Proceedings of the Annual Meeting
Northeast Business & Economics Association

Thirty-Eighth Annual Meeting
November 3rd-5th, 2011

Sheraton Society Hill Hotel
Philadelphia, Pennsylvania

Hosted by:

Conference Chair
Dr. George P. Sillup
Saint Joseph’s University

Proceedings Editor
Dr. Rajneesh Sharma
Saint Joseph’s University

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Saint Joseph's University is a Catholic and Jesuit university that instills in each member of its academic community: a love of learning and of the highest intellectual and professional achievement; moral discernment reflecting Christian values; and a transforming commitment to social justice. Saint Joseph's is a private Independent university. Saint Joseph's Erivan K. Haub School of Business provides a comprehensive business curriculum complementing the liberal arts.
component of the general education program at Saint Joseph’s. There are eight business majors from which to choose from among seven departments.

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Dr. George Sillup, Chairman

Dr. Rajneesh Sharma, Editor
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Dear Colleagues and Friends,

On behalf of the Northeast Business & Economics Association (NBEA) Board Members, I welcome you to this year’s annual conference. The NBEA is proud to be celebrating its 38th year! A special welcome to new NBEA members and a warm hello to our current and tenured members.

The NBEA has an intentional reach to welcome both academics and practitioners from all related business disciplines. This year’s conference agenda ensures that each attendee will find what he or she seeks in an academic scholarly conference. A variety of paper presentations and panel discussions will fill your days. Most important, we build into the conference agenda the time for all of us to meet with each other. We will share ideas, renew friendships, and make new connections.

All the recognition for this conference belongs to Dr. George P. Sillup of Saint Joseph's University. Also, the support provided by the administration of Saint Joseph's University deserves our special thanks and appreciation.

Next year the 2012 conference will be hosted by Dr. William O'Brien and me with the support of both Dowling College and Worcester State University. The 2012 NBEA Conference will take place at the beautiful waterfront village of Port Jefferson, Long Island, New York. I encourage each of you to etch the 2012 conference dates into your professional agenda so that not a day is missed. Dr. O'Brien and I have already started to plan an energetic, scholarly, and exciting agenda for the 2012 event.

I will continue to reach out to you throughout the year and want you to feel continuously connected to the NBEA. I invite you to share with me your views on the direction of this (your) association. What would you like to see in the future? Also, I request that you spread the word about our association and our annual conference. We grow because our members invite those who they work with to join them at these annual meetings. Please send me your thoughts and comments to mackenzm@dowling.edu.

With warm regards,

Maureen
Dear Colleagues:

Welcome to Philadelphia and the 38th Annual Meeting of the Northeast Business and Economics Association, which is hosted by Saint Joseph’s University (SJU) and SJU’s Pharmaceutical & Healthcare Marketing (PMK) Department this year. On behalf of the NBEA Board of Directors, I extend our gratitude to SJU for its support of the conference.

You will find the location of this year’s conference hotel the Sheraton Society Hill, to be within walking distance of Philadelphia’s historic district. As you walk across the cobblestone roads, you can actually feel the spirit of liberty when you visit Independence Hall, National Constitution Center, Liberty Bell Center and homes of the fathers and mothers of America. With the recent passing of Halloween, I’m told that you may even encounter Ben Franklin’s ghost. Please take time to enjoy these environs as well as one of the fine dining establishments in the city.

The program of this year’s NBEA Conference is especially diverse with authors presenting their research findings in numerous business tracks to include economics, accounting, finance, marketing, pharmaceutical marketing, business education, organizational development and environmental studies along with several workshops. The conference will provide a forum for constructive discussion and welcomes students to gain valuable input on their work from the collegial atmosphere. The session rooms will be anchored by session chairs, who will invite commentary among attendees. Between sessions please visit our sponsors, SJU’s Haub School of Business, SJU’s Executive MBA in Pharmaceutical & Healthcare Marketing and Harvard Business Publishing.

The NBEA is proud and honored to have David P. McSweeney as our luncheon speaker on Friday, November 4th. Mr. McSweeney is a former health insurance CEO and founder of several businesses that introduced insights to improve healthcare delivery in the U.S.

A special thank you goes to those who have helped me to make this conference possible. Kristi Goldstein-Taverno, Student Placement Assistant in SJU’s Food Marketing Academy, coordinated the conference with the hotel to include all meals and activities and designed/identified the conference materials. Mark Fanelli, Graduate Assistant for PMK, established the electronic presence and did anything else that needed to get done. Danielle Puccino, PMK undergraduate student, developed and maintained the database that undergirds registration. We deeply appreciate the efforts of Dr. Rajneesh Sharma, Associate Professor, SJU’s Finance Department, who took time from his sabbatical to serve as Proceedings Editor. We thank our Session Chairs and Student Ambassadors for ensuring unencumbered presentation sessions. Lastly, my special thanks to Dr. Maureen Mackenzie and Dr. Bill O’Brien for their sage advice and to all the NBEA Board members for their continuing commitment to making this event a success.
Call for Papers
39th Annual Conference
Norteast Business & Economics Association
October 25 – 27, 2012
At Danford’s Hotel and Marina
Port Jefferson, Long Island, NY

Competitive papers, detailed abstracts, proposals for panels, symposia, tutorials and workshops in all subspecialties of business and economics are invited for peer review and presentation at the 39th Annual Conference of the NBEA. The conference provides a forum for a wide range of papers addressing all areas of business and economics.

Guidelines for Submission:
Authors may submit abstracts (2-4 pages), full papers or proposals for workshops or panels. Abstracts, panel and workshop proposals and papers must have two title pages. The first page must include the title, primary track designation and the following information about each author: name, affiliation; address; office and home phone numbers; e-mail address. For papers with multiple authors, please note the primary address for future correspondence. The second page must have only the title (for blind peer review). All submissions are to be prepared in Word and are to be submitted electronically.

Acceptances and Proceedings:
Accepted papers, workshop descriptions and panel summaries, will all be published in the Proceedings. A Proceedings template with publication requirements and guidelines will be sent to the author upon notification of acceptance.

Best Paper Awards
Authors are encouraged to submit their work for the Best Paper Awards for: (1) regular faculty and (2) junior faculty – doctoral students. Best Paper winners are eligible for fast-track review and publication in the NBEA’s Journal of Business & Economic Studies. Only full papers received by August 15, 2012 will be considered for this competition.

Registration Fee
The registration fee is $250. Payments made before October 1st qualify for the discounted rate of $200. Student and emeritus faculty registration fees are $100 before October 1 and $125 after October 1.

Tracks:
- Accounting & Taxation
- Banking
- Business Education
- Business Ethics
- Case Studies
- Corporate Governance
- Finance & Investment
- E-Commerce
- Economics
- Entrepreneurship
- Environmental Economics
- Government Regulation
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Has Okun’s Law Changed over Time, with Emphasis on the 2007-09 Recession?

By

Fatma Abdel-Raouf
Economics and Finance Department
Goldey-Beacom College
4701 Limestone Road
Wilmington, DE 19808 USA
Phone: (302) 225-6212
raouff@gbc.edu

ABSTRACT
This paper examines whether Okun’s law has been stable over time or not, with emphasis on the 2007-09 recession. Using a rolling regression technique, I found that Okun’s law is not stable over time and is sensitive to the state of the business cycle. Okun’s coefficient in absolute value increased significantly over the 2007-09 recession, reaching 0.11 in 2009 for the first time since 1948. The output growth consistent with stable unemployment increased in the 2007-09 recession as well but remained below its level at the beginning of the sample.

Keywords
Okun’s Law, Business Cycles, Unemployment, Output Growth, Rolling Regression, ARDL Model

1 INTRODUCTION
With the persistent high unemployment that the 2007-09 recession is witnessing, it is important to reexamine the strength of the relationship between the change in the unemployment rate and the output growth. Arthur Okun in 1962 quantified this relationship where he estimated that for every 3 percentage point increase in the U.S. output growth rate, the unemployment rate decreases by one percentage point. Since then, many economists have examined this relationship and no consensus has been reached about the exact extent of this relationship.

In this paper, I’m going to examine whether Okun’s law has changed over time, with emphasis on the recent economic downturn. In doing so, I’m going to use a rolling regression technique to see whether Okun’s coefficient and the output growth consistent with stable unemployment have changed over time or not. The analysis is done using two versions of Okun’s law: The difference and the dynamic (an autoregressive distributed lag ARDL (2,2) model) versions. The difference version of Okun’s law allows the change in the unemployment rate to depend on current output growth only, whereas the dynamic version allows the change in the unemployment rate to be distributed over the current and past output growth as well as past unemployment rate.

The results show that Okun’s law has not been stable over time and is sensitive to the state of the business cycles. Specifically, higher economic growth was needed in the beginning of the sample to maintain stable unemployment than what is needed toward the end of the sample. Further, in the 2007-09 recession, Okun’s coefficient in absolute value increased significantly.

2 ESTIMATING OKUN’S LAW

2.1 The Difference Version of Okun’s Law:
Starting with the same time period used by Okun, I estimated the following equation using quarterly data from 1948 Q2 to 1960 Q4

\[ \Delta u_t = 0.323 - 0.076 X_t \]

\[ N=51 \quad R^2 = 0.59 \quad (1) \]

\[ P-value 4.06 \times 10^{-6} \quad 5.24 \times 10^{-11} \]

Where \( \Delta u_t \): the change in the unemployment rate
\( X_t \): Real output growth

Okun’s coefficient is -0.076, multiplying it by 4 gives us -0.304. The growth rate consistent with stable unemployment (-a/b) is 4.25%.

Using the whole data set from 1948 Q2 to 2010 Q2 gives us the following equation:

\[ \Delta u_t = 0.2521 - 0.0688 X_t \]

\[ N=249 \quad R^2 = 0.5 \quad (2) \]

\[ P-value 6.8 \times 10^{-23} \quad 4.2 \times 10^{-39} \]

The results obtained here are similar to the ones obtained by Okun in 1962. Okun’s coefficient is -0.076, multiplying it by 4 gives us -0.304. The growth rate consistent with stable unemployment (-a/b) is 4.25%.

Using the whole data set from 1948 Q2 to 2010 Q2 gives us the following equation:

\[ \Delta u_t = 0.2252 - 0.0641 X_t \]

\[ N=198 \quad R^2 = 0.45 \quad (3) \]

\[ P-value 5.2 \times 10^{-17} \quad 6.7 \times 10^{-27} \]

Okun’s coefficient is not much different from the one in the previous equation, while the output growth consistent with stable unemployment decreased to 3.66%. This could be due to using a larger sample or due to a structural change in the relationship between the change in the unemployment rate and the output growth. By examining the relationship in different time frame from 1961 Q1 to 2010 Q2, I get the following estimated equation:

\[ \Delta u_t = 0.2252 - 0.0641 X_t \]

\[ N=198 \quad R^2 = 0.45 \quad (3) \]

\[ P-value 5.2 \times 10^{-17} \quad 6.7 \times 10^{-27} \]

The output growth consistent with stable unemployment is now 3.51%, which is still lower than Okun’s estimate. This tells us that the output growth consistent with stable unemployment is now lower than what it was during Okun’s time.
### 2.2 The Dynamic Version: An ARDL (2,2) Model:

The dynamic version allows the change in the unemployment rate to depend on past output growth and change in the unemployment rate. In that regard, the values of the impact and the interim multipliers are important as they show the effect of a 1% change (sustained and unsustained) in the growth rate distributed over the current and past quarters.

Starting with data from 1948 Q2 to 1960 Q4, I estimated an autoregressive distributed lag ARDL (2,2) model:

\[
\Delta u_t = 0.4334 - 0.054 X_t - 0.0299 X_{t-1} - 0.021 X_{t-2} + 0.207 \Delta u_{t-1} - 0.199 \Delta u_{t-2} \quad R^2 = 0.776 \quad (4)
\]

P-value 3.7 E-6 9.9 E-9 0.013 0.08 0.166 0.0897

Where \( X_{t-1} \): output growth lagged one quarter. \( X_{t-2} \): output growth lagged two quarters. \( \Delta u_{t-1} \): change in unemployment rate lagged one quarter. \( \Delta u_{t-2} \): change in unemployment rate lagged two quarters.

Using data from 1961 Q1 to 2010 Q2, I estimated the following equation:

\[
\Delta u_t = 0.247 - 0.04 X_t - 0.015 X_{t-1} - 0.013 X_{t-2} + 0.31 \Delta u_{t-1} - 0.02 \Delta u_{t-2} \quad R^2 = 0.66 \quad (5)
\]

P-value 1.6 E-13 3.4 E-19 0.005 0.016 2.5 E-5 0.734

Looking at these two equations, we see that during Okun’s time lagged change in the unemployment rates are not significant. Only current and lagged one quarter output growth are significantly affecting the change in the unemployment rate. This explains Okun’s use of the difference version. Updating Okun’s law using a longer data set from 1961 Q1 to 2010 Q2, we see that change in the unemployment rate lagged one quarter is a significant factor in explaining the current change in the unemployment rate. In addition, current and lagged output growth significantly affecting the change in the current unemployment rate as well.

Using the whole data set 1948 Q4 to 2010 Q2, I estimated the following equation:

\[
\Delta u_t = 0.2923 - 0.049 X_t - 0.0196 X_{t-1} - 0.014 X_{t-2} + 0.301 \Delta u_{t-1} - 0.096 \Delta u_{t-2} \quad R^2 = 0.705 \quad (6)
\]

P-value 1.2 E-19 1.2 E-19 9.7 E-5 0.0057 4.9 E-6 0.085

Comparing equations 5 and 6, we see that the estimated coefficients and their significance are very similar and both are different from the estimated coefficients in equation 4. This implies one of two things: Either the years from 1948 to 1960 were really different from the rest of the years or having a longer data set changes the results than having a shorter data set. In the latter case, the specific years included does not make much of a difference. Note that, as expected with an ARDL model, the absolute value of the coefficients of \( X_t \) and \( \Delta u_t \) decrease as the number of lags increases: The effect of the current output growth on the change in the unemployment rate is 0.049 vs. 0.0196 and 0.014 for the output growth lagged one and two quarters, respectively.

### 2.3 The Multiplier Analysis:

The impact multiplier shows the effect on \( \Delta u_t \) if \( X_t \) increases by 1% and then returned to its original level. The interim (and total) multiplier shows the effect on \( \Delta u_t \) if \( X_t \) increases by 1% and stayed at this level.

The impact multiplier and the delay multipliers for the first four quarters are given by

\[
\begin{align*}
\Delta u_t &= -0.049 \\
\Delta u_{t-1} &= -0.03435 \\
\Delta u_{t-2} &= -0.0103 \\
\Delta u_{t-3} &= -0.0031 \\
\Delta u_{t-4} &= -0.0009
\end{align*}
\]

The impact and delay multipliers mean that a 1% increase in the growth rate leads to a decrease in the unemployment rate by 0.05% in the current quarter, a decrease of 0.03% in the second quarter, a decrease of 0.01% two quarters from now, a decrease of 0.003% three quarters from now, and a decrease of 0.0009% four quarters from now.

The total multiplier, which is given by \( \sum_{i=0}^{4} \beta_i \), is -0.0981. This shows that a sustained 1% increase in the growth rate leads to a decrease in the unemployment rate by 0.098% over four quarters.

### 3 OKUN’S LAW AND THE BUSINESS CYCLES

#### 3.1 Dummy Variable Model:

To check whether the state of the business cycle has a significant effect on the relationship between the change in the unemployment rate and the output growth, I use a dummy variable approach. Using the whole data set from 1948 Q2 to 2010 Q2 and applying it to the difference version of Okun’s law, the estimated model is:

\[
\Delta u_t = 0.5268 - 0.0475 X_t - 0.4217 D_{2t} \quad (7)
\]

P-value 4.23 E-33 3.13 E-21 6.73 E-16

\( N=249 \) \quad \( R^2 = 0.6139 \)

Where

\[
D_{2t} = \begin{cases} 
0 & \text{During Recession} \\
1 & \text{During Expansion} 
\end{cases}
\]

Periods of recessions are based on the National Bureau of Economic Research (NBER) classifications.
Using the ARDL(2,2) model, the estimated equation is:
\[ \Delta u_t = 0.46 - 0.04 X_t - 0.0132 X_{t-1} - 0.0135 X_{t-2} + 0.291 \Delta u_{t-1} - 0.104 \Delta u_{t-2} - 0.283 D_{2t} \]
\[ R^2 = 0.75 \] (8)

The dummy variable in both models is significant indicating that the state of the business cycle has a significant effect on the relationship between the change in the unemployment rate and the output growth, regardless of whether past unemployment rate and output growth are used in the model or not.

3.2 Rolling Regression Using the Difference Version of Okun’s Law:

Using a long time series analysis, such as the one used in this paper from 1948 to 2010, may not show the change in the relationship between the change in the unemployment rate and the output growth. To capture the change in the relationship, I’m going to use a rolling regression technique, which estimates the relationship over a shorter time period and for many samples. Each rolling regression is estimated using 13 years of data (52 quarters). The first rolling regression uses data from 1948 Q2 to 1961 Q1 and estimates the coefficients a and b. The sample is then moved ahead one quarter to start at 1948 Q3 and end in 1961 Q2, and estimates a second set of the coefficients a and b. This process is repeated until the last sample from 1997 Q3 to 2010 Q2. If the relationship is stable over time, then the estimated coefficients from each regression should be close to each other. If the estimated coefficients differ significantly from one regression to the next, then the relationship is not stable over time.

Figure (1) the absolute value of the Okun’s coefficient for the rolling regression.

The graph above shows significant change in Okun’s coefficient over time. In particular, there were two noticeable drops in the absolute value of Okun’s coefficient over the time frame analyzed: The first was in 1971 to 1975 and the second was from 1997 to 2007. On the other hand, there was a big increase in the absolute value of Okun’s coefficient in 2009 and 2010. The periods of low Okun’s coefficient were dominated mainly by expansions. 1971 Q1 to 1974 Q4 had 13 quarters of recessions and 54 quarters of expansions. 1997 Q2 to 2007 Q4 had 6 quarters of recessions and 88 quarters of expansions. On the other hand, the periods of high Okun’s coefficients had more than one recession in them. 1994 Q2 to 1995 Q3 period includes two recessions in it: 1981-82 and 1990-91 recessions, and 2009 Q2 to 2010 Q2 period includes two recessions as well: 2001 and 2007-09 recessions.

An interesting phenomenon noticed in the analysis of Okun’s coefficient is that Okun’s coefficient, in absolute value, decreases significantly between two consecutive regressions covering periods staring at the quarter that marks the end of a recession and the following quarter that marks the start of an expansion. That happened after 1957-58, 1973-75, 1980, 1982-83, and 1990-91 recessions.

Figure (2) output growth consistent with stable unemployment for the rolling regression.

As the graph above shows the output growth consistent with stable unemployment differs significantly over time as well. Overall, it decreased from a range of 3 to 5% to a range of 2 to 4%.

Starting at the third quarter of 2008 (which uses data from 1995 Q4 to 2008 Q3), the output growth consistent with
stable unemployment increased to above 3% and the Okun’s coefficient, in absolute value, increased as well to above 0.05. Both of them continued to increase for the rest of the time frame analyzed to reach 3.45 and 0.082, respectively. These results point out to a possible change in the relationship between the change in the unemployment rate and the output growth over the 2007 – 09 recession. However, since the sample used here (52 quarters) is too long to determine, a shorter time frame is needed. In the next section, I’m going to use a shorter time frame of 20 quarters.

3.3 Rolling Regressions Using the Difference Model, Shorter Time Period:
Using twenty quarters, starting with 1948 Q2 to 1953 Q1, and ending with 2005 Q3 to 2010 Q2, I estimated the set of coefficients from each sample. The graph below shows the absolute value of Okun’s coefficient for each sample.

Figure (3) the absolute value of Okun’s coefficient for rolling regression, 20 quarters.

Okun’s coefficient is sensitive to the state of the business cycle. Okun’s coefficient, in absolute value, increased in the regressions with recession quarter(s) in them. This happened in the regressions from 1953 Q1 to 1964 Q4, from 1975 Q1 to 1979 Q4, and from 1983Q2 to 1987 Q3. On the other hand, Okun’s coefficient was very small in the regressions that include no recessions in them. This happened in the regressions from 1966 Q1—the first regression with no recession in it—to 1974 Q3, from 1989 Q1 to 1990 Q2, from 1996 Q2 to 2000 Q4, and from 2006 Q3 to 2008 Q2. In 2007 – 09 recession, Okun’s coefficient, in absolute value, started to increase in 2008 Q3 until 2009 Q2.

Between the second and third quarters of 2008, Okun’s coefficient more than doubled in value. Last time Okun’s coefficient was that high was in 1987. Since 1948, Okun’s coefficient has never been above 0.11 except in 2009. This significant increase in Okun’s coefficient implies that the change in the unemployment rate is more sensitive to the output growth in 2007 – 09 recession than it was in previous time. This agrees with Dube (2011) finding that during the 2007-09 recession, the sensitivity of the unemployment rate to the output growth is more than twice as much as the historical level. With the dismal increase in U.S. economic growth after the 2007-09 recession, this explains—in part—the persistent high unemployment rate the U.S. continued to witness even after the recession has ended.

From this we see that Okun’s coefficient has varied significantly over time and with the state of the business cycle. Therefore, the relationship between the change in the unemployment rate and the real output growth is not stable over time. In particular, Okun’s coefficient in absolute value increases during recessions while decreases during expansions. In other words, an increase in output growth will have a greater impact on the unemployment rate during recessions than during expansions.

4 CONCLUSION
In the recent expansions, Okun’s law does not seem to hold. From 1985 Q1 to 1990 Q2, the average growth rate in the U.S. was 3.3%, while the unemployment rate decreased by only 0.09% over the same period. Similarly, from 1992 Q1 to 2000 Q4, the average growth rate in the U.S. increased by 3.9% while the unemployment rate decreased by only 0.09% over the same period. Again, from 2002 Q1 to 2007 Q3, the average growth rate in the U.S. was 2.7% while the unemployment rate decreased by only 0.04% over the same period. This led us to question the validity of Okun’s law over different phases of the business cycle and whether Okun’s coefficient has changed over time or not. This is the focus of this paper.

In assessing whether Okun’s law has changed over time or not, this research—confirming other researches—found that it has. Using a rolling regression technique, if the relationship between the change in the unemployment rate and the real output growth is stable over time, then the estimated set of coefficients should not change much from one sample to another. The results of the rolling regression used in this research show significant change in the estimated set of coefficients over the analyzed time frame. This implies that Okun’s coefficient has changed over time. The change was clearer over the business cycles. In addition to the rolling regression, I used a dummy variable technique, which confirmed the same result.
Looking at the business cycles, I found that Okun’s coefficient in absolute value increases during recessions while decreases during expansions. This is also supported by the data: During expansions, the average U.S. growth rate is 4.36% and the average change in the unemployment rate is -0.10%, while during recessions, the average growth rate is -1.42% and the average change in the unemployment rate is 0.59%. This implies that the impact of a change in real output growth on the unemployment rate is higher during recessions than during expansions. This is important for policymakers trying to reduce the unemployment rate during periods of recessions. Relying on economic growth seems to have a greater impact on unemployment rate during these periods than during expansions. Moreover, it seems that Okun’s law holds more closely during recessions than during expansions. In examining the 2007 – 09 recession, I found that Okun’s coefficient in absolute value increased significantly. The output growth consistent with stable unemployment increased slightly above its value before 2007 but was still lower than its value at the beginning of the data.

Moreover, I examined whether there was a structural change in the relationship between the change in the unemployment rate and the output growth after the start of the jobless recovery in 1990. I found that before the 1990 recession, recent data were more important in explaining the changes in the unemployment rate than after the 1990 recession. This is consistent with the jobless recovery, where we expect output growth to rebound before the employment does.

References:


MANAGING COMMUNICATION EFFECTIVELY:
A REVIEW OF THE FEDERAL EMERGENCY
MANAGEMENT AGENCY AND EVENTS SURROUNDING
THE HURRICAN KATRINA DISASTER IN 2005

Seth D. Adams
BADM-Undergraduate
Fayetteville State University
1200 Murchison Road
Fayetteville, NC 28301
(910) 224-9782
Sadams18@broncos.uncfsu.edu

Kendrick Williams
BADM-Undergraduate
Fayetteville State University
1200 Murchison Road
Fayetteville, NC 28301
(214) 907-8327
kwili68@broncos.uncfsu.edu

Yvette Essounga-Njan, Ph.D.
Department of Management
Fayetteville State University
1200 Murchison Road, SBE Room 388
Fayetteville, NC 28301
(910) 672-1764
yessoung@uncfsu.edu

ABSTRACT
The purpose of this study is to examine the Federal Emergency Management Agency (FEMA) and its actions surrounding hurricane Katrina during disaster relief efforts. The study will concentrate on FEMA’s managerial and communication efforts in order to improve leadership and communication skills within similarly large agencies, organizations and corporations. This is suggesting that if FEMA was able to control the media, bypass political partisanship and synchronize, organize and disseminate communication between all relief effectors, the agency would have been able to succeed in its mission. We are suggesting that the agency’s coordination of relief efforts, agencies and supplies would have come much faster and been more effective, resulting in saving more lives. This study is focusing on the culture particular to New Orleans and the Political climate at the local, state and federal level.

Keywords
Communication effectiveness, Managerial Communication. Political climate.

1 INTRODUCTION
When disaster strikes in the corporate world, there is a need for someone to come in and manage damage control. For some, Warren Buffet might come to mind. If a natural disaster strikes or a terrorist attack happens in America, who would most Americans think of calling? Many, probably, would think of The Federal Emergency Management Agency (FEMA), albeit with a negative feeling and with some degree of hesitation. This is as a result of the events surrounding Hurricane Katrina and the actions that FEMA took that resulted in an apparent catastrophic failure. This failure is attributed to FEMA’s lack of leadership and ineffective communication when attempting to coordinate relief efforts between the other agencies, organizations and teams involved on the ground during the events following Hurricane Katrina in New Orleans. This discussion will explore the FEMA’s internal structure, strategies and actual efforts surrounding Hurricane Katrina, analyzing the problems FEMA faced and continues to face in leading effective relief efforts, often leading to communication failures.

2 PURPOSE OF THE REVIEW
Consequently, this review purposes to explore the events around Hurricane Katrina in relation to FEMA, in order to assess the ways the agency can go about improving leadership and communication skills, all strategies that may be applied in other similarly large organizations when facing catastrophic events of national scope.

3 RESEARCH QUESTION
Can organizations the size of FEMA prepare for catastrophes the scope of Katrina, in order to minimize glitches and act, communicate and deliver on the public expectations in an effective way? In other words, this review seeks to answer the following questions: What actions and messages caused problems which delayed help, causing further loss of life and damage? What elements were present that caused miscommunication, confusion and failure during relief efforts? What actions were taken which were wasteful of assets, time and personnel?

4 VALUE OF THE REVIEW
It is pertinent to discuss the conditions surrounding FEMA because such an assessment would benefit other government agencies and various similar agencies at the state and local levels. These agencies are often at the forefront of actions whose consequences may mean the difference between life and death for those individuals who may have no recourse other than to rely on the help of these agencies. Other beneficiaries of this discussion include policy makers and leaders in the corporate world.

5 IMPLICATIONS
The magnitude of the hurricane Katrina disaster was non negligible, to use a euphemism. However, one cannot but deplore the lack of preparedness of an agency whose existence was unbeknownst to most Americans who only learned of it to discover what appeared as its sheer incompetence. In these circumstances, it is only normal to
attempt and find what went wrong in order to find ways of not repeating the same mistakes, given the high stakes surrounding operations such agencies carry out.

REFERENCES


KM at SMEs: Observations and Recommendations from Managers at Large Organizations

Jeffrey W. Alstete
Iona College
715 North Avenue
New Rochelle, NY 10801
jalstete@iona.edu
914-633-2265

ABSTRACT
This qualitative research study found that managers at larger firms generally agree that informal knowledge management practices at small and medium-sized enterprises are appropriate and effective methods to leverage information without relying on formal conventional KM terminology and formal techniques. The research findings are based on four separate interactive online discussions over a four year period from 2008 to 2011 with thirty four managers at larger organizations in the New York metropolitan area. Findings revealed that larger firm managers overwhelmingly believe that KM is informally applicable at SMEs, and factors such as cost, willingness to share knowledge, and combining formal with informal KM practices should be considered.

Key words: knowledge management, small business, informal KM, SMEs

1. INTRODUCTION
Knowledge management primarily involves knowledge creation, dissemination and implementation (Pillania 2009). There has been research published for many years on KM at SMEs, but most of the studies examine the issue from the small to medium-sized business perspective. Few, if any, studies have been conducted by experienced managers at larger organizations who are familiar with the concepts, terminology and usage of KM in regard to their thoughts on using KM at smaller firms. This study seeks to begin an effort to uncover what advice and perspectives the managers at larger firm may have to offer. Many years ago Somerset Maugham stated that “it is a great nuisance that knowledge can only be acquired by hard work” (Esar 1968). While this may have been the primary method in the past, in today’s era, systems for knowledge management have been developed to not only acquire knowledge, but also record, develop and use it effectively. This article also seeks to expand the understanding of KM at SMEs in general by collecting and synthesizing selected perspectives of experienced larger firm managers with brief literature review and an analysis of qualitative primary research discussions.

2. KM at SMEs
Since knowledge management practices have been used for many years now, there is a relatively large amount of previous research published by scholars and practitioners that mainly examine knowledge management at large organizations and a lesser amount about small and medium-sized organizations (Levy, Loebbecke et al. 2003; Pillania 2006; Pillania 2008). However a brief search of business research literature finds that the concept is certainly not unexamined. In fact, various papers and research studies have been written that examine if KM works at SMEs (Hutchinson and Quintas 2008), the strategic issues therein (Pillania 2008), the characterization and classification of approaches (Wong and Aspinwall 2004; Sparrow 2005), using knowledge management to foster innovation (Edwards 2005; Zhou and Uhlaner 2009).

Interestingly, there was a study conducted ten years ago that specifically examined “SME and Large Organization Perceptions of Knowledge Management” (McAdam and Reid 2001) by comparing the perceptions of both large organization and SMEs at a meta level. The survey results at that point in time found that KM was developing and being implemented at the larger organizations, but was less advanced in the SME sector. Subsequent research previously mentioned found that SMEs are now more aware of KM practices, albeit informally and less structured, and that certain culture and behavior characteristics at SMEs can have a positive effect (Varintorn Supyuenyong 2009).

When analytically reading the business research studies regarding knowledge management at SMEs, naturally the usual approach involves examining practices and policies at small and medium-sized and the practices of managers at these organizations. For example, an informative comparison between larger organizations and SMEs is offered in “The Impact of Knowledge Management on SME’s”
by Nazar Rasheed (Rasheed 2005). The author illustrates the similarities and differences between KM in large corporations and SMEs in the areas of management, structure, culture, and human resources. For example, Rasheed states “the managers are in most cases the owners, which imply that decision-making is centralized, and there are fewer layers of management. This means that decision-making is shorter than in large organizations. The advantage for the owners in SMEs, is that they become the key drivers for knowledge management implementation. Another distinction to be made is that managers of SMEs have to look after every aspect of the business which gives them limited time to focus on the strategic issues relating to knowledge management. Senior management in larger organizations in contrast have the power to delegate some of their responsibilities to lower management, thus freeing their time to focus on knowledge management strategies” (p. 12). Decentralization has been found to improve administrative effectiveness in some ways (Alstete 1997) and Rasheed concurs that SMEs have an advantage over large enterprises in implementing knowledge management because “They have a simple, flatter, and less complex structure, which will facilitate a change initiative across the organization since functional integration both horizontally and vertically is easier to achieve and fewer complications will be encountered” (p. 12). While it is commonly understood that larger organizations are more bureaucratic in their structure which makes them slower and less flexible in creating new systems, it also stated that one of the advantages that larger organizations have over SMEs is the level of specialization in their roles. This gives them better expertise in implementing knowledge management policies and practices.

In addition, Rasheed states that the SMEs tend to have a more organic and fluid culture than larger organizations and that SMEs have a problem in attracting high caliber experienced employees, unlike large companies with higher salaries and often with better benefits. Therefore people who are possibly more experienced with KM concepts may tend to work at larger organizations, and SMEs may be seen by some employees as just a stepping-stone in their careers to move to a larger organization. Subsequently the departure of highly knowledgeable employees is a major threat to SMEs, unless that “knowledge is captured, codified, and transferred throughout the organization” (p. 12) (Rasheed 2005).

Research Methodology
In this four-year study from 2008 to 2011, thirty-four managers at larger firms (including traditional corporations and non-profit organizations in the New York metropolitan area), engaged in four separate week-long small-group discussions on a specific topic setup by the researcher. The initial research study question that began each online asynchronous discussion asked managers the following question related to the aforementioned research study by Hutchinson and Quintas. The opening question is followed by the article title and abstract for the participants to also read:

“Do you believe that KM is formally or informally applicable at Small to Medium Enterprises (SMEs)? There are various articles on this topic, and you may have some experience working in a small business. Support your perception based on the research or your experience, and discuss.”

To get the conversation started, here is one abstract…

Do SMEs do Knowledge Management?

Abstract (Summary)
Recent studies of knowledge management indicate that the growth of interest in this area is primarily focused on the larger organization. Not only do large firms feature in the majority of published case studies but also their employees are regular contributors to conference proceedings. This article addresses the comparatively under-researched issue of knowledge and its management in small businesses. Looking beyond formal Knowledge Management (KM) initiatives and structures, emphasis is placed upon the importance of informal knowledge processes. Two related propositions are made: first, knowledge is managed by organizations without use of the language and concepts of KM and accompanying formal KM structures, and that this behaviour might uncontroversially be called ‘informal’ knowledge management, and secondly, small firms are more likely to adopt such informal
processes to manage knowledge. These propositions are explored within the context of small firms and the research revealed that small firms do indeed manage knowledge informally as part of their normal activities, without the use of the terminology and concepts of KM. However, contrary to expectations, on occasion some also engage in formal KM.”

This discussion-based qualitative research technique can yield informative and valuable perspectives based on the synergistic conversations that develop beyond the responses to the initial opening question as the participants read and respond to others group members. In addition, the asynchronous format of a week-long discussion such as this allows participants sufficient time to reflect on their answers before posting responses and adding comments to these complicated and advanced management concepts. The research participants were employed in an assortment of position types, and were questioned, probed and encouraged to offer their insights about their perspectives regarding the use of established knowledge management strategies and practices at small and medium sized organizations. The detail that all of the participants fit this profile of working for large companies and have knowledge management awareness is a gauge that they meet the requirements of condition sampling that was established by the researcher. As stated in previous studies by the author, criterion sampling can bring crucial qualitative components to research and assist with more precise in-depth examination because the examples which are chosen meet a set of predetermined criteria (Patton, 1990). The particular initial research question used was intended to let study participants have the autonomy to expand on answers regarding this management concept, and not be restricted by customary prescribed investigations that limit answers to preset selections. In addition, there are elements of theory building from cases (Eisenhardt and Graebner 2007) because specific current company practices and evidence are used for sources. However there are limitations of this research study, including but not limited to, the size of the population, the geographic location, the self-selection to participate, and the potentially leading nature of the initial question presented to the participants.

**Findings**

It was nearly unanimous among all 34 participants from larger firms in the four discussions over the recent four-year period that KM concepts and practices are indeed applicable to SMEs, and that SMEs informally apply the techniques in their own way. The following comments and advice from selected study participants reveal that KM is leveraged at larger organizations, widely recognized, and more formalized that in smaller companies. The perspectives and advice offered seemed genuine and contemplated the differences in organizational size in their answers.

In response to the initial question to participants the responses and conversations included the following:

“I believe KM is informally applicable to SME’s. I do believe that formal KM is unique and creatively tailored to be positioned to not only structure knowledge within an organization. It not only addresses key issues, but formal KM helps add strategic competitor advantage. The cost of developing a formal KM system for a SME might be too risky, and the time and developmental changes needed could prove too costly for smaller corporations. I worked for a small hardware chain before college and saw firsthand how late we were in adapting with the advances in technology and knowledge. However, it was the safe route for the company to take in implementing such changes nationally throughout its stores without having them sustain such heavy costs to carry and ultimately financially pay off. It can be looked at as a safer and non-aggressive move, but SME's more times than not cannot wait a few years to climb out of the red or even survive a system which fails. PC I agree cost is an issue for small companies to really use KM to its full advantage. [In] some of these case studies that we read…. companies were spending a lot of money on KM just to improve. A small company would not be able to shell out that kind of money.” J.N.

“Not only do I see the cost as an issue, but in order for SME's to stand out amongst their competitors, they have to create a market niche. Trying to balance gaining a competitive advantage and integrating a KM system can be an extremely complex task for small companies with little or no play room to experiment. Shared knowledge and creativity is their best route in sustaining and growing in market share.” P.C.
“I don’t think cost should be an obstacle for successful KM in small firms. Getting a shared understanding about the firm’s value proposition and whatever strategic advantage that may provide is crucial for firms of any size; and is far more important than managing cost or funding a big investment in KM IT.” A.I.

“[JN], I agree the cost of SMEs to institute a KM strategy could potentially be too large for the firm to take full advantage of KM. However, I feel that if they viewed all the options, either listed in McElroy’s (McElroy 2003) or Tiwana’s (Tiwana 2002) book, they could pick and choose which aspects of KM would be of benefit for their firm. I also believe that the returns from instituting a KM strategy, while hurting company profits in the beginning, would bring greater returns in the future. Dismissing the idea of attempting a KM strategy because of cost, would save short term profits, however I believe long term returns would greatly suffer.” J.N.2

“Good perspective [JN2], that return on investment viewpoint is absolutely a legitimate way to rationalize subtracting resources from one firm section and reallocating them for the greater good. I believe this would be a great transition for employees with high morale who believe in the future of the firm. If management takes a nonchalant approach to their training and selection process, some employees may not buy into this complex and still developing industry and theory. If they can't visualize the long term positives then they may just feel overworked and confused by the new policy and training efforts. The trials and tribulations that come with a firm attempting to finance a new training process, especially for a smaller company become immeasurable if the implementation fails. The financial resources and employee hours that go into new changes and strategies are meant to be successful while carrying a return on investment. They cannot partially contribute or halfway succeed. These small and medium enterprises do not have the same margin of error, conglomerates have and can therefore risk little in regards to a what if or pretty picture without knowing for sure the picture has substance.” M.G.

These last two respondents seem to concur that although cost may be a factor that could discourage some SMEs, the return on investment could be worthwhile. The next set of respondents, in a subsequent year of the research study time period, discussed the idea that KM is more informally applicable to SMEs than in larger firms, and that the employee training and management practices are often using KM concepts without formally identifying them as such.

“Based on my professional experiences, I would agree with the author's premise in the quote that KM is more informally applicable to Small and Medium Enterprises, than it is to larger firms. I believe one of the reasons for this is that larger firms generally employ more staff members, particularly in the IT and HR disciplines, the two key departments responsible for developing and supporting first and second generation KM platforms within the firm. These departments help to establish and support KM platforms in a more formalized and consistent manner. These departments also monitor and support ongoing employee training in systems and platforms, guiding changes in the KM architecture, based on changing organizational, or market needs. Secondly, I have observed these specific differences, while working for an automotive manufacturer (large firm), and calling on automobile dealers (small firms), during the last 25 years. For example, my company supports both first and second generation KM initiatives, in the form of company-wide intranets, KM databases, ISO and Six Sigma activities, and cross-functional project-team activities. Automobile dealerships on the other hand, tend to rely more on informal KM activities and tacit knowledge sharing among employees. These small to medium enterprises generally are more concerned with operating within the specified operational guidelines set forth by vehicle manufacturers, various government agencies and ad hoc trade organizations, which informally guide their business practices. Dealership employees rely on this codified knowledge to guide most of their activities on a day to day basis. Rarely, have I seen what would be considered second-generation KM activities taking place within the SME's I have visited. This is not to say that SME's do not actively engage in formalized KM activities, but I have not observed this to be the case in my specific industry. In the longer term view though, large automotive dealer groups have begun to consolidate former single point dealerships into multi-store operations. With this consolidation, I have seen once small and medium enterprises transformed into large businesses very quickly. These large dealer groups exhibit many of the
same operational parameters as the manufacturers, including the support of many first generation KM platforms, while beginning to integrate second generation KM activities, in order to gain economies of scale, improve efficiency, and reduce enterprise costs. Regardless of the size of the firm, KM remains an important and growing part of all businesses, in today's complex global economy! “J.D.

“In small and medium enterprises, as in larger organizations, staffs need suitable and advanced knowledge. They need to know what their colleagues know and to be connected with them to share knowledge. And like large organizations, SMEs need methods of detecting what they know. In effect, with the Internet, knowledge management has become cost efficient. Given the methods, SMEs could gain an advantage over their bigger counterparts in applying knowledge management, because they do not have to deal with existing hierarchical structures that promote concealment rather than directness. Knowledge management is the key to allowing SMEs to function globally without giving up the advantages of their smaller size. With knowledge management tools and integration with the Internet, the virtual network of an organization can now be leveraged by SMEs to increase their assets and competitiveness.” C.B.

“I think KM is formally and informally applicable at Small to Medium Enterprises. For example formal structure describes the parts of the organization, their functions and their responsibilities. and informal structure, makes the organization productive or causes disruption. For example, the self-forming communities. Also on the other hand, a substantial proportion of productive output arises from the informal structure, so I think that SMEs should encourage its growth.” A.D.

“[JD] provides a good illustration and I agree with [his or her] sentiments. I too believe that KM is informally applicable to SME’s. Often times the resources in human capital are not available in a smaller organization and many managers where various hats. There is little time and therefore minimal focus on gathering, processing and formalizing knowledge. Large organizations have departments devoted to KM and have the people, knowledge, and time to proactively think, process and integrate KM. I have worked for all size companies and I can say that the smaller ones lacked time to practice any type of management practice or study. Most of the time, you are reacting to the market, hiring the best talent or updating technology to remain competitive. From a banking standpoint, similar to the automobile dealer example, my company houses the KM function in HR. The group focuses on working with HR relationship managers in the field who focus on keeping the client (being employees) happy and functional in their job. Are employees engaged in their job? If not, what can be done to do so and if they are how is it translating into bringing in new business and selling products to customers. What possible outcomes exist if all employees are engaged, are properly trained and contain the knowledge to be the best in the industry? Will they sell more to SMEs? The small businesses the bank builds relationships with and services, informally possess KM and rely on the expertise of the larger entity to provide KM services such as cash management or derivative planning to make their money and investments work for them-not against. The relationship is reciprocal.” C.C.

“Modern day knowledge management has been targeted at large companies and large organizations. However, in practice, knowledge management within giant enterprises has been mainly departmental. The general practice has been to adopt knowledge management to individual departments. Most often the size of and style of operations mirrors that of a smaller-sized company. Users of knowledge management within large companies and organizations would ideally want to take a more enterprise-wide approach. But practicality often dictates otherwise. Therefore, traditionally, the systematic capturing, transferring, and sharing of knowledge has primarily been practiced in what is essentially a smaller-sized company environment. Within the smaller-sized company, and departments within large companies, it is perhaps significantly easier to gain a valuable understanding of the formal and informal knowledge communities, than it is within the much larger and more complex companies. Smaller-sized companies are already likely to actively have in place a culture that is more in tune with knowledge sharing, and sharing of resources in general.” C.V.

“I agree, I think many small to medium companies do not even know that KM exists. Of those who are aware of the power of knowledge
management, very few feel they have the necessary infrastructure to implement the KM systems and many feel they have far more pressing priorities and needs. I am sure that Knowledge management is still very much viewed by smaller sized companies as a fad, that only the giants can afford to indulge in. Smaller-sized companies should adopt the policies and practices of the larger, more prosperous companies. They should understand that they need knowledge management just as much as the larger companies do, and they need it now, not in the distant future.” A.D.

It is important to note that these participants from larger organizations share and synthesize the idea that small companies “need knowledge management just as much as the larger companies do” and that “modern day” KM has primarily targeted larger organizations. It is this researcher’s opinion that there could be an opportunity for consultants, information system developers, researchers, and instructors to further explore the opportunities of formally defining KM at SMEs, and including these concepts in small business management courses, textbooks, and organization training programs.

“Much of the discussion of knowledge management implies that KM is not worth doing unless dealing with a large company. However, these assumptions are completely unwarranted. People are becoming more aware that KM is also advantageous to smaller enterprises. In these size companies, staff needs appropriate and up-to-date knowledge. They need to know what their colleagues know and to be connected with them to share knowledge. Similar to large corporations, SMEs need ways of remembering what they know. Given the tools, SMEs find themselves at an advantage over large companies in implementing knowledge management, because they do not have to overcome existing hierarchical structures that foster secrecy rather than openness. Knowledge management is the key to allowing SMEs to operate internationally without giving up the benefits of their smaller size. With the right KM tools and integration with the Internet, the virtual network of an organization can now be leveraged by SMEs to increase their resources and competitiveness. It can mean the difference of survival and future success. Generally, knowledge management software developers and vendors do not target smaller-sized companies for their tools. The reason for this is purely market driven. Smaller-sized companies are apparently not a ready market, and the large companies' market is far from saturated. Most vendors, therefore, view smaller sized companies as the more difficult to penetrate markets. However, the lack of attention given to smaller-sized companies by knowledge management vendors is not in the least indicative of the urgent need for these kinds of tools. It is obvious that the smaller-sized company also needs to capture and intelligently exploit its knowledge. C.V.

A problem may arise when the question arises “do SME have the resources available to properly implement formal KM systems?” Each SME may have a different response to this question. SMEs may have to effectively allocate resources in order to accomplish successful implementation. Also, different formal KM systems may benefit one SME more than another. The given SME has to evaluate which KM system is appropriate and meets their needs. We have spoken about this in past posts. There may be a transitional period and process that will occur in order to everyone to accept the change. It will be a process that may take time. Also, since some SMEs are already using informal KM systems they may be able to implement a combination of informal as well as formal KM systems. This will decrease the overall change, and make employees more comfortable, making the transition easier to make. Also, the combination of both formal and informal systems may be an innovation that will benefit an SME.” D.Q.

“I believe that KM is handled more informally in small to medium sized companies. I feel as though they don't have the necessary means and resources to implement formal practices of knowledge management. There would be a very important question to ask if a smaller company were to implement a formal program: who would manage this? One can think that maybe the CEO would try to implement a KM program, but then the question would arise would it even be efficient? I absolutely believe that formal practices of KM are done in larger corporations. They have the funds to do the correct research in achieving what needs to be done and what KM would try to fix. A larger corporation has the ability to allocate efficient programs. Moreover, I believe that smaller companies are more likely to have informal KM programs, and larger companies are more likely to incorporate formal programs.” K.L.
“It sounds like most of us agree that SMEs have informal KM because these firms do not have the resources available to have true focus in this arena. Money is tight and the human capital side is at a minimum. I suppose a company, just starting out, could choose to implement KM and show its importance from the onset. Then it would be as any other crucial department... as many of us strive to start our own business one day, a foundation of information on this topic will help us to utilize it in our future endeavors. “C.C.

“We know that most employees don't understand what the value of a KM system is and the value that it has for a company. In a large company, there are so many different areas that can be explored, even though employees would have access to the information, they may not be able to use ALL of the information in the future. However, in a smaller organization, a KM system may give employees enough information that they could start their own competitive business. Many SMEs are family businesses and have information that has been passed down generation to generation. Do you think that once more and more SMEs start realizing that the benefits of instituting a KM [system] there will be some that don't want to "put it all out there" for fear of having a former employee start a viable competitive business?” M.H.

“Corporate politics will always be an issue and can definitely be a blocker when looking to advance. Not everyone will agree with your reasons for advancement and many will balk at the high costs of technical implementations. I think your real life example is great in showing that it is highly noticeable to employees that knowledge sharing is lacking and can lead to higher productivity. Now we just need managers to also pick up on it! Where I work we implement a 70M ecommerce system that has a suite to develop site offers and promotions. This suite does not function properly in its current phase and needs many updates. It takes me very long to do any work in this system or to post any information. It ends up costing me a lot of my time and costing the company money. This to me is an example of how knowledge management is only a resource when it is implemented correctly and for the correct organization.” M.C.

I feel that KM is more informally applicable for SME’s. For starters, in most large organizations knowledge is more scattered throughout the organization. Different organizational departments may work on different aspects of the same knowledge realm without coordination and without being conscience of each other’s activities. Therefore, successful implementation of a formal knowledge management system in a large business is easier to attain the commitment at all managerial levels. This makes for a more formal structure which includes a chief knowledge officer. In smaller businesses knowledge is not as dispersed throughout an organization and knowledge can be transferred at a quicker rate, generally speaking. This causes for a more natural, less forceful flow of information. Whereby, knowledge management practices should be utilized and adapted into corporate culture, in my opinion it does not necessarily need to be done in an as formal manner as with large corporations. I feel a practical approach to knowledge management should be tailored specifically to the needs of a business.” C.K.

“I agree with your post. In my opening post I felt that SME’s can implement formal KM systems which I still believe would be a good idea, but I understand 100% where you are coming from. It is almost a natural process for SME’s to develop informal KM systems. It is almost a result of the environment and the organization structure in general. SME’s tend to have smaller lines of communication and less knowledge to manage resulting in these informal systems. On the other hand, I still believe implementation of a formal KM system on top of their informal systems can only help the organization.” D.W.

Overall, many of the larger firm participants seemed to agree that the size of the organization does not matter, and that the objectives of sharing and transferring organizational knowledge can and should be accomplished by SMEs. The last set of selected participant comments concluded that KM often develops naturally in smaller organizations. This researcher would probably clarify to this to mean that the participants were referring to successful SMEs.

“Similar to [J]’s experience I worked for a big company…. and we had a great KM network. I worked on the Olympics in Torino so how we ran things were very different then the network itself. We worked for a large company but within that company we were broken down in to one
small sector (the Olympics) and then broken down even farther by event venue. There was a great deal of information always on the move. One of the great things that [C.K.] touched on earlier was that no matter what countries you are in you have access to the Internet. [XYZ Company] has a great KM network where you can track equipment, people, pretty much whatever you need to know. That is KM on the large scale very formal on a need to know bases. In Italy we had more of an informal KM system. If you were not at a venue you were at the [XYZ] which was the home of the KM system. [XYZ] was the home for all the information about everything and everyone, this system used tacit knowledge sharing among employees. The KM system breaks down even farther with the event venue. The KM system was very informal and transferring and sharing knowledge flowed freely. I don’t think it is really the size of your company but rather how they handle the information given.” L.J.

“[LJ] I really enjoyed your post as it represented a real life example as well as a different view to informal and formal KM systems. I found it interesting how a larger company (XYZ) implements different forms of KM systems when the company is broken down into different divisions or working on different projects or events. When you think about it logically, this makes a lot of sense as different systems are needed for different situations. A large scale formal system would not be as effective within a smaller isolated event. Therefore, different systems are implemented based on the environment. I have said this in earlier posts as I believe a combination of both formal and informal KM systems would benefit an organization. Now I see that another aspect is the nature of the project or event the organization is facing. This plays a major role in which system to choose from. What I take from this is that companies must train their employees to handle and understand both forms of the systems as they will more than likely be encountering them during their tenor.” D.Q.

Overall, the discussions seemed to conclude very optimistically for KM usage at SMEs from the perspective of managers working at larger organizations. It is informative to see the conversations develop to the point where it is also recommended that larger organizations should seek to leverage some of the power of informal KM practices by encouraging smaller departmental units (within the larger organizations), or specific company project teams, that often enable SMEs to be faster moving on some knowledge issues while also having the established KM infrastructure and policies of larger organizations.

3. CONCLUSION
It has been said that “knowledge doesn’t pay, it’s what you do with your knowledge that pays” (Esar 1968). This study found that managers at large organizations seem to agree that knowledge can indeed pay, and KM can be a valuable asset for all sizes of organizations to use knowledge, not just larger organizations that have formalized KM processes. In addition, informal KM processes used by SMEs (from the perspective of large organization managers) can indeed payoff for large and small organizations. The costs or investment in KM processes whether formally or informally, are believed to be something that can benefit SMEs in valuable knowledge creation, retention and dissemination to help the smaller companies maximize their potential for organizational performance, profit, and achievement of their objectives. The study also revealed that the large organization practitioners of KM believe that these processes can payoff for small organization managers. Both large and small organizations can make KM investments payoff, whether formally or informally, to leverage knowledge creation, retention, constancy, and valuable knowledge dissemination, to help companies maximize, to maximize their potential for organizational performance, profit for owners/shareholders/stakeholders, and achievement of their stated objectives.

4. REFERENCES


The New Hybrid Business Types: Their Uses and Purposes

First Author (corresponding)
Dr. Valeriya Avdeev
Department of Accounting and Law
Cotsakos College of Business
William Paterson University
1600 Valley Road, Wayne NJ 07474
(973) 720 – 3744
avdeevv@wpunj.edu

Second Author
Dr. Elizabeth C. Ekmeekjian
Department of Accounting and Law
Cotsakos College of Business
William Paterson University
1600 Valley Road, Wayne NJ 07474
(973) 720 - 3851
ekmekjian@wpunj.edu

ABSTRACT
Prior to creation of the low-profit limited liability company, or an L3C, private foundations rarely invested in program-related investments, even though such investments were beneficial to them on many levels. Most non-profits have shunned away from such investments mostly due to the unpredictability of their treatment by the Internal Revenue Service. However, with the help of the new hybrid entity, the L3C, the world as we know it as it relates to PRIs is about to change.

L3C was specifically drafted to act as a safe-harbor for meeting the three requirements of program-related investments exception under Internal Revenue Code Section 4944(c). Specifically, every state statute that authorizes the creation of L3Cs, includes the three program-related investments (PRI) requirements as part of the entity's definition. L3C, by its very definition, should become a prima facie case for a safe program-related investment arrangement. According to Robert M. Lang, Jr. of The Mary Elizabeth and Gordon B. Mannweiler Foundation, who is a significant proponent of L3Cs, L3C is a PRI vehicle: “We looked at this and convened a panel of distinguished lawyers, financiers, etc. and asked what would happen if an LLC was chartered from the beginning to be a low profit entity. We wanted to codify the concept that maximization of member (shareholder) profits was not the prime goal. We started there, trying to draw up a law for a special form of LLC called L3C; low-profit, limited liability company, with the hope that after the law passed and had received a few favorable private letter rulings, that the ruling would become automatic or maybe even unnecessary.”

An L3C, was first enacted in Vermont in April of 2008 and was drafted as an extension of a limited liability company (LLC). As such, L3C is neither tax-exempt nor eligible to receive tax-deductible charitable contributions. L3C, just like a traditional LLC, is a pass-through entity and is not subject to federal income taxes. Instead, items of income, expense, gain, and loss flow through to members of the L3C and would have to be reported on the members' individual income tax returns. Moreover, L3C was intended to be a hybrid entity: organized for-profit, but with a charitable social purpose. Specifically, L3Cs are required by state statutes to have the primary purpose of furthering a charitable or educational mission and not to maximize profits.

The other states that have enacted L3C legislation have adopted language very similar to the one used in the Vermont Limited Liability Company Act. Similarly to Vermont, all of the other states require the same basic elements: (1) the entity must further the accomplishment of a charitable or educational purpose within the meaning of §170(c)(2)(B), (2) the entity would not have been formed but for its relationship to the accomplishment of a charitable or educational purpose, (3) neither the production of income nor the appreciation of property are a significant purpose of the entity, and (4) the entity has no political or legislative purpose within the meaning of §170(c)(2)(D).

Furthermore, in some states, such as Vermont and Utah, the educational and charitable purpose requirement for an L3C is included in the definition provisions of the state’s limited liability company act and no specific language is expressly required to be contained in the L3C’s articles of organization. In other states, such as Michigan, the charitable or education purpose together with the prohibition on lobbying and political campaign activity is required to be expressly stated in the L3C’s articles of organization. However, since the articles of organization is a public document and operating agreement is not, it would probably be more appealing to the Internal Revenue Service to have the requirements specifically stated in the articles of organization.

Moreover, all of the states that passed L3C legislation did so by supplementing their existing LLC statutes to permit a creation of the new social-purpose business entity. Therefore, L3C is a subset of the LLC and similarly should be treated as a pass-through entity for income tax purposes, assuming that the L3C does not make the election to be treated as a corporation. Similarly to LLC, L3C provides its members with limited liability protection against the actions and debts of the L3C business.

The arrival of L3C is potentially a break-through moment for the individuals and organizations that are dedicated to achieving social change. L3C is likely to cause a substantial increase in the availability of both private and non-profit capital to entities that would need it most – those designed to further charitable and educational purposes.
ABSTRACT
In recent years several studies have focused on the potential benefits of conducting monetary policy by setting a target for the path of the price level rather than a target for the rate of inflation. This research has shown that, unlike previous studies suggested, price-level targeting may be able to achieve a better trade-off between inflation and output volatility. This paper focuses on the implications of price-level targeting for exchange rate dynamics. The simulation of a small open economy model calibrated to match the Canadian data shows that a central bank with a price-level target may be able to reduce the volatility of the nominal exchange rate, but the effect on the real exchange rate depends on the type of shocks faced by the economy. Demand shocks generate less real exchange rate volatility under price-level targeting than under inflation-targeting, but the opposite is true for supply shocks. The results indicate that in Canada a price-level target would have generated much less inflation volatility but slightly higher real exchange rate volatility than its current inflation targeting regime.

Keywords
Monetary policy, price-level targeting, exchange rates

INTRODUCTION
In the last two decades many central banks have been very successful at maintaining a low rate of inflation. The adoption of inflation targets has, without doubt, contributed to this success. For example, the Reserve Bank of New Zealand’s introduction of a formal inflation target in 1989 reduced the inflation rate from the teens in the 1980’s to about 2% in the 1990’s. Canada’s adoption of an official inflation target in 1991 is responsible for reducing the average rate of inflation from about 5% to about 2% (Figure 1). Inflation targeting has also helped to greatly reduce the volatility of inflation.

1 Currently Australia, Canada, the European Monetary Union, Mexico, New Zealand, South Africa, Sweden and the United Kingdom have explicit inflation targets. In addition, other countries, including the US, have an implicit inflation target.

Despite its success, one important caveat of inflation targeting is that if the central bank uses monetary policy to keep inflation close to its target, its ability to use monetary policy to influence the exchange rate is limited. Although central banks with inflation targets explicitly signal that they are primarily concerned about price stability, they may also be concerned about excessive exchange-rate volatility. In fact, many governments and central banks go above and beyond to reduce or eliminate exchange-rate volatility. Measures taken range from sporadic foreign exchange interventions to abandoning the domestic currency altogether, passing by different types of fixed exchange rate regimes. The most obvious cost of excessive exchange-rate volatility is uncertainty about future exchange rates, which is detrimental for international trade and finance. Fluctuations in the exchange rate may also contribute to increased volatility of output and consumption.

Figure 1 Canada’s Inflation Rate (%)

Given that the goals of price and exchange-rate stability are often in conflict, the purpose of this paper is to study whether a price-level targeting regime would be able to achieve a better trade-off between the two than the current inflation targeting regimes. In other words, can a price-level

2 Although this is not always the case: exchange rates may also act as “shock-absorbers” and dampen a rise (or fall) in those variables.
target help reduce exchange-rate volatility without sacrificing price stability?

**Inflation Targeting vs. Price-Level Targeting**

Under inflation targeting the central bank conducts monetary policy with the objective of minimizing deviations of the inflation rate from a chosen inflation target (say, 2% annually). Such an objective can be attained by adjusting a benchmark interest rate in order to influence the aggregate demand, which in turn would affect the inflation rate. In this paper, the term inflation targeting is used loosely and it includes the practice of central banks that not only target inflation but also may use monetary policy to stabilize output and/or the exchange rate. For instance, Taylor’s (1993) well-known description of US monetary policy in terms of a simple rule that determines the federal funds rate as a function of its natural rate, deviations of inflation from an implicit target of 2% and deviations of output from potential output could be considered an example of inflation targeting.

Despite the success of inflation targeting, several authors have proposed replacing inflation targets with targets for the price level. Currently there are no central banks with a price-level target, although there is a historical precedent in Sweden from the 1930’s (Berg and Jonung, 1999). Under a price-level target, the central bank’s objective is to minimize the deviations of the price level (as measured by the CPI or another price index) from a pre-announced path. For example, the price-level target could rise by 2% every year. To understand the difference with respect to an inflation target of 2%, consider the different responses of a central bank to an increase of inflation above 2% under the two alternative regimes (Figure 2). Once the inflation rate returns to 2%, the central bank with an inflation target does not need to take any action: it is not expected to correct past deviations of inflation from its target. By contrast, under a price-level target the central bank would not be satisfied with a return of inflation back to 2%. The temporarily higher-than-2% inflation rate has caused a permanent increase of the price level above the desired path. In order fulfill its objective, a period with inflation above 2% must be followed by a period of inflation below 2%. Although in both regimes inflation becomes stationary, only under a price-level target is the price level trend-stationary. Despite the fact that central banks with an inflation target always aim for “price stability,” the reality is that under an inflation target it’s very difficult to predict what the price level will be in the more distant future. One clear benefit from a price-level target is that it would make future price levels much more predictable. The reduced uncertainty would encourage long-term contracts and long-term investments. On the other hand, such benefit might be offset by higher inflation volatility in the short-run. If so, the choice between an inflation target and a price-level target implies a trade-off between inflation volatility and price-level volatility, a result supported by Fisher (1994), among others. It is not obvious which one the public dislikes the most. However, Svensson (1999) and Vestin (2006) showed that a price-level target could offer a “free lunch” in the sense that, under certain conditions, it could reduce both the volatility of inflation and the volatility of the price level. Under a price-level target, higher-than-average inflation today means lower-than-average inflation in the future. If price-setting decisions are forward-looking, the expectation of low prices in the future will moderate the increase in prices today. This implies that a price-level target may be better even if the public is only concerned about inflation volatility and not about price-level volatility.

![Figure 2 Responses to a Temporary Inflation Rise](image)

While most of the literature comparing price-level and inflation targeting has focused on the implications for inflation and output volatility, there is a compelling reason to consider the effects of a price-level target on the exchange rate. With a price-level target the nominal exchange rate becomes stationary around the real exchange rate. Shocks that temporarily affect inflation but have no permanent effects on real variables, including the real exchange rate, would not cause any change in the expected future value of the nominal exchange rate. Given the forward-looking nature of the exchange rate, that would reduce its volatility in the short-run as well. While international investors may be primarily concerned about the volatility of the nominal exchange rate, international trade is mainly affected by the real exchange rate. In practice both exchange rates move closely together in the short-run, which may be attributed in part to the sluggishness with which prices adjust. If so, the reduction in nominal exchange rate volatility may also reduce the volatility of the real exchange rate.

This study uses Canada as a benchmark for small open economies with inflation-targeting regimes. A dynamic stochastic model of the Canadian economy is used to compare the actual performance of the Canadian economy under its current inflation targeting regime with its hypothetical performance under a price-level target. The simulation of the model economy under both regimes shows that a price-level target would have been successful at
generating significantly less inflation volatility without higher output volatility. However, in the particular case of Canada, the real exchange rate would have been moderately more volatile under a price-level target. The simulation of the model also allows comparing the performance of the two regimes under different shocks. Price-level targeting, which responds to all types of shocks by raising the real interest rate more aggressively than inflation targeting, performs better in the case of demand shocks. However with supply shocks the aggressive response by the central bank may be more successful at containing inflation, but has a cost in terms of higher output and real exchange rate volatility.

The remainder of the article is organized as follows. Section 2 describes the small open economy model and the estimation or calibration of its parameters. Section 3 compares the behavior of output, inflation and the real exchange rate under the inflation-targeting regime actually followed by the Bank of Canada and under a hypothetical price-level target. It also compares the performance of the two regimes depending on the type of shock hitting the economy. Finally Section 4 concludes.

2 SMALL OPEN ECONOMY MODEL
All of the individual elements of the model are fairly standard in the New Keynesian macroeconomics literature. Due to space constraints this section describes the model’s main features but does not present the model’s equations.

Households derive utility from consumption and real money balances. They also derive disutility from labor. The utility function is assumed to exhibit external habit formation in order to help replicate the persistence of consumption and output in the data. In addition to labor income, households receive profits from domestic firms and interest from domestic and foreign bonds. Income is used to pay taxes and consumption expenditures and to accumulate money, domestic-currency bonds and foreign-currency bonds. Capital owners borrow funds from households and use them to purchase capital, which is then rented to domestic wholesale firms. Investment spending includes capital adjustment costs, which help replicate the volatility of investment in the data. The government collects revenue from money creation and taxes and uses it to make purchases. Domestic spending, which includes consumption, investment and government purchases, is divided between domestic and foreign goods. Preferences over domestic and foreign goods are described by a constant elasticity of substitution (CES) function. Domestic goods are also exported. The foreign demand for domestic goods is assumed to exhibit inertia as in Gertler et al. (2007). Purchasing power parity holds for exports (although not for imports, due to partial exchange-rate pass-through).

There is a competitive wholesale industry that produces wholesale output, which is then sold to retailers. The wholesale good is produced using capital, which is rented from capital owners, and labor, supplied by households. The production function is Cobb-Douglas. There are also two monopolistically competitive industries: retailers and importers. Retailers purchase domestic wholesale output, differentiate it, and sell it to the government, consumers, capital owners and foreigners. Preferences over the differentiated goods are given by a CES function. The retail sector is introduced to create price stickiness as in Calvo (1983), which makes monetary policy non-neutral. Importers are very much like retailers except that they purchase foreign rather domestic wholesale output, they do not export their output and their degree of price stickiness may be different. Price stickiness in the importing sector creates an incomplete exchange-rate pass-through, since not all importers incorporate the change in the exchange rate in the period in which it takes place.

The existence of domestic-currency and foreign-currency bonds is necessary to derive an interest parity condition that will determine the exchange rate. However, without additional constraints or frictions, the composition of the households’ portfolio would be undetermined. Therefore it is assumed that households use domestic-currency bonds exclusively to lend to domestic capital owners and use foreign-currency bonds to lend or borrow from the rest of the world. In addition, there is a friction in international capital markets: the interest rate paid or received on foreign bonds depends on the ratio of net foreign assets to income. This financial friction is introduced for technical reasons; without it there would not be a unique steady state.

Monetary policy is conducted by following a Taylor-type interest-rate rule consistent with the estimated Bank of Canada’s interest-rate rule (more details below): the central bank responds to deviations of expected inflation from its target and also tries to stabilize the output gap, but it does not try to stabilize the real exchange rate. In addition, the interest rate is adjusted gradually towards the desired level (interest-rate smoothing). Under the hypothetical rule, the central bank targets expected deviations of the price level rather than expected deviations of the inflation rate.

The model contains seven exogenous shocks: a consumption shock, a government spending shock, a mark-up shock, a productivity shock, an import-price shock, a foreign demand shock, and a foreign-interest shock. All shock are assumed to follow an AR(1) process.

Estimation of the Model’s Parameters
The sample period spans from the first quarter of 1991, when Canada adopted its official inflation target, to the first quarter of 2009, when it lowered its benchmark interest rate target to 0.25%. At that level the Bank of Canada’s decision on interest rates is constrained by the zero-bound: even if its rule suggested that lowering interest rates was necessary it would not be able to do so, since nominal interest rates cannot be negative.

The interest rate is measured by the overnight inter-bank nominal interest rate. The output gap is constructed as the
percentage deviation of real GDP from its quadratic trend. Expected inflation is proxied by the average CPI inflation rate over the next four quarters. The real exchange rate (REER) is measured by the percentage deviation of the real effective exchange rate from its quadratic trend. All data is obtained from Statistics Canada and the IMF.

The actual interest-rate rule followed by the Bank of Canada is specified and estimated as in Clarida et al. (1998). The list of instruments includes the levels of the overnight interest rate, the output gap, the real exchange rate, and the quarterly growth rates of the consumer price index, wages, productivity and the M2 money supply in the preceding four quarters. Since the real exchange rate coefficient is not significant the interest-rate rule is re-estimated without it. The estimated coefficients (and standard errors) for the output gap, expected inflation and the smoothing parameter are 0.41 (0.10), 1.86 (0.29) and 0.83 (0.01), respectively. The J-statistics in both specifications indicate that the overidentifying restrictions cannot be rejected.

Some of the parameters are calibrated rather than estimated. The steady-state ratios of investment, government spending and imports to GDP are set equal to their sample averages: 20%, 20% and 34%, respectively. The average ratio of net foreign assets to annual GDP is set at -24% (its sample average). The subjective discount factor is set at 99%, which implies an annual real interest rate equal to 4%. The capital depreciation rate and the capital share are set at their standard values of 2.5% and 33%, respectively. The parameter associated with the risk premium is set at 0.1% to match the volatility of the net foreign assets to GDP ratio. The parameter for capital adjustment costs is set at 40 to match the volatility of the net foreign assets to annual GDP is set at -24% (its sample average). The capital depreciation rate and the capital share are set at their standard values of 2.5% and 33%, respectively. The parameter associated with the risk premium is set at 0.1% to match the volatility of the net foreign assets to GDP ratio. The parameter for capital adjustment costs is set at 40 to match the relative volatility of investment to GDP.

The rest of the model’s parameters and the properties of the exogenous shocks are estimated using Bayesian techniques (see for example Smets and Wouters, 2003). The parameters values are chosen so that the model replicates output, inflation, and the real exchange rate data over the sample period. First the posterior distribution’s parameter modes are estimated. Then the posterior distribution’s parameter means are calculated using the Metropolis-Hastings algorithm. In all cases the standard deviations of the prior distributions are set quite loose. The prior means for the fraction of retailers and importers that do not adjust their price in a given period are set at 75%. This implies that on average prices change every four quarters. The prior mean for the habit formation parameter is set at 50%. The prior means for the inverse of the Frisch elasticity of labor supply and the inverse of the intertemporal elasticity of substitution are both set at 2. The elasticities of substitution between domestic and foreign goods are set at 1. The prior mean for the parameter for export inertia is set at 50%. The prior means for the autocorrelation coefficients of the shocks are set at 50%, and the prior mean for their standard deviations is set at 1%.

The estimation results indicate a lower degree of price stickiness than assumed for domestic goods. On average domestic prices are re-set every 3 quarters, which is still within the usual estimates. Imported prices take on average more than seven quarters to be adjusted, which implies a very low degree of exchange-rate pass-through. Consumers exhibit a high degree of habit persistence (0.71) and their utility of consumption is almost logarithmic (1.17). The domestic elasticity of substitution between home and foreign goods is low (0.56), which can be explained by the fact that in reality some home goods cannot be traded. The foreign elasticity of substitution between home and foreign goods is in line with previous estimates (1.45). Exports exhibit a relatively high degree of inertia (0.18).

3 SIMULATION RESULTS

Table 1 shows that the simulated model with inflation targeting does a good job at matching the volatility of output and the real exchange rate. However it generates slightly more inflation volatility than the data. Table 1 also shows what would have been the volatility generated by the model if the central bank targeted the price level rather than inflation. For the interest-rate rule with price-level targeting the smoothing parameter and the coefficient on output are kept unchanged and the coefficient on price-level deviations is set at 1.86. With those coefficients, the model with price-level targeting generates the same output volatility as the model with inflation targeting. However the price-level targeting rule is able to dramatically reduce the volatility of inflation. Since firms infrequently change prices, they take into account future price levels when deciding by how much to raise their prices today. The commitment by the central bank to return the price level to its path makes firms expect low prices in the future and curbs price increases today.

<table>
<thead>
<tr>
<th>Data</th>
<th>IT</th>
<th>PT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Output</td>
<td>2.19%</td>
<td>2.04%</td>
</tr>
<tr>
<td>Inflation</td>
<td>0.63%</td>
<td>0.73%</td>
</tr>
<tr>
<td>RER</td>
<td>6.16%</td>
<td>6.37%</td>
</tr>
</tbody>
</table>

Table 1 Standard Deviations

By construction, the nominal exchange rate is stationary only under price-level targeting. However under a price-level target the volatility of the real exchange rate would have been slightly higher. To find out why, it is useful to study the effects of each individual shock in isolation.

<table>
<thead>
<tr>
<th>Gov. Shock</th>
<th>Cons. Shock</th>
<th>IT</th>
<th>PT</th>
<th>IT</th>
<th>PT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Output</td>
<td>0.98‰</td>
<td>0.86‰</td>
<td>1.93%</td>
<td>1.86%</td>
<td></td>
</tr>
<tr>
<td>Inflation</td>
<td>0.24‰</td>
<td>0.11‰</td>
<td>0.33%</td>
<td>0.06%</td>
<td></td>
</tr>
<tr>
<td>RER</td>
<td>0.73‰</td>
<td>0.59‰</td>
<td>1.78%</td>
<td>1.63%</td>
<td></td>
</tr>
</tbody>
</table>

Table 2 Domestic Demand Shocks

Tables 2 and 3 show the volatility generated when all shocks but one are shut down. In all instances price-level targeting
generates significantly lower inflation volatility. However price-level targeting only generates less volatility in output and the real exchange rate in the case of demand shocks, while it generates higher volatility in the case of supply shocks. The impulse-response functions (not shown) show that the central bank always raises the real interest rate more aggressively when following price-level targeting than under inflation targeting. In the case of demand shocks, that helps to curb the aggregate demand and reduce the volatility of inflation, output and the real exchange rate. A demand shock does not create a conflict between the central bank’s price and output stabilization goals. However the situation is different with a supply shock. In this case the more aggressive response of the price-level targeting central bank means more price stability at the expense of lower output and real exchange rate stability. The statistics for the external shocks (not shown) are consistent with this interpretation. The foreign-interest and foreign-demand shocks are equivalent to demand shocks, while the import-price shock is like a supply shock.

<table>
<thead>
<tr>
<th>Mark-Up Shock</th>
<th>Tech. Shock</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>IT</td>
</tr>
<tr>
<td>Output</td>
<td>0.11%</td>
</tr>
<tr>
<td>Inflation</td>
<td>0.17%</td>
</tr>
<tr>
<td>RER</td>
<td>0.11%</td>
</tr>
</tbody>
</table>

Table 3 Domestic Supply Shocks

4 CONCLUDING REMARKS

Previous research has shown that price-level targeting not only provides certainty about the future price levels but may also help reducing inflation volatility in the short run. This paper points out another potential benefit that has drawn little attention: price-level targeting would make the nominal exchange rate stationary around the real exchange rate. That would make the nominal exchange rate more predictable without sacrificing price stability. However the nominal exchange rate may still remain quite volatile if most of the volatility of the nominal exchange rate is caused by real factors that affect the equilibrium real exchange rate. In addition, while a price-level targeting regime is more successful at reducing the volatility of inflation, it does not always generate lower volatility of other variables, including output and the real exchange rate. Price-level targeting seems to perform better in response to demand shocks since in that case there is no trade-off between prices and output: a more aggressive central bank response leads to lower output, inflation and real exchange rate volatility. However such forceful response is not clearly superior in the case of supply shocks. The higher stability in prices may be achieved at the expense of higher volatility in output and the real exchange rate. This implies that the one crucial factor that central banks need to take into account when considering the adoption of a price target is the prevalence of one type of shock over another in their economy. In the case of Canada, a price target is not clearly superior, since it generates lower inflation volatility but higher real exchange rate volatility. The choice of one regime over another depends on the costs of exchange-rate volatility relative to the costs of inflation volatility.

The reason why price-level targeting is not always superior to inflation targeting may be due to the common central bank practice of gradually adjusting interest rates. As Svensson (1999) and Vestin (2006) point out using optimal policy rules rather than Taylor-type rules, price-level targeting serves as a commitment mechanism that introduces history-dependence into the policy rule. But history-dependence can also be incorporated by adding interest-rate smoothing into a Taylor-type inflation-targeting rule (Clarida et al., 1999). This implies that, given the current practices of central banks with inflation targets and interest-rate smoothing, a shift to price-level targeting may bring only small benefits in terms of the volatility of real variables, including the real exchange rate.

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Monetizing Daily Deals Online: Groupon, Inc

David L. Bakuli
Department of Economics and Management
Westfield State University
577 Western Avenue, Westfield MA 01086
dbakuli@westfield.ma.edu

ABSTRACT
With 116 million customers and operating in 175 markets in 45 countries within 30 months of operation, Groupon is the pioneer in the Daily Deals sector. This growth and several other factors prompted Groupon to file for an Initial Public Offering (IPO) in June, 2011. However, this filing was fraught with setbacks from the start. First, Groupon used nonstandard account reporting procedures that masked losses and was forced to update the filing. When it revised and properly presented its accounts, it revealed high marketing costs and annual losses since inception prompting several analysts and investors to question its business model. Second, since filing for an IPO the stock market has been quite volatile, putting in doubt Groupon’s chances of making $25 billion. There are several strategic decisions management has to make. Should it go public or remain private? Should it be put up itself for acquisition? Should Groupon acquire a company to expand its offerings? Or should it continue to expand abroad or scale down?

Keywords: Social commerce, group buying, discrimination pricing, daily deals, IPO, entrepreneurship, venture capital, company valuation, discount pricing, volume purchase.

1 INTRODUCTION AND BUSINESS MODEL
Groupon is a provider of social commerce websites that offer several deals on local goods, services and cultural events. It offers a daily shopping bargain to subscribers via e-mail, negotiating deals with merchants for electronic coupons, or "groupons," for products and services. Once a predetermined number of groupons are sold, the deal becomes valid, typically giving the purchaser a 50 percent discount on the item or service offered. Groupon takes a percentage of the revenue generated from the sale, generally 50 percent. The majority of products and services offered by Groupon are tailored to the local markets. As of June 30, after just over two and one-half years in operation, the company is operating in 175 markets and has acquired 116 million subscribers in 45 countries including North America. By the second quarter of 2011, Groupon had 78,466 merchants participating in the program. Despite the fast growth, Groupon has incurred losses since inception, yet Groupon is planning to issue an initial public offering (IPO). While the value proposition of the Daily Deal is clear for the website owner and the consumer, it is not so for the business who is initially giving up 50% revenue. The profitability of the daily deal to the business stems from getting new customers; coupon users spending beyond the face value of the coupon; coupon holders coming back as repeat customers to spend at full price; and some of the coupon holders failing to redeem the coupons (Dholakia 2011). A 2011 study of Daily Deals in 23 US markets indicated that 35.9% of deal users spent beyond the deal value and 19.9% returned for a full-price purchase; 48.1% businesses indicated they would run another daily deal promotion, 19.8% said they would not run another daily deal promotion, and 32.1% were unsure; and 72.85 indicated they were open to considering another daily deal site (Dholakia 2011).

3 COMPANY BACKGROUND
Groupon, which was established in October, 2008, grew out of a website called The Point, which was launched in November 2007 to let users start a campaign asking people to give money or do something as a group. A special feature of The Point was that a project could not proceed unless it had attained a minimum number of people willing to participate in the initiative. This was the "tipping point." Thus, The Point helped consumers, employees, citizens, activists, and parents come together to solve problems that they couldn't solve individually.

The Groupon concept is based on the idea that city-dwellers are faced with so much cool stuff to do that the choices can be overwhelming. With so many options, sometimes the easiest thing is to go to a familiar restaurant, or just stay at home and watch a movie. As a result, they miss out on trying all the cool things cities have to offer. By focusing on one good or service each day, Groupon promises to simplify the selection. And by leveraging The Point's framework for collective buying, Groupon is able to offer deals that make it very difficult for merchants to say no to. Thus Groupon was started as a side project of The Point. Groupon’s philosophy: "we treat their customers the way we would like to be treated." (About us)

Founder of The Point and Groupon
Andrew Mason was born in Pittsburg, PA, but moved to Chicago to attend Northwestern University from which he graduated in 2003 with a degree in Music. After graduation, he took on part time jobs and learned software development from friends. Excited by the power of technology to change the world, Andrew developed Policy Tree, a policy debate visualization tool, and won a scholarship to attend the University of Chicago’s Harris School of Public Policy in 2006. In school for only 3 months, Andrew dropped out after receiving an unexpected offer to fund the idea that would become The Point. The Point, a then ground-breaking approach to online collective action and fundraising, was launched in November 2007 and one year later, Andrew
founded Groupon, leveraging the collective buying technology of The Point to make it easier (and cheaper) for participants to purchase goods and services in Chicago (About us).

2 Groupon Products

Featured Daily Deals. Daily deals distributed by email, on behalf of local merchants, to subscribers based on their location and personal preferences. The product was launched in October 2008 and it is offered in all of the North American and international markets.

Deals Nearby. Daily deals that do not appear as a featured daily deal appear as Deals Nearby. Each Deal Nearby currently is summarized in fewer than 20 words next to the featured daily deal. Deals Nearby often extend beyond the subscriber's closest market or buying preferences. Deals Nearby can also be targeted to certain subscribers, where access to the deal can only be obtained through an emailed hyperlink. Upon clicking the hyperlink, a subscriber is directed to a full description of the deal that is presented in the same format as the subscriber's featured daily deal. This product in January 2009 and it is offered in substantially all of the North American and international markets.

National Deals. This product is aimed at national merchants to use it as an alternative to traditional marketing and brand advertising. Although our primary focus continues to be on local deals, we use national deals from time to time to build our brand awareness, acquire new customers and generate additional revenue.

Groupon NOW. Groupon NOW is a deal initiated by a merchant on demand and offered instantly to subscribers through mobile devices and the Groupon website. Groupon NOW deals target subscribers within close proximity of the merchant and the purchased Groupons typically expire within a few hours of the deal launch. Merchants launch Groupon NOW deals from Groupon platform and can use this product to attract customers when they have excess capacity. The Groupon NOW product was launched in the second quarter of 2011 in 25 North American markets.

Deal Channels. Deal Channels aggregate daily deals from the same category and are accessible through the Groupon website and through email alerts that subscribers sign up to receive. Currently Deal Channels are offered in home and garden and event tickets and travel. Merchants can register their deals to be included in a Deal Channel. Subscribers can use Deal Channels to focus on deals that are of interest to them. Deal Channels were launched in February 2011 in selected North American markets.

Self-Service Deals. Self-Service Deals allows merchants to use a self-service platform to create and launch deals at their discretion. The use of the platform is free and allows merchants to establish a permanent e-commerce presence on Groupon that can be visited and followed by subscribers. Groupon receives a portion of the purchase price from deals sold through Self-Service Deals based on the extent to which it marketed the deal. The Self-Service Deals was launched in December 2010 in selected North American markets.

4 The Daily Deal Industry

The industry in which Groupon operates is the so-called “Daily Deal” and it is growing at an extraordinary pace. It is predicted that the U.S. daily-deal market will continue to grow and has potential to generate $3.93 billion in 2015 (Kharif 2011, Levy 2011). Currently, the industry is filled with hundreds of firms who generally operate within small local markets. There seems to be few barriers to enter the industry since it requires minimal initial capital investment. The bulk of the expenses are due to customer acquisition, merchant vetting and acquisition, and overhead costs of owning and operating a website, where third merchants post various promotions to the daily-deal company’s subscriber base. Larger firms such as Groupon and LivingSocial are taking steps to optimize their vendor’s promotions by utilizing data mining techniques to properly understand their subscriber base, and in the long run to be able to offer targeted promotions based on customer demographics. Top tier firms continue to explore ways to engage and expand their respective subscriber base through the use of social networking platforms such as Facebook and Twitter, as well as offering mobile applications for users to download and track local deals on smart-phones and portable devices.

There are several key developments that might affect the sector. Total US revenue for advertising and related services rose 11.5 percent in the fourth quarter of 2010 compared to the same period in 2009 (Groupon 2011). To help customers cash in Groupons at the check-out counter, VeriFone Systems, the second-largest manufacturer of electronic-payment systems is in negotiations to develop a cash register with Groupon dedicated features (Kharif 2011). Cartera Commerce Inc. has integrated Groupon Inc.’s daily deals into its merchant network to enable consumers to earn rewards by purchasing a Groupon deal (Bell 2011). Merchants have huge inventories on-hand. For the consumer electronics & appliances retail industry it takes an average 78.16 days to cycle through its inventory (“Consumer Electronics” 2011) and according to (Department Stores 2011), it takes an average of 104.29 days for a store to cycle through its inventory, thus, stores are most likely to embrace the daily deal’s ability to help move their inventory. For example, in 2010 Groupon teamed with Gap Inc. in a campaign in which 400,000 Groupons were used to generate $11 million in revenue. For this deal, Groupons was sold nationally.

5 Competition

There are about 500 daily deal businesses in the US alone. Additionally, traditional media companies such as newspapers and magazines are expanding into this growing daily deal sector (Patel 2011). The leading competitor to Groupon is LivingSocial, which, soon after Groupon refused to be bought by Google in December 2010, received a $175 million private equity investment led by Amazon, Inc. Other rivals apart from LivingSocial include OpenTable, BuyWithMe, and TravelZoo. These competitors are briefly described in Table 1.
LivingSocial  A Washington DC-based company. In August
TravelZoo  A publisher of travel, entertainment and local deals

Table 1: Groupon Competitors

<table>
<thead>
<tr>
<th>Company</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>OpenTable</td>
<td>A San Francisco-based company founded in 199, has 20,000 restaurants clients for whom it makes reservations in the US, Canada, Germany, Japan, Mexico, and the United Kingdom. OpenTable also owns and operates toptable.com, a restaurant reservation site in the United Kingdom (About OpenTable). During the year ended December 31, 2009, the Company seated approximately four million diners per month. Restaurants pay OpenTable a one-time software installation fee for onsite installation and training, a monthly subscription fee for the use of its software and hardware and a fee for each restaurant guest seated through online reservations.</td>
</tr>
<tr>
<td>TravelZoo</td>
<td>A publisher of travel, entertainment and local deals online. It claims to have 24 million subscribers. Business pay a fee to have their deals published on TraveZoo website. The company has local websites in Canada, China, France, Germany, Hong Kong, Japan, Spain, Taiwan, and United Kingdom.</td>
</tr>
<tr>
<td>LivingSocial</td>
<td>A Washington DC-based company. In August 2009, it started offering deals and expanding to NY and Atlanta and it now offers one fantastic deal every day with discounts of up to 90% at local restaurants, bars, spas, theaters, and more. It has a presence in North America, Europe, and Australia and New Zealand (About LivingSocial).</td>
</tr>
</tbody>
</table>

5 ECONOMIC OUTLOOK

At the time Groupon was launching in October 2008, the US economy was in a recession. Unemployment was at 6% and the massive loss of wealth from the decline in the stock and home prices had taken a huge toll on American households. Businesses were putting off spending on capital equipment opting instead to perform in-house maintenance. Prices were falling and causing consumers to postpone spending as they waited for prices to drop further (Hagenbaugh 2009). Thus by the end of the 2008 presidential election year the recession had set in. Causes included the demand-supply imbalance in the real estate market, tightening of credit by financial institutions, rising oil prices, rising unemployment, war expenditures, and other social factors. This gloomy outlook was not confined to the US it was a global phenomenon as captured in the Figure 1 showing the Growth in Global Industrial Production and Merchandise Trade between June 1997 and November 2008.

On June 1, 2011, Andrew Mason CEO of Groupon applied for an Initial Public Offering (IPO) of Groupon shares to the public. For the first time the general public were allowed to view the financial figures behind the company. They were not good. For example, from Exhibit 1, it is clear that Groupon has not made a profit since inception. From Exhibit 1 also we notice that the company had $420 million loss in 2010 and $220 million loss in the first six months of 2011.

According to Exhibit 2, Subscriber Count, the number of customers stood at 116 million, up from 51 million at the end of 2010. Not shorn on the chart but available among documents filed with SEC is the number of employees. As at June 2011, Groupon had 7,000 employees.

6 THE FUTURE

On September 7, 2011, The Wall Street Journal reported that Groupon “had cancelled its investor roadshow and is evaluating plans for an initial public offering in the face of stock-market volatility.” (Raice 2011). What strategies would you recommend to current CEO, Andrew Mason? Should he go public or remain private? In the beginning, Groupon had just a single product, one deal of the day and relied on word-of-mouth and social networking media to promote its business. Now there are hundreds of competitors springing up in most major markets in which Groupon operates. Also of particular note is the signaling of Google to start offering a deal of the day on its popular search engine. To bolster its move, Google has recently purchase Zagat, a restaurant rating company. This competition has forced Groupon to allocate a major portion of its revenues to marketing and has since expanded its products to seven including location-based targeting of deals to customers and allowing merchants to stage deals via Groupon platform. In the three months since filing for an IPO the stock market has been very volatile hence it is difficult to predict how its stock will fair. Furthermore, Groupon has faced a lot of criticisms for its high marketing costs and unprofitable business. Should Groupon make further expansions in emerging markets? What other services and products should Groupon introduce? Should Groupon embark on acquisitions such as Google’s acquisition of Zagat to boost its merchant vetting? Develop a three-year strategic plan for CEO Andrew Mason?

Figure 1: Global Industrial Production and Merchandise Export
Exhibit 1: Consolidated Statements of Operations

<table>
<thead>
<tr>
<th></th>
<th>Year Ended December 31</th>
<th>Six Months Ended</th>
<th>Year Ended December 31</th>
<th>Six Months Ended</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2008</td>
<td>2009</td>
<td>2010</td>
<td>June 30</td>
</tr>
<tr>
<td></td>
<td>(dollars in thousands, except share data)</td>
<td></td>
<td>(unaudited)</td>
<td></td>
</tr>
<tr>
<td><strong>Revenue</strong></td>
<td>$94</td>
<td>$30,471</td>
<td>$713,365</td>
<td>$131,534</td>
</tr>
<tr>
<td><strong>Cost of revenue</strong></td>
<td>80</td>
<td>10,142</td>
<td>423,411</td>
<td>77,176</td>
</tr>
<tr>
<td><strong>Gross profit</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Operating expenses:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Marketing</td>
<td>163</td>
<td>4,548</td>
<td>283,202</td>
<td>35,435</td>
</tr>
<tr>
<td>Selling, general and</td>
<td>1,474</td>
<td>7,458</td>
<td>233,913</td>
<td>37,677</td>
</tr>
<tr>
<td>Administrative</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Acquisition-related</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total operating expenses</strong></td>
<td>$1,637</td>
<td>$12,008</td>
<td>$700,288</td>
<td>$22,608</td>
</tr>
<tr>
<td>Loss from operations</td>
<td>(1,632)</td>
<td>(1,077)</td>
<td>(420,344)</td>
<td>(28,248)</td>
</tr>
<tr>
<td>Interest and other (expense)</td>
<td>0</td>
<td>(15)</td>
<td>214</td>
<td>(96)</td>
</tr>
<tr>
<td>Equity-method investment</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>activity, net of tax</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Loss before provision for</td>
<td>(1,542)</td>
<td>(1,092)</td>
<td>(420,060)</td>
<td>(28,346)</td>
</tr>
<tr>
<td>income taxes</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Provision (benefit) for</td>
<td>248</td>
<td>6,674</td>
<td>905</td>
<td>1,722</td>
</tr>
<tr>
<td>income taxes</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Net loss</strong></td>
<td>(1,542)</td>
<td>(1,014)</td>
<td>(413,386)</td>
<td>(27,459)</td>
</tr>
<tr>
<td>Less: Net loss attributable</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>to noncontrolling interests</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Net loss attributable to</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Groupon, Inc.</td>
<td>(1,542)</td>
<td>(1,014)</td>
<td>(413,386)</td>
<td>(27,459)</td>
</tr>
<tr>
<td>Dividends on preferred stock</td>
<td>(277)</td>
<td>(5,175)</td>
<td>(138,660)</td>
<td>(27,778)</td>
</tr>
<tr>
<td>Redemption of preferred stock</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>in excess of carrying value</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Adjustment of redeemable</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>noncontrolling interests to</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>redemption value</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Preferred stock distributions</td>
<td>(299)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>**Net loss attributable to</td>
<td>$ (2,121)</td>
<td>(5,991)</td>
<td>$ (460,320)</td>
<td>(28,425)</td>
</tr>
<tr>
<td>common stockholders**</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Net loss per share</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Basic</td>
<td>(0.01)</td>
<td>(0.04)</td>
<td>(2.66)</td>
<td>(0.17)</td>
</tr>
<tr>
<td>Diluted</td>
<td>(0.01)</td>
<td>(0.04)</td>
<td>(2.66)</td>
<td>(0.17)</td>
</tr>
<tr>
<td><strong>Weighted average number of shares outstanding</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Basic</td>
<td>166,738,126</td>
<td>168,604,142</td>
<td>171,349,356</td>
<td>169,048,421</td>
</tr>
<tr>
<td>Diluted</td>
<td>166,738,126</td>
<td>168,604,142</td>
<td>171,349,356</td>
<td>169,048,421</td>
</tr>
</tbody>
</table>

**Source:** Groupon S1 Filing

Exhibit 2: Subscriber Count

<table>
<thead>
<tr>
<th></th>
<th>Year Ended December 31</th>
<th>Six Months Ended</th>
<th>Year Ended December 31</th>
<th>Six Months Ended</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2008</td>
<td>2009</td>
<td>2010</td>
<td>June 30</td>
</tr>
<tr>
<td><strong>Operating Metrics:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Subscribers(1)</td>
<td>+ 1,807,278</td>
<td>50,583,805</td>
<td>10,445,521</td>
<td>115,717,299</td>
</tr>
<tr>
<td>Cumulative customers(2)</td>
<td>+ 375,099</td>
<td>9,031,807</td>
<td>2,379,611</td>
<td>23,072,600</td>
</tr>
<tr>
<td>Featured merchants(3)</td>
<td>+ 2,695</td>
<td>66,289</td>
<td>12,468</td>
<td>135,247</td>
</tr>
<tr>
<td>Groupons sold(4)</td>
<td>+ 1,248,792</td>
<td>30,296,070</td>
<td>5,822,856</td>
<td>60,620,482</td>
</tr>
<tr>
<td>Average revenue per</td>
<td>$ 17</td>
<td>27</td>
<td>+ 3.3</td>
<td>3.5</td>
</tr>
<tr>
<td>subscriber(5)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Average cumulative Groupons</td>
<td>$ 24</td>
<td>24</td>
<td>3.0</td>
<td>4.0</td>
</tr>
<tr>
<td>sold per customer(6)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Average revenue per</td>
<td>$ 24</td>
<td>24</td>
<td>3.0</td>
<td>4.0</td>
</tr>
<tr>
<td>Groupons sold(7)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* Not available

**Source:** Groupon S1 Filing

REFERENCES

References will be provided, upon request, by the author: dbakuli@wesftfield.ma.edu
Integrating Multiple Sustainability Criteria in Technology, Innovation, and Operations Management Strategic Decisions

Daniel R. Ball
Department of Management & Decision Sciences
Leon Hess Business School
Monmouth University
400 Cedar Avenue
West Long Branch, NJ 07764-1898, USA
001 (732) 923-4642
dball@monmouth.edu

ABSTRACT
The current domestic and global economic climate has led to an increased awareness of the importance of developing and implementing strategic models that help organizations achieve long-term sustainable value creation. Although many organizations have achieved success through various sustainability initiatives, the multitude of sustainability definitions and modeling complexity complicate the decision-making process. In many cases, a broader definition of sustainability should be considered that encourages decisions promoting business sustainability in the areas of technology and innovation research and development, improved operations management processes, and domestic and global business success, in addition to the more traditional areas of environmental, social, and economic sustainability. Furthermore, the development of an accurate strategic decision-making model is made difficult due to many factors including the identification of affected parameters, possible parameter correlations, projected impacts, and uncertain future market conditions. Therefore, it is necessary to identify and link together each factor of sustainability and develop a conceptual, endogenously-driven model that presents both challenges and business opportunities that are within this expanded view of sustainability. This paper presents a framework for developing models that assist organizations to strategically manage their decisions and achieve full sustainability: business (e.g., technology, innovation, and operations management), environmental, social, and economic sustainability.

Keywords
Sustainability, technology management, innovation, operations management, strategy

To further confuse this issue, the growing complexity of global business networks has provided a need for a more comprehensive decision-making model to assist organizations in achieving and sustaining long-term value creation through technology, innovation, and operations strategies.

One of the original research efforts in the area of sustainability studied the potential issues resulting from an exponentially growing world population when compared with only linear expected growths of necessary resources based on technological advances (Meadows, et al., 1972). This study raised doubts as to whether there would be sufficient resources to sustain the expected growth in global population. Sustainability was more formally defined by Gro Harlem Brundtland, the former Prime Minister of Norway, as “development that meets the needs of the present without compromising the ability of future generations to meet their own needs” (Brundtland, 1987; Werbach, 2009). Bell and Morse (2010) summarized additional formal definitions of both sustainability and sustainable development. Here, sustainability has been defined as: “…the capacity of a system to maintain output at a level approximately equal to or greater than its historical average, with the approximation determined by the historical level of variability” (Lynam and Herdt, 1989); “…maximizing the net benefits of economic development, subject to maintaining the services and quality of natural resources over time” (Pearce and Turner, 1990); and “…sustainability of natural ecosystems can be defined as the dynamic equilibrium between natural inputs and outputs, modified by external events such as climatic change and natural disasters” (Fresco and Kroonenberg, 1992). Some definitions of sustainable development include: “…development that meets the needs of current generations without compromising the ability of future generations to meet their needs and aspirations” (WCED, 1987); and “…development that improves the quality of human life while living within the carrying capacity of supporting ecosystems” (IUCN, 1991).
These definitions stress the importance of considering both environmental and social concerns when making business decisions. However, there may be confusion regarding how to balance the strategic concerns of organizational stakeholders with these sustainability constraints, especially when considering technology, innovation, and operations management decisions. In this context, it is important for businesses to consider the expanded concept of corporate sustainability that more explicitly incorporates both environmental and social issues with a strategic management focus aimed at ensuring long-term organizational value creation. Corporate sustainability was broadly presented by Epstein (2008) to include social, environmental, and financial criteria, with the following nine performance principles: ethics; governance; transparency; business relationships; financial return; community involvement / economic development; value of products and services; employment practices; and the protection of the environment (Epstein and Roy, 2003). A very succinct view of a sustainable business is one that is able to thrive in perpetuity while considering four coequal components: social, economic (i.e., profitable operations), environmental, and cultural (Werbach, 2009). These views of corporate sustainability may be used to guide strategic business decision-making into directions that are able to achieve business economics, social, and ecological value creation and sustainability.

2 STRATEGIC MOTIVATIONS FOR CORPORATE SUSTAINABILITY

Before any strategic decision-making model is constructed, the motivations behind organizations striving to achieve corporate sustainability must be identified. One possible motivation may be to become publicly recognized as promoting corporate social responsibility (CSR) and achieving related marketing benefits. As presented by Esty and Winston (2009), the carpet fiber maker Anton experienced an increase of $4 million in sales when it became certified by Scientific Certification Systems as an “Environmentally Preferable Product”. Another motivator may be to recognize cost savings due to waste reduction. For example, 3M’s 3P program (i.e., “Pollution Prevention Pays”) has strived to reduce emissions, solid waste, and energy and water usage; a result has been significant reductions of pollutants and $11 million in cost savings (Esty and Winston, 2009).

Whereas these CSR marketing and waste reduction examples exhibited clear benefits across each criteria of corporate sustainability, strategic investments in other areas such as new technology innovation research and development and operational processes are not as clear. For example, whereas the investment in a new technology such as improved hybrid electric vehicles may be made to foster environmental sustainability, the resulting risks of either cannibalizing the current gasoline-powered product line or not yielding a successful new product may actually hurt profits and long-term value creation potential for a company, as well as hinder its position to be able to generate value continuously into the future. The potential costs and benefits of these ventures are not as clear, thus making any investment in this area risky. However, there are also significant risks of succumbing to incumbent inertia and missing out on the future market opportunities if these investments are indeed successful.

Regardless of the organization’s motivation, generating sustainable corporate value is becoming an important strategic consideration for both domestic and global business environments. For example, firms in the United States have suffered as past managerial decisions have led to a current economic and industrial climate that has proven to be unsustainable (e.g., housing market crashes; financial market instability; off-shoring of both manufacturing and service related jobs). These domestic issues within the United States have also made it difficult for firms to compete in the global marketplace. One area that helps govern a firm’s global business decisions has been the development of various internationally-recognized standards. Examples from the International Organization for Standardization Organization (ISO) include the following series: 9000 (Quality Management), 14000 (Environmental Management), and 26000 (Social Responsibility). These standards assist organizations in making decisions and following operating practices that are recognized internationally and promote the concept of corporate sustainability.

In summary, the current domestic and global business domains have created a climate where firms need to generate sustainable value, while also adhering to environmental, resource, and future operational and innovative constraints. This paper considers the importance of developing models that assist with organizations strategically managing their decisions to achieve full sustainability: business (e.g., technology, innovation, and operations management), environmental, social, and economic sustainability.

3 SUSTAINABILITY METRICS

Organizations may possess a multitude of strategic objectives when considering decisions that may affect each of the areas of corporate sustainability. As previously discussed, the lack of clarity and general consensus surrounding the various definitions of sustainability may lead to confusion as to how organizations should actually make decisions. Furthermore, the development of an accurate strategic decision-making model is made difficult due to many factors including the identification of affected parameters, possible parameter correlations, projected impacts, and uncertain future market conditions. A number of metrics have been proposed in an effort to assist with measuring sustainability.

One of the first metrics proposed was the IPAT model (Ehrlich and Holdren, 1972). This model attempts to
determine the environmental impact (I) due to human activity as a function of the population size (P), per capital affluence (A), and the technology involved in supporting each unit of consumption (T). Two other more recent indices of note are the Environmental Sustainability Index (ESI) and the Environmental Performance Index (EPI) and were created as an Initiative of the Yale Center for Environmental Law and Policy (YCELP) and the Center for International Earth Science Information Network (CIESIN) of Columbia University, in collaboration with the World Economic Forum and the Joint Research Centre of the European Commission. The ESI is calculated on a nation-state basis and factors the following areas: environmental systems, reducing environmental stresses, reducing human vulnerability to environmental stresses, societal and institutional capacity to respond to environmental challenges, and global stewardship (Bell and Morse, 2010; YCELP/CIESIN/ESI). The EPI evaluates a country’s environmental performance and considers the following two objectives: reducing environmental stresses on human health, and promoting ecosystem vitality and sound natural resource management (YCELP/CIESIN/EPI). Although the IPAT, ESI, and EPI are just a few examples of sustainability metrics, it should be noted that the focus of each metric is in the areas of human factors, and environmental and natural resource sustainability. The reader is referred to Bell and Morse (2010) for summaries of additional sustainability performance metrics.

In an effort to move more toward the inclusion of business economic factors as presented to achieve corporate sustainability and assist with technology, innovation, and operations management strategic decisions, it is necessary to account for the actual costs associated with any decision geared toward sustainability. The Triple Bottom Line (TBL) accounting approach refers to the importance of measuring social (i.e., people), economic (i.e., profits), and environmental (i.e., planet) factors (Elkington, 1998). Atkinson (2000) stressed the importance of including external environmental costs (e.g., pollution costs) in addition to internal costs in a full cost accounting approach to measure corporate sustainability. Werbach (2009) built upon his own definition of sustainability to extend the TBL accounting approach and create a sustainable bottom line by also integrating cultural factors. A key consideration of these metrics is that business practices would not be sustainable unless environmental, social, and cultural factors were also considered.

The metrics presented so far have either focused primarily on environmental and social welfare factors, or have viewed the economic aspects of sustainability as external “burden costs” to a firm (e.g., pollution costs). An alternative measure of corporate sustainability has been proposed by Figge and Hahn (2005) and termed sustainable value. This sustainable value metric compares the net value added by a firm to the cost of utilized sustainability capital and evaluates a sustainability efficiency value. This sustainability efficiency value may then be compared to a benchmark to determine how efficient a given firm is at utilizing the sustainable capital and generating sustainable value. An important feature of this methodology is that it measures corporate sustainability as value-based, whereas other metrics view environmental and social factors in terms of their negative impacts (i.e., “burden costs”).

4 STRATEGIC DECISION-MAKING MODEL TO ACHIEVE SUSTAINABILITY

The sustainable value creation philosophy posed by Figge and Hahn (2005) should be extended to firms seeking to make strategic decisions regarding technology, innovation, and operations management. In each of these cases, a model is required that may be used to evaluate the potential to generate both short- and long-term domestic and global business sustainability potential, while also promoting broader environmental, social, and economic sustainability. The modeling approach proposed in this paper specifically identifies a theoretical framework for approaching these types of strategic decisions and system dynamics. This framework also extends previous research by Ball (2010) that presented some general concerns of domestic and global sustainability, and more broadly defines sustainability to account for individual business/industrial sustainability challenges in light of additional business constraints such as government environmental regulations and other more traditional sustainability factors. For example, some factors that promote environmental sustainability may restrict business/industrial sustainability, and vice versa. Consequently, the comprehensive strategic model proposed in this paper incorporates multiple sustainability factors that link business success, technology/innovation developments, operations management, and ecological/environmental, social, and economic sustainability.

The first stage of this research effort is to identify each factor that may have an impact on, or be impacted by, business decisions in each area of sustainability. As discussed in this paper, many current models restrict the concept of sustainability to include only effects on environmental, social, or economic factors. However, firms operating both in the domestic or global marketplace need to also be concerned with generating sustainable stakeholder value and, consequently, many other factors need to be considered. These factors include, but are not limited to, technology and innovation research and developments, improved operations management processes, and domestic and global business success, in addition to environmental, social, and economic value creation. Whereas governmental regulations and potential business practices may encourage and extract value from “green management” philosophies, these same initiatives may also impose restrictions that further constrain businesses. It is proposed here that broader domains of business, environmental, social, and economic sustainability are essential for the long-term health of
domestic and global industrial economics and societal welfare; this comprehensive sustainability must be considered in any strategic model from each of these perspectives. Therefore, it is necessary to identify and link together each factor of sustainability and develop a conceptual, endogenously-driven model that presents both challenges and business opportunities that are within this expanded view of sustainability.

For example, consider the difficult decisions firms in the automotive industry face when developing technology and innovation investment strategies pertaining to traditional gasoline versus hybrid powered vehicles. Some of the factors contributing to expected revenues, costs, and underlying technological uncertainties include: profits; consumer payback period; research and development costs; governmental regulations; environmental impacts and tradeoffs; and battery production and disposal. From an operations perspective, consider the effects on global supply chains, including: manufacturing practices; transportation modes; profits; material selection and transportation; forward and reverse logistics; energy usage; and waste generation and disposal. These two examples present a sampling of the complexities firms face when trying to achieve overall sustainability while making strategic decisions in the areas of technology, innovation, and operations management.

This proposed technology, innovation, and operations management strategic decision-making framework involves the identification of all pertinent parameters and interlinking correlation effects among the following categories of sustainability: business (e.g., technology, innovation, and operations management), environmental, social, and economic sustainability.

4.1 Business Sustainability
Any decision that an organization makes must be geared at achieving both short- and long-term sustainable stakeholder value creation. This value creation may be in terms of profits or setting the organization up to remain flexible and adjust to future market dynamics. For the focus of this paper, business sustainability may be further segmented into the areas of: (1) technology and innovation management, and (2) operations management.

4.1.1 Technology and Innovation Management
As proposed in Ball (2010), three technology and innovation management domains that organizations should consider are independent, global, and unforeseen industries. The independent industries are the ones that allow a country to promote broad-based sustainability and reduce its dependence on foreign nations. Examples of these independent industries may include the production of food, clothing, and shelter, as well as basic services such as health care. The global industries are those that a nation may invest in to develop key sustainable core competencies that promote its success in the global marketplace. These global industries may either involve all of the research and development efforts to occur within the boundaries of a single country, or perhaps employ a globally-linked network where multiple countries collaborate and provide their own unique core competencies (Bartlett and Ghoshal, 1990). Possible examples of global industries may include energy development, biotechnology, telecommunications, or transportation industries. Finally, the unforeseen industries are the ones that emerge over time and are difficult to predict far in advance. For example, the emergence of the Internet would have been difficult to predict in the 1980s, but successful organizations had to be flexible enough to incorporate this technology into their business strategies and operations processes. Strategic planning with respect to unforeseen industries is especially difficult to predict and model in advance, and also has a major effect on a firms’ ability to remain sustainable from a business perspective. Additional factors that affect business sustainability in the area of technology and innovation management include the following: new product and process developments; discontinuous technologies; establishing a dominant design; cannibalism of current technologies; suffering from incumbent inertia and core rigidity; actions by competitive organizations; development of incremental and/or radical technologies; effects of timing of entry strategies; ability to enter new markets; and the production and availability of enabling technologies or complementary goods (Schilling, 2010). Also, new technologies may be developed that assist with efforts in the areas of operations management, environmental, social, and economic sustainability.

4.1.2 Operations Management
As mentioned in Ball (2010), operations management processes and infrastructure may be used to assist with new technology and innovation research and development efforts, or they may be simply part of the transformation process in the firms’ production of goods and/or services. As a result, it is important for any organization to continually improve its operations processes and infrastructure to promote sustainable value creation. Continued efforts in the areas of waste reduction and “cradle-to-grave” analyses of supply chains and reverse logistics may help an organization to achieve both economic and environmental sustainability goals. These efforts serve to reduce a firm’s pollution costs and metrics, as well as include such concepts as “design for manufacturing, recycling, and environment” into product and process design. As mentioned in this paper, the development and adherence to the ISO 9000, 14000, and 26000 series provide operational goals that an organization may strive to achieve. For example, the rapidly-changing electronics industry has created numerous challenges to firms when trying to predict the expected new product development costs. These costs may include design, manufacturing, and forward and reverse logistics as the firm may assume responsibility not only for the production and delivery phases, but also the disposal costs (i.e., costs incurred throughout the entire product life cycle). A well-
4.5 Sustainability Decision-Making Process

For each of the described areas of business, environmental, social, and economic sustainability, it must be determined whether or not there is expected to be a positive effect on sustainability, a negative effect on sustainability, no effect on sustainability, or any interlinking and correlation parameter effects (e.g., governmental regulations that promote environmental sustainability may restrict operational measures or profit potential, and vice-versa). For any given strategic decision or investment opportunity, each of the pertinent sustainability factors and parameters must be identified, including:

- Costs of the project;
- Costs of the resources;
- Projected environmental impact and costs;
- Expected future revenue inflows or benefits;
- Expected potential for future business value creation; and
- Interlinking and parameter endogenous trade-off relationships.

Once the pertinent parameters, their expected effects on overall sustainability, and the interlinking and correlation relationships are identified, a proper analytical technique may be developed to help assist with the decision-making process. The results of this model should be able to provide the decision-maker with the following information:

- Given a certain set of conditions and expected sustainability impacts, should the technology, innovation, or operations management investment be made or not? Depending on the complexity of the problem domain, various solution techniques may be employed including the use of one or more operations research tools (e.g., decision analysis; simulation) or even staged investment analyses using real options (Dixit and Pindyck, 1994; Trigeorgis, 1996).
- How much capital needs to be invested in order to achieve a positive net sustainability value across each of the defined dimensions? The success of any strategic decision may be dependent on the level of capital invested in the venture. This type of analysis is similar to the traditional net present value (NPV) breakeven or internal rate of return analyses.
- To assist with the business analysis, the ultimate result of this model should be a financial metric of the expected NPV of the investment that is adjusted to reflect the cumulative positive or negative effects of each area of sustainability (i.e., business, environmental, social, and economic sustainability). If appropriate, this metric may then be converted to an index that measures the organization’s level of corporate sustainability.

Once this strategic decision-making model has been developed, a more comprehensive quantifiable sustainability factor/index can be developed that may provide an expected measured impact of any business decision on the organization’s unique effect on its future comprehensive sustainability potential. If a benchmark sustainability index value is established, then decisions can be made that are
expected to increase, maintain, or reduce the organization’s sustainability index. This index should consider the more traditional areas of environmental, social, and economic sustainability, as well as this more comprehensive business metric of sustainability. For example, whereas investments in a given new technology research and development project may be expected to yield positive financial net present value measures, the effect of the environmental waste aspects may prove that the technology will have negative effects on the firm’s sustainability index. Consequently, altering the raw materials for this particular technology project may yield a positive net effect on its comprehensive sustainability index. Because a firm is ultimately evaluated based on its shareholder value, this research proposes that sustainability cannot be valued solely from a business or environmental perspective, but instead this comprehensive metric must include the endogenous relationships of business, environmental, social, and economic sustainability factors.

5 CONCLUSIONS
This paper presented some of the challenges that arise within organizations when making strategic decisions pertaining to technology, innovation, and operations management with a goal of promoting overall corporate sustainability. As discussed, many definitions and metrics of sustainability have been proposed; however, using them to make these strategic decisions is quite complex. Furthermore, a broader definition of sustainability should be considered that encourages decisions promoting business sustainability in the areas of technology, innovation, and operations management in addition to more traditional criteria such as environmental, social, and economic sustainability. The overall decision-making framework presented in this paper is designed to assist firms in identifying each pertinent parameter, evaluate whether or not a given investment should be made, and how much capital may be necessary to achieve the desired sustainability objectives. Extensions to this approach may be made that help firms compare these individual decision opportunities to organizational benchmarks that will allow for sustainable value creation in both the domestic and global marketplaces.

ACKNOWLEDGEMENTS
The author wishes to acknowledge the Business Council of the Leon Hess Business School at Monmouth University for the generous funding of this research project.

REFERENCES


OSHA, EPA Regulations and Productivity in the U.S. Manufacturing Industries

Soumendra Nath Banerjee
Clark University
950 Main Street
Department of Economics
Worcester, MA 01610
(508)793-7226
sbanerjee@clarku.edu

ABSTRACT
This paper seeks to explore the dynamics of the impact of government regulations implemented through OSHA and EPA along with other production inputs on productivity and productivity growth at industry-level between 1958 and 2005. Only the years between 1973-79 period and 1979-88 period experienced productivity growth, which is the change of TFP in the U.S. manufacturing sector. OSHA and EPA regulations can hardly be blamed for the slowdown between the 1988-00 period and 2000-05 period. Apparently this study has found that the effect of EPA is quite strong with PAOC being stronger than PACE, gradually effect on productivity has fallen of all the regulatory measures with PAOC’s case the most dramatic one, pollution-abatement spending has affected only the measurement of productivity growth with no real effect on the productivity of inputs actually used in production, and input growth has accounted for most of the variation in output growth rates.

Keywords
OSHA, EPA, regulation, productivity

1 INTRODUCTION
Following Gray (1987), I devote this study to reassess the impact of government regulations implemented through OSHA and EPA along with other production inputs on productivity and productivity growth at industry-level. This essay involves performing ordinary least squares (OLS) procedure. I find bigger effects for EPA than OSHA, unlike Gray (1987), and smaller/less significant contributions to productivity in later periods.

The research unfolds as follows – section 2 aims to build up the basis by sketching out the theoretical models with special focus on its neo-classical moorings. Section 3 describes the databases. The results are presented in section 4, and finally, section 5 concludes the paper.

2 THEORETICAL MODEL
Given a simple production function,

\[ Y = T \times \left( X_1, \ldots, X_p \right) \]

in which output \( Y \) depends on the level of productivity \( T \) (assumed to be Hicks-neutral) and inputs \( X_i \), I can calculate TFP growth \( \tau \) as

\[ \tau = \frac{dy}{dt} - \sum \frac{dx_i}{dt} \]

in which \( x_i \) is the share of input \( i \) in total cost, and \( dy \) and \( dx_i \) are the growth rates of \( Y \) and \( X_i \). To be clearer, I assume a Cobb-Douglas production function with constant return to scale (CRS) to measure the contribution of inputs to output. In this case equation (1) gets the following specific form

\[ Y = T \times \left( X_1^a X_2^b X_3^c \right) \]

in which real output \( Y \) depends on technology \( T \), and inputs include real capital \( K \), number of production workers' hours \( L \), number of non-production workers \( L \), real expenditure on non-energy materials \( M \), real expenditure on energy \( E \), and \( a, b, c, \theta, \varphi \) are production function parameters.

Manipulating the logarithm of equation (1) I get

\[ \ln(Y) = \ln(T) + a \ln(K) + b \ln(L) + c \ln(M) + \theta \ln(E) + \varphi \]

Now consider the following standard Neoclassical microeconomic model where firms are profit \( \max \) – maximizers in a perfectly competitive market, aware of all possible methods of production and choose one which minimizes cost

\[ \max \sigma = R - \frac{C}{\sigma} \]

First order conditions (FOCs):

\[ \frac{\partial R}{\partial \sigma} = \frac{\partial C}{\partial \sigma} \]

Hence, profit maximizing perfect competition assures that \( a, b, c, \theta, \varphi \) are shares of revenue of respective input. To calculate the shares of revenue \( I \) take average of the cost shares across both years. Calculating the average shares for years \( t-1 \) and \( t \) is designed to "approximately" correspond to the input change between \( t-1 \) and \( t \) - simply using the share from year \( t \) (or year \( t-1 \)) would be a less accurate approximation (if the shares are changing between \( t-1 \) and \( t \)).

Hence, \( \sigma = \left[ \frac{t-1 + t}{2} \right] \)

Second order conditions (SOCs):

\[ \sigma > 0, \theta, \varphi < 1 \] \( \text{[which is obvious by assumption]} \]

Since we do not observe capital’s share directly, we calculate it from other revenue shares, assuming CRS:

\[ \sigma = 1 - \left( \theta + \varphi + \beta + \psi \right) \]

Regulation could affect measured productivity growth by
forcing firms to use some inputs for compliance. If a firm uses \( R_i \) of each input to comply with regulation and TFP is calculated without recognizing this, then \( x_i, a_i, \) and \( \tau \) will be measured as \( x_i + a_i \) and \( \tau \).

\[
\frac{\Sigma x_i + a_i}{\Sigma x_i} = \frac{\Sigma x_i}{\Sigma x_i} \pm \Sigma a_i/\Sigma x_i
\]

If the fraction of each input used in compliance is \( a_i \), we have the following relationship between measured \( \tau \) and true \( \tau \) TFP growth:

\[
\Omega_t \tau = \Omega_t \left( x_i + \frac{a_i}{x_i} \right) \pm \Sigma a_i x_i \]

where the quality of the approximation depends on \( a_i \) being close to 0, which ensures \( a_i \) is close to \( x_i \) and \( x_i - x_i \) is close to \(-\Delta x_i\). This so called “measurement effect” (because inputs actually contributing to output are being misidentified) leads a growth accounting measure to underestimate true productivity growth. In other word, showing that it is not necessary to know how much of each input is used for compliance; the share of compliance cost in total cost \( \omega \) is enough.

In addition to the “measurement effect,” regulation might have a “real effect” on productivity. It could impose constraints on the firm’s choice of production process by making it harder to take advantage of the new innovations, cause firms to lower new investment by increasing uncertainty, or otherwise reduce the productivity of other (noncompliance) inputs. If I measure productivity growth without \( \Omega_t \) and with \( \Omega_t \) regulation imposed we get

\[
\Omega_t \left( x_i + \frac{a_i}{x_i} \right) \pm \Sigma a_i x_i
\]

where \( x_i + a_i \) is the real effect and \( \omega \) is the measurement effect.

If we observe \( \Omega_t \) and \( \omega \) for many different firms, indexed by \( \Omega_t \), we could estimate an equation like the following:

\[
\Omega_t \left( x_i + \frac{a_i}{x_i} \right) \pm \Sigma a_i x_i
\]

Here \( \Omega_t \) allows for influences but regulation to affect productivity growth (economywide and firm-specific, respectively). If regulation had only measurement effect then \( \Omega_t \) would yield \( \beta = 1 \). If regulation does have a real effect then \( \beta > 1 \), as firms facing greater regulation would have lower the true productivity growth.

3 DATA DESCRIPTION & ECONOMETRIC SPECIFICATIONS

The data set is the combination of extensive information on both productivity growth and regulation. The NBER Manufacturing Productivity (MP) database covers almost the entire U.S. manufacturing sector, divided into 462 separate industries based on North American Industry Classification System (NAICS). Annual productivity growth for each industry is calculated from 1958 to 2005, based on a growth accounting model with five inputs. TFP growth is calculated by subtracting real input growth (the real growth of each input, weighted by its cost share as calculated earlier in section 2) from real output growth:

\[
\Omega_t \left( x_i + \frac{a_i}{x_i} \right) \pm \Sigma a_i x_i
\]

Two measures of EPA regulation of each industry are the industry’s annual pollution-abatement operating cost (PAOC) and pollution-abatement capital expenditure (PACE). The data are based on the EPA’s Pollution Abatement Costs and Expenditures (PACE) survey. The compliance costs are divided by the value of shipments for the industry. A measure of the enforcement effort directed by OSHA toward each industry is used. OSHA’s Management Information System that tracks OSHA inspections for agency review purposes identifies the industry and number of employees for each inspected establishment. The number of workers inspected is aggregated each year by industry and divided by total industry employment, yielding the fraction of industry employment (OSHINS) in plants inspected by OSHA that year.

4 PRODUCTIVITY AND REGULATIONS

The basic variables are presented in Table 1.
Only first period shows that all regulation measures are negatively correlated with the productivity measures (as expected) prominently. Otherwise, PAOCs continue to produce expected result in third and fourth periods, whereas, PACEs are showing negative correlation only with TFPCHGs in second and third and OSHINSs are positively correlated to both productivity measures after the first period. In the first period regulatory variables are positively correlated with each other, indicating that analysis of only one measure would overstate its effect on productivity. PAOCs and PACEs are positively, PAOCs and OSHINSs are negatively correlated in second to fourth periods. There is no clear trend of correlation between OSHINSs and PACEs.

When TFPCHG is the dependent variable, the regression results are presented in Table 3, which shows the connection between the regulations measures and productivity slowdown.

One characteristic of these results (Table 3 and Table 4) is the similarity between the coefficients on the regulation measures in the regression except the second period, explaining the change in the rate of productivity growth (Table 3) and the rate of productivity growth (Table 4) unlike other periods. This means that the regulation measures are not correlated with the earlier period's productivity growth: (talking about the first period) more highly regulated industries had a greater productivity slowdown than average because they did worse than average during the 1970’s, not because they did better than average during the 1960’s. Also, the coefficients on PAOCCHG and PAOC are generally smaller than 1 in magnitude, suggesting, in terms of Equation (1), only a measurement effect on TFP calculation, without a real effect on productivity of noncompliance inputs.

Given some evidence for a regulation-productivity link, we can tell its importance quantitatively by looking at R²'s of regressions, which indicate the fraction of the variation in productivity growth across industries due to the regulation measures. In Table 3 and Table 4, R’s tend to be small. Small R’s in Table 3 indicate that only 10-22 percent of the TFP variation is explained. This is due in large measure to the calculation of productivity as a residual. Input growth accounts for most of the variation in output growth rates, so the majority of the remaining variation in output growth is due to random disturbances. We can use equation (4) to represent TFP growth as the difference between output growth and aggregate input growth. Then TFPCHG is the difference between the change in output growth from the earlier to the later period (OUTCHG) and the change in aggregate input growth (INCHG). The results from regressing OUTFCHG on INCHG along with the regulation measures and the other factors are presented in Table 5 in which R’s are much higher suggesting the importance of the calculation of productivity as a residual. In Table 5, PAOCs (OSHINSs) shows the most consistent (inconsistent) results regarding sign of the coefficients and statistical significance. Sometimes, OSHINSs seem to even help growth (second and fourth periods) with statistically significant in the fourth period.
<table>
<thead>
<tr>
<th>Dep. Var</th>
<th>First period</th>
<th>Second period</th>
<th>Third period</th>
<th>Fourth period</th>
</tr>
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<tbody>
<tr>
<td>INCHG</td>
<td>.8476***</td>
<td>.8056***</td>
<td>.8703***</td>
<td>.9850***</td>
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<td></td>
<td>(.0104)</td>
<td>(.0081)</td>
<td>(.0075)</td>
<td>(.0061)</td>
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<td>-.0032</td>
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<tr>
<td></td>
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<td>(.0010)</td>
<td>(.0021)</td>
<td>(.0028)</td>
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<tr>
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<td>-.1179</td>
<td>-2.847***</td>
<td>-.3381***</td>
</tr>
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<td>(.0395)</td>
<td>(.0218)</td>
</tr>
<tr>
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<td>-.5909***</td>
<td>-.0684</td>
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<td></td>
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<td>R²</td>
<td>.714</td>
<td>.763</td>
<td>.816</td>
<td>.847</td>
</tr>
</tbody>
</table>

*p<0.05, **p<0.01, ***p<0.001

Note: Standard deviations are presented in parentheses.
aAll regressions also include CONSTANT, SHEN, SHCAP, GPLCHG, and TFPCHGX.
bIndependent variables correspond to their respective periods.

5 CONCLUSION
I find that the effect of EPA is quite strong with, PAOC being stronger than PACE, while that of OSHA is comparatively weak (unlike Gray (1987)). This seems to support the prevailing opinion that EPA has had more effect on productivity than any other form of federal regulations, but this study cannot confirm this argument because my measure of OSHA regulation is very different than that of the EPA regulations. My analysis also finds that the effect of regulation on productivity gradually falls for all the regulatory measures, with PAOC’s case the most dramatic one. Evidence has also been provided to indicate that pollution-abatement spending only affected the measurement of productivity growth, with no real effect on the productivity of inputs actually used in production. This study also finds that input growth accounts for most of the variation in output growth rates.

6 ACKNOWLEDGEMENTS
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7 REFERENCES


Using Organizational Justice to Understand, Explain and Prevent Decision-Making Errors in the Forensic Science Industry

Scott J. Behson
Department of Management
Fairleigh Dickinson University
1000 River Rd (H-DH2-06)
Teaneck, NJ 07666
(201) 692-7233
Behson@fdu.edu

Roger Koppl
Department of Economics
Fairleigh Dickinson University
285 Madison Avenue
Madison, NJ 07940
(973) 443-8846
Koppl@fdu.edu

ABSTRACT

Decision-making processes in the Forensic Science Industry are analyzed using Leventhal’s (1980) criteria for establishing procedural justice. Each of the criteria are explained and used to understand and explain elements of Forensic Sciences that lend themselves to systemic flaws and biases. Finally, this analysis is used to recommend how decision-making procedures can be improved to prevent and correct for these flaws.

Keywords
Organizational Justice, Procedural Justice, Forensic Science, Decision-Making Processes

1 INTRODUCTION

Research has demonstrated that flaws in the forensic science (FS) and criminal justice systems lead to errors in how forensic testing is conducted and how its results are interpreted. As a result, it has been estimated that there are 20,000 false felony convictions a year due to these system-based errors (Koppl 2010a).

The economic approach to analyzing FS has elucidated how systemic flaws lead to errors. In particular, Koppl (2010b) explains (a) that despite the illusion of precise technology and scientific testing, most evidence is decided upon based on the subjective judgment of forensics professionals, (b) the fact that forensic labs are often dependent upon law enforcement agencies for funding and oversight, (c) the fact that evidence usually goes to one lab only, giving that lab monopoly status that reduces the chance to catch and correct errors, and (d) the use of objective performance criteria for law enforcement that tend to incent and reward number of convictions rather than correct verdicts. All of these structural defects can lead to error, particularly a bias towards finding guilt. This bias is at odds with the underpinnings of the US legal system, which presume innocence until proven guilty, and err on the side of preventing false convictions, even if this means some guilty persons are exonerated.

From a psychological standpoint, Cooley (2003) discusses how decision-making (DM) biases such as selection and confirmation biases, as well as the relationships and communication between forensic labs and law enforcement lead to similar errors.

While both economics and psychology have led to important insights, the theories of organizational behavior can provide an additional useful lens for assessing the systemic reasons behind process-based errors. After all, OB is an interdisciplinary area of study that uses a blend of psychological, sociological, economic and anthropological concepts and focuses them on understanding how individuals, groups and whole systems behave in organizational settings.

The present study utilizes procedural justice, a core area of organizational behavior research, as a lens to assess common practices in FS. Specifically, the major criteria for establishing procedural justice in organizations, as developed by Leventhal (1980), are applied to forensics science, as it is commonly practiced in the criminal justice system. In this way, we can better assess the current state of FS, explain how some industry practices may be prone to error and bias, and provide practical suggestions for improving industry practices to better adhere to the principles of procedural justice.

2 PROCEDURAL JUSTICE

It is in every organization’s best interests to make accurate, unbiased decisions. However, when making decisions that involve important consequences for individuals and groups, it is also important that DM processes are seen as equitable by affected parties (Croppanzano, Bowen, & Gilliland, 2007). As a result, OB researchers have extensively studied fairness in DM and identified four major components of organizational justice: distributive (based on outcomes relative to employee contributions), procedural (based on the fairness of DM processes), interpersonal (based on how one is personally treated), and informational (based on data-based explanation of decisions) (Behson, 2010; Colquitt,
There is considerable evidence that, despite some conceptual and measurement overlap, these dimensions of justice are valid, distinct but inter-related, and useful to managers in improving DM accuracy and acceptance, as well as influencing a wide range of employee reactions. (Colquitt, Greenberg, & Zapata-Phelan, 2005).

Of the four dimensions, procedural justice (PJ) is seen by many as particularly important for managers, as managers can often exert more control over DM process than over outcomes (Cropanzano, et al., 2007). Further, PJ is particularly important in shaping employee reactions to decisions, not just to the decision that is made, but also to the larger system in which the decision is made (Ambrose, Hess, & Ganesan, 2007; Behson, 2010). For example, while the amount of bonus one receives is important, the knowledge that bonuses were distributed in a fair manner also affects employees’ assessment of the supervisors involved, the overall organization, and of the DM process. These assessments may lead employees to either increase or decrease their satisfaction with the organization, its outcomes (Cropanzano, et al., 2007). Further, PJ is seen as particularly important for managers, as managers can often exert more control over DM process than over outcomes (Cropanzano, et al., 2007). Employment laws regarding disparate treatment, comparable worth and pay equity also exemplify concern for this criterion. Another related notion is ensuring that processes are not changed too often, and that all changes to a DM process are explained ahead of time (Cropanzano, et al., 2007).

Consistency is also valued in forensic science. Crime labs have scientific protocols, to which forensic scientists tend to express allegiance. Those protocols, however, generally permit forensic scientists to exercise discretion and subjective judgment. Discretion and consistency may not be fully compatible principles. A study by the National Academies of Science (NAS, 2009) notes that many forensic disciplines, including “impression evidence” such as shoeprints and tire tracks, toolmarks and firearms identification (the later commonly called “ballistics”), traditional hair microscopy, the handwriting comparisons of questioned document examiners, bloodstain pattern analysis, and fingerprint examinations rely on subjective judgment (NAS, 2009). Thompson (2009) and Dror and Hampikian (in press) show that even DNA analysis often relies on subjective judgment. It may be surprising that fingerprint examination and DNA analysis are often subjective; however, subjective judgment is an important element in fingerprint examinations when the “latent” print lifted from a crime scene is smudged, partial, lifted from an irregular surface, or overlain by other prints or marks. Subjective judgment is also involved in DNA analysis when the crime-scene sample is small, contaminated, degraded, or a mixture derived from two or more persons.

Dror and Charlton (2006) provide experimental evidence of a lack of consistency in fingerprint examinations. They arranged for a group of fingerprint examiners to receive evidence from cases they had analyzed in the past. They
arranged it so that the old evidence appeared to the examiners as new evidence from new cases. In six out of 48 (12%) of the trials the examiners reversed their own earlier decisions. Four of these reversals went from match (“individualization”) to no match (“exclusion”). One went from no match (“exclusion”) to match (“individualization”), and one went from “individualization” to “cannot decide” (p. 610).

Dror and Hampikian (in press) took a DNA mixture from a criminal case in Georgia and presented it to 17 other DNA analysts, but with the case information stripped away. The original forensic scientists working the case had concluded that the suspects in the case could not be excluded as contributors to the crime-scene DNA sample. “In regard to suspect three,” Dror and Hampikian report, “the results obtained from the 17 independent DNA examiners varied. One examiner concluded that the suspect ‘cannot be excluded’, 4 examiners concluded ‘inconclusive’, and 12 examiners concluded ‘exclude.’” This result suggests that forensic DNA analysis as it is practiced today in the US may lack consistency.

Nichols (2007) vigorously defends subjective judgment in firearms and toolmark identification, which is commonly known as ballistics. While he states that standard techniques are “rooted in firm scientific foundations” and “critically studied according to the precepts of the scientific method”, he asserts that, “the interpretation of individualization/identification is subjective in nature… and based on the examiner’s training and experience” (p. 587). Thus, subjectivity is seen not as a flaw to be minimized, but rather an important feature of FS.

**Criterion #2- Freedom from Bias**

This criterion is focused on ensuring that self-interest is removed from a DM process. In this way, bias is lessened by removing conflicts of interest and the possibility that decision-makers can give themselves an advantage or undue benefit. Following this criterion often means that decision-makers must recuse themselves from certain decisions that may affect them or their constituencies.

Other ways to conform to this criterion include making conflicts of interest known and having multiple people involved in making decisions. For example, executives do not set their own compensation; pay packages are commonly developed by the compensation committee of the board of directors, often with assistance from an outside consultancy. Many companies have strict romance and nepotism policies and do not allow romantically-involved couples or family members to directly supervise or control outcomes for those with whom they have a personal relationship (Lickey, Berry & Whelan-Berry, 2009). In addition, the possibility of bias is one of the cited disadvantages of 360 degree performance reviews, as employees have an incentive to over-rate themselves and under-rate their coworkers (Morgeson, Mumford & Campion, 2005).

Further, this criterion involves addressing decision-making biases, such as halo effects and confirmation bias (Jonas, Schultz-Hardt, Frey & Thelan, 2001), often through anonymization. For example, research into employee selection has noted bias against resumes that contain unconventional or ethnic names and against interviewees who speak with certain foreign accents (Hosoda & Stone-Romero, 2010). By stripping resumes of names and indentifying information before passing along to decision-makers, and using structured interviews and rating scales, one can eliminate much of this bias. Even some education researchers suggest that teachers should anonymize before grading student work to reduce the effect of biasing information (Walvoord & Anderson, 2009).

Bias is now a widely recognized problem in FS, although many forensic scientists generally view it as a relatively minor problem producing few errors. There are several causes of potential bias in FS, including its relationship to law enforcement and the role of context information.

The National Academies study notes, “The majority of FS laboratories are administered by law enforcement agencies, such as police departments, where the laboratory administrator reports to the head of the agency” (NAS, 2009, p. 6-1). Dependence on law enforcement for budgets, resources or personal advancement creates a risk of bias. “Forensic scientists who sit administratively in law enforcement agencies or prosecutors’ offices, or who are hired by those units, are subject to a general risk of bias” (NAS 2009, 6-2). Much of this bias pressure is likely to be subtle rather than overt, but still exerts influence (Yukl & Tracey, 1992).

Context information in FS is information about the circumstances of the crime or underlying event. Some context information, such as the criminal history of the suspect, may be extraneous to the scientific analysis of physical evidence. Other context information, such as the genetic profile of the suspect, may be relevant, but potentially biasing (Risinger et al. 2002, Krane et al. 2008). Risinger et al. (2002, p. 37) give an example of potentially biasing context information drawn from lab notes in a real case. “Suspect-known cri[p] gang member–keeps ‘skating’ on charges–never serves time. This robbery he gets hit in head with bar stool–left blood trail. [Detective] Miller wants to connect this guy to scene w/DNA.” In another case an examiner writes, “Death penalty case! Need to eliminate Item #57 [name of individual] as a possible suspect” (Krane, 2008). Such context information has the potential to skew the results of a FS examination, particularly under the frequently encountered condition of ambiguous evidence.
Masking is the most basic strategy for minimizing the biasing potential of context information. Rosenthal (1978, p.1007) enjoins us to “keep the processes of data collection and analysis as blind a possible for as long as possible.” Risinger et al. (2002) have an excellent discussion of bias and masking. Krane et al. (2008) outline a protocol they call “sequential unmaking” for applying the principle of masking to forensic DNA analysis. Unfortunately, we do not know of any public crime lab that has adopted sequential unmasking or similar protections against bias by context information.

**Criterion #3- Basing decisions on Accurate Information**

This criterion is focused on use of information that is correct, can be verified, and is not overly subjective. Objective data is favored over subjective data and one should use reliable data and informed opinion when making decisions (Leventhal, 1980). Decision-makers must be competent, and should be held responsible for making good decisions and keeping records about the decision-making process.

In businesses, this criterion is adhered to with such practices as MBO, goal-setting, and the use of objective performance standards during performance reviews. Of course one needs to be careful about using performance measures that minimize misalignment and unintended consequences (Kerr, 1980). Decision-makers must be fully trained and knowledgeable so that they can use information wisely. Finally, the results of DM processes need to be continually assessed to determine whether decision-makers are doing their jobs well. In this way, for example, supervisors who are not conducting thorough and objective performance reviews can be sent for training or otherwise held accountable.

We have seen that FS decisions are often subjective, may vary from one forensic scientist to another, and may be biased by context information. In addition, FS practice does not always include good record keeping; this fact compounds the problems associated with subjectivity, inter-rater variance and bias.

One example of problematic record keeping is provided by an official report by the Justice Department’s Office of the Inspector General (OIG) in 1997 on the explosives section of the FBI crime lab. This report was based on the concerns of a whistleblower, Supervisory Special Agent Frederic Whitehurst, a Ph.D. scientist employed in the FBI Laboratory. The report records the following facts relating the 1989 case, United States v. Psinakis.

The court asked [FBI forensic scientist Terry] Rudolph why the diphenylamine test and other tests he described were not documented in his notes. Rudolph responded, When I examine a case I put in my notes things that are important to me when I . . . give testimony. I don't write my notes for the United States Attorney. I don't write my notes for the defense. I write my notes for myself. Rudolph said he had done thousands of tests since 1982 and could not possibly remember them all. The court asked, Isn't that one of the reasons you keep notes? (Office of the Inspector General, Part three, section A, subsection II.A).

An FBI audit of the Houston Crime Lab (FBI Director, 2002) provides another example. The audit was ordered after errors had been revealed and found multiple serious inadequacies. “The laboratory is not designed to minimize contamination due to the central screening area being used by serology, trace, and arson. Better separation of these disciplines is needed. The audit team was informed that on one occasion the roof leaked such that items of evidence came in contact with the water” (FBI Director, 2002, p. 21). Evidence in storage freezers was not properly sealed. It could not be established whether forensic workers wore gloves and lab coats. “Procedures for calibration of equipment have been written,” the report indicates, “however, they are not being followed. Logs are not available documenting repair of equipment and calibration prior to being used in casework analysis” (p.34). Lab reports were grossly inadequate. There were no “written procedures for taking and maintaining case notes” (p. 34). Moreover, “Screening notes are very minimal and provide little information. Screening notes do not include a description of the item, what probative stains were identified, how the stains were identified, and what stains were collected” (p. 34). Lab reports were sloppy. They “do not consistently include: case identifier, description of evidence examined, a description of methodology, locus, results and/or conclusions, an interpretative statement, date issued, disposition of evidence (including any depleted samples), and a signature and title of the analyst”(p. 35). Laboratory personnel did not “have the education, training and experience commensurate with the examination and testimony provided” (p.11). The lab even lacked written procedures for the “cleaning of screening areas, common work areas, and equipment” (p. 22). The lab was similarly sloppy regarding the preparation of reagents. “One bottle in the lab had two dates on it and it was unclear which was the date of preparation” (p.30).

Accurate information can be difficult or impossible to obtain when files are difficult to access (Gold 2008) or forensic evidence is destroyed (Greene & Moffeit 2007). Greene and Moffeit (2007) found cases of 141 prisoners in different states “whose bids for freedom have stalled because officials lost or destroyed DNA.”
Criterion #4- The Ability to Correct Flawed Decisions

This criterion is focused on the ability for those affected by a decision to have their case reviewed and checked for errors in both process and outcome. This often involves creating and implementing proper grievance procedures that may involve third-parties or skipping a part of the chain of command (i.e., removing initial decider from the appeal). One should be able to review the information used at various stages of the process, as well as various elements of the process, such as rater selection, criteria, and consistent application of decision rules.

Organizational sexual harassment policies adhere to this principle by requiring companies to set up grievance procedures run by someone outside of the chain of command of those involved, such as a designated HR professional or an outside arbiter (Steingold, 2011).

Forensic-science errors are often difficult to correct. In addition to the risk of evidence destruction noted above, some forensic tests including DNA analysis “consume” a portion of the evidence. If the quantity of evidence is low, testing may consume all of it. If evidence has been consumed or destroyed, any error in the analysis of it will be hard to correct.

The organization of FS also increases the difficulty of correcting forensic-science errors. FS today is characterized by a twofold monopoly. First, evidence typically examined by one crime lab only. In this sense the crime lab receiving a bit of evidence has a monopoly on examination of that evidence. Second, that same lab will normally be the only one to offer an interpretation of the results of the examination it performs. The current process does not commonly produce multiple examinations by the defense experts or independent experts (Thompson 1995, 167). Noting this fact, the National Academies report says, “prosecutors usually have an advantage over most defendants in offering expert testimony in criminal cases” (NAS, 2009, p.S-8). Giannelli (2004) finds that the defense’s right to expert assistance recognized by the Supreme Court in the 1985 case Ake v. Oklahoma “has not been effectively implemented” (p. 1419). Monopoly in examinations may allow errors and even fraud to go undetected. Monopoly in interpretation may allow false interpretations to go unchallenged and alternative hypotheses to go unexamined.

Thomspson & Dioso-Villa (2008) examine the case of Robin Lovitt, who was convicted of murder and sentenced to death in Virginia. They note problems with the crucial DNA evidence in the case and explain how various attempts to translate those problems into a new trial for Lovitt have failed. Though Governor Warner commuted his sentence to life imprisonment, Lovitt has not been released or exonerated. Their overall assessment (p. 142) is strongly worded.

The jury that convicted Robin Lovitt of capital murder was misinformed about key facts of the case. It was a conviction obtained under false scientific pretenses. Whether Lovitt is actually guilty or not can be debated, but it seems quite clear that his trial was unfair. Close examination of this case suggests that we have a trial system where scientific findings can be misrepresented. Perhaps equally important, it shows us that our system of appellate and habeas review can fail to recognize these problems. Although the problems with the Lovitt case were readily apparent to several outside observers who happened to review the evidence and testimony, the judicial system has turned a blind eye to the matter, as has the state board assigned to oversee FS in Virginia.

The Lovitt case illustrates the difficulty in getting even unambiguous errors corrected.

Criterion #5- Conformity with Prevailing Morals

This criterion involves ensuring procedures are made in accordance with precedent, law, and cultural standards. Elements such as deception, privacy violations, bribery and spying would generally run afoul of this criterion. In businesses, this may also involve ensuring processes are consistent with organizational culture and norms.

One dimension of prevailing morals that is of paramount importance to FS is the standard of presumptive innocence. That is, as a moral viewpoint, suspects should be presumed innocent, and treated as such, until guilt can be proven beyond a reasonable doubt (please note we are not discussing the legal implications of this issue). The prevailing morality view on this subject seems to be comprised by some FS practices. For instance, FBI fingerprint expert Bruce Budowle and his co-authors report, “a latent print examiner tends to approach the comparison to ‘make an identification[,]’ rather than to attempt to exclude.” (Budowle, et al., 2006).

The case of Kirk Turner is an example of how the moral principle of a presumption of innocence was compromised by the practices of forensic scientists, who conducted experiments designed to support the prosecution’s case for murder charges, even after initial examinations seemed not to implicate Mr. Turner and seemed consistent with his claim of self-defense (Neff, 2010a, 2010b). In this case, Jennifer Turner was killed with a pocketknife by her husband on September 12, 2007. Mr. Turner claimed that he acted in self-defense after his wife stabbed him the thigh twice with a
decorative spear. His wounds were consistent with his story, and the initial analysis performed by the bloodstain pattern analyst of the local crime lab was consistent with Turner’s story of self-defense. This initial assessment was documented in an email to the prosecutor. After meeting with prosecutors, however, the forensic scientists continually experimented with bloodstain patterns, in an attempt to strengthen the prosecutor’s case for murder charges. These efforts were captured on video (footage can be seen at: www.newsobserver.com/videos/?media_id=17182298.) The actions of the forensic scientists in this case seemed to have been aimed at showing that the prosecution theory was correct, and not aimed at an evenhanded determination of what the physical evidence said.

In addition, the verification procedures for fingerprint examination might also compromise the presumption of innocence. Fingerprint examiners in the US use the “ACE-V” methodology, consisting in the four stages of Analysis, Comparison, Evaluation, and Verification. The last stage applies if the examiner believes that the known and unknown fingerprints match. In that case the examiner seeks out another qualified examiner to verify the initial identification.

The current SWGFAST (2006) guidelines for fingerprint analysts do not prohibit verification shopping, whereby a failure of verification may be ignored and another, more favorable, verification sought. SWGFAST guidelines give responsibility and authority to individual agencies to review situations in which initial identifications are not verified and that it is “the responsibility of the agency to determine whether corrective action is appropriate.” Thus, the documentation of “conflicting conclusions” is not necessarily required by SWGFAST guidelines, and, again, leave it up to the individual lab to determine whether errors were made or corrective actions need to be taken. Such loose policy and self-policing is leaves open a possibility of bias towards confirming guilt rather than exploring all possible avenues of innocence (Cole, 2005; Dror, Charton & Peron, 2006; OIG, 2006). Indeed, there are at least two documented cases in which verification shopping seems to have been tolerated as a matter of policy.

In Spring 2007, A Seminole County latent fingerprint examiner issued a memo accusing her co-worker of misbehavior and incompetence (Stutzman 2007a, 2007b; Williamson 2007). One of her specific charges regarded shopping verifications. After two non-confirming attempts at verification, the co-worker then sent the print in question to a retired fingerprint examiner “who, one year earlier, medically retired early and had admittedly lost his eye for latent prints. This examiner should not have been deemed ‘competent’ and not allowed to verify the print for such reasons (see SWGFAST Quality Assurance Guidelines for Latent Print Examiners. Page 5. 4.2.4).” (The underlining was in the original memo.) In this case, the examiner found fault with her colleague seeking verification from someone who was not competent. Verification shopping also seems to have occurred.

The second case comes from an official report on the case of Brandon Mayfield, whom the FBI mistakenly identified as the source of a print left at the scene of the Madrid train bombing.

The [FBI’s Latent Print Unit (LPU)] Quality Assurance Manual provided that if the second examiner reached a different conclusion, the matter “must be referred to the supervisor and/or the Unit Chief for resolution.” No formal statistics regarding the frequency of this occurrence have been maintained by the LPU, but LPU witnesses interviewed by the OIG stated that a refused verification was as an extremely unusual event. One option available to the supervisor was to select another verifier if the first verifier declined to confirm the identification. In that instance, there was no policy requiring that the first verifier’s disagreement be documented in the case file. (OIG, 2006, p. 115)

The report does not suggest that there was verification shopping in the Mayfield case. But it does reveal that it was considered legitimate procedure to shop for positive verifications.

**Criterion #6- Consideration of the Opinions of Affected Parties**

This criterion includes such considerations as participation, voice, and consent. Before a DM process is designed and implemented, those involved should make sure that a wide range of opinions, including dissenting ones, are heard. For example, while researching a way to reorganize a company, decision-makers should make an effort to get input from a wide variety of employees, from all levels and departments (Cropanzano, et al., 2007). Many organizations set up representative bodies, focus groups or task forces for this purpose. By doing so, those affected by the decision will better understand the decisions that are made and are less likely to feel that the process did not consider their views. This criterion also encourages a broad definition of stakeholders and constituents.

Another organizational application is allowing employees to participate in performance evaluations- by having employees self-assess and then discuss their ratings with their supervisor. Finally, having an employee and supervisor jointly set performance goals generally leads to more acceptance and commitment to goals, and to better performance and job satisfaction (Locke & Latham, 2002).
We noted above that government crime labs are generally organized under law enforcement agencies. This governance structure reduces the voice of other participants in the criminal justice system, especially public defenders and defense attorneys. In some cases, public defenders have difficulty gaining access to state crime labs and forensic scientists. The FBI has so far refused to release anonymized data from its large criminal DNA dataset. This policy prevents both disinterested scientists and defense experts from studying the data for possible patterns and anomalies that may matter for some criminal cases. Krane et al. (2009) call on the FBI to give qualified researchers greater access to this data.

Cowan (in press) argues that crime labs should be governed by a board “consisting of a local prosecutor, a prominent defense attorney, a representative from the public defender’s office, a traditional scientist (non-forensic), and a forensic scientist from a cross jurisdictional laboratory.” This governance structure seems likely increase the participation, voice, and consent of at least some participants in the criminal justice system who are underrepresented in FS today.

3 RECOMMENDATIONS FOR IMPROVED PRACTICE IN THE FORENSIC SCIENCES

The results of this study can help those who conduct FS and those who manage FS operations to better understand potential structural flaws and take steps to correct them, leading to a more just and rigorous system.

The literature on improving FS has focused mostly on the problem of unconscious bias. Risinger et al. (2002) is representative of this approach. From that perspective, sequential unmasking (Krane et al. 2008) is the crucial procedural change required to improve FS practice. As this change would address PJ criteria 1, 2 and 3, we endorse this suggestion and the literature that undergirds it. We also believe, however, that the organization of FS is important. Many observers now recognize that it is inappropriate to organize crime labs under law enforcement. Unfortunately, relatively few observers seem to have adopted a broader organizational perspective on FS. Attention to these concerns would be particularly important in addressing PJ concerns regarding criteria 2 and 4.

Adopting an economic perspective, Koppl (2005) has proposed a suite of reforms that includes measures to break the twofold monopoly of FS. This monopoly structure makes it difficult or impossible for one lab challenge the results of another lab, in clear violation of PJ criteria #4. In the more open structure of research science, any one lab may challenge the results of any other lab. Koppl’s notion of “competitive self regulation” would help to bring to FS practice some of the openness of research science. In particular, Koppl suggests random, independent, multiple examinations of forensic evidence. This change would help to introduce checks and balances to FS.

Cowan’s (in press) proposal for more representative governance of crime labs is based in economics and in the organizational design literature, and is particularly consistent with criteria #6. We endorse the economic perspective on improving FS, but call on scholars of organizational behavior to expand upon it with new analyses and new proposals for improving FS in the criminal justice system. The current paper is an initial attempt to apply procedural justice principles to this purpose. Other areas of OB research, such as organizational structure, organizational climate/culture, and overt and subtle forms of power and influence also seem well-suited to this research.

Finally, applied and industry-specific research is rare in organizational behavior. For example, while there has been over 40 years of OB research into procedural justice, to date, none has been explicitly applied to forensic sciences. Industry-specific inquiry in a variety of contexts can be a powerful method of investigating the generalizability, applicability, and limiting factors of OB theories, and can bridge the all-too-common gap between management theory and practice.

ACKNOWLEDGEMENTS

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REFERENCES


Towards an Improved Finance Pedagogy: 
Utilization of Technology and Role Playing 
In Student Projects

Gregory J. Blosick 
Department of Finance 
University of New Haven 
300 Boston Post Road 
West Haven, CT 06516 
(203) 931-2929 
gblosick@newhaven.edu

ABSTRACT
Since our university established its Samuel S. Bergami, Jr. 
Learning Center for Finance and Technology or “Trading 
Room”, we have been working towards using more of this 
available technology and software in both our undergraduate 
and graduate classes. This paper describes some of the 
ways in which we have leveraged this technology and 
software in an introductory undergraduate course in finance 
through the use of a role playing student project. Our 
students play the role of a consultant to a major company in 
the S&P 500 Index and use the facilities of our Trading 
Room to gather, extract and analyze data. They use some of 
the extracted raw data to calculate financial ratios which are 
then analyzed in several ways. The objective is a written 
report on their findings and analysis for their selected 
companies. These projects help develop skills in the use of 
Excel (including the use of macros) and other software 
products, improve analytical skills and critical thinking as 
well as develop writing skills in a business context. The 
objectives of this paper are to describe some of these 
approaches and qualitatively assess some of the outcomes 
derived from the implementation of these techniques.

Keywords
Finance pedagogy, Smart classroom, Tegrity, Starboard, 
Computer Lab, Role playing, Value Line, Thomson One 
Analytics, Morningstar Direct, Research Insight, Compustat, 
GICS sub-industry codes, Excel macro, Analytical skills, 
Critical thinking, VBA programming, Financial ratios, 
SWOT analysis, Experiential learning

1 INTRODUCTION
Too many college seniors in all fields are graduating without 
achieving the level of oral and writing skills expected by 
employers who also complain that young hires lack powers 
of analysis and critical thinking (Oblinger and Verville, 
1998; Jones, 2005). A steady decline in student engagement 
towards academics has also been observed (Datar, Garvin 
and Cullen, 2010) though students are increasingly 
interested in college courses that prepare them for careers 
rather than a liberal arts education (Bok, 2006).

Technical skills among students are also weak. College 
students tend to be adept at playing computer games, surfing 
the web and being able to use e-mail, but these are not the 
most important computer skills looked for by employers. 
What is needed is facility in working with spreadsheets and 
databases (Hughes-Hallett, 2003). Employers need skilled 
workers with quantitative skills. The National Council on 
Education and the Disciplines include working with data, 
computers and reasoning as important aspects of developing 
quantitative skills that are needed (Steen, 2001). Because 
tenure in first jobs is shrinking, employers today are 
spending much less time on training and expect new hires to 
“hit the ground running” (Bok, 2006). This means that 
employers expect college educators to provide the skill sets 
required for their young employees.

Finance education has evolved over time as technological 
developments have enhanced the pedagogical possibilities. 
In the past, finance classes were traditional lectures with 
problems done manually. The advent of computers and 
calculators have meant that problems can now be solved 
with these new technologies, but course lectures in many 
cases are still conducted as they have been in the past in 
traditional classrooms with the added feature of PowerPoint 
slides.

In consideration of the above realities about the current 
status of college education, some new approaches to 
teaching an introductory finance course were developed to 
address some of these issues.

2 BACKGROUND
At our university we are fortunate to have a lot of 
technology available, but until relatively recently it has not 
been used very extensively for introductory finance courses. 
Our Smart Classrooms have master computer stations that 
have extensive audio and video capabilities. We can project
images from software packages and annotate them with an electronic pen using Starboard software. We can write on a computer based electronic whiteboard. With Tegrity software we can capture not only the audio of lectures, but every image displayed on the master computer as well. These recorded sessions are available to our students for playback via Blackboard, our electronic bulletin board at the university.

Tegrity recorded lectures are a virtual way for experiencing classroom lectures and are being exploited in a variety of ways. It gives students the opportunity to review every aspect of a lecture. For foreign students for whom English is not their primary language, this is quite valuable as they can review the material exactly as it was presented as often as they like. Students who miss classes for athletic events, job interviews, illness or other personal issues can make up the classes on their own time. Classes cancelled because of weather or any other reason can be made up with these recorded sessions. More to the point of this paper however, is that some classes (or at least portions of classes) can be taken offline (that is, recorded away from regular class time and posted to the Tegrity area within Blackboard) to free up class time for workshops. Supplemental material such as demonstrating solutions to problem sets can be handled in this way. Bonus materials can be offered in this fashion to challenge the more advanced students.

Teaching our introductory finance courses in our technology center computer lab with the strategies described has enabled us to integrate workshops into the finance curriculum to simulate experiential learning. We now have divided our introductory finance classes into a lecture segment that does not require a lab and a dedicated recitation/lab segment that is conducted in our technology center with its sophisticated financial software. Through the course of the semester workshops are conducted that incrementally develop the student project described below.

3 STUDENT PROJECT PHASE 1
DATA COLLECTION
At the beginning of a term, students are presented with a list of companies from which each student must make their own selection. The list is a subset of the S&P 500 companies that eliminates conglomerates such as General Electric, financial and insurance companies and companies in sectors with only a few representatives. The idea here is to try to limit the list to those companies with financial statements that are easier for beginning students to understand. Additionally, the list has been screened to exclude sectors with fewer than about 15 companies. The idea of having each student work on their own company is intended to eliminate the free rider problem that so often occurs with student team projects.

Analyst reports are gathered from Morningstar Direct and Value Line software for such things as business descriptions and outlooks. Thomson One Analytics is used to analyze shareholder information and gather additional corporate information for a SWOT analysis. Corporate websites are used for information, but students are warned against potential bias on these sites so that multiple sources are emphasized to reduce this bias.

The SWOT analysis requires the students to include actionable suggestions to address the issues uncovered and to prioritize them. This helps them to develop analytical skills and critical thinking. This phase of the project is primarily information gathering, as they are not yet working with raw data. These early phases of the project are good for the first part of the semester as some of the basic concepts of the introductory finance course are being developed. The work at this phase is not overly taxing.

An introductory workshop using Research Insight/Compustat simply to acquaint students with the product and do basic navigation is introduced at this stage. By about the midpoint of the semester after financial ratios have been covered, students are ready for the more challenging aspects of their projects. Students are then asked to extract raw data for the current year from Standard and Poor’s Compustat database using the Research Insight frontend. They use GICS sub-industry codes for aggregating companies in a particular industry. The fields that they extract for subsequent calculation of financial ratios are:

- Ticker symbol
- Current assets
- Current liabilities
- Inventories
- Annual sales
- Receivables
- Net fixed assets—plant, property and equipment
- Total assets
- Total debt
- Cost of goods sold
- Interest charges for 12 months
- Net income
- Common equity
- Earnings per share
- Book value per share
- Earnings before annual interest and taxes

The text file created by this extract is opened in Excel for subsequent processing. The students are then asked to extract the same data for four prior years and process the five years worth of data so that they can do trend analyses.

4 STUDENT PROJECT PHASE 2
DATA PROCESSING
The next phase of the project involves working with this raw data in Excel to calculate financial ratios and mean values for the industry averages. This introduces the students to the problems of working with raw data such as missing data, division by zero generating non-numeric calculated values, outliers etc.

At this point the students are introduced to the use of Excel macros which greatly simplify the amount of work that they
are asked to perform. To work with macros, some background settings need to be changed. The following steps describe the parameters for Excel 2007, but essentially the same steps apply for Excel 2010 as well.

- Click on the Office Button in the upper left corner. Then select the Excel Options button on the bottom.
- Select the Trust Center option from the left column. Then select the Trust Center Settings on the right.
- Next select the Macro Settings from the left column and then select Enable all macros. Also check the Trust Access to the VBA project object model option.
- Click on OK twice and you are ready to use macros in Excel.
- To start recording the macro, select the View Tab, then click on the arrow under the Macros option which is on the far right. Then select Record Macro. You can rename the macro to whatever you like, but no spaces are allowed in the name. You will now be recording every change you make in Excel.
- Remember to turn off your macro when you are finished processing the file.
- To save a macro in an Excel workbook, you must save the file as an Excel Macro-Enabled Workbook. This file has a .xlsm extension.

The processing of the first file includes deleting a blank line at the top which is an artifact of the software, adjusting and formatting headers and then calculating financial ratios. Students add headers for each of the following ratios and then create formulas to calculate them from their raw data. The financial ratios that they calculate for this exercise are the following:

- Current ratio
- Quick ratio
- Inventory turnover
- Days sales outstanding
- Fixed assets turnover
- Total assets turnover
- Total debt to total assets
- Times interest earned (TIE)
- Operating margin
- Profit margin
- Return on total assets (ROA)
- Basic earning power (BEP)
- Return on common equity (ROE)

The calculation of averages for the calculated ratios serves to illustrate the problems in working with raw data. Often this data contains non-numeric fields such as @N/A or #DIV/0! which makes it impossible to use the AVERAGE function in Excel. This problem is illustrated in Exhibit A. Here the AVERAGE function for the range Z2:Z18 fails because of the non-numeric data in cell Z5. Complex sorting of the data would be necessary to isolate these non-numeric fields so that the numeric data could be averaged.

This process can be quite tedious so a macro was written to solve this problem. This macro (named Calc_Mean) is executed by highlighting a column of data for which an average value needs to be calculated as shown in Exhibit B.

After highlighting the range, the macro is run and the average is displayed at the bottom of the range after skipping one cell. This represents an easy solution to the problem of non-numeric data and introduces students to the Microsoft Visual Basic programming workspace in Excel as it is necessary for them to copy the code from a Word document into this workspace in order to execute it against their data. When they open the VBA window, they can also look at the code they generated from recording their macros. Exhibit C below shows the result of running the Calc_Mean macro (Exhibit D).

The mean value of 79.24 excludes the non-numeric values in cells Z1 and Z5. All the other cells in this column in the range of Z1 to Z18 with numeric values were included in this calculation. Students can then easily calculate the averages for all of their financial ratios.

After completing the first set of data, the four prior years are very easy to process. Students separately open the other four files, copy them into the workbook with the recorded macro and run the recorded macro to do all the same processing and ratio calculations in a matter of seconds. They only have to run the Calc_Mean macro to calculate the averages for each financial ratio.

An issue which arises in working with some of the student projects is the problem of outliers. They can visually inspect their calculations to see if any values are far removed from the average value and thus significantly skew the average found. With the Calc_Mean macro they can overtype a suspect outlier with letters such as ‘abc’ for example to turn it into a non-numeric field and then run the macro again. They can then compare the results and see how much the average changes when the suspected outlier is removed from the average calculation.

After all the averages are calculated for the five sets of data, the students can then graph the results for their company vs the industry sector and analyze the trends that they see. Then they can make recommendations in their final report as to what they think the company should do to improve their situation.

5 OUTCOMES

Analytical skills are developed. Students are required to obtain data for their companies from a minimum of six sources. They must then critically examine this material and synthesize it into a coherent report for the SWOT analysis that includes prioritizing the importance of all the items in a given category. They also develop analytical skills for interpreting the trends for their financial ratios over the five year period that is studied.
Critical thinking is developed as students need to consider if they have outliers within their data that may be skewing the averages for their financial ratio calculations. They can test this by dropping a data point and seeing how significant a change is created for the industry average that results. They then have to make choices about whether to include a data point or not for the final report.

Working in this computer lab takes them beyond academics. They get very engaged in these projects and the quality of some of the final reports is quite impressive. In one sense this could be considered a back door way to get students to think about academics because they now have to think about what they are doing in the context of a real company that in many cases they are familiar with.

Students develop new skills in Excel or refine existing skills. One student used her report at a job interview to demonstrate her newly acquired Excel skills. Most students are not familiar with macros or the VBA programming language available in Excel so this is a revelation to them and many find it fascinating.

Students develop some basic knowledge of Research Insight/Compustat which is a software package used by financial professionals. This introduction to the product is developed further in advanced finance courses and gives students a solid grounding to build on in their careers. For students for whom this introductory finance course is a terminal experience in finance, the experience of working with a contemporary database introduces them to the various components that are part of many database interfaces today such as radio buttons, input boxes, lists etc. so that they become familiar with generic types of navigation through software applications.

Students clearly have an opportunity to develop their written communication skills in a business context. They do require some guidance here as some do not routinely use spell checker or grammar checker on their final products. Some students look for feedback on their drafts before final submission so this iterative approach helps to refine the final product.

As this approach has been refined over the past several years, the average grades for the introductory finance courses have increased by several points. How much of this increase if any can be attributed to this methodology is impossible to say but it is nonetheless an interesting development.

Feedback from students has been quite positive. Many say they enjoy the projects and that they really learn a lot from them. Some students truly take ownership of their projects and do some really terrific work. A few have turned in quality 30 to 40 page projects. This outcome has been far beyond the expectations of their professor.

ACKNOWLEDGEMENTS

The author wishes to thank his colleagues Demissew Ejara and Joe Hearl for their valuable suggestions regarding the structure and organization of this paper. Thanks also to my wife Elaine who is my “go to” person for technical questions regarding Word and Excel. Finally, thanks are extended to my former students who have given valuable feedback on these projects, in particular, Felix Okhiria, Jr.

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Bok, Derek, 2006, Our Underachieving Colleges, Princeton University Press.


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<td>0.3209</td>
<td>11.1002</td>
<td>0.0969</td>
<td>0.05759</td>
<td>0.0696</td>
<td>0.1174</td>
<td>0.1546</td>
<td></td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>0.2742</td>
<td>13.7100</td>
<td>0.2040</td>
<td>0.1700</td>
<td>0.0964</td>
<td>0.1195</td>
<td>0.2128</td>
<td></td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>0.5166</td>
<td>-5.2851</td>
<td>-0.059</td>
<td>-0.0683</td>
<td>-0.1113</td>
<td>-0.0961</td>
<td>17.5747</td>
<td></td>
<td></td>
</tr>
<tr>
<td>15</td>
<td>0.5242</td>
<td>1.2649</td>
<td>0.1063</td>
<td>0.42286</td>
<td>0.3122</td>
<td>0.0784</td>
<td>1.4271</td>
<td></td>
<td></td>
</tr>
<tr>
<td>16</td>
<td>0.0012</td>
<td>1.245</td>
<td>0.2210</td>
<td>0.2208</td>
<td>0.2213</td>
<td>0.2217</td>
<td>0.2334</td>
<td></td>
<td></td>
</tr>
<tr>
<td>17</td>
<td>0.1223</td>
<td>20.0841</td>
<td>0.1594</td>
<td>0.09002</td>
<td>0.10003</td>
<td>0.1772</td>
<td>0.15199</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
**EXHIBIT C**

![Excel Spreadsheet](EXHIBIT_C.png)

**EXHIBIT D**

Option Base 1

Sub Calc_Mean()

'This code is used to calculate the average (mean) value of a single column of data. The column can contain non-numeric data 'which will be excluded from the calculation. To use this macro simply highlight the range of values in a column that you 'want to average and then run the macro. Including a non-numeric header in the range is acceptable. The mean calculated 'value will be shown at the end of the selected range after skipping one cell.

```
Dim x As Integer
Dim n As Integer
Dim maxn As Integer
Dim myRange As Range
Dim myArray() As Single
Dim myAddress As String
Dim myTally As Single
Dim myMean As Single
Dim strLength As Long

Option Base 1
Sub Calc_Mean()

' This code is used to calculate the average (mean) value of a single column of data. The column can contain non-numeric data ' which will be excluded from the calculation. To use this macro simply highlight the range of values in a column that you ' want to average and then run the macro. Including a non-numeric header in the range is acceptable. The mean calculated ' value will be shown at the end of the selected range after skipping one cell.

'****************************************************
'****************************************************
'****************************************************
'****************************************************
'****************************************************
'****************************************************

Written by Gregory J. Blosick, Lecturer
Department of Economics and Finance
College of Business
University of New Haven
300 Boston Post Road
West Haven, CT 06516
Spring Semester 2010
Dim strLocation As Integer
Dim strLocation2 As Integer
Dim strRight As String
Dim strRightLength As Long
Dim strColumn As String
Dim lngRow As Long
Dim colAddress As String
Dim rowAddress As String
Dim thisAddress As String

'Select range for processing
Set myRange = Application.Selection

x = myRange.Count

ReDim myArray(x + 1) As Single

'Load array with numeric values
n = 1
For Each cell In myRange
    If IsNumeric(cell.Value) Then
        myArray(n) = cell.Value
        n = n + 1
    End If
Next cell

maxn = n - 1

myTally = 0

'Process array data
For n = 1 To maxn
    myTally = myTally + myArray(n)
Next n

myMean = myTally / maxn

'Determine location to place mean value in spreadsheet
myAddress = ActiveWindow.RangeSelection.Address
strLength = Len(myAddress)
strLocation = InStr(1, myAddress, ":", vbTextCompare)
strRight = Right(myAddress, strLength - strLocation)
strLocation2 = InStr(2, strRight, "$", vbTextCompare)
strRightLength = Len(strRight)
strColumn = Mid(strRight, 2, strLocation2 - 2)
lngRow = Right(strRight, strRightLength - strLocation2)
colAddress = "$" & strColumn
rowAddress = "$" & lngRow + 2
thisAddress = colAddress & rowAddress

'Place calculated mean value in spreadsheet
Range(thisAddress).Select
Range(thisAddress).Value = myMean

MsgBox("Processing is complete.")

End Sub
Exposing Management Characteristics in Mutual Fund Performance

Qiang Bu, Ph.D.
Assistant Professor of Finance
School of Business Administration
Pennsylvania State University-Harrisburg
Middletown, PA 17057
(717) 948-6164
qxb1@psu.edu

ABSTRACT
This article examines the relation between manager tenure, team management and fund performance. We find that longer manager tenure improves fund performance, and the relation is dependent on market states. In a down market of low market return and high volatility, manager tenure has a statistically significant positive impact on fund performance, and this effect becomes less important or even negative in a boom. The times series properties of fund returns show that experienced fund managers on average earn higher returns and take on lower risk. In conclusion, manager experience matters, especially in a volatile market. We do not find any difference in return or risk-taking behavior between team-managed funds and individually managed funds.

Key words: Manager tenure, team management, market return, market volatility

1 INTRODUCTION
Manager tenure is often used as an important factor in choosing mutual funds, and many practitioners seem to agree to it. The rule of thumb is that you should not put your money in a fund that has just changed managers, or that the manager does not have much experience in managing the fund. The logic is quite obvious: if the fund that you are looking into has a manager with a long tenure, then the good track record must have been the result of this manager's decisions. In addition, there is a saying “two brains are better than one”, suggesting that team-managed funds are better than single-managed funds. While this makes it much easier to determine whether or not the fund will be managed effectively, can we say that this is always the best decision to make?

As one of the fund specific characteristics, manager tenure and its relation to fund performance have been examined in academia. Some researchers identified a positive relation between manager tenure and fund performance. According to Payne, Prather, and Bertin (1999), Philpot, Hearth and Rimbey (2000), Lemak and Satish (1996), and Golec (1996), longer tenure can improve fund performance. On the other hand, Fortin, Michelson and Wanger (1999) found no significant relation between manager tenure and fund performance. With regard to the risk-taking behavior of fund managers, Lemak and Satish (1996) discovered that manager tenure is inversely related to the risk level of a fund. Brozynski, Menkhoff and Schmidt (2004) found that, when professional experience is accounted for, managers tend to exhibit lowered risk level and reduced extent of overconfidence. However, Chevalier, Judith, and Glenn Ellison (1999) find that younger fund managers take on lower unsystematic risk and deviate less from typical behavior than their older counterparts.

Several researchers have also investigated the effect of team management. Baer, Kempf, and Ruenzi (2005) find some weak evidence that team management has a negative impact on fund performance. Bliss, Potter, and Schwarz (2008) find no significant difference in risk-adjusted performance between team-managed and individually managed funds. Funds managed by teams, however, are significantly less risky and exhibit lower turnover.

In light of prior research, we think that there are several aspects that can be further explored. First of all, using a fund sample to examine manager tenure’s role on fund performance over a long sample period cannot capture the dynamics of the relation. In other words, using one Morningstar mutual fund disc will be leading to not only fund survivorship bias but also manager survivorship bias, since the fund sample can only reflect the tenures of those managers who have successfully survived up to a particular time point. Next, common wisdom tells us that a new manager is willing to take more risk in the expectation for good performance, while a seasoned manager with an established track record has more to lose and tends to be more risk averse. In view of this, we examine how managers with different tenures weigh the tradeoff between risk and return. Moreover, in view of the increasing popularity of team management, we also examine the role of team management to shed more light on this topic.

2 DATA
The sample period in this study spans from January 2000 to September 2009, a period that includes both up and down markets and therefore provides an excellent window to study
the dynamic relation between manager tenure, team management, and fund performance. We use 39 quarterly Morningstar Principia discs to cover this sample period. Since these discs only include funds that are available to the investors in a particular quarter, the dynamics of the relation between management characteristics can be captured. More importantly, the methodology is also designed to minimize manager survivorship bias, which means that a fund sample only includes managers who have survived from manager replacement as of a particular time point.

This fund sample only includes U.S. equity funds, and fund-level data are used in the study. In addition, we exclude index funds, specialty funds, and hybrid funds from the fund sample, since these funds have different investment strategies from regular equity funds. And funds without tenure information are deleted from the data sample. Table 1 presents the descriptive statistics for the year-end fund sample from 2000 to 2009\(^1\), including the percentage of team-managed funds, the manager tenure, the fund size, the expense ratio, and the turnover ratio.

### Table 1: Descriptive statistics

<table>
<thead>
<tr>
<th>Year</th>
<th>Obs.</th>
<th>TM(%)</th>
<th>Manager Tenure</th>
<th>Fund Size</th>
<th>Expense Ratio</th>
<th>Turnover Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
<td>Median</td>
<td>Mean</td>
<td>Median</td>
<td>Mean</td>
<td>Median</td>
</tr>
<tr>
<td>2000</td>
<td>2001</td>
<td>38%</td>
<td>4.70</td>
<td>4.00</td>
<td>1023.29</td>
<td>112.18</td>
</tr>
<tr>
<td>2001</td>
<td>2345</td>
<td>43%</td>
<td>4.04</td>
<td>4.00</td>
<td>140.82</td>
<td>88.13</td>
</tr>
<tr>
<td>2002</td>
<td>2149</td>
<td>51%</td>
<td>4.11</td>
<td>4.00</td>
<td>626.98</td>
<td>76.00</td>
</tr>
<tr>
<td>2003</td>
<td>2082</td>
<td>49%</td>
<td>4.85</td>
<td>3.90</td>
<td>851.41</td>
<td>97.74</td>
</tr>
<tr>
<td>2004</td>
<td>2153</td>
<td>49%</td>
<td>4.88</td>
<td>3.90</td>
<td>865.13</td>
<td>119.19</td>
</tr>
<tr>
<td>2005</td>
<td>2488</td>
<td>56%</td>
<td>4.44</td>
<td>3.90</td>
<td>850.26</td>
<td>123.50</td>
</tr>
<tr>
<td>2006</td>
<td>2844</td>
<td>64%</td>
<td>4.11</td>
<td>2.90</td>
<td>884.46</td>
<td>104.31</td>
</tr>
<tr>
<td>2007</td>
<td>2958</td>
<td>64%</td>
<td>4.57</td>
<td>3.00</td>
<td>201.53</td>
<td>112.05</td>
</tr>
<tr>
<td>2008</td>
<td>3063</td>
<td>60%</td>
<td>4.57</td>
<td>3.30</td>
<td>823.47</td>
<td>79.00</td>
</tr>
<tr>
<td>2009</td>
<td>2755</td>
<td>68%</td>
<td>4.88</td>
<td>3.70</td>
<td>807.82</td>
<td>115.21</td>
</tr>
</tbody>
</table>

### 3 EMPIRICAL FINDINGS

#### a. Fund characteristics and performance

In this section, we examine the relation between fund performance and fund specific variables, including the manager tenure, the fund size, the expense ratio, the price to earnings ratio (PE), the price to cash flows ratio (PC), and the turnover ratio. A dummy variable is used to test the role of team management with one being team-managed funds and zero for individually managed funds. Test results are reported in Table 2.

### Table 2: Effects of fund specific variables on fund performance

<table>
<thead>
<tr>
<th>Regression</th>
<th>Intercept</th>
<th>Manager Tenure</th>
<th>TM (%)</th>
<th>Dummy</th>
<th>Turnover</th>
<th>Expense Ratio</th>
<th>Net Assets</th>
<th>PE</th>
<th>PC</th>
<th>Adj. R-sq</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pooled regression</td>
<td>-6.060</td>
<td>0.026</td>
<td>-0.539</td>
<td>0.001</td>
<td>0.218</td>
<td>0.015</td>
<td>0.346</td>
<td>-0.332</td>
<td>0.0166</td>
<td></td>
</tr>
<tr>
<td>Regression I</td>
<td>-3.996</td>
<td>0.000</td>
<td>-0.140</td>
<td>0.015</td>
<td>0.336</td>
<td>-0.149</td>
<td>-0.073</td>
<td>0.644</td>
<td>0.3715</td>
<td></td>
</tr>
<tr>
<td>Regression II</td>
<td>17.855</td>
<td>0.062</td>
<td>-0.201</td>
<td>0.021</td>
<td>-0.252</td>
<td>-0.454</td>
<td>-0.290</td>
<td>0.2993</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Regression III</td>
<td>-3.566</td>
<td>0.003</td>
<td>-0.141</td>
<td>0.062</td>
<td>-0.210</td>
<td>0.126</td>
<td>0.126</td>
<td>0.202</td>
<td>0.0093</td>
<td></td>
</tr>
<tr>
<td>Regression IV</td>
<td>1.901</td>
<td>0.008</td>
<td>-0.099</td>
<td>-0.001</td>
<td>-1.342</td>
<td>-0.062</td>
<td>-0.476</td>
<td>0.485</td>
<td>0.0041</td>
<td></td>
</tr>
</tbody>
</table>

*** indicates statistical significance at 1%, ** indicates statistical significance at 5%, * indicates statistical significance at 10%.

In Table 2 we first run a pooled regression to examine the aggregated relation for the whole sample period. As Table 2 shows, mutual funds with longer tenure tend to perform better, while team management has a negative impact on fund performance, and both are statistically significant at 1% level. This finding is consistent with that of Baer, Kempf, and Ruenzi (2005). In addition, the PE ratio, the expense ratio, and the fund size all have positive effects on fund performance, while the loadings on the PC ratio and the turnover ratio are negative, and they are all statistically significant at 1% level.

Pooled regression is based on data of the whole sample period covering quite different market states. To test whether this relation is stable or not, we choose four time points to examine the dynamics between fund performance and fund characteristics, especially manager tenure and team management. Sub-period I represents the 1st quarter of 2001, a dramatic period with a narrowly missed market crash and...
extremely high market volatility. From Table 2 we see that none of these fund-specific variables retains its sign across the four time points, indicating that the relation between fund returns and fund specific characteristics is dynamic instead of static. The loadings on manager tenure are mainly positive, and they are all statistically significant in a down market, indicating that experience counts when the going is tough. We also notice that manager tenure has a negative effect on fund return during the tech bubble period, and we believe this is a sign of caution. On the other hand, the effect of team management is largely negative in fund performance, and this effect is also statistically significant in the sub-periods II and III. As for other fund specific variables, we see that the relation between fund return and turnover ratio, fund size, expense ratio, PE ratio and PC ratio is not static, either. The loadings on these variables change as market state changes. Since the relation between fund specific variables and fund performance is dependent on market states, we run a cross-sectional regression in each quarter of the sample period. Table 3 summarizes the sign and the statistical significance of the loadings on manager tenure based on 39 regressions. We also categorize the results in the context of market return and market volatility. High (low) return market in Table 3 represents the top (bottom) 10 quarters in the sample period based on market (S&P 500) excess return, while High (low) volatility market represents the top (bottom) 10 quarters in the sample period based on market volatility (proxied by VIX).

Table 3: Summary of the cross-sectional regression loadings on manager tenure

<table>
<thead>
<tr>
<th>Tenure</th>
<th>Total Observations</th>
<th>Total Loadings</th>
<th>Positive Loadings</th>
<th>Statistically Significant</th>
<th>Negative Loadings</th>
<th>Statistically Significant</th>
</tr>
</thead>
<tbody>
<tr>
<td>Whole sample period</td>
<td>39</td>
<td>18</td>
<td>9</td>
<td>21</td>
<td>8</td>
<td></td>
</tr>
<tr>
<td>High return market</td>
<td>10</td>
<td>3</td>
<td>0</td>
<td>7</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Low return market</td>
<td>10</td>
<td>10</td>
<td>8</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>High volatility market</td>
<td>10</td>
<td>7</td>
<td>6</td>
<td>3</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Low volatility market</td>
<td>10</td>
<td>2</td>
<td>1</td>
<td>8</td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>

From Table 3 we see that out of the 39 loadings on manager tenure, 18 are positive, and half of them are statistically significant at 5% level. 21 loadings are negative, and 8 of them are statistically significant at 5% level. Based on market volatility, in the top 10 market volatility quarters, we see that 7 out of the 10 loadings on manager tenure are positive, and 6 of them are statistically significant. On the other hand, only 2 loadings are positive in the quarters of the lowest market volatility, and only 1 of them is statistically significant.

What can we infer from Table 3? Seems like manager experience is not much appreciated when the time is good, but when the going gets tough, it definitely plays an important role in improving fund performance. Following the same approach, the effect of team management (TM) is examined and reported in Table 4. We see that out of the 39 loadings on team management, 16 are positive with 5 of them statistically significant at 5% level, while 23 are negative with 10 of them statistically significant. The majority of the loadings on team management are negative, indicating that team management actually tends to decrease fund returns. In addition, team management does not exhibit any pattern across market states.

Table 4: Summary of the cross-sectional regression loadings on team management

<table>
<thead>
<tr>
<th>TM</th>
<th>Total Observations</th>
<th>Total Loadings</th>
<th>Statistically Significant</th>
<th>Negative Loadings</th>
<th>Statistically Significant</th>
</tr>
</thead>
<tbody>
<tr>
<td>Whole Sample Period</td>
<td>39</td>
<td>16</td>
<td>5</td>
<td>23</td>
<td>10</td>
</tr>
<tr>
<td>High Return Market</td>
<td>10</td>
<td>6</td>
<td>2</td>
<td>4</td>
<td>1</td>
</tr>
<tr>
<td>Low Return Market</td>
<td>10</td>
<td>3</td>
<td>1</td>
<td>7</td>
<td>4</td>
</tr>
<tr>
<td>High Volatility Market</td>
<td>10</td>
<td>3</td>
<td>2</td>
<td>7</td>
<td>3</td>
</tr>
<tr>
<td>Low Volatility Market</td>
<td>10</td>
<td>3</td>
<td>1</td>
<td>7</td>
<td>2</td>
</tr>
</tbody>
</table>

To examine the correlation of the effect of fund-specific variables on fund performance, we test the correlation coefficients among the 39 quarterly loadings on manager tenure, team management, market excess return, market volatility, expense ratio, turnover ratio, fund size, PE ratio and PC ratio. As Table 5 shows, the impact of manager tenure on fund performance is negatively correlated to several other fund-specific as well as market variables, with market volatility as the only exception. Particularly, the impact of manager tenure on fund performance have a negative correlation to that of expense ratio, indicating that the value of manager experience is not reflected by expense ratio. We also see that the impact of team management on fund performance is positively correlated to those of fund size, turnover, expense, and PE ratio.
**Table 5: Correlations among loadings on fund-specific variables**

<table>
<thead>
<tr>
<th></th>
<th>Tenure</th>
<th>TM</th>
<th>Market Return</th>
<th>Market Volatility</th>
<th>Expenses</th>
<th>Turnover</th>
<th>Size</th>
<th>PE</th>
<th>PC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tenure</td>
<td>1</td>
<td>-0.1365</td>
<td>-0.4766</td>
<td>0.0038</td>
<td>-0.7010</td>
<td>-0.5778</td>
<td>-</td>
<td>0.5151</td>
<td>-0.6079</td>
</tr>
<tr>
<td>TM</td>
<td>1</td>
<td>-0.1076</td>
<td>0.1618</td>
<td>0.1885</td>
<td>0.1885</td>
<td>0.1015</td>
<td>0.226</td>
<td>-</td>
<td>-0.2504</td>
</tr>
<tr>
<td>Market Return</td>
<td>1</td>
<td>-0.1118</td>
<td>0.3894</td>
<td>0.1509</td>
<td>0.4425</td>
<td>0.0889</td>
<td>0.160</td>
<td>-</td>
<td>-0.0000</td>
</tr>
<tr>
<td>Market Volatility</td>
<td>1</td>
<td>-0.0100</td>
<td>0.0052</td>
<td>-0.0099</td>
<td>0.0319</td>
<td>0.0408</td>
<td>-</td>
<td>-</td>
<td>-0.0000</td>
</tr>
<tr>
<td>Expenses</td>
<td>1</td>
<td>0.3222</td>
<td>0.6885</td>
<td>0.6362</td>
<td>0.144</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-0.0000</td>
</tr>
<tr>
<td>Turnover</td>
<td>1</td>
<td>0.1846</td>
<td>0.5340</td>
<td>0.5417</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-0.0000</td>
</tr>
<tr>
<td>Size</td>
<td>1</td>
<td>0.3910</td>
<td>0.1174</td>
<td>-0.1174</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-0.0000</td>
</tr>
<tr>
<td>PE</td>
<td>1</td>
<td>0.1989</td>
<td>0.0193</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-0.0000</td>
</tr>
<tr>
<td>PC</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>-</td>
<td>-</td>
<td>-0.0000</td>
</tr>
</tbody>
</table>

**b. Time series properties**

Is it wise to put your money in the hands of experienced managers? In this section we investigate the relation between fund performance and manager tenure over time. For each quarter of the sample period, we divide the funds into quintiles: quintile 1 stands for funds with the shortest manager tenure while quintile 5 the longest, in this way we get 5 time series data based on manager tenure.

To explore fund managers’ performance controlling for manager tenure, Figure 1 presents the risk-return graph. In the coordinates, return represents the average quarterly return, and risk is the total risk measured by standard deviation.

**Figure 1: Risk-return tradeoff of equity funds controlling for manager tenure**

According to the test results not reported here, we find that there is no difference between team-managed funds and individually managed funds in mean, standard deviation, skewness and kurtosis.

**c. Risk-adjusted Performance**

Next we use Jensen’s alpha and Fama-French three-factor alpha to measure funds’ risk-adjusted return and market risk.

The basic structure of our model can be written as follows:

\[ r_{p,t} = \alpha_p + \sum_{i=1}^{N} \beta_i r_{i,t} + \varepsilon_{p,t} \]

where \( \alpha_p \) is the abnormal return of funds, \( \beta_i \) are factor i loadings represented by quarterly market excess return, size, and style, and is counted for the number of factors such that \( N \) is one for the single-market factor model and three for the Fama-French three-factor model.

**Table 6: Risk characteristics of equity funds controlling for manager tenure**

<table>
<thead>
<tr>
<th>Manager tenure</th>
<th>Mean return</th>
<th>Standard deviation</th>
<th>Skewness</th>
<th>Kurtosis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quintile 1</td>
<td>0.92276</td>
<td>10.4489</td>
<td>-0.3343</td>
<td>-0.2582</td>
</tr>
<tr>
<td>Quintile 3</td>
<td>1.1166</td>
<td>10.2087</td>
<td>-0.3081</td>
<td>-0.2293</td>
</tr>
<tr>
<td>Quintile 5</td>
<td>1.16842</td>
<td>9.90624</td>
<td>-0.2695</td>
<td>-0.0537</td>
</tr>
</tbody>
</table>

Figure 1 shows that, compared with quintile 3 and quintile 5, quintile 1 lies on the lower right part with higher risk and lower return. Quintile 3 moves up to the upper left direction of quintile 1, indicating an improved risk-return tradeoff. Compared with quintiles 1 and 3, quintile 5 lies on the upper left corner on the coordinates, this means that manager experience increases fund return while reducing return volatility over time.

Table 6 reports the mean, the standard deviation, the skewness, and the kurtosis of quintiles 1, 3, and 5. As Table 6 indicates, from quintiles 1 to 3 to 5, the mean return goes up while the standard deviation goes down. All the quintiles have negative skewness, but quintile 5 is less negatively skewed compared with quintiles 1 and 3. Quintiles 1, 3, and 5 all have negative kurtosis but quintile 5 has a kurtosis closest to zero, an indicator of better risk control over the sample period.

**Table 7: Risk-adjusted returns of equity funds controlling for manager tenure**
<table>
<thead>
<tr>
<th>Manager tenure</th>
<th>Alpha</th>
<th>MRKT</th>
<th>SMB</th>
<th>HML</th>
<th>Adj. Rsq</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quintile 1</td>
<td>0.0620</td>
<td>1.0565</td>
<td>(27.86)**</td>
<td>0.9006</td>
<td></td>
</tr>
<tr>
<td></td>
<td>0.1106</td>
<td>1.0239</td>
<td>(27.86)**</td>
<td>0.9006</td>
<td></td>
</tr>
<tr>
<td></td>
<td>-0.49</td>
<td>-0.1166</td>
<td>(-1.12)</td>
<td>0.9006</td>
<td></td>
</tr>
<tr>
<td>Quintile 3</td>
<td>0.2643</td>
<td>1.0341</td>
<td>(30.24)**</td>
<td>0.9048</td>
<td></td>
</tr>
<tr>
<td></td>
<td>0.1015</td>
<td>1.0081</td>
<td>(1.30)</td>
<td>0.9056</td>
<td></td>
</tr>
<tr>
<td></td>
<td>0.48</td>
<td>0.1005</td>
<td>(-0.40)</td>
<td>0.9056</td>
<td></td>
</tr>
<tr>
<td>Quintile 5</td>
<td>0.2381</td>
<td>0.9957</td>
<td>(22.50)**</td>
<td>0.8949</td>
<td></td>
</tr>
<tr>
<td></td>
<td>-0.0017</td>
<td>0.9575</td>
<td>(1.14)</td>
<td>0.8956</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.01)</td>
<td>0.0818</td>
<td>(0.81)</td>
<td>0.8956</td>
<td></td>
</tr>
</tbody>
</table>

From Table 7 we can see that, as far as the alpha is concerned, none of the fund groups earned statistically significant market adjusted returns, and the loadings on size factor and style factor are not statistically significant, either. However, the loadings on market factor show that the market risk becomes lower as manager tenure increases, meaning that experienced fund managers attach more importance to market risk control than less experienced managers, though this skill is still not enough to beat the market.

Summary

Using a specially structured fund sample, this study examines the effects of manager tenure and team management on fund performance. We first use a pooled regression to investigate the aggregated relation between fund specific variables and performance, then we explore the dynamics of the relation between manager tenure, team management and performance controlling for market states. Funds are also divided into quintiles in each quarter to examine the time series properties of funds with different manager tenure.

Based on the pooled regression, we find that there exists a positive relation between manager tenure and fund performance, and the relation between team management and fund performance is negative. However, the relation is not static. In a down market characterized by low market return and high market volatility, manager tenure improves fund performance and the effect is statistically significant. The role of manager tenure becomes less important or even negative in a boom.

The times series properties of funds show that experienced fund managers on average earn higher returns, carry low total risk measured by standard deviation. Skewness and Kurtosis of their fund returns also confirm the value of manager tenure. On a risk-adjusted basis, neither experienced nor inexperienced fund managers can beat the market, but experienced fund manager tend to take on less market risk.

Team management has a negative impact on fund performance, but this impact is not economically significant, since we do not find any difference in fund return or risk-taking behavior between team-managed and individually managed funds.

We conclude that experience matters in improving fund performance, especially when the market is volatile. Based on the correlation among the effects of fund specific variables on fund performance, we see that the skill of manager tenure is not priced through higher expenses.

References


ABSTRACT
Business educators are struggling with how to better engage their students in the learning process. At the same time stakeholders are reporting that business students are ill-prepared in problem solving techniques and the effective use of spreadsheets. The systemic use of Excel as a teaching tool in the business curriculum may be the answer to both situations. This paper reviews how computer literacy (with a particular focus on spreadsheets) is addressed in a sample of AACSB accredited business schools. Three models are discerned and discussed. We then follow with an examination of how business faculty are using spreadsheets as a means of student engagement. The results of the literature search in this area are summarized and discussed. The paper concludes with recommendations and directions for future research and curriculum development.

Key Words
Active learning, spreadsheets, computer literacy

1. INTRODUCTION
Educators have long recognized the need to revise our pedagogical approach for the new generation of business students. While socially technically savvy, as evidenced by their use of Facebook, Twitter and Google, these students are frequently not prepared to use technology as a tool, as students and as professionals, to address business problems. Creighton, Kiloyne, Tarver and Wright (2006) found college freshmen majoring in business were not able to complete a rudimentary spreadsheet problem. Students earned an average score of 27% on the Excel assignment, which consisted of totaling columns, entering formulas, formatting numbers and making a chart. A recent survey of finance managers found that only 17% believed their non-finance managers could link a cell in one worksheet to a formula in another spreadsheet in the same workbook (Serven, 2007). Even students’ self-assessment of their spreadsheet skills is low and showing relatively slow improvement (Stoner, 2009).

While assessments of the spreadsheet skills of students and recent graduates are low, the business community continues to rank spreadsheet functionality in business situations as a critical need for new employees (Speiech, 2005; Stoner, 2009). As an additional indicator from the business community of the pervasive need for professionals to understand Excel, BarnesandNoble.com currently lists 325 different books (none textbooks) available supporting the use of Excel. While many business curriculums typically include a course or course segment on spreadsheets, business education has been slow to comprehensively incorporate spreadsheets as a fundamental and multi-disciplinary tool.

The engagement of students is not restricted to business education. From the sciences (Marshall and Nykamp, 2010; Popkess and McDaniel, 2011) to engineering (Heller, Beil, Dam and Hairum, 2010; Smith, Sheppard, Johnson and Johnson, 2005) to political science (Peters and Beeson, 2010), educators have been struggling with the issue of how to make students active participants in the learning process. When students are active participants in their own learning, whether via tutorials (Seal, Przasnyski, and Leon, 2010), cases (Springer and Borthick, 2007), discussion and activities (Coram, 2005; Serva and Fuller, 2004; Smith and Van Doren, 2004) or service learning (Ayer, Gartin, Lahoda, Veyon, Rushford and Neidermeyer, 2010; Eyler and Giles, 1997; Still and Clayton, 2004), students report higher satisfaction and/or better performance. Additionally, active learning shows improvements in short term retention as evidenced by higher test scores (Yoder and Hochevar, 2005). Of the many ways business faculty can employ active learning, the use of Excel for problem solving and analysis is among the most relevant and accessible. In addition to gaining the instructional benefits of active learning, students will be reinforcing their spreadsheet skills, which will serve them well in the job market and beyond. This paper seeks to examine to what extent spreadsheets are being taught and used in the business school curriculums, review the innovative ways in which Excel can be used as an active learning tool and propose directions for pedagogical development and research.

2. WHERE WE ARE
To what extent are business schools teaching and using Excel in the curriculum? To address that question a random number generator was used to select a random
An examination of the descriptions of required courses indicated that although each school requires courses that teach the use of Excel, there is no consensus among schools as to the methodology. There appears to be three models that schools are using to address computer literacy, including spreadsheets. The most prevalent (73%) is the inclusion of Excel within a required lower division business course. Even within this model, there is a lack of consensus as to how to incorporate the teaching of Excel in the curriculum. In some cases the course is Excel specific, but more likely, the use of Excel is one of several topics within the course. Credit for these courses range from 0 to 3 credits and course titles vary from “Computer Literacy Concepts for Business” to “Information Systems in Organizations”. Note, that in some cases, the business school allows students to take a proficiency exam to waive a course requirement. The second model (18%) differs from the first only by requiring that students take a lower division course in computing outside of the business school. This method allows students to complete a general education requirement at the same time as developing computer literacy. The least common approach (9%) has computer literacy built into a university-wide requirement in that every student, regardless of major (i.e. business, humanities, social science) must demonstrate computer literacy. In this case, a proficiency exam must be passed. Each of the methods listed ensures that students have been exposed to Excel and can demonstrate some ability in using this software prior to the junior-level. Unfortunately, unless students routinely apply Excel in classes or projects, their ability to utilize it as a tool in making business decisions decreases significantly due to a lack of use. The situation is this: Students learn Excel while as a freshman or sophomore in a specific class dedicated to Excel or information technology and are then expected to remember this two to three years later, upon graduation without consistent use of Excel in upper division classes. Fewer than 50% of the schools reviewed had an advanced course in problem-solving using Excel and of those that did, none of them were required courses for the management major. A recent study at an AACSB institution showed that the incorporation of spreadsheets in the curriculum lags behind word processing, presentation software and internet research applications. In addition, the use of spreadsheets is stronger in the accounting curriculum than in the general business core (Varnon, 2010).

3. WHERE SOME OF US HAVE BEEN

The literature is rife with cases and notes, from the basic to the advanced, on using Excel in the business curriculum. While our review of the literature cannot be viewed as exhaustive, we found that nearly every business discipline is represented in published pedagogical papers in peer-review journals. Examples of articles explaining innovative ways in which Excel is being used in the classroom in economics (Erfle, 2001), finance (Friedman and Munter, 2004), accounting (Togo, 2004), information systems (Chen, 2004), marketing (Ganesh and Paswah, 2010), operations management (Hanna, 2010) and statistics (Gordon and Gordon 2009).

The use of spreadsheets in the business curriculum offers specific pedagogical benefits. By being active participants in the modeling or running of the analysis, students are more engaged and gain a firmer grasp of the material. For example, Springer and Borthick (2007) found that students who were taught with cognitive conflict tasks, problems for which there was no prescribed right answer, used higher-level thinking and achieved higher scores than students taught in the traditional manner. Rather than doing standard problem solving, the students in the experimental group were given business situations and asked to build spreadsheet models and analyze the affects of assumptions and decisions. Not only did these students perform better on the examination, they were also more likely to enroll in a higher level accounting course when taught with cognitive conflict method in the principles course. Using spreadsheets allows students to address larger and more realistic problems, engaging them in higher level learning thus moving from knowledge and comprehension to application, analysis and synthesis (Bloom, 1956).

In addition, the adoption of Excel as a medium for active learning in business is relevant, feasible and accessible. Employers want to hire graduates who are computer literate, in general, and adept with spreadsheets, specifically. Excel is nearly universally available on campus and in the workplace. Active learning exercises are accessible and can be incorporated into many of the traditional business courses. Excel exercises can be found in many new textbooks, practitioner journals and websites. To achieve the greatest benefit, the course elements should increase the skills and knowledge of the application, rather than simply provide an illustration of the application’s usage (Varnon, 2010).

4. A ROADMAP FOR GETTING THERE

While seemingly obvious, it is none the less the greatest barrier: both the students and faculty must be comfortable with the spreadsheet basics. It would be impossible to effectively use Excel as the tool for delivering higher level concepts if those involved are not sufficiently confident in basics such as data entry and manipulation, writing formulas and formatting numbers and text. Time and again, studies have found that students are not proficient with spreadsheets (Awasthi, Bee, De Mello-e-Souza and
As indicated by our curriculum review, most schools are already at this point with 9.1% requiring a computer literacy exam as part of the general education requirement and 90.9% requiring a course in software applications. But what about the faculty? It is likely that many faculty have self-taught themselves Excel and have received limited formal training. While they may be able to accomplish known tasks, they may not know the full functionality of the tool. The release and university adoption of Excel 2010 is the perfect time to pursue faculty training and consider new textbook adoption. As more students arrive on campus with the new Office suite, the increase in backward compatibility issues will force universities to adopt Office 2010, including Excel 2010. This adoption of Office 2007/2010 from Office 2003 provides an excellent opportunity for faculty to pursue training and consider new textbook selections. This adoption can also act as a prime motivator for faculty to make the curriculum revisions needed to embed Excel in upper division courses.

5. CONCLUSIONS AND DIRECTIONS FOR RESEARCH
Most curriculums provide students with the basics of spreadsheets, either as a university wide requirement or as part of a required lower division course. Our preliminary examination of the curriculums of 22 AACSB business schools revealed significant lack of consensus as to how to embed the use of Excel in the curriculum. Researchers may choose to broaden this examination to seek a more complete picture. A review of teaching notes and articles unearthed a number of innovative ways Excel is being used in courses in the business curriculum. We have proposed employing spreadsheets in upper-level business classes can provide the mechanism to engage students in more active learning support higher level learning. While we have, anecdotally, seen these benefits in our classrooms, it has not been empirically addressed. Future research should build upon prior active learning research and seek to confirm the potential pedagogical success of using spreadsheets for student engagement in the learning process.

REFERENCES


ABSTRACT
This study examines moral reasoning levels in undergraduate and graduate college students studying business at a small faith-based liberal arts institution in the Midwest. Founded by the Ursuline Sisters of Cleveland in 1871, Ursuline College was the first women's college in Ohio and one of the first in the United States. Specifically, this study examines “Is there a difference between the moral reasoning levels of Ursuline College undergraduate business students and graduate MBA students by age and years of education?” Utilizing the Defining Issues Test-2 (DIT2), data were collected from three groups of students: (1) traditionally aged undergraduate business majors enrolled in a non-accelerated program; (2) non-traditionally aged undergraduate business majors enrolled in an accelerated degree completion program; and (3) graduate level MBA students. Ursuline data were analyzed using factorial ANOVA. Contrary to research asserting that the number of years of education is the primary predictor in moral reasoning development, this study indicates significant differences when age and major are factors.

Keywords
DIT2, Moral Reasoning, Character Education, Undergraduate and Graduate Business Education

1 PURPOSE AND BACKGROUND OF THE STUDY
This study is a first effort to assess the existing levels of moral reasoning of undergraduate and graduate students enrolled in traditional and non-traditional Ursuline College business programs. The need to perform this assessment is a direct result of the College’s Assessment of Student Learning function and efforts. In the convention of liberal arts learning, an Ursuline education is designed to develop the whole person. The seven academic learning goals are essential aspects of an Ursuline education for both graduate and undergraduate students:

i. **Analyze and Synthesize** by examining and distinguishing constituent elements (analysis) and combining parts or elements into a whole (synthesis).

ii. **Communicate Effectively** by exchanging ideas, thoughts, opinions or feelings through a common system of language, symbols, signs or gestures appropriate for everyday living.

iii. **Interact Socially** by engaging in behavior that permits effective relationships in both one-to-one and group situations.

iv. **Make Decisions Based on Values** by making discriminations based upon the consideration of what the individual prizes as ethical, socially worthwhile, good, beautiful, and true.

v. **Respond to Beauty** by integrating the cognitive and affective domains in a personal experience of the arts.

vi. **Solve Problems** by finding a solution to a question or situation that presents uncertainty or difficulty.

vii. **Take Responsibility for Society** by accepting the obligation to respond to unjust or oppressive social situations.

These learning goals were implemented by the Ursuline Studies Program in 1992 when the women-focused curriculum was adopted. Still relevant, they are mirrored in the Essential Learning Outcomes identified by the American Association of Colleges and Universities (2007). Research conducted with employers (Hart Research Associates & AACU, 2010) also align these goals with successful employment after college.

In this study, we aim to measure and provide evidence for the three learning goals linked to moral reasoning: (1) Make Decisions Based on Values, (2) Solve Problems, and (3) Take Responsibility for Society.
Moral reasoning is a key concept central to ethical decision making and behavior (Bazerman & Tenbrunsel, 2011; Forte, 2005; Langford, 1995; Lennick & Kiel, 2008; Pennino, 2010). Studies in leadership, management, and business related education examine ethical practices, human actions and choices as a means to assess the implications of moral development, moral intelligence and ethical practices (McFerran, Aquino, & Duffy, 2010; Reed Blasi & Aquino, 2008; Trevino, 1992; Weber & McGivern, 2009). Stages or levels of moral reasoning as applied to ethical behavior and practices are cited and studied in graduate and undergraduate levels of moral reasoning as applied to ethical behavior and practices (McFerran, Aquino, & Duffy, 2010; Reed Blasi & Aquino, 2008; Trevino, 1992; Weber & McGivern, 2009). Stages or levels of moral reasoning as applied to ethical behavior and practices are cited and studied in graduate and undergraduate business textbooks (George, 2006; Hellriegel & Slocum, 2011; Whetten & Cameron, 2011). They have also been discussed in professional publications such as the New York Times (April 21, 2011), the Journal of Business Ethics (Brower & Shrader, 2000) and Public Relations Strategist (Krukemberg, 1997).

Research on moral reasoning indicates that the amount of education is key to ascertaining an individual’s moral compass (Bebeau & Thoma, 2003; Rest, Narvaez, Thoma, & Bebeau, 2000). This assertion has been widely accepted in social science circles (Thoma, Narvaez, Rest, Derryberry, 1999; Washatka, 2010). The implication is that an 18-year-old freshman will have moral reasoning scores equal to those of a 50-year-old freshman as they each have experienced 13 years of education (Rest, Narvaez, Thoma, & Bebeau, 2000; Rest, 1994). Within the context of the DIT2 measurements, our results support the extant body of research. However, our research also indicates that age, and by association experience, correlated more strongly with moral reasoning scores than did education level.

Limited research exists on a longitudinal body of students of varying ages and life experiences (e.g., traditionally-aged undergraduate business students and adult learner undergraduate business students) to gauge a correlation between years of education and moral reasoning, and life experience and moral reasoning (Washatka, 2010). Therefore, in an attempt to add to the body of research, this study examines existing levels of moral reasoning of students enrolled in Ursuline College business programs and tested the question, “Is there a difference between the moral reasoning levels of Ursuline College undergraduate business students and graduate MBA students by age and years of education?”

2 METHODOLOGY
Utilizing the DIT2 instrument, data were collected from three groups of Ursuline College Business students: (1) traditionally aged undergraduate business majors enrolled in a non-accelerated program; (2) non-traditionally aged undergraduate business majors enrolled in an accelerated degree completion program; and (3) graduate level MBA students.

Reliability and Validity of the DIT2 Instrument
The following information regarding the DIT2 is written by the DIT2 test-guide developers and researchers and copied from the most current 2003 DIT2 Guidebook. Within this context, Beneau and Thoma (2003) offer this documentation as the official prose of the validity and reliability of the DIT2 assessment. We offer this explanation in its entirety as one foundational portion of a larger multifaceted study about student learning at Ursuline College:

“The DIT is a paper-and-pencil measure of moral judgment derived from Kohlberg’s theory of moral reasoning (Kohlberg, L. [1984] Essays on moral development: The nature and validity of moral stages, Vol. 2. San Francisco, Harper & Row.) Instead of scoring free-responses to hypothetical moral dilemmas in an interview (as in the Kohlberg procedure), the DIT presents 12 issues after a hypothetical dilemma for a subject to rate and rank in terms of their importance. Hence the DIT data consists of ratings and rankings instead of interview responses that are then scored by a trained judge according to a scoring manual. Instead of envisioning the scoring process as classifying responses into Kohlberg’s 6 stages, the DIT analyzes responses as activating three schemas. The scores represent the degree to which a subject uses the Personal Interest, Maintaining Norms, or Postconventional Schema. The schemas have a close relation to Kohlberg’s stages, yet they are different. As with Kohlberg’s theory, the schemas scores purport to measure developmental adequacy --in particular, how people conceptualize how it is possible to organize cooperation in a society. In short, the DIT is a measure of the development of concepts of social justice.

Validity for the DIT has been assessed in terms of 7 criteria (Postconventional. Rest, Narvaez, Bebeau & Thoma, 1999, cite over 400 published articles): (1) Differentiation of various age/education groups --studies show that 30% to 50% of the variance of DIT scores is attributable to level of education. (2) Longitudinal gains—a 10-year longitudinal study of men and women, of college-attendees and non-college subjects from diverse walks of like show gains; a review of a dozen studies of Freshman to Senior college students (N>500) show effect sizes of .80, making gains in DIT scores one of the most dramatic effects of college. (3) The DIT is significantly related to cognitive capacity measures of Moral Comprehension (r .60s), recall and reconstruction of Postconventional moral arguments, Kohlberg’s interview measure, and (to a lesser degree) to other cognitive developmental measures. (4) The DIT is sensitive to moral education interventions One review of over 50 intervention studies reports an Effect Size for dilemma discussion interventions to be .41 (“moderate” gains) whereas the Effect Size for comparison groups was only .09 (“little” gain). (5) The DIT is significantly linked to...
many “prosocial” behaviors and to desired professional decision making. One review reports that 37 out of 47 correlations were statistically significant. (6) The DIT is significantly linked to political attitudes and political choices—in a review of several dozen correlates of political attitudes, the DIT typically correlates in the range, =.40 to .65. When coupled with measures of cultural ideology, the combination predicts up to 2/3s of the variance of controversial public policy issues (such as abortion, religion in the public school, women’s roles, rights of the accused, rights of homosexuals, free speech issues). (7) Reliability is adequate. Cronbach alpha is in the upper .70s / low .80s*. Test-retest reliability is about the same. Further, the DIT shows discriminant validity from verbal ability/general intelligence and from Conservative/Liberal Political attitudes—that is, the information in a DIT score predicts to the 7 validity criteria above and beyond that accounted for by verbal ability or political attitude. The DIT is equally valid for males and females. No other variable or other construct predicts the pattern of results on the 7 validity criteria as well as moral judgment.

DIT-2 is an updated version of the original DIT devised 25 years ago. Compared to the original DIT, DIT-2 has updated stories and is also a shorter test, has clearer instructions, retains more subjects through subject reliability checks, and in studies so far, does not sacrifice validity. If anything it improves on validity. The correlation of DIT-1 with DIT-2 is .79, nearly the test-retest reliability of DIT-1 with itself. However when the new index (N2), and the new subject reliability checks (New Checks) are applied to DIT-1, the older and longer DIT-1 shows the same validity as DIT-2 (Bebeau & Thoma, 2003, p.30).

Analysis
Following the adoption of a methodological design (factorial ANOVA) two research questions were posed:

1. Is there a statistically significant difference in Moral Reasoning Score (N2Score) between undergraduate and graduate students?
2. Is there a statistically significant difference between a person’s Moral Reasoning Score (N2Score) and level of education and age?

The convenience sample included 179 students. Data were collected fall, spring and summer terms (2010-2011) from students voluntarily taking the test during class time. One-way Analysis of Variance (ANOVA) was used to determine if there was a statistically significant relationship for student N2 scores between levels of education (undergraduate and graduate). The results from the One-way ANOVA indicated a significant difference ($F(1, 171) = 5.22, p = .024$) such that the N2 scores were higher for graduate students (M = 36.48, SD = 15.04) than for undergraduate students (M = 28.67, SD = 15.81).

### RESULTS

#### Research Question 1

Is there a statistically significant difference in Moral Reasoning Score (N2Score) between undergraduate and graduate students?

For the first research question, a One-way Analysis of Variance (ANOVA) was used to determine if there was a statistically significant relationship for student N2 scores between levels of education (undergraduate and graduate). The results from the One-way ANOVA indicated a significant difference ($F(1, 171) = 5.22, p = .024$) such that the N2 scores were higher for graduate students (M = 36.48, SD = 15.04) than for undergraduate students (M = 28.67, SD = 15.81).

#### ANOVA

<table>
<thead>
<tr>
<th>N2SCORE</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between Groups</td>
<td>1263.775</td>
<td>1</td>
<td>1263.775</td>
<td>5.224</td>
<td>.024</td>
</tr>
<tr>
<td>Within Groups</td>
<td>41368.301</td>
<td>171</td>
<td>241.920</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>42632.076</td>
<td>172</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
graduate. Results from this analysis again indicated a statistically significant difference \( F(2, 176) = 5.53, p = .005 \) such that the N2 scores were higher for graduate students \((M = 36.48, SD = 15.04)\) than for traditional undergraduate students \((M = 28.67, SD = 15.81)\) and UCAP/non-traditional undergraduate students \((M = 35.92, SD = 12.38)\). These results for research question one followed Rest’s (1994) assertion that the number of years of education is the primary predictor in moral reasoning development as graduate students will have completed at least a bachelor’s degree prior to entering graduate school and therefore have a greater number of years of education than the undergraduate business student.

**Research Question 2**

Is there a statistically significant difference between a person’s Moral Reasoning Score (N2Score) and level of education and age?

We further tested where significant differences occurred between programs using Sheffe post hoc criteria for significance. The results indicated significant differences between the N2 scores for traditional undergraduate students compared to graduate students \((M_{\text{diff}} = -7.80, SD = 2.57, p = .011)\) with graduate students having higher N2 scores, but the results were non-significant for UCAP/nontraditional undergraduate students compared to graduate students \((M_{\text{diff}} = -.56, SD = 3.79, p = .989)\). These results seem to indicate that differences in N2 scores are attributable to factors other than educational level. Typically, UCAP/nontraditional undergraduate students are 24 years of age and older, with most students’ ages ranging between 30 and 45 years old. They have had significant personal and professional life experiences. These experiences include but are not limited to family responsibilities such as parenthood, caring for aging and/or ill relatives; and years in the workforce in varying capacities ranging from short-term minimum wage jobs to developed careers.

Finally, factorial ANOVA tested the effects of each year in the undergraduate program (freshman, sophomore, junior and senior) and age on the student N2 scores. A significant difference was found for freshmen \( F(2, 26) = 4.66, p = .04 \) and a marginally significant difference for sophomores \( F(2, 13) = 4.029, p = .066 \). However, there was no significant difference for juniors \( F(2, 26) = 0.83, p = .776 \) or seniors \( F(2, 53) = 0.19, p = .666 \). Pairwise comparisons tested the effect of age on student N2 scores for each year in the undergraduate programs. Results indicate lower N2 scores for freshmen students in their twenties than in their thirties \( F(2, 26) = 3.889, p = .035 \). No significant differences were found for other age groups or other years of undergraduate education.

**4 CONCLUSION**

The implications of this study will help drive curriculum development that applies enhanced approaches to character education for traditionally-aged, business and non-business majors. Research supports the impact and benefits of character building educational experiences (Bloodgood, Turnley, & Murdrack, 2010; Weber & McGivern, 2009; Washatka, 2010; Worthington, 2009).

As part of our assessment of student learning processes and efforts, this research has revealed gaps in how we ready our students for professional life. Development for character education efforts will be explored. Our goal is two-fold: (1) to enhance recognition in the traditional student population; and (2) to heighten awareness in the nontraditional student population about the implications of justifying professional decisions based solely on bottom line and short term goals. Research indicates this practice has encouraged the “ethical fading” that has been so pervasive in the recent business landscape (Bazerman & Tenbrunsel, 2011; Kidder, 2009; Reed, Blasi, Aquino, 2008).
As academic professionals, our hope is to better understand this issue and contribute to a reversal of ethical fading. This effort may be accomplished through strengthening and developing college curricula and providing specific and meaningful learning experiences addressed in liberal arts education. We also aim to promote and develop moral reasoning abilities so that students can successfully integrate them into academic, professional, social, and personal situations.

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Ranking Business Ethics Journals:
The Effect of Journal Age on Citation Rates

Susanna Cahn
Department of Management & Management Science
Pace University
Lubin School of Business
861 Bedford Road
Pleasantville, NY 10570, USA
(914) 773-3517
ecahn@pace.edu

ABSTRACT
Ranking of journals is done to estimate quality of journals, and in turn research, authors, and schools. Prior research has shown that it is very difficult to make comparisons among journals in different fields and that niche fields and new journals are often left out or undervalued because they don’t belong to a standard discipline group. Since business ethics is relatively new as an independent discipline, it would be instructive to study this problem in business ethics journals. This research studies citation ratios for a representative sample of business ethics journals ranging in age from seven to fifty years.

Results for the journals in this sample showed a general increase in citation ratios over time. In all journals’ early years, the citation ratios are low. Closer to the present citations grow, though at varying rates. While it appears that a journal’s age is a factor in its reputation, clearly there are also other factors at work. All the journals in this sample showed higher citation ratios in the most recent year than in earlier years, but the oldest journal is not necessarily the most cited.

Keywords
Business ethics journals, journal ranking, niche journals, journal age, new journals.

1 INTRODUCTION
There have been quite a few studies whose objective was to develop a list of ranked journals, which in turn were used to evaluate quality of research, faculty, or school. Most of these have been discipline specific: In accounting, Chow, Haddad, Singh, & Wu (2008) and Howard & Nikolai (1983); in economics, Liebowitz & Palmer (1984); in finance, Borde, Cheney, & Madura (1999) and Coe & Weinstock (1983); in management, Clark & Wright (2007) and Coe & Weinstock (1984); in marketing, Luke, Doke, & Reed (1987) and Dibb & Simkin (2005). Some have aggregated disciplines: Swanson (2004) and Herron & Hall (2004). In general, though, the disciplines, or even aggregations of disciplines follow traditional academic lines with niche fields or new research areas left out. In fact, one of the criticisms of journal ranking studies is that the lists they produce can be misleading because they are not entirely representative (see for example, MacRoberts & MacRoberts (1989), Ritzberger (2008), and Ellis & Durden (1991)). Cases in point are journals in business ethics, a niche and relatively new field.

Several papers have addressed the niche of business ethics journals, researching either citations or opinion surveys. Serenko & Bontis (2009) developed a list of the top 20 business ethics journals and ranked them based on citation data collected from Google Scholar. Paul (2004) studied the citation rates among the top three journals in the fields of business and society/business ethics. Wicks & Derry (1996) used five criteria for opinion-based rankings of a group of business ethics journals and a selected group of management journals. This was one of the earliest attempts to assess how the niche business ethics literature compares to the larger field of management in general. Albrecht, Thompson, Hoopes, and Rodrigo (2010) surveyed a global group of business ethics scholars to create a list of the top ten business ethics journals. Then they compared the list to a group of mainstream management journals that publish business ethics research, concluding that many researchers prefer to publish in the niche business ethics journals rather than the more general management journals. While there is considerable overlap in the lists produced by these researchers, there isn’t complete uniformity or agreement on rankings.

Since business ethics is relatively new as an independent discipline, it would be instructive to use business ethics journals to examine the effect of a journal’s age on its ranking or reputation. The present study uses Google Scholar to develop citation data for this purpose. A representative sample of business ethics journals of different ages is examined for patterns.
2 METHOD

Business ethics journals of five different ages were studied. The sample is representative but not exhaustive. The oldest journal in this sample is Business and Society first published in 1961, the most recent is the Journal of Business Ethics Education first published in 2004. Tables of Contents from each journal were used to find the articles published in each of three years; Google Scholar was then used to get data for the number of citations to each of these articles in the two years following publication. A citation ratio was computed: the number of citations to an article in the following two years divided by the number of articles in that journal in a given publication year. That citation ratio is the measure used in this study to represent journal reputation. The years selected were the journal’s second year of publication, its fifth year of publication, and 2008 which was the most recent year for which such data could be computed.

3 RESULTS

Charts of citation ratios are shown in Figure 1. Citation ratios do appear to show a growth rate over time. Especially in a journal’s early years, the citation ratios are low. Closer to the present citations grow, though at varying rates. While it appears that a journal’s age is a factor in its reputation, clearly there are also other factors at work. All the journals in this sample showed higher citation ratios in 2008 than in earlier years, but the oldest journal is not necessarily the most cited.

The number of articles per issue varied considerably among these journals as well as over time. This is shown in Figure 2. There was no apparent systematic pattern to the number of articles per journal.

4 CONCLUSIONS

This study presents an introductory treatment of the relationship between journal age and reputation. Conclusions are limited, however, by the small size of the sample studied. A larger list of journals as well as more time points for each journal would provide more compelling evidence. It would be especially helpful to include in the list of journals some of those which were short-lived, either ceasing publication or merging into larger journals. Another limitation is that different publications have different editorial practices regarding review articles and systematically published comments, which might also affect citation rates. There are still many unanswered questions about what contributes to a journal’s reputation.

REFERENCES


The effect of option listing on American Depository Receipts

Jason Chiu
Rider University
Department of Finance
2083 Lawrenceville Road
Lawrenceville
NJ, 08536
(609) 896-5299
cchiu@rider.edu

ABSTRACT
This paper examines option listing effects on American Depository Receipts and their local counterparts. I analyze a sample of 42 option listings from 15 different countries and obtain negative price effects on the day after option listing. One possible explanation for the findings is that option listing relaxes the short sale constraints for the underlying securities.

Keywords
Options, short sale constraints

1 INTRODUCTION

Do option listings have an impact on the underlying securities? According to Arrow-Debreu uncertainty theory, option listings move an incomplete stock market towards a state of equilibrium by increasing the number of assets to hedge against different states of nature. Black and Scholes (1973), however, see options as redundant assets and price them as such in their renowned options model. Consequently, numerous options models assume independence between stock and options market. Without a concrete theoretical direction, I examine the option listing effects on the underlying American Depository Receipts\(^1\) (ADRs) and their local counterparts in the home country. I find a negative price effect on the first day post option listings. The negative abnormal returns are -0.66% and -0.64% for ADRs and their local counterparts respectively.

2 METHODOLOGY

Using the event study methodology of Conrad (1989) and Sorescu (2000), I examine ADR returns after option listing. (See MacKinley (1997)) Two statistical models are used in computing the normal returns: the market model and the constant mean return model. Benchmarks are S & P 500 for the ADRs only analysis and major international indexes for the local stocks only analysis. No clustering effect is assumed and no portfolios were constructed because of the sparseness of the data over the sample period.

3 EMPIRICAL RESULTS

We find negative daily abnormal return, AR, of -0.66% on the day after of listing and no clear trends before and after the listing date. The cumulative abnormal returns, CAR, display a slight negative trend. Mean and median abnormal returns exhibit similar trends.

Option listings have a positive effect on volatilities. Volatility increases from 0.0037% to 0.0043% for ADRs and from 0.0032% to 0.0033% for local counterparts. This is in contrast to the previous claim that option listings tend to stabilize the financial market by reducing price volatility.

Systematic risks have remained relatively constant. We find an increase of beta from 0.69 to 0.81 for the ADRs and a decrease of beta from 1.21 to 1.17 for the local counterparts.

The volume effects, as measured by turnover ratios, show that ADRs have experienced higher volume turnover than its local counterparts did. Volume turnover ratio of 1.07 for the local counterparts cast doubt on the notion that options traders in local markets were building inventory for hedging purposes. Control 1 group consists of firms listed in S&P 100 that were sized matched, around the time of ADR option listing, with the ADRs. Control sample has a turnover ratio of 1.13, which, when compared to the 1.33 of ADRs,
suggests a higher post-listing demand for the ADRs.

4 CONCLUSION

I investigate the option listing effects on the underlying American Depository Receipts (ADRs) and the underlying stocks in the home market. I find option listings have a negative price effect on the ADRs and their local counterparts that suggest options listings lower the short sale constraints on the underlying securities.

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AN EMPIRICAL COMPARATIVE STUDY OF AMERICAN & FRENCH ADVERTISING THROUGH MAGAZINE & INTERNET ADS: THE ROLE OF NATIONAL CULTURE

Yvette Essounga-Njan, Ph.D.
Fayetteville State University
1200 Murchisson Road
SBE Rm 388
Fayetteville, NC 28301
(910) 672-1764
yessoung@uncfsu.edu

Nicole Jean Christian, MPA
Dowling College
150 Idle Hour Blvd.
Business School
Oakdale, NY 11769
(631) 879-1588
Christian@dowling.edu

ABSTRACT
Increased globalization of multinational enterprises and the lure of real or imagined benefits to be derived from standardization of advertising (Cleveland & Laroche, 2007; Tansey, Hyman, & Zinkhan, 1990) make the field of international advertising one that continues to foster both controversy and interest. As a consequence, cross-cultural research in international marketing remains of great interest to scholars (Samiee and Jeong, 1994; Sharma, 2011) and corporations. In adding to this discussion, the present study examines ad contents in French and US magazines concomitantly with French and US Internet sites. A study of this kind is appropriate in view of the paucity of studies involving French speaking countries, and particularly in view of the cultural differences between the two countries.

Keywords
Advertising, Cross-cultural, Consumer Behavior, National Cultures

1 INTRODUCTION
The difficulty of a universal or standardized approach to advertising resides in the cultural and national differences between nations (Cutler et al., 1992; Deleersnyder, Dekimpe, Steenkamp & Leeflang, 2009; Douglas et al., 1987). Reporting on the results of his study of cultural differences across various nations, Hofstede (1993) contended that the American culture profile was below average on Power Distance (40 L) and Uncertainty Avoidance (46 L); highly Individualistic (91 H), fairly Masculine (62 H) and Short-Term oriented (29 L). On the other hand, the French showed a larger Power Distance (68 L) and Uncertainty Avoidance (86 H), but were found less Individualistic (71 H), somewhat Feminine (43 M) and just as Short-Term oriented (30 L) as the Americans (29 L) (Hofstede, 1993). Today, a growing number of individuals recognize that even diverse cultures share certain common interests (Mowen & Minor, 2001). In fact, even culturally diverse countries as France and the US can share commonalities when it comes to products such as wine, and the consumption of movies.

Furthermore, the issue of sex roles in advertising (Gilly, 1988) continues to elicit questions as to reasons marketers prefer the use of women in advertising compared to men, for instance, or even compared to children or the elderly. As an important dimension in international advertising, color choice for instance, remains critical in shaping customers’ feelings and behaviors, while continuing to be seen as particular to each culture (Clarke III & Honeycutt, 2000). Thus, it is critical for international marketers to find the right balance and combination of colors in their efforts to reach international consumers across different cultures. Lastly, at the core of the problem, remain the envisaged benefits real or imagined, marketers continue to pursue in their quest for the ideal solution in international marketing (Sharma, 2011; Tansey, et al., 1990). The question of standardization versus adaptation remains a true dilemma as those reasoning in behavioral terms think that individuals from all cultures share the same wants and needs since they are all motivated in a uniform manner, thus advocating “a one for all” type of advertising. The counter argument comes from those reasoning in environmental terms as they hold the stance that culture and demographics are simply too different from one country to another for marketers to risk a uniform or global approach in their advertising (Cleveland & Laroche, 2007; Klippel & Boewadt, n.d. Yu & Zaheer, 2010).

A review of ad contents in French and American magazines and on French and American Internet sites tends to validate these two conflicting arguments. This suggests, therefore, that marketers need to remain careful in deciding on the strategy to adopt when advertising products in a country different from their country of origin (Deleersnyder et al., 2009; Okazaki, Taylor & Doh, 2007; Samiee, & Jeong, 1994). Furthermore, the implication of this state of affairs may be the fact that culture alone may not suffice as an explanation of how individuals in a particular country will respond to a certain type of advertising, despite existing
literature pointing to the opposite (Minor, 1994; Yu & Zaheer, 2010).

2 PURPOSE OF THE STUDY

Thus, we offer that despite increasing globalization, the issue of standardized versus localized advertising remains complex, especially giving the varying attitudes that consumers exhibit vis-à-vis different types of advertising (Sharma, 2011), especially as consumers become more savvy and demanding.

3 OBJECTIVE OF THE STUDY

A study of this kind makes it possible to realistically assess the current trends in international advertising and consumer behaviors in an age in which business and global business have become synonymous, and individuals’ behaviors increase in complexity, as a result of increasingly fluid boundaries between nations across the world (Cleveland & Laroche, 2007; Mowen & Minor, 2011).

4 RESEARCH QUESTION

Today, just as in the past, or even more so than in times past, it remains relevant to wonder whether increasing globalization is making obsolete the need for companies to tailor advertising to local needs and national cultures, as these companies are fiercely competing for market share.

5 RATIONALE FOR THE STUDY

This discussion proposes that if companies could ascertain the uselessness of localizing advertising messages, it would save these companies monies that could be used towards improving the quality of the products offered. This would ensure greater customer satisfaction, without incurring the cost of changing advertising messages to fit the tastes of every domestic market. It remains that engaging recklessly in such behavior would strike a fatal blow to companies’ profitability.

6 VALUE AND CONTRIBUTION

Continued company growth remains at the core of all activities in which companies engage. Globalization compels these companies to ascertain their practices will yield the needed and expected returns. Thus a study of this nature would be of value to marketers who, today, face difficult choices regarding the allocation of scarce resources. This study would also contribute to the field of cross-cultural research involving the United States, but also France, often less studied, due to the language barrier. In the full version of this study, the discussion expounds on the results of ad content analysis appearing in French and American magazines over a period of two years, from 2002 to 2004 shortly after the slump of aftermath of the September 2011 events. We also looked at ads appearing on French and American Internet sites as they could be viewed at the time of this review.

We compared two cultures that do not share the same language and show different cultural dimensions. It is our hope a discussion of this nature will start complementing the current literature in International Business, which has been heavily focusing on English language cultures (Samiee and Jeong 1994; Sharma, 2011).

Often, International Marketers will find it easier to circumvent language barriers involved in attempting to translate the home country messages by avoiding the translation of these in international advertisement, simply adapting the message to the related culture. In France, McDonald’s indicates its concern for the environment on its ads, even mentioning that in order to obtain good French fries, it is necessary to grow potatoes for five months. In the US, it is obvious McDonalds has concerns other than convincing eager consumers the potatoes served endured a lengthy growth period. The review of 29 US magazines, 19 French magazines, 22 American Internet sites and 22 French sites can hardly make it possible to infer that the world has become that “global village” which remains the dream of every international marketer (Cleveland & Laroche, 2007). As Tansey, Hyman, and Zinkhan pointed out in their study, “Though some of our findings suggest that a “global village” may yet emerge, other findings suggest that seemingly similar cultures may not converge because of important historical differences” (Tansey et al., 1990).

However, we found some rare instances in which international companies simply used the same ads in both countries. That was the case for the company marketing Martini Rossi, a beverage commonly consumed in France and the United States. The company’s American and French Internet websites were similar to the letter and they simply portrayed pictures of various Martini brands. Yu and Zaheer offered that both adaptation and differentiation remain complex issues with which companies continue to wrestle, even as they continue looking for the best way to achieve sustained profitability (Yu & Zaheer, 2010). It would be interesting to study a bigger pool of magazines, Internet ads and television ads as well in both countries, extracting a more statistically significant number of items utilized in both cultures. This would lend enhanced credence to our discussion of a still unresolved dilemma for companies: to standardize or harmonize.

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Abstract: Colorectal cancer is the second leading cause of cancer mortality in both the United States and Canada. Although a variety of screening methods exist for colorectal cancer prevention, the more effective and preferred method is the colonoscopy. In the United States the deep-south region was found to have a high rate of colorectal mortality and incidence with about 19 out of 100,000 persons dying from CRC complications. Of this region, 53% of the population was screened for CRC. In Canada, the region of Ontario exhibited a high rate of CRC mortality of 3,400 CRC deaths, making up about one third of the overall CRC deaths. Ontario also had low screening rates that correlated with high incidence and mortality rates. Coverage in the United States was Medicare dependent for those who were eligible and the procedure itself cost from $600-$3,000. In Canada, the procedure was entirely covered under the Ontario Health Insurance Plan (OHIP) with a cost of roughly $400 with a flat rate fee of $144. Financial, systemic, and sociocultural barriers were identified that prevented patients from seeking or receiving proper screenings. Major barriers that existed in the deep-south included sociocultural factors such as lack of awareness, education, and income level. Physician endorsement played a small role in the screening behaviors in the south and there were personal barriers such as discomfort and embarrassment that also aided in patient decision. In Canada, main barriers were systemic and were direct results of lack of health care and physician awareness. It is suggested that in both the United States and in Canada, there needs to be established more comprehensive guidelines for physicians to follow. These guidelines would ensure that each patient is receiving the care they need regardless of predisposition to CRC. In addition, alternative testing such as the FOBT Clinical trials should be started up for potential genetic screenings which would be non-invasive and efficient at early detection. Educational programs as well as full coverage plans would also aid in increasing screening rates.

1 Introduction

Colorectal cancer is the second leading cause of cancer death in both the United States and in Canada. About 80% of all colorectal cancer is preventable and when caught early on is very treatable. Those over the age of 50 are encouraged to get screened once every ten years. While various preventive measures exist to detect colorectal cancer in order to improve survival rates of patients, many patients do not utilize the tests available. Testing is crucial early on in this disease for colorectal cancer treatments are more effective in the beginning stages and also because it is possible to remove malignant growths inside the colon before they begin to metastasize. A variety of screening methods are available to patients; however, the more common form of colorectal screening is the colonoscopy. About 72% of all tumors arise in the colon and 28% arise in the rectum making colonoscopies highly valuable and efficient. Colonoscopies are highly invasive procedures that require patients to undergo a rigorous preparation in order to be tested (Medlineplus, 2011). Part of this procedure requires a cleansing of the bowel which may take 2-3 days of a strict diet. During the procedure, patients are sedated and a small tube is placed in the colon with a scope to view the internal walls. Patients may experience pressure or slight pain during this procedure. Colonoscopies are performed once every ten years making them a more preferable method for physicians and insurance companies. In order to receive coverage for this procedure there may be preliminary tests to ensure a patients’ predisposition for colorectal cancer making it difficult to receive or cover under an insurance plan (CCA, 2011).

While colorectal cancer mortality and incidence rates exist across both countries, these rates are not evenly distributed over the demographic regions. Two demographic areas have been identified as having the highest rates of mortality and incidence
in both countries. In Canada, the province of Ontario has high mortality rates and in America, the deep-south region show high mortality and incidence rates. In these areas, it is possible that that the high incidence and mortality rates coincide with a variety of area-specific barriers which prevent patients from obtaining the proper preventive screenings. Such barriers that exist may be financial barriers such as insurance coverage and out of pocket costs of the procedure may inhibit patient care. It is also suggested that physical barriers exist such as the strict preparation preceding the procedure which may inconvenience the patient followed by the invasiveness which may create discomfort in patients. Another suggestion is that there exists a health care barrier created by health personnel and health care policy (Dobrowa, M.J., 2006). The U.S. and Canada operate under different health care systems that both have the potential to create unique barriers which are out of the patient’s control.

This paper will focus on whether or not there exists a lack of preventive measures taken in these areas and if so, why there is a stigma surrounding preventative screenings. A variety of physical, financial, and sociocultural barriers will be compared between both countries in order to understand how each health care system operates and how patient views compare. Comparison of demographics, government policy, and patients’ opinions may give a better idea as to why colonoscopies are not utilized as an effective preventive measure against such a prevalent disease.

2 Literature Review

Various Colorectal cancer websites were reviewed for general information on screening methods, particularly for colonoscopies. General information sites were used to find information on the colonoscopy procedure and screening information. In Canada, the main center for screening information was the Colorectal Cancer Association of Canada site. For demographic information, the Canadian Cancer Society site provided the incidence and mortality rates for colorectal cancer. For the United States, demographic information and colorectal cancer incidence and mortality statistics were found at the Kaiser State Health Fact website and at the Center for Disease Control. Journal articles were found for both the United States and Canada for reasons why patients did not receive colonoscopies. Both peer-reviewed and periodical articles were analyzed for possible alternative screening procedures and government policy changes that would support higher screening rates.

The demographic areas with high mortality rates were determined using census information as well as health care sites that provided a comprehensive view of mortality and incidence rates of colorectal cancer. After the demographic areas were determined, the broad spectrum of financial barriers was looked at to find some correlation between the incidence and mortality rates and a designated area. Insurance sites as well as government websites provided the fixed costs for colonoscopies in both countries as well an insurance plans and regulations. The microcost of the colonoscopy procedure, including both physician and indirect fees, was compared between the two countries with the technical and physician fees taken into consideration. Other financial factors, such as insurance and out of pocket fees were then analyzed. Using supporting information from gathered literature, the proper support and evidence was used to compare the demographic areas, hospital and government infrastructure, financial, and sociocultural reasons as to why patients are hesitant to get screened.

3 Methodology Analysis

The overall method was to conduct a critical review of selected periodical and journal articles. The content was analyzed for statistical and qualitative data concerning colorectal cancer preventive measures taken by citizens of both the United States and Canada. After gathering statistical and demographic information, supporting journal articles and research studies were found using the search engines PubMed and EBSCO Host. These engines provided peer-reviewed journal articles which provided supporting evidence for colonoscopy screening rates in the previously isolated demographic areas. Many of the articles cited supporting articles to further define the topic. From the gathered literature, statistics for screening rates and mortality rates were compared for both countries. The regional barriers were also compared to understand the impact of different health care systems on preventive medicine.

4 Results
In both countries, colorectal cancer (CRC) is the second leading cause of cancer death with the colonoscopy ranked as the more efficient preventative screening. In the United States, roughly 53,000 died of colorectal cancer and 142,000 were diagnosed in 2007 (CDC, 2011). Of those who are of the age to be screened, only 62.9% were screened following recommended guidelines. In the deep-south region including states such as Mississippi, Alabama, and Louisiana, high rates of colorectal cancer mortality exist in comparison to other U.S. states with 19.8 out of 100,000 deaths due to CRC (Kaiser, 2006). Louisiana and Arkansas also had low rates of colonoscopy screening where only about 53% of the state population was receiving these tests compared to the state average of about 65%. In Canada, about 22,000 people will be diagnosed with CRC with 9,100 deaths (Society, 2010). The province of Ontario in Canada has among the highest incidence rate of colorectal cancer and has low rates of screening with an estimated 8,300 incidence cases and 3,400 cancer deaths, making up about one third of the total cancer deaths in Canada. In one study, 79% of the participants had not received any type of colorectal screening and of those who did, only 6% had a colonoscopy. Of those that were screened, less than 20% went back for a follow-up screening. There were also regional variations in Ontario. The northern parts have an overall higher incidence and mortality rate compared to the rest of the province. The survival rates were also lower than the overall survival rates, with the northern section at a 51% survival rate and Ontario’s overall survival rate was 56%.

The cost of the procedure in the United States was a total of $923 compared to Canada’s cost of $467 (Henry, S.G., 2007). In the U.S., the indirect costs which included equipment, maintenance, etc. were $226 while the direct cost which included medical personnel was $379. Patient time was also calculated which took into account transportation and medications. The cost of a colonoscopy in the United States increases depending on additional procedures such as a polyp removal and can extend beyond $3,764. In Canada, physician fees accounted for 80% of the total cost and the flat rate of the procedure itself was $200 which also takes into account indirect costs (Sharara, N., 2008). The specific technical fee set for the province of Ontario is approximately $146.66 which covers the cost of maintaining and purchasing the equipment necessary to perform the procedure (Bach, D 2006). The colonoscopy procedure is covered under Ontario under the Ontario Health Insurance Plan (OHIP). A specific clinic, The Rudd Clinic, has four clinics across the province of Ontario that are designed specifically to render preventative services; however, if patients are not covered by OHIP they must pay preset fees established by the Ontario Medical Association (Clinic, 2009). This would be the technical fee of $144.66. In the United States, many of the private insurance companies cover various colorectal screening tests. Medicare covers the cost of a colonoscopy every ten years if the patient is predetermined to be at a high risk for colorectal cancer (CDC, 2011). It will not cover the test if the patient had received a sigmoidoscopy within the last four years. If there were unusual findings during the procedure, Medicare will cover additional testing. If the procedure was performed at an ambulatory center, the patient must pay 25% of the Medicare approved amount.

Various barriers existed to prevent screening in both countries. In the United States, fear was most prevalent reason for not getting screened (Rabin, R.C., 2011). In the deep-south of the United States, particular cultural and lifestyle barriers played a role in the decision to get screened. Of those interviewed, 8.85% had never heard of a colonoscopy and 41.59% had heard of the test but did not receive the screening (Tseng, T., 2008). Those with low colorectal cancer knowledge were less likely to be screened at the age of 50. Also, those who were enrolled under Medicare or Medicaid were less likely to score high on cancer knowledge and preventative measures. Family income as well as the education level correlated with higher screening rates with those completing a college degree scoring 2% higher on CRC knowledge exams. In Ontario, those who were screened were more likely to be aged 55 and 95% of those screened had a discussion about screening after the diagnosis (Madlensky, L., 2003). Those who were not screened were likely to receive physician encouragement only 22.2% of the time while 84.3% of those screened were exposed to physician encouragement. Out of the patients who felt healthy, 66% would go only if they felt symptoms and 55% who did not receive physician endorsement would be screened if there had been physician prompting (Madlensky, 2004). Of those anticipating discomfort, 25% would receive a colonoscopy if they had symptoms and 20% would follow physician endorsements. In a specific study of screening efficacy, only 7% of the patients had received a colonoscopy at the recommended age (Assn. of Colonoscopy & Death from Colorectal Cancer, 2009). This study also concluded that there was a lower mortality rate for colonoscopies with patients who had left-sided colorectal cancer. Those
who had right-sided colorectal cancer did not show a significant decrease in mortality rates.

5 Discussion

Both Canada and the United States had specific regions that were more likely to have high mortality and incidence rates for CRC. Both of these regional areas also saw a correlation with low screening rates. These low rates were a product of various barriers which overlapped between both countries in some cases. Financial barriers did not seem to be as prevalent in either country, although in Canada, the cost of the test itself was much lower than in the United States. Medicare had established guidelines for coverage of colonoscopies as well as set a cost of $500 to cover the procedure. This would only become a problem if there were complications during the procedure to raise the traditional cost. Ontario covered all citizens who were under the Ontario Health Insurance Plan. Those who were not fully covered under the program had to pay the out of pocket fee which was set at $144 by the Ontario Ministry of Health.

The main barriers seen in both countries existed at the systemic health care level including physicians and government personnel. There were also various barriers that existed at the personal level of the patient. In the deep-south, education coupled with lack of physician encouragement prevented the majority of the patients to seek preventative screenings (Tseng, T.F., 2008). These sociocultural issues take root in government policy; however, there are effective strategies to help increase patient awareness. Educational programs should be targeted to those who do not have a familial history of CRC for they are less likely to be exposed to the importance of screening or the disease itself. Low income areas with low levels of unemployment should also be a target for these educational programs, specifically the church-going group who are more likely to be influenced by their peers than their physician (Tseng, T.F., 2008). Fear of a negative diagnosis also plays a role in the patients’ decision, so raising awareness along with physician compliance can help to properly educate and implement screenings (Rabin, R.C., 2011).

The barriers that were most common in Ontario were the systemic and health care barriers that prevented patients from receiving a comprehensive screening that included a colonoscopy as a follow-up procedure. Both the United States and Canada lack specific guidelines on how to properly screen patients for CRC. The focus lies more with patients who are pre-disposed to cancer which creates a barrier for those who do not have a family history. Embarrassment and discomfort also played a role in the screening decision. In Ontario, those who are covered under the OHIP would not have to pay for the procedure; however, there were still patients who were not willing to receive a colonoscopy. Only 20% of those who were anticipating comfort were willing to be screened for cancer after their physician recommended the procedure and only 25% were willing to go once they had started realizing symptoms (Madeleinsky, 2004). This remains a huge problem, for alteration of the colonoscopy procedure itself is not feasible; however, there are other less invasive methods that exist. One example that had already been mentioned is the Fetal Occult Blood Test (FOBT). Although this is not the preferred method for physicians, it may be preferred by patients who do not wish to undergo discomfort or the inconvenient prep work involved in the colonoscopy.

Physician influence plays a large factor in the decision of the patient to get screened in both countries. It also suggested that in addition to physician endorsements, patients need an educational foundation in order to understand the risks and complications that can occur without preventive screenings. The benefits of screening should also be emphasized for those who are not predisposed to CRC but are of the screening age.

6 Conclusions

It is estimated that in both the United States and in Canada, about 6 billion dollars will go toward colorectal cancer treatment. In both countries, it is possible to lower costs of treatment, especially preventable treatment, and also lower mortality and incidence rates. Both health care systems must operate under a cohesive and comprehensive screening program that includes clear guidelines in order for physicians to diagnose and treat CRC in an effective and equally distributive manner. These guidelines should be based on a combination of innovative tests that can detect CRC early on in an effective manner and also existing methods that are inexpensive and effective. The feasibility of these methods must also be considered including the availability of proper physicians and personnel that are trained to administer screening procedures as well as interpret the results.
In the United States, there has been development of innovative genetic tests which identifies specific gene markers (Rabin, R.C., 2011). Although not yet approved by the FDA, it provides promising insight into a simplified and inexpensive gateway test. This would cut down on health care costs and be more accessible to patients. In order to be approved; however, these tests must go through clinical trials in order to provide evidence of it's safety and efficacy. To begin immediate improvements of screening rates, established methods should be taken into serious consideration. One existing method would be the administration of the FOBT which is a financially feasible gateway method to detect colorectal cancer. This test followed by a more comprehensive screening such as a colonoscopy or sigmoidoscopy would provide the patient with the proper screenings to lower mortality rates.

Proponents for the administration of the FOBT exist; however, in Canada, there is a strong opposition to using this test as a preventative screening method (McGregor, E., 2004). While 8.2% believe that colonoscopies provide a comprehensive examination, 56% believe that there is low patient acceptance of this method. The FOBT would be an alternative method; however, 88.2% believe it to have performance issues and 75.3% believe it to have the potential to miss potential tumors. The FOBT does have a higher patient acceptance rate than the colonoscopy because it is less invasive and less expensive. Physicians agree that colonoscopies put a financial strain on the health system with 69% of Ontario physicians believing it is high in cost; however they do not agree on the tests efficacy. In the United States, the cost of such a test would be about $10 and Medicare would allow patients to only pay about 20% of the total Medicare cost. Aside from Medicare, a variety of private insurance companies fully cover the cost of a FOBT. The use of the FOBT as a pre-screen for a colonoscopy would allow physicians to better discriminate between those who need to get a colonoscopy and those who can wait. This can cut down on unnecessary tests as well as cut down on the amounts of personnel necessary to give the colonoscopy.

Current preventive programs do exist in Ontario which outlines stages and treatment plans to reduce mortality rates (CCO, 2008). This program has shown success in increasing the number of FOBT from 14.8%-29.7% in four years. About 61% of those who had received a positive FOBT had participated in a follow up procedure and the rate of early cancer detection increased by 2%. This program is promising in that it is preventively screening its patients at a low cost and educating them through the process as to what follow up procedures they should aquire, including colonoscopies. It has also been shown that 13.1% of colonoscopies are incomplete in Ontario hospitals (Shah, H.A., 2006). These incompletion rates were associated to the gender of the patient with more females receiving incomplete tests as well as location of the testing center, where more complete colonoscopies taking place in teaching hospitals. This suggests that there needs to not only be patient awareness, but also endocptists must ensure that their patients are receiving the full test even if they are not completing the entire test.

Financial barriers are not as prevalent in the patients as they are in the government and health care delivery. For patients, it is mainly the procedure itself including the bowel preparation which serves as an inconvenience and the embarrassment of the procedure itself. Further research is suggested as to why there exists specific flaws in the delivery of screening tests and how this can be improved. The program in Ontario provides a precedent for other provinces in Canada and also for the U.S. to raise awareness and provide coherent guidelines for medical personnel. Patient-physician barriers must also be overcome so that patients who are not at risk still receive the screening procedures at the most basic level (FOBT) to ensure that they so not have CRC.

7 Ethical Perspective

The concept of a colonoscopy may seem to be simple; however, there are multiple variables that must be considered in order for the procedure to be carried out. The cost of the procedure as a whole may be one factor in the decision for consultants to advise receiving a colonoscopy as well as the additional costs which include administrative and indirect patient-physician interaction. These costs are higher in the United States than in Canada; however, the insurance companies will usually cover the costs. The problems in the screening procedure usually arise at the systemic level including access to preventative measures and patient/physician outlooks on these procedures.

Currently, screening procedures exist in both the United States and Canada; however, the demographic distribution of clinics and available physicians are not uniform across many areas. One obstacle that patient’s face in receiving colorectal cancer screenings is access to this type of care.
Access may be inhibited by the unequal distribution of screening procedures, especially in low income areas. This infringes upon the ethical principle of distributive justice where there is not an equal distribution of medical procedures in low income or remote areas. This is a systemic problem where many of the hospitals and clinics do not have the resources or the specialists to perform the procedure. This may be due to a variety of factors including physician pay and government funding in these areas, which brings up deeper socioeconomic issues that are present in a capital society.

to practice in a way as to do no harm, it is necessary to establish guidelines that will provide a cohesive and effective method of treatment. Otherwise, the patients may not receive ultimate care and the set of standards for preventative care would be subpar (Wenger, N.S., 2010). Insinuated in the principle of beneficence is that the care received along with the physician’s training would be to a certain degree of quality.

The treatments used in cancer therapy also become high in cost once the patient is diagnosed with cancer. This leads into availability of various treatment methods which may be high in cost and harder to provide, especially to those patients who are uninsured or underinsured. The physician also has a dilemma when the patient wants to continue treatment; however, the treatment is found to be futile. This is when alternative care (such as comfort care) must be considered. Another issue that must be taken into consideration is the implication of using certain methods on the elderly (Mönkemüller, 2009).

Overall there are seemingly small dilemmas when the question is raised concerning colorectal care and preventative measures; however, there are issues that arise in different layers of the health system. Issues arise in the systemic health care delivery level where there are physician and resource shortages. They also arise at the physician and patient level where it is not clear the specific guidelines to follow or what treatments to provide. This leads to the question of how both preventative measures and treatment methods can be standardized to provide quality care to all of the population.

Works Cited


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This article is an outgrowth on material studied in the Pharmaceutical Marketing

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7
Workforce Transformation Issues: Can We Enable Workers To Acquire Adequate Skills And Knowledge Necessary To Succeed In A Multi-Generational Workforce Environment?

Constance J. Crawford CPA, MBA
Professor of Accounting
The Anisfield School of Business, Ramapo College of New Jersey
505 Ramapo Valley Road, Mahwah, New Jersey 07430
(201) 684-7396
crawfor@ramapo.edu

ABSTRACT
The United States workforce has experienced the most radical transformation since the end of the Great Depression starting in 2008. Most economists agree there appears to be a fundamental long-term change in job generating patterns as a result of the economic debacle caused by the sub-prime mortgage meltdown. As a result of the current economic malaise, many older workers planning on retiring will be unable and the next generation of employees will be impacted as a result of this current demographic shift in retirement strategy.

The downturn in the US economy has created a dynamic and evolving workplace overwhelmed by critical issues undermining employee productivity and mobility. The need to ascertain the viable solutions to resolve the problematic workplace challenges is critical to the recovery of our national malaise.

The need for a more flexible workplace necessitated by the most radical workplace transformation since WW II is a critical component to the success of the US economy. Learn and earn innovative solutions have failed to achieve the anticipated level of success due to the continuing high unemployment rates.

Specific characteristics inherent in each generation of workers have contributed to both a crisis in confidence and an erosion of business ethics plaguing our workplace environment. The generational conflict inherent in age and cultural differences must be addressed to assure a compatible workforce. The primary problem created by the current economic down-turn is that the largest population of Baby Boomers entering the retirement arena has been forced to delay their gold watch retirement parties and to continue working. The retirement age of 65 has been replaced with a recognition that many of the 8,000 baby boomers turning 60 each day will be forced to work well into their mid-70’s to overcome the financial decline caused by the subprime mortgage meltdown. In the 2011, 77 million baby boomers will have attained the minimum 65 age requirement necessary to meet the maximum retirement benefits, but many will be unable to step aside to provide opportunity for the next generation of workers due to a decline in finances.

Keywords
Workforce, jobs, economy
This demographic shift in retirement age from 65 to 75 will require management to incorporate the historical and common characteristics of the aging workforce into their management styles to ensure a cohesive work environment. In a 1991 book titled “Generations” the authors outlined the specific generational characteristics common to each named generation. The Silent Generation (1925-1942) currently is the smallest portion of the workforce population. Their experience, knowledge and wisdom are an integral component of the current workplace environment and must be preserved to ensure a historical foundation. The Boomer Generation (1943-1960) is the largest segment of the current workforce. They are characterized as an outspoken and idealistic “me” generation population, many of whom morphed into the stereotypical yuppies of the 1980’s. The Boomers are competitive, value expertise and believe in “paying your dues” as a requirement for advancement. The Gen X Generation (1961-1981) comprises the first “latch-key” population of adults raised by dual-income households, 40% of which became a divorce statistic. This generation is driven by the entrepreneurial spirit embracing the “job-hopping” to advance up the corporate ladder of success strategy. The Millennial Generation (1982-2003) is comfortable in a secure, informal work environment. These “20 some things” seek a structured format that provides supportive coaching and mentoring.

The integration of 4 active generations into a cohesive workplace environment is a daunting task for any management team. The need to integrate the complexities and differences of each generation into the workplace dynamic is essential for long-term economic growth. The specific characteristics of each generation are contributing to the workplace crisis mindset. The perception of Boomers vs. Gen X’ers is driven by the reality that an aging workforce with a growing population is the dominant culture in today’s workplace. A recent survey focusing on “Cheating in School” highlighted the differences in both the generational experiences and their underlying ethics. In response to a question: “Have you ever cheated in school?” 64% of the students under the age of 40 answered yes compared to 16% for the over 40 population. The experiences in the classroom ultimately formulate the behaviors exhibited in the workplace. Clearly, as the survey determined, the experiences of Gen X and Millennial Generations are very different from the Boomer Generation. How these different generational perceptions and beliefs will impact the workplace need to be examined.

2 THE AGING WORKFORCE
A central issue in the organizational culture of every entity is their ability to produce innovative ideas and maintain economic stability. Therefore, it is essential to assess the relationship between aging, workforce transformation, and innovation. Some studies of the organizational behavior of different companies suggest that aging has a positive influence on companies. Such theories assume that as the workforce and, respectively, the firm’s age, they accumulate experience over time and introduce innovative approaches more frequently in order to stay competitive. On the other hand, other group of organizational behavior professionals argue that there exists a negative correlation between aging and innovation because as the workforce ages, an organization becomes increasingly incapable of generating innovative approaches to establish a long-term trend of workforce transformation.

Although many studies have been performed in this area, the results are somehow misleading because the gathered empirical evidence suggests that the level of innovation adopted by each business entity depends on the type and size of the company, the organizational structure and culture, the specifics of the industry, etc.

Nevertheless, change in the composition of the workforce is one factor that influences innovation and productivity growth. In their study of the workforce aging, Malmberg, Lindh, and Halvarsson develop two hypotheses about the changes in age composition and productivity. Their first hypothesis states that the prime group of employees associated with the highest levels of labor productivity varies between 30 and 50 years of age. The second hypothesis is based on the theory of the Horndal Effect.

Horndal steel plant is located in central Sweden. Between 1927 and 1952, the plant's workforce grew significantly older. In contrast, its productivity increased by 2.5 percent for the same period. As a result, Horndal Effect demonstrates that aging workforce alone is not a reason for decreased productivity. In fact, "an aging workforce was compatible with rapid increases in labor productivity through a learning-by-doing effect." Therefore, aging workforce may bring substance to different business entities through accumulation of experience and technical knowledge and still be competitive and highly productive. However, how willing are the representatives of aging workforce to transform their skills and possibly go back to the classrooms, if
affected by the mass lay-offs undertaken by most business organizations during the current economic meltdown?

3 THE ROLE OF EDUCATION

Employee training and workforce transformation are key factors in stimulating the economic growth of the U.S. The declining job market stability in the recent years and the demand for more flexible employees have resulted in the need to retrain the workers who are already a part of the active labor force. As a result, more and more employers have begun to recognize the role of community colleges in providing employee training. Job market studies show that 30 percent of the business entities rely on community colleges as a source of employee training. Furthermore, the increased demand for obtaining associate's degrees resulted not only from the necessity to be more flexible in the business world, but also because associate’s degrees are easily convertible into Bachelor's degrees.

Community colleges also try to be proactive in terms of their programs in order to fit the needs of the businesses. In addition to the regular course curriculum, some special classes are designed in accordance with the specifications of certain employers. In other words, employers may request the preparation of customized training programs to enhance the competitiveness of their employees and businesses.

Nevertheless, there exists a gap between the employee training that is demanded by business establishments and the one that employees from different companies receive. Larger companies rely on community colleges for employee training much more compared to small business entities. Also, companies in certain industries utilize training practices more than firms in other industries. Other striking evidence is that the organizations that usually provide extensive employee benefits are more committed to innovative workplace practices and substantial employee training.

It is essential to consider the reasons for larger employers to be more aware of the community college programs compared to smaller employers. In fact, small companies are generally more focused on day-to-day survival and have less developed human resource departments, if any. On the other hand, large companies have the funds to assign professionals to scan for and evaluate external training vendors, and to look for state funds and government subsidized programs that are available to pay for employee training as well. Furthermore, large business organizations more often interact with local economic development groups that frequently involve community colleges among their members. Business utilization of community college training also varies significantly by industry. Some industries such as finance, insurance, manufacturing, health care, transportation, and utilities are greatly dependent on training in order to be successful in the long run. On the other hand, employers in wholesale and retail trade, apparel making, and construction rarely invest in employee training programs. Therefore, there exists a trend that government subsidies related to enhancement of employee skills are only available for and target certain business fields and industries. In this respect, the inter-industry differences create a huge gap in terms of technical preparation of the workers employed by some industries and limit their ability to faster transform their skills, if necessary, in order to survive in a highly-dynamic workplace environment.

However, it is not just the employer demand that determines the increasing tendency for the community schools to work with larger companies. A conducted research aiming to provide information concerning the main targets of the training programs supplied by community colleges reveals that community schools prefer to work with large companies because they are better able to afford contract training and provide enough employees to enroll in specially prepared programs.

The uneven utilization of employee training by different companies appears to be a significant issue that has a negative influence on the economy and the equality among employees. Moreover, this uneven utilization of training implies that smaller companies and employers in certain industries receive less training and, therefore, less occupational mobility. In respect to the current situation of the job market, the employees of these entities, if let go, would not have an equal opportunity and skill set to compete with employees coming from larger companies.

4 GENERATIONAL DIFFERENCES AND PERCEPTIONS IMPACTING THE WORKPLACE

Generations are becoming increasingly important in today's work environment. The attempts of many business organizations to create diverse workforce have reduced the level of the racial, age, and gender prejudice. More and more companies have introduced equal opportunity programs in order to establish better professional relationships and equality among their employees. In this respect, an important factor to consider is the cultural specifics, the differences
between age groups, and their level of expertise. Moreover, during the current economic meltdown, company leaders must understand the characteristics and values of each generation in order to better manage and create an efficient workforce. With the baby boomers approaching a retirement age and the increasing number of boomers exiting the workforce in the current years, the emphasis shifts to the representatives of Generation X and Millennials in order to fill up the vacant positions. Therefore, many companies have already started the process of transforming their leadership approaches and corporate cultures to better fit the characteristics of the current workforce.

The individuals in Generation X (1961-1981) grew up during a time of economic insecurity, the Vietnam War, and the oil embargos. As a result, Gen-Xers developed a strong sense of self-reliance and independence. In today's business environment, they distinguish themselves as achievers while adopting innovative approaches to complete their tasks.

One of the strengths of the employees falling in this group is that they are very flexible in terms of learning and obtaining new skills. If provided with opportunities to develop their skills and knowledge in an environment that supports innovation and risk-taking, Gen-Xers would appear to be very important and valuable assets for an organization. Moreover, Generation X is about to replace the retiring Baby Boomers at the workplace and become a key leadership group in the business world.

Out of the active generations that comprise the labor force, Millennials (1982-2003) are going to be the next generation of leaders following the Gen-Xers. They need to see defined career paths that provide them with the opportunity to progress quickly through the different position levels. This implies changes in the structures of some organizations in order to include more managerial positions.

Furthermore, Millennials have been raised in a very steady economic environment, growing with the advancement of technology. Therefore, they are the most optimistic and open-minded out of all generations. Because Millennials are strongly motivated to reach their career goals and most of them are just about to enter the workforce, they are the group to adapt the best to the changing workforce trends.

5 THE IMPACT OF BABY BOOMERS ON THE WORKPLACE

Many individuals of the baby boomer generation are at the age for retirement and are likely to exit the workforce in the next three to five years. Although many may choose to postpone retirement, others would leave the public sector to look for opportunities in the private sector. A significant importance is placed on the fact that baby boomers have leadership positions, specialized positions, and a lot of expertise in their fields. Upon exiting the workforce, such workers take away valuable knowledge and experience with them. As a result, the organizations are affected negatively by the lack of specialized skills.

Various studies have observed the variation of annual turnover of employees in different organizations. The results show that 68 percent of responding organizations have a turnover rate between 1 and 10 percent and 28 percent of the employers indicate turnover levels fluctuating between 11 and 20 percent. Companies were also asked to identify the rate of voluntary turnover. 37 percent of the firms place the voluntary turnover at more than 76 percent. This means that the majority of their employees choose to leave their employment. Another striking fact is that 46 percent of the organizations indicate low levels of voluntary turnover varying between 1 and 26 percent. Therefore, in those companies, up to 74 percent of the employees are let go by the management teams. HR professionals explain that such high turnover rate may be an indicator of funding and resource issues.

Another critical factor resulted from the performed analyses of the current workforce structure is that 26 percent of the employers expect to lose between 26 and 50 percent of their employees due to retirement as opposed to 69 percent of the organizations that have between 1 and 25 percent of their labor force eligible to retire. These figures demonstrate that many business entities will be affected by a significant shortfall in their staff. Smaller firms will face the biggest challenges. For instance, if 20 percent of the employees of a company retire within 12 to 18 months, while the firm is looking for new talents to hire, the current employees will have to take over additional tasks and duties to maintain the flow of operations. In this case, the company would postpone the implementation of many projects associated with its long-term strategic initiatives and would place a primary focus on the everyday transactions which may threaten firm's competitive position at the market.

The employees that are eligible to retire may not have a drastic impact on the organizations. Nevertheless, if
we combine the rate of retirement with the high level of employee turnover, some organizations may appear to be unprepared for such staffing issues.

6 CONCLUSION

In today’s complex and problematic workplace, the only option available for many older workers is to remain employed. That reality will require these older employees to make themselves an essential part of the workforce. Older employees bring invaluable experience to their jobs but they must remain relevant. A recent study conducted by the nonprofit Transamerica Center for Retirement Studies determined that three out of five workers in their fifties and sixties plan on working beyond the traditional retirement age of sixty five. The older employee can only maintain their value in the workplace if they stay abreast of the latest technological advances and continue to provide perceived benefit to their employers.

REFERENCES


The Social Security system, established in 1935, was intended to alleviate some of the hardships caused by the great Depression. The plan worked very well in the middle part of the 20th century when there was an abundance of younger workers to support Social Security at a time when life expectancy was lower. The authors will investigate the differences between then and now to ascertain the viability of today’s Social Security system and its continued effectiveness. The authors will show how changes in the ages at which individuals receive social security benefits, together with the salary cap, can actually lead to greater financial relief afforded to middle class wage earners while adding needed funds to the overall budget of the Social Security system. A new program, the Secured Transparent Retirement Account Program (STRAP), is also proposed. This program which creates individual retirement accounts managed by the Federal government would offer higher returns and allow every American to better understand the growth of their retirement funds. Such an approach would remove the ability of the government to poach the Social Security account and result in a phase out of the government-run Social Security system. Automatic restructuring of individuals’ retirement accounts based upon age would allow every American to capture the best returns while having the safety of Treasury bill guarantees during the last decade of the working life. This system would also allow for workers to receive distributions at age 60 or after 40 years of employment, whichever comes first. Residual balances could be included in each individual’s estate.

Key Words
Social Security, Minimum Age, Salary Cap, STRAP (Secured Transparent Retirement Account Program)

1 INTRODUCTION
Given the effects of the Great Depression, many progressives were calling upon Franklin Delano Roosevelt, elected president of the United States in 1932, to provide support for Americans in their retirement years and in the case where disabilities prevented them from earning an income. The solution was the Social Security Act (SSA) which was passed in 1935. When initially conceived, the Act and its funding were based on certain assumptions that are being challenged by the demographics of today’s America. As a result, the future of Social Security is jeopardized. The purpose of this research is to study these issues and develop a better understanding concerning the future of Social Security. Proposals will be offered to enhance the solvency of the program both in the short and long-term.

2 HISTORY OF SSA
Originally passed on August 14, 1935, the SSA has had many amendments and changes over the years to allow it to expand coverage and handle cost of living increases. As initially passed, the Social Security Act provided a monthly benefit to individuals aged 65 and older and no longer working. The monthly benefit was paid to the primary worker when he or she retired. The amount received was based on the individual’s payroll tax contributions. The SSA also provided unemployment insurance, aid to dependent children and grants to states for medical care (King, Cecil & Wayne, 2007). In 1939, the SSA was amended to include benefits for the spouse or the minor children of a retired worker. It also added a survivor’s benefit which further extended the concept of economic security to the family. A major addition to the program was initiated in 1950 when a cost of living adjustment (COLA) was implemented.

In 1961, the retirement age for men was reduced to 62. Those deciding to accept Social Security at that age received a scaled-down monthly benefit. This was a very interesting adjustment to the program given that an individual’s life expectancy was increasing. In 1935 when the program was instituted, the average life expectancy of a white male was 59.9 years. By 1960 life expectancy had increased to 66.6 years (InfoPlease.com, 2007). In 1972, an amendment for institution of automatic COLAs was enacted. This was coupled with a significant increase for those who waited until age 65 to receive benefits. By 1972 the life expectancy had increased to 67.4 (ibid). Since 1972, there has been a significant increase in life expectancy as a result of lower death rates given better treatment for heart disease, cancer and other major causes of death and the eradication of such insidious diseases such as smallpox and polio. Currently the average combined life expectancy for males and females is 78.24 (CIA.gov 2010). An interesting change in today’s demographics is that the American workforce is approaching
50% females who have a longer average lifespan than men, the original intended audience.

Table 1 and Figure 1 illustrate these demographics.

<table>
<thead>
<tr>
<th>Year</th>
<th>0-19</th>
<th>20-60</th>
<th>60+</th>
<th>% Male</th>
<th>% Female</th>
</tr>
</thead>
<tbody>
<tr>
<td>1950</td>
<td>33.91%</td>
<td>53.93%</td>
<td>12.16%</td>
<td>49.66%</td>
<td>50.34%</td>
</tr>
<tr>
<td>1960</td>
<td>38.67%</td>
<td>48.28%</td>
<td>13.05%</td>
<td>49.40%</td>
<td>50.60%</td>
</tr>
<tr>
<td>1970</td>
<td>37.70%</td>
<td>48.09%</td>
<td>14.21%</td>
<td>48.66%</td>
<td>51.34%</td>
</tr>
<tr>
<td>1980</td>
<td>31.80%</td>
<td>53.10%</td>
<td>15.10%</td>
<td>48.44%</td>
<td>51.56%</td>
</tr>
<tr>
<td>1990</td>
<td>28.59%</td>
<td>54.60%</td>
<td>16.81%</td>
<td>48.70%</td>
<td>51.30%</td>
</tr>
<tr>
<td>2000</td>
<td>28.60%</td>
<td>55.13%</td>
<td>16.27%</td>
<td>49.06%</td>
<td>50.94%</td>
</tr>
<tr>
<td>2010</td>
<td>28.49%</td>
<td>54.69%</td>
<td>16.82%</td>
<td>49.18%</td>
<td>50.82%</td>
</tr>
<tr>
<td>2020*</td>
<td>27.98%</td>
<td>51.49%</td>
<td>20.53%</td>
<td>49.31%</td>
<td>50.69%</td>
</tr>
<tr>
<td>2030*</td>
<td>27.76%</td>
<td>48.62%</td>
<td>23.62%</td>
<td>49.30%</td>
<td>50.70%</td>
</tr>
<tr>
<td>2040*</td>
<td>29.10%</td>
<td>47.00%</td>
<td>23.90%</td>
<td>49.28%</td>
<td>50.72%</td>
</tr>
<tr>
<td>2050*</td>
<td>30.20%</td>
<td>46.60%</td>
<td>23.20%</td>
<td>49.34%</td>
<td>50.66%</td>
</tr>
</tbody>
</table>

*All projections based on a constant growth rate.

**Table 1** Source: http://www.censusbureau.gov

**Figure 1** Source: U.S. Census Bureau www.censusbureau.gov, www.SSA.gov

3 THE EMERGING PROBLEM
The United States has experienced unprecedented economic expansion over the past 70 years and corresponding financial growth among the populace. The size of the population has increased from 124,000,000 in 1935 to 308,000,000 today (U.S. News, 2010) as a result of the aforementioned medical conditions...
advances as well as a tremendous influx of immigrants, legal and illegal (ibid). ‘Baby Boomers,’ those born between 1946 and 1964, numbers are approximately 80,000,000 (Haaga, 2010). These adults are entering their Social Security years at a time when life expectancy has advanced from approximately 60 years when SSA was enacted to a combined 78.2 years for both males and females.

It is also interesting to note that at the time the SSA was passed, less than 8% of the population was over the age of 60. Workers aged 20-60 supported the retirees through the payroll taxes. Today over 20% of the population are eligible to receive benefits. This number will exceed 30% in 2050 which underscores the strain on Social Security since the 46% of those working and contributing payroll taxes will need to fund the system (ibid).

The current situation is untenable. Significant changes will need to be implemented to prevent the Social Security system from becoming insolvent. If one looks at the contributions over the life of the system, one gets a better understanding of the looming problem. From 1937-1950, the Cap on Social Security wages was $3,000. This Cap, known as the contribution and benefits base (Social Security Administration Website, 2010), usually adjusts upward each year with increases in the national wage index. It should be noted that amounts for 1937-74 and for 1979-81 were set by statute; all other amounts were determined under automatic adjustment provisions of the Social Security Act. The amount each citizen was mandated to pay was based upon his/her individual income and the growth/increase in the national average wage. This base has never decreased and has stood at the following rates for each of the last five decades:

<table>
<thead>
<tr>
<th>Year</th>
<th>Contribution Base</th>
</tr>
</thead>
<tbody>
<tr>
<td>1970</td>
<td>$7,800</td>
</tr>
<tr>
<td>1980</td>
<td>$25,900</td>
</tr>
<tr>
<td>1990</td>
<td>$51,300</td>
</tr>
<tr>
<td>2000</td>
<td>$76,200</td>
</tr>
<tr>
<td>2010</td>
<td>$106,800 (ibid)</td>
</tr>
</tbody>
</table>

As can be seen from this progression, there has been an increasing amount of Social Security taxes withheld over the last forty years, a testament to the growth of prosperity in the United States. Even though there has been such an increase, the overall revenue generated by the Social Security tax, even though substantial, has failed to keep pace with the amount of money that has been paid. It can also be shown that this shortfall is exacerbated by the increased lifespan of the population. As already mentioned, women now make up 46% of those working and contributing payroll taxes will need to create a solvent system given the provisions of the SSA, changing demographics, and increased life expectancy.

The pyramid scheme that worked so well in the first few decades of the SSA is becoming insolvent as a smaller percentage of the population will be required to pay for the benefits of the increasing numbers receiving support. Most estimates are that Social Security will be insolvent by 2040 if not sooner (Kurtz, 2009). Future increases in the base wage rate will be enacted according to the metric developed by the Social Security system. However, these increases may allow the fund to remain solvent for an additional six or seven years (Heritage Foundation, 2010).

6 CHANGES IN HOUSEHOLD EARNINGS

While the United States has seen unprecedented growth since the end of World War II, the last decade has seen a significant shift in the distribution of earnings. The growth of the higher income wage earners has increased consistently since the “dot com” bubble burst and the recession of 2001-03. Roughly 6% of the population had earnings above $106,800, the Cap above which the social security tax does not apply.

Due to growing income inequality, the percentage of United States earnings above the Cap has risen. Table 2 provides further information about the rising inequity in income distribution within the United States (IRS, Gross Collections, 2008). As can be seen, while the highest incomes have seen substantial growth, middle class incomes have stagnated (Economic Policy Institute, 2009). This trend is expected to continue, meaning that a growing share of earnings will remain steadily outside the tax base. It should be noted that with the Cap in place, higher-income individuals and their employers pay a smaller percentage in Social security taxes than the middle-class. If the employee and employer share of Social Security and Medicare taxes are considered, earners in the middle fifth of the income distribution now pay an average effective payroll tax of about 11 percent. In contrast, the top 1 percent of earners pays just 1.5 percent on average (ibid).

<table>
<thead>
<tr>
<th>Year</th>
<th>Numbers of households above $250,000 [Thousands]</th>
<th>% of Households</th>
<th>Mean income</th>
</tr>
</thead>
<tbody>
<tr>
<td>2001</td>
<td>1,305</td>
<td>1.23</td>
<td>$464,536</td>
</tr>
<tr>
<td>2002</td>
<td>1,472</td>
<td>1.32</td>
<td>$438,005</td>
</tr>
<tr>
<td>2003</td>
<td>1,547</td>
<td>1.38</td>
<td>$424,693</td>
</tr>
<tr>
<td>2004</td>
<td>1,699</td>
<td>1.50</td>
<td>$438,338</td>
</tr>
<tr>
<td>2005</td>
<td>2,023</td>
<td>1.77</td>
<td>$434,757</td>
</tr>
<tr>
<td>2006</td>
<td>2,240</td>
<td>1.93</td>
<td>$448,687</td>
</tr>
<tr>
<td>2007</td>
<td>2,245</td>
<td>1.92</td>
<td>$418,063</td>
</tr>
<tr>
<td>2008</td>
<td>1,640</td>
<td>1.78</td>
<td>$421,072</td>
</tr>
</tbody>
</table>


It should be further pointed out that the 94% of all individuals that fall below this level have a greater...
proportion of earnings taxed than that of the 6% whose earnings exceed it. The contention is that the revenue generated by raising the level—estimated at almost $100 Billion in 2004 if all earnings were taxed—could be used to reduce Social Security taxes for lower wage earners and help reduce the long term actuarial shortfall in Social Security. Those who support retaining the base in its current form point out that Social Security’s benefit formula favors low-wage earners by replacing a greater proportion of their earnings than it does for higher wage earners. They argue that the progressive benefits mitigate the regressive tax. They maintain that completely eliminating the base would allow the rich to receive much higher retirement benefits since benefits are based on one’s earnings record, would weaken pension programs and other forms of private savings, and ultimately erode public support for the program (CRS Reports to Congress, 2009).

The ongoing problem with the Social Security System is not just the overall demographics of the country, but an insidious leveraging caused by the multiplier of the base earnings and the monies being paid out. Average household income in 2010 is $68,424, a 54% increase from the $37,403 in 1990. The Cap has increased from $51,300 to the present $106,000 or roughly 48%, falling behind the earner increase by almost 6% in a period with growing numbers of post 60 year old workers (U.S. Census Bureau, 2010).

However, given the disparity between high income and low income, it is best to use the median as the very top end wage earners now skew and bias the results. In 1990, the median income was $30,000 and today it is $50,300 or an increase of 59%, or 5% more than the difference of the mean average (U.S. Census Bureau, 2010). This amount adjusts to roughly each household paying $3,168 per year at the current base rate Social Security tax of 6.3% with employers contributing another 6.3%. It is easy therefore to calculate the full amount of inflow into the system each year with the Cap at $106,800. The average Social Security payout is roughly $13,500 per year (Political Calculations, 2005) and, given the present Cap, it will take approximately two workers to annually support one retiree. There has been a slight shift in the total amount of males and females in the workforce as well as the percentages in the past three decades. During this period we have seen an expanding rate of women to men with the increase of two wage earners in the family. In 1954, approximately 54% of the workforce was below 60 years of age. They were paying into the system to support roughly 12% of the population collecting Social Security. This has changed dramatically in the past few decades to the point that the ratio is 54.69% vs. 16.82% and the life expectancy has increased from 70 in 1980 to 75.2 for males and 80 for females today (U.S. Census Bureau, 2010).

By 2050, the population projections based upon a constant rate of growth and change will be 46% between the ages of 20-60, and 23.20% for those over 60. This almost doubles the rate of the elderly in 1950 as the working age portion of the population has diminished by 17%. This two to one payout ratio of workers to retirees is the result of the “baby boomers’ entering retirement eligibility and living much longer productive lives. A shrinking pool of workers supporting growing numbers of retirees with a multiple of eleven to one will result in the collapse of the system unless significant steps are taken in the short and long-term.

7  RETIREMENT AGE AND THE CAP
When the SSA was enacted, it is obvious that those in the 1930s did not fully consider in its provisions the radical change that has occurred in the demographics of the United States citizenry. First, they never realized that medical advancements would radically increase life expectancy. The retirement age in the original Act was greater than the average life expectancy for males. Even if a male lived until the retirement age, it would not be expected that they would receive significant benefits during retirement. Secondly, it is often stated that the program originators intended to set the Cap to limit the amount of benefits those earning more than the Cap would receive (Political Calculations, 2005). Finally, the Social Security payout was more generous in its early years. When one considers cost-of-living, there is a need to supplement the maximum annual payout in order to provide an individual with the means to survive.

It is also obvious that throughout the past eighty years politicians have failed to grasp the enormity of the outflows as the population grew and aged at an ever increasing rate. In the past, there have been many proposals including increasing the retirement age. There have also been proposals to change the maximum taxable wage base, the Cap. For example, the Heritage Foundation looked at the negative impact of removing the cap in 2005. Others have proposed a rate increase while not eliminating the Cap.

It should be emphasized that Social Security was created as a pay-related retirement system, not as a welfare program that redistributes money from workers to those in need regardless of whether or not they paid into the system. The benefits that retirees received were supposedly linked to the taxes they paid when they were part of the workforce. Social Security was intended to supplement rather than replace private sources of retirement income. Maximum level of benefits and maximum taxable wages aided the government in determining the upper limit Americans should receive from the program. A limit on benefits should relate to the amount of money that they paid into the system. Placing an upper limit on the taxes that workers paid into the system would be appropriate (ibid).

Two questions must be raised:
1. Shouldn’t the age when one begins to receive Social Security benefits be increased?

Several commissions have called for such an increase given the current situations. There are many positives associated with such an increase in the age at which one receives benefits. However, others have pointed out that with the rising unemployment, this proposal may hurt those who need their benefits the most.
2. Why create a limit above which no social security taxes would be paid?

The answer may lie in the economic environment of the Great Depression and the experience the government had in collecting income taxes after the 16th amendment to the U.S. Constitution permitted the federal government to impose them. After taking effect in 1913, the federal income tax soon proved to be a highly effective means of providing funding for the U.S. Federal Government. In fact, the new income was so successful that it more than compensated for the tax collections lost when the government enacted the prohibition on the sale of alcohol with the 18th Amendment to the U.S. Constitution (ibid). After Prohibition, the U.S. again would go back to levy a heavy tax on the sale of liquor as a means to provide additional funding to operate the government. However, this was a volatile tax and there was a need to supplement Social Security outlays with a more even and measurable source of revenue. The original intent was to set the base rate below the level of the highest wage earners as their earnings tended to the most volatile and subject to greater fluctuation. With this cap on the amount of income that could be taxed and benefits paid linked to it, Social Security should be capable of weathering the extreme storms in the U.S. economy and insure beneficiaries would always receive the benefits promised. Unfortunately keeping that promise has been increasingly difficult.

We now have to look forward to see what can be done in the intermediate term. A proposal to bridge the gap is necessary until a more permanent solution can be investigated and implemented before the hopes and dreams of Americans evaporate.

8 RAISING THE AGE

Increasing the retirement age for Social Security benefits would be quite simple. In fact, the retirement age has recently been raised from 65 to 67. Many supporters of this approach wish to see it rise even further to age 70. Others propose indexing this increase to increases in life expectancy.

An argument for such a reform is rather straightforward. Today’s workers can expect to get Social Security benefits for a period of time which is 50 percent longer than when the program was first enacted due to the increases in life expectancy. In addition, individuals have a far greater capability of working beyond 65 due to modern medicine and changes in the physical content of most jobs. A major contributor to the Social Security crisis is the increase in life expectancy with minor changes in the age when individuals receive benefits. Why should there be a magic number for retirement?

The argument against raising the age is such a change would be a cut in Social Security benefits that American citizens are entitled to. An accompanying argument is that such a change will hurt those that need Social Security benefits the most, blue collar and low income individuals. Workers holding such jobs often find themselves incapable of performing arduous work up to and beyond 65 or 67 while higher paying white collar jobs do not put the same strain on the worker. Such individuals find it possible to continue working until 70 or beyond.

Finally, while raising the age can be easily accomplished by act of Congress with the President’s approval, changing the retirement age for private pension plans would be quite difficult. Therefore, the Social Security system may find itself with a higher retirement age than private plans. Given such a situation, private plans would run counter to the Social Security system which encourages the continuation of work. Further exacerbating the impact of this increase in retirement age has been the rising unemployment rate which stood at approximately 9.1% in May, 2011.

In 2010, the issues concerning the United States budget resulted in a bipartisan Presidential commission issuing a report that addressed Social Security amongst many other issues concerning fiscal responsibility and reform. The report states the following excerpt concerning the early and full retirement age:

“After the Normal Retirement Age (NRA) reaches 67 in 2027 under current law, Index both the NRA and Early Eligibility Age (EEA) to increases in life expectancy effectively increasing the NRA to 68 by about 2050 and 69 in about 2075, the EEA would increase to 63 and 64 in lock step.”

To be more specific, the effect of this is roughly equivalent to adjusting the retirement ages by one month after the NRA reaches 67. This change would also maintain a constant ration of years in retirement to years in adulthood. As the life expectancy grows by one year, individuals will be able to spend an additional 4 months in retirement on average when compared to today.

While there is no guarantee that the above will be enacted, it does present a serious proposal by a bi-partisan Presidential commission. The result will likely be an increase in age for both the NRA and EEA in the future.

9 ELIMINATING THE CAP

As previously stated, Social Security taxes are levied on earnings up to some maximum amount set each year by the Cap. In 2004, the Cap—or what is also referred to as the taxable earnings base—was $87,900 (CRS Report to Congress, 2004). Currently it is $106,800. There is no similar base for the Medicare Hospital Insurance (HI) portion of the tax; all earnings are taxable for HI purposes. Elimination of the HI base was proposed by President Clinton and enacted in 1993, effectively beginning in 1994. As stated earlier, some have proposed that the base for Social Security should be raised or eliminated as well. The complaint is that taxing up to a certain level only creates a regressive tax with the poor sharing a greater burden.

The basic stance of this paper is that the base wage should be eliminated and the HI protocol replicated. In essence,
this will result in a large tax increase for the wealthiest of Americans resulting in a huge transfer of wealth, a perceived Robin Hood tax. While this may seem to be undesirable for the long term, this approach is being taken to ensure solvency over the next ten to twenty years until a permanent solution can be accepted and implemented. This nation must face the inevitability that the present system is about to derail. It is felt that this proposal will alleviate the situation in the least painful fashion while protecting the large portion of the population who will become eligible to receive benefits over the next two decades. There is no doubt that this proposal will cause considerable debate with Republican House members refusing to go along because they feel it is a tax increase. However, the recent extension of the Bush tax cuts could counter the opposition.

As can be seen by Table 3, a considerable number of households are earning above the base wage and these earnings are going untouched above the base rate of $106,800. All earnings above $106,800 amount to a loss of revenue for the Social Security System. While far from advocating for a more socialistic tax framework, this research is endeavoring to look for ways to help slow down the demise of the Social Security System. What has also occurred during the first decade of the 21st century is an increase in the super-rich, wealth that can be taxed at a more equitable rate without impeding wealth creation or consumption. Table 3 looks further at the growth on incomes above $100,000 and beyond.

<table>
<thead>
<tr>
<th>Year</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1998</td>
<td>18.2%</td>
</tr>
<tr>
<td>1999</td>
<td>19.4%</td>
</tr>
<tr>
<td>2000</td>
<td>19.3%</td>
</tr>
<tr>
<td>2001</td>
<td>19.1%</td>
</tr>
<tr>
<td>2002</td>
<td>18.8%</td>
</tr>
<tr>
<td>2003</td>
<td>19.3%</td>
</tr>
<tr>
<td>2004</td>
<td>18.7%</td>
</tr>
<tr>
<td>2005</td>
<td>19.1%</td>
</tr>
<tr>
<td>2006</td>
<td>19.9%</td>
</tr>
<tr>
<td>2007</td>
<td>20.2%</td>
</tr>
</tbody>
</table>


What will be accomplished by the elimination of the Cap on the base wage? The first five years after elimination of the Cap would result in a tax increase of some $472 billion (CATO Institute 2005). On an individual basis, in short, one American in five will stop paying Social Security taxes at some time during the year. Table 4 portrays the tax payment time table, by occupation, illustrating the economic stress on different levels of wage earners, many of whom do not reach the base threshold of $106,800 (Alliance for Retired Americans, 2005).

<table>
<thead>
<tr>
<th>Wage Earner</th>
<th>Salary</th>
<th>Date When Cap Reached</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teacher</td>
<td>$29,564</td>
<td>All Year</td>
</tr>
<tr>
<td>Nurse</td>
<td>$45,000</td>
<td>All Year</td>
</tr>
<tr>
<td>Police officer—1st year</td>
<td>$46,653</td>
<td>All Year</td>
</tr>
<tr>
<td>Seattle Firefighter</td>
<td>$55,752</td>
<td>All Year</td>
</tr>
<tr>
<td>U.S. House Member</td>
<td>$158,000</td>
<td>July 27</td>
</tr>
<tr>
<td>U.S. Senator</td>
<td>$158,000</td>
<td>July 27</td>
</tr>
<tr>
<td>Vice President</td>
<td>$202,900</td>
<td>June 1</td>
</tr>
<tr>
<td>House Speaker</td>
<td>$202,900</td>
<td>June 1</td>
</tr>
<tr>
<td>President</td>
<td>$400,000</td>
<td>March 24</td>
</tr>
<tr>
<td>S. O’Neal ex CEO Merrill Lynch</td>
<td>$28,144,273</td>
<td>January 2</td>
</tr>
<tr>
<td>Derek Jeter</td>
<td>$18,600,000</td>
<td>January 2</td>
</tr>
<tr>
<td>CEO Pfizer Jeffrey Kindler</td>
<td>$28,151,000</td>
<td>January 2</td>
</tr>
<tr>
<td>CEO Wal-Mart Michael Duke</td>
<td>$28,963,872</td>
<td>January 2</td>
</tr>
</tbody>
</table>

Table 4 Source: Alliance for retired Americans, January 6, 2005

We can get an idea of how much money could be added to the Social Security balance sheet if the Cap was eliminated. It may be strange to believe the fact that anyone who makes $106,800 pays the same amount of Social Security tax as the CEO’s of Merrill Lynch, Pfizer or Wal-Mart. It does seem to be an inequitable burden to carry. As mentioned before the growth of returns from $1,000,000 to $10,000,000 and beyond continues to grow and leaves untapped huge sums of money that could flow into the Social Security coffers helping to reduce or even eliminate the shortfall over the intermediate term. A more permanent solution will have to be implemented in order to solve the Social Security looming debacle. A future research paper will tackle such an issue and offer some preemptive, provocative and possibly short-term distasteful but much needed medicine.
This approach should be viewed as a direct injection of funds into the beleaguered system by those individuals who could best afford the burden. According to the Social Security Administration, fully eliminating the Cap on taxable earnings would be sufficient to close the projected shortfall. If newly-taxied earnings above the taxable maximum were credited toward benefits, eliminating the Cap would close most, but not all, of the gap. Without the Cap, the increase in inflow would resolve the issue.

10 POLITICAL REALITY
As stated above, increasing the Cap will not be easy especially in the House of Representatives with the many fiscal conservatives and Tea Party activists recently elected in 2012. Options may have to be put forth. While it is desirable to remove the cap, it is possible that reducing the take out percentage coupled may prove politically wise. For example, keeping the current Cap but reducing the percentage associated with the tax above the Cap may allow the proposal to gain the necessary support.

However, the next year may also provide a significant opportunity for action. With the burgeoning United States budget deficit and both Democratic and Republican proposals to reduce the deficit, moderates may be looking for common ground. The recommendations of the bipartisan Presidential commission will certainly be considered. That common ground may be tax reform. Tax reform can possibly be sold as a means of redistributing taxes and may gain a more favorable response than outright tax increases. Actions on raising the age for benefits and the Social Security Cap may accompany such tax reform.

11 STRAP
For the past decade, there has been a considerable buzz concerning the privatization of Social Security. What does this mean? Simply stated, privatization means that the control of Social Security will be transferred from Federal government to the individual. Privatization will result in individuals having greater control over how their funds will be invested since they will be doing the investing. Private plans are often characterized by personal accounts with voluntary levels of contribution, private sector management rather than the Federal government, individual investment choice, and a lump-sum payout option. Under such conditions, individuals would probably be investing their funds into more risky investments such as stocks. Social Security investments can only be made into government bonds and other very secure investment instruments.

Is such an approach good or bad? Proponents point to the fact that the stock market over time produces higher returns than that of Treasury and other government bonds. Therefore, individuals who invest wisely will generate higher returns and have greater reserves when it comes time to retire. Proponents also point out that individuals should also have more control over how much they wish to contribute to their retirement. Under Social Security, this flexibility does not exist. In addition, the United States prides itself on an individual controlling her or his destiny. Social Security takes away such individuality.

Some organizations and individuals also feel that providing retirement benefits to individuals is not an appropriate role for Federal government. The Social Security system creates the need for a huge bureaucracy. In addition, the system is not flexible enough to change with demographic changes since any proposal often needs to get approved by the United States Congress. Today’s Social Security crisis can be partially attributed to the inability of government to respond.

Opponents of privatization stress that the potential of higher returns is accompanied by greater risk. Over the past 15 years, the United States stock market and other global financial markets have experienced steep declines in overall value. Individuals could easily have all their retirement savings wiped out with the collapse of the stock market. Also, individuals do not necessarily have the knowledge to diversify their holding so as to adequately protect themselves from such a disaster. If this occurs, who will support senior citizens? Other societies around the world rely on families and offspring to care for parents and other senior citizens. However, this is not ingrained within the United States culture. For the poor and the working class, Social Security often represents a significant portion of retirement income and they cannot afford to be wiped out.

Based on the above discussion, it is now proposed to initiate a Secured Transparent Retirement Account Program (STRAP). This fund would be kept separate from other government programs so the fund could not be used to provide funds to the Federal government. The STRAP initiative which would cure the future funding issues while allowing every individual to know exactly what he or she will be receiving at retirement. An additional proposed benefit is to entitle the individual to include any residual in their estate at death. It will also allow younger workers to possibly capture greater returns over a longer period of time. At the age of 50, 100% of their STRAP units will be invested in Treasury Securities.

In essence the STRAP proposal is one where every American would ‘own’ his or her retirement account and be able to project future needs during retirement. However, it is important to note that STRAP accounts would not be managed by the individual, a major departure from the privatization proposals previously discussed. STRAP accounts while customized would still be managed by the Federal government. The individual’s portfolio for those younger than 50 would be structured based on the age of the individual and attempt to maximize returns and minimize risk. It should be emphasized that even when those under 50 suffer losses in the short-run, history tells us that those losses will be recovered and positive returns will be experienced in the long-term.

This use of individual accounts would also remove the ability of the government to poach the Social Security account and begin the phase out of the current government-
run Social Security system. Automatic restructuring of individuals’ retirement accounts based upon age would allow every American to capture the best returns while having the safety of Treasury bill guarantees during the last decade of the working life. This system would also allow for workers to receive distributions at age 60 or after 40 years of employment, whichever comes first. Residual balances could be included in each individual’s estate.

In implementation, the program would provide for a phase out of the current Social Security system while protecting every single age bracket and allowing the youngest of our citizens to receive enhanced returns by diversifying their STRAP accounts based upon age. All citizens 60 years or older at the time at which STRAP was implemented would continue to be part of the present Social Security system. Workers younger than 60 would see their STRAP account automatically invested in a diversified portfolio consisting of the S & P 500 stocks, AAA Corporate bonds and Treasury bills. The percentages and balance of the portfolio will be solely determined by the individual’s age based upon historical returns using certain risk factors. It will be assumed that younger individuals can weather short-term declines in values while reaping the benefits of higher long-term returns associated with equities and corporate bonds. While higher risks may be associated with such an investment strategy, historical results have shown that the highs and lows smooth out over the duration of average years of employment.

12 SUMMARY
As the first baby boomers begin collecting social security benefits, this research paper is very timely. At its inception the SSA was much needed given a sorely depressed economy and a citizenry in need. As the decades rolled on and diseases were conquered, life style changes resulted in better and longer life spans. Population, aided by increased immigration, grew rapidly. Social Security has now reached that ‘tipping point’ when politically distasteful decisions must be made to remedy the malaise now being foisted on children and unborn generations. This paper has attempted to lay the foundation for the long-term by recommending interim steps. The first step would be to follow the lead of the bipartisan commission and increase the ages when recipients receive benefits. The second interim step calls for eliminating the Cap for the next ten years which will result in raising approximately $500,000,000,000 from those wage earners making in excess of $106,800. While this proposal will not be greeted with enthusiasm by those making beyond The Realignment of America. The Wall Street Journal. Federal Tax Relief for 2006. (www.familiesusa.org/ftr2006). The authors are grateful to Ms. Alayna Butryn for her assistance in expediting this manuscript.

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Outward foreign direct investment (OFDI) flows have always raised serious policy concerns about the effect on the domestic investment in the source/home countries. The concern arises because OFDI activities could shift not only some of the production activities from home to foreign destinations but also could possibly threaten the availability of scarce financial resources at home by allocating resources abroad. The review of the available economic literature indicates that there is no unambiguous evidence of whether OFDI and domestic capital formation are substitutes or complements. Also, at different stages of production, there exists the possibility of switch between the substitutability and complementarity of FDI outflows and domestic capital formation. In view of such ambiguities and complexities, further exploration of the relationship between OFDI and domestic investment becomes imperative. The central goal of this paper is to empirically investigate the extent and direction of the macroeconomic relationship between OFDI and levels of domestic capital formation in the four emerging economies, Brazil, Russia, India and China (BRIC) that constitute some of the major sources of FDI.

The paper is organized as follows. While Section 1 presents the introduction, section 2 provides a documentation of the statistics of OFDI and domestic investment for the BRIC economies. Section 3 delivers a review of the existing economic literature on this issue. Section 4 postulates the methodology and analyzes the empirical results. We will try to keep the technical discussions as limited as possible and instead provide the relevant references. Section 5 will conclude the study and tend to offer suggestions for future research.

2. OFDI Flows and Domestic Capital Formation in the BRIC Countries

The BRIC economies have been displaying a steadily rising trend since 2000 accounting for nearly 9% of global FDI flows in 2009. Amongst the BRIC countries, Russia has been the dominant economy in making FDI outflow since 2002 with an only exception in 2006 when Brazil went ahead of Russia (Sauvant, 2005; UNCTAD, 2007; Gammeltoft, 2008). The combined OFDI flows for these four countries showed more than four times increase over 2005 through 2008 from $30.6 billion to $147.3 billion. Not surprisingly, it is in 2009 that we see a fall in OFDI flows from each of the BRIC countries, partly due to the economic decline in important host countries and partly due to the temporary disability of the BRIC outbound investors to finance their own expansion.

Figure 2 shows domestic investment made by the BRIC countries as represented by the ratio of national gross domestic capital formation (GCF) to GDP.

Source: UNCTAD’s FDI Statistics database.
Comparing Figures 1 and 2 we observe that while Russia made the largest volume of OFDI flows, its domestic investment (GCF to OFDI ratio) varied between ranks 3 and 4 among the four BRIC countries alternating with Brazil. In fact, Brazil and Russia have comparably insignificant amount of domestic investment with an investment ratio falling in 2009. China was in a very favorable position, occupying the second rank in OFDI and first in domestic investment. Chinese domestic investment-GDP ratio has since 1980 always remained much above that in the other three BRIC countries. Even with the credit crunch and the global recession in 2009, domestic investment in China shows signs of uninterrupted growth. India also demonstrated significant rise in domestic investment, following China in GCF; however, its FDI outflows languished much behind alternating between ranks 3 and 4 with Brazil. Brazil was in the lowest ranking in both OFDI and domestic investment. While in OFDI it alternated the ranks 3 and 4 with India, it shared these ranks with Russia for GCF.

3. Literature Review

Analysis of economic literature indicates two opposite strands of thought in explaining the association between domestic investment and OFDI of the source economies. One view suggests a positive/complementary association. This could happen in situations where the home and overseas production activities are deliberately combined by the investing firms to exploit the economies of scale, reduce costs and enhance the efficiency in domestic production and investment efforts. This in turn increases domestic investment as is evident in Desai, Foley and Hines (2005). Such positive relation is established in Faeth (2006) for Australian balance of payments data. Herzer and Schrooten (2007) find a positive relationship between domestic capital formation and FDI outflows for the US. Braunerhjelm, Oxelheim and Thulin (2006) found that a complementary relationship between OFDI and domestic investment can be expected to come through in vertically integrated industries. In case of complementary OFDI, the home economy enjoys the spillover of the increased returns by the investing companies obtained through cross-border expansion and diversification of markets. Such gains are derived in the form of increased economic activity including domestic investment and employment related to FDI projects, as well as tax revenues.

On the contrary, economic literature also points towards a relation of substitutability between OFDI and domestic investment. Substitution takes place because of various reasons. First, the domestic production itself could be shifted overseas due to the lower cost of capital abroad, the preferential tax treatment to foreign profits of home country corporations and other fiscal incentives (Stevens and Lipsey (1992); Feldstein, (1995); Desai Foley, and Hines (2005a) and Herzer and Schrooten, (2007)). Next, the segmentation of financial markets due to capital controls does not allow firms to bring cheaper capital back to invest at home. Production activity thus shifts abroad and growth in investment domestically is slower. Thus, firm’s capital constraints would mean that an outward FDI could crowd out domestic investment (Girma, Patnaik, Shah, 2010). For example, in India, the capital control policies create a wedge between the capital cost of domestic versus foreign expansion because it is cheaper for Indian firms to secure debt for creation of foreign asset rather than domestic investment (Girma, Patnaik, Shah, 2010). Third, such crowding out might also be visible when domestic firms engage in offshore production with the primary objective of exporting back to home markets. Desai, Foley and Hines (2005) have argued that in the case of horizontal OFDI there is a possibility of the diversion of domestic investment provided the domestic exports have been substituted by overseas production by the home country firms. However, in latter stages after the accomplishment of the initial horizontal cross-border investment, if the foreign operations utilize their domestic set-up, OFDI and domestic investments could become complementary to each other. Fourth, substitutability could also arise in vertical OFDI when stages of the production process that were previously undertaken in the home country are now shifted to overseas locations. After the initial slicing up of the production process, complementarities are possible between the domestic investment and foreign investment activities of these outgoing firms through the increase in demand for the tangible and intangible resources available to the domestic counterpart of the capital exporting firms. Thus, the internationally operating domestic firms may import significant amounts of inputs and technology from their parent companies, generating spillover of technologies to the
domestic firms and thus promoting domestic investment. Also, FDI abroad can create secondary flows whereby the home country firms can in future export machinery and other capital equipment, domestically manufactured production inputs and specialized services, software, technical and managerial consultancy as conduits of the initial FDI made from the home country. These linkages between FDI outflows and domestic investment in the source countries and the corresponding impact on their income and employment are experienced by the OECD countries. Finally, if domestic investment opportunities start lagging behind savings, OFDI could become not only a better alternative but also a necessity.

Feldstein (1995) identified such substitutability by regressing domestic investment on domestic savings and FDI flows from major OECD countries on aggregate cross country data of the 1970s and 1980s. He found a roughly one-to-one negative correlation1 between OFDI and domestic investment. Such negative association is also supported in Desai, Foley, and Hines (2005a) for OECD-countries for the 1980s and 1990s. This substitution relationship comes into scrutiny because of its potential to reduce domestic productivity of home firms in the long run, especially when the OFDI substitutes those domestic investments that could have sustained and enhanced home productivity. Herzer and Schrooten (2007) determined a negative relation for Germany.

The review of the available literature thus indicates that there is no unambiguous evidence of whether OFDI and domestic capital formation are substitutes or complements. Also, at different stages of production, there exists the possibility of switch between the substitutability and complementarity of FDI outflows and domestic capital formation. In view of such ambiguities and complexities, further exploration of the relationship between OFDI and domestic investment becomes imperative.

4. Data, Methodology and Results

4.1 Data

The econometric exercise that follows involve eight macro variables – Gross Capital Formation (GCF), gross national savings (S), OFDI, inward FDI flows (IFDI), export (X) and import (M) all as ratios to GDP, growth of GDP (GGDP) and real rate of interest (RRI). The data has been transformed into natural logarithms in order to include the proliferative effect of time series, to account for the expected non-linearities in the relationships and also to achieve stationarity in variance (Chang and Caudill, 2005). The name of each variable will be preceded by an L to indicate the logarithmic transformations. Data on total outward and inward FDI flows come from UNCTAD’s FDI Statistics database. These FDI flows are scaled by GDP as measured in the World Bank data. All other data are acquired from the World Bank’s World Development Indicators.

4.2 Methodology

This study is carried out in two broad steps. The first step is a time series data analysis where we have performed country level exercise to estimate the long run causal relationship between OFDI and domestic investment in each of the four BRIC countries. Given the limitations on data availability, we had to restrict ourselves to a bivariate with only two variables. We have used time series data of varying lengths depending on the availability of statistical information for each of the countries. The starting years are 1975 for Brazil and India, 1982 for China and 1989 for Russia. Although the starting years are different, the end year is 2009 for all the BRIC economies. In the next step, we have employed a balanced panel of four countries – Brazil, Russia, India and China over the period of 18 years from 1992 through 2009. The choice of our variables is basically from the Feldstein (1995) model, which includes FDI inflows and outflows, domestic savings as well as other variables that might jointly influence domestic investment.

4.2.1 Time Series Analysis

In the time series analysis, we have adopted the method of vector autoregressive model (VAR) to estimate the long run bivariate causal relationship between OFDI and domestic investment in each of the four BRIC countries using time series data. The test for causality between OFDI and GCF in the BRIC countries has been performed in three steps. According to Granger and Newbold (1974), a regression analysis between the variables does not provide reliable results in case non-stationary data is used. For this reason, as a precondition to the testing for cointegration and then implementing the Granger causality test, we needed to examine the stationarity for each individual time series. Having established the order of integration in the series, we used Johansen cointegration test for the long run relationships between the variables in question. Finally, Granger causality methods are used to assess the short run cointegration. However, prior to the Cointegration test, we have performed the Quandt-Andrews (QA) breakpoint test to

1 This means that every dollar amount of OFDI causes one dollar to be less invested at home thus indicating a perfect substitutability between the two variables.
get a clear picture of structural breaks in the data, with no prior knowledge about potential break-dates. The tests tend to designate 1995 for Brazil, 1993 for India and 2004 for China as major though insignificant breakpoints. This is intriguing because these periods coincide with noteworthy events in each of these countries. The conventional Pairwise Granger causality test is the most appropriate tool in determining causal relation. The results of the VECM Granger Causality/Block Exogeneity Wald Test indicate that GCF and OFDI are independent of each other for all the four BRIC countries. Thus, there is no econometric evidence of any short run association between domestic investment and FDI outflows for the BRIC countries.

4.2.2 Panel Data Analysis

Given the longitudinal nature of the dataset, the standard panel data analysis technique will be used to empirically investigate the relationship between domestic investment and outward FDI flows for the four BRIC countries using other variables that might jointly influence domestic investment. We have performed the panel test for causality in three steps. First, we test for the order of integration in the GCF, OFDI and other time series variables. This is essential because if the variables are not stationary, the direct application of ordinary least squares (OLS) or generalized least squares (GLS) regression analysis will generate spurious results making the test statistics invalid or misleading. These regressions would produce inflated performance statistics, such as high R²'s and t-statistics, which often lead investigators to commit a high frequency of Type I errors (Granger and Newbold, 1974). Next, having established the order of integration in the series, we use heterogeneous panel cointegration test for the long run relationships between the variables of interest. In other words, we need to determine whether or not there exists at least one linear combination of the non-stationary variables that is cointegrated (integrated of order zero). If the variables share a common stochastic trend and their first difference is stationary, then they can be cointegrated. Finally, dynamic heterogeneous panel causality will be used to assess the short run cointegration. The direction of causality between the two variables is then inspected using heterogeneous panel causality tests. Based on the Toda-Yamamoto Granger Causality Analysis as also the VAR and VECM Granger Causality/Block Exogeneity Wald Tests we found that OFDI and GCF have not demonstrated any Granger Causal relationship among themselves for the BRIC countries. On the other hand, results show that amongst all the explanatory variables it is only domestic savings and exports that Granger cause GCF. With the potential role of savings and exports in Granger causing domestic investment in these economies, it becomes imperative that these countries should make special effort to promote domestic savings, production and export through the designing of appropriate policies. For example, one policy prescription would be to make further reforms in inward FDI policies and create improved international investment climate in these countries. This is because in all these countries, a significant part of FDI inflows is export-oriented. So in order to boost exports, FDI inflows ought to be encouraged.

In reality, a sizeable portion of the FDI outflows from Russia and Brazil are presumed to be propelled by speculative factors and suggest pronounced insecurity in domestic investment, high rates of interest and a lack of investment opportunities (Lundvall, 2008). This is an indicator of substitution between domestic investment and outward FDI flows and consequently reflects that a growing OFDI is a sign of weak domestic economic development in these countries. Also, in case of Russia, the strengthening of the market power of domestic extractive industries is another motive identified by Lundvall (2008). The huge trade surplus in China is directed towards net capital outflows largely in the form of OFDI so as to somewhat mitigate the upward pressure on the yuan. The Chinese outward FDI flows are understood to be partially motivated by the desire to access energy and raw materials as also to acquire technology and brands (Lundvall, 2008). As Gu and Lundvall (2006) point out, this trend of high OFDI flows could be related to the Chinese attempts to promote endogenous innovation and harmonious development. If that is true, then in China FDI outflows could be viewed as

5. Conclusion, Policy Implication and Future Agenda

In this paper we have investigated the impact of OFDI on domestic investment in the BRIC countries both at the individual country level and also for panel data. At the
complementary to domestic investment.

Coming to the Indian situation in particular, we observe in Figure 3 that over 1994 through 2009, Indian gross domestic savings (S) and exports (X) have been significantly higher in comparison to OFDI and gross capital formation (GCF), all expressed as percent of GDP. The saving-investment gap has remained positive over the entire period though falling in 2009 due to the economic decline.

**Figure 3**
**OFDI, Exports, Savings and Investment in India over 1994-2009**

Due to the inherent constraints of the data, the results that derived are thus admittedly tentative. Moreover, the success of BRIC in outward FDI is very recent. With such a short history, it is yet to be seen whether the time series data can sustainably display the relations that the empirical evidence of this study will suggest or whether the interaction of the home country and host country economic forces change the prevailing relationship pattern. Nonetheless, it is true that this study has deeply explored certain critical facets of the relationship of FDI outflows from the BRIC economies with the domestic investment in these countries. The findings of the present research are expected to make an important contribution towards the FDI literature for emerging economies.

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ABSTRACT
Economists have given notable attention to the effects of obesity on labor market outcomes, i.e. wages, but no study has ever considered the wage effects of obesity across wage distribution. Higher wage workers might likely be less affected by obesity, possibly because of the nature of their jobs, than lower wage workers or workers with less education, or vice versa. Hence, the main aim of this paper is to observe whether the effects of obesity on wages might vary across the wage structure in the US and in Europe. Employing the National Longitudinal Survey of Youth data for the effects of the US and European Community Household Panel for Europe, the results reveal that while in the US low-income people are more prone to obesity wage penalties, obesity affects the wages of workers from different earning levels equally in Europe.

Keywords
obesity, wages, endogeneity, instrumental variable quantile regression

SUMMARY
Current studies show that the prevalence of obesity rates has risen rapidly in recent decades and about 35% of the US population is obese now. Obesity is an important risk factor for numerous health problems including coronary heart disease, diabetes, osteoarthritis, hypertension, and stroke. Moreover, it is widely documented to cause major problems with potentially important social and economic consequences (Sturm, 2002).

Economists have given notable attention to the effects of obesity on labor market outcomes, i.e. wages. However, most of the results are contradicting and to my knowledge no study has ever considered the wage effects of obesity across wage distribution. Higher wage workers might likely be less affected by obesity, possibly because of the nature of their jobs, than lower wage workers or workers with less education, or vice versa. Hence, the main aim of this paper is to observe whether the effects of obesity on wages might vary across the wage structure. The National Longitudinal Survey of Youth data set is employed for the US studies and European Community Household Panel is used for the effects of obesity in Europe.

Partitioning the dependent variable, (log) wages, into different groups and regressing (log) wages on explanatory variables for these specific groups could produce incorrect results and lead to sample selection bias (Heckman, 1979). Koenker and Hallock (2001) state that a more suitable econometric technique is quantile regression, in which one can focus on the conditional distribution of the dependent variable and avoid the selection bias associated with truncated regression. The problem of whether the impact of obesity on wages might vary across the wage structure is addressed by comparing estimates for various quantiles using instrumental variable quantile regression model proposed by Chernozhukov and Hansen (2008).

The preliminary results illustrate that obesity affects the wages of females relatively more at lower quantiles in the US; wage penalties vary from 9.1% to 5.1% across the quantiles. However, obesity affects the wages of males only at the lower quantiles in the US; wage penalties are 2.5% and 2% at the 10th and 25th quantiles, respectively. European results show that obesity wage penalties are fairly constant over the wage distribution for both genders and the penalties are lower than the penalties in the US. Obesity wage penalty ranges from 5% to 4.4% for females and 1.9% to 1.7% for males in Europe.

The results reveal that while in the US low-income people are more prone to obesity wage penalties, obesity affects the wages of workers from different earning levels equally in Europe. The results of the paper may have policy implications for the US and Europe. The results support policies designed to reduce discrimination against obese individuals both in the US and Europe. Furthermore, higher taxes on unhealthy foods and beverages, and regulation of certain food advertising and fast foods, especially in districts where average household income is lower in the US, would also be consistent with these results.
REFERENCES


ABSTRACT
The paper reveals that hospitalization rates associated with childhood obesity have dramatically increased in recent decades in California, Florida, and Washington. The study also provides statewide and national estimates of the costs associated with childhood obesity, which have more than doubled in past 10 years.

Keywords
obesity, childhood, hospitalization, cost

1 BACKGROUND
In the United States, prevalence of obesity in kids has been considerably increasing in recent decades from 11% in 1990 to 17% in 2006. The number of hospitalization of kids, ages 2 to 19, with a diagnosis of obesity-related conditions has also significantly increased from 20% to 30%.

2 OBJECTIVE
The main objective of the paper is to describe trends in childhood obesity in selected states in the US, i.e. California, Florida, and Washington, and to provide state comparisons and policy implications for avoiding obesity.

3 METHODS
Analysis of the State Ambulatory Surgery Databases (SASD) and Nationwide Inpatient Sample (NIS) from 1994 to 2006 as part of the Healthcare Cost and Utilization Project. These are two of the largest, longitudinal, all-payer inpatient care databases in the US. All kids aged between 0 and 18 years are included in the analysis. Outcome measures of the paper are estimated statewide (California, Florida, Washington) annual rates of obesity-related hospitalizations, such as asthma, diabetes, gallbladder disease, pneumonia, skin infections, pregnancy complications, depression and other mental disorders, which are classified by age, gender, in-hospital mortality, family characteristics, and demographic characteristics.

4 RESULTS
The results show that in all three states, especially in California, from 1994 to 2006, the estimated annual rate of hospitalization associated with childhood obesity has significantly increased. The hospitalizations have risen from 2,578 to 5,230 in California, from 1,701 to 2,447 in Florida, and from 1,457 to 2,265 in Washington (p<0.001). The hospitalization rates have increased similarly for boys and girls, but have increased more in racial or ethnic groups. Further, kids less than 5 years of age are less likely to be hospitalized than kids more than 5 years old. The primary results also show significant increases in obesity hospitalization rates of kids in elementary school age, in fatal hospitalization rates, and in estimated costs of childhood obesity in all three states.

5 CONCLUSION
The paper reveals that hospitalization rates associated with childhood obesity have dramatically increased in recent decades in California, Florida, and Washington. The study also provides statewide and national estimates of the costs associated with childhood obesity, which have more than doubled in past 10 years.
The Effects of Competition on Pharmaceutical Advertising and Safety

Guy David  
The Wharton School  
University of Pennsylvania  
3641 Locust Walk  
Philadelphia, PA, USA, 19104-6218  
(215) 573-5780  
gdavid2@wharton.upenn.edu

Sara Markowitz  
Department of Economics  
Emory University  
1602 Fishburne Drive  
Atlanta, GA, USA 30322  
(404) 712-8167  
sara.markowitz@emory.edu

Lindsay Allen  
Research Assistance  
University of Pennsylvania  
3451 Walnut Street  
Philadelphia, PA, 19104  
linz.allen@gmail.com

ABSTRACT
The extent of pharmaceutical advertising and promotion can be characterized as a balancing act between profitable demand expansions and potentially unfavorable subsequent regulatory actions. However, this balance also depends on the nature of competition (e.g. monopoly versus oligopoly). In this paper, we model the firm’s behavior under different competitive scenarios and test the model’s predictions using a novel combination of sales, promotion, advertising, and adverse event reports data. We focus on the market for erectile dysfunction drugs as the basis for estimation. This market is ideal for analysis as it is characterized by an abrupt shift in structure, all drugs are branded, the drugs are associated with adverse health events, and have extensive advertising and promotion. We find that advertising and promotion expenditures increase own market share but also increase the share of adverse drug reactions. Competitors’ spending decreases market share, while also having an influence on adverse drug reactions.

Keywords: Competition, Promotion, Adverse drug events

1 INTRODUCTION
The market for pharmaceuticals is one of the most highly regulated markets in the nation (Danzon, forthcoming). While the interaction between manufacturers and the U.S. Food and Drug Administration (FDA) that occurs in the pre-approval stage has received much attention in the literature, the effects of competition and promotion on patients’ demand and safety in the post-approval stage has received far less attention (Scherer, 2000). This paper aims to fill some of this void by modeling the firm’s choice of promotion under different competitive and regulatory scenarios, and by testing the model’s predictions using a novel combination of sales, promotion, advertising, and adverse event reports data.

Following David et al. (2010), we model profit-maximizing pharmaceutical manufacturers, who choose the level of advertising expenditures knowing that higher advertising (or promotion) expenditures raise sales, but may trigger unfavorable regulatory actions against the firm. Regulatory action results when the expansion of prescriptions to users who are poor matches for the drugs leads to adverse health events. The model prediction regarding optimal levels of advertising is sensitive to the competitive situation at hand (monopoly versus oligopoly).

In the case of oligopoly, it has long been recognized that advertising can have two types of effects on demand, either increasing demand for the entire product category or changing the consumer mix across brands within the product category (Waldman and Jensen, 2007). The role of competition, advertising, and promotion on patient safety has received much less attention. The literature has also overlooked situations where the level of competition in the market grows abruptly.

This paper examines the market for erectile dysfunction (ED) drugs, which includes Viagra (Pfizer), Levitra (Bayer) and Cialis (Lilly), because it is characterized by an abrupt shift in structure, all drugs are branded (no generics), and all have extensive advertising and promotion (Kim, 2010). Our analysis, therefore, focuses on strategic interactions among firms producing drugs within the same class.

Because this market presents an interesting case of a switch from monopoly to oligopoly, it allows for tracking the dynamics of market size, market share, promotion, and adverse event reporting as the market becomes more competitive. The entry to market of “me-too” products may also lead to market expansion, which may lower their overall appropriateness, reflected through higher rates of adverse drug events (Lee, 2004). In the pharmaceutical market, increased demand for a product may also increase the risk of gaining patients who experience adverse drug reactions, leading to an increased risk of regulatory intervention by the FDA or litigation, leading pharmaceutical companies to internalize the full costs of their actions (Ching and Ishihara, 2010).

We use available data to test predictions from the theoretical model and study (1) the effect of direct to consumer advertising (DTCA) and promotion on sales and market share in an oligopoly setting, and (2) the effect of DTCA and promotion on adverse drug events (ADEs) in both the monopoly and oligopoly settings.

2 THEORY AND MODEL
In this section, we develop models where profit-maximizing pharmaceutical manufacturers choose the level of advertising expenditures, knowing that higher advertising expenditures raise sales, but may trigger unfavorable regulatory actions against the firm. The model prediction regarding optimal levels of advertising is sensitive to the

Keywords:
competitive situation at hand (monopoly versus oligopoly).

To highlight the roles of regulatory uncertainty and competition, we introduce these dimensions sequentially into a standard advertising framework. We start with the classic Dorfman and Steiner (1954) model of monopoly advertising.

A firm maximizes the following profit function, given by \( \Pi = P \cdot Q(P, A) - C(Q(P, A)) - A \), where \( Q \) represents the quantity demanded, \( P \) represents price, \( C \) represents the cost function, and \( A \) represents advertising expenditures. From this function, the Dorfman-Steiner rule can be derived:

\[
[1] \quad \frac{A}{P \cdot Q} = \left( \frac{P - MC}{P} \right) \left( \frac{\partial Q}{\partial A} \cdot \frac{A}{Q} \right)
\]

Allowing for the uncertainty of regulatory action, the firm would maximize the following expected profit function,

\[
ET\Pi = (1 - w(A)) \cdot (P \cdot Q(P, A) - C(Q(P, A))) - A,
\]

where \( w(A) \) is the probability of regulatory action, such as withdrawal of a drug from the market, under which the firm’s surplus is lost but the advertising expenditures are sunk. For simplicity, we take the probability of regulatory action to be a known function of the level of advertising expenditure chosen by the firm. The resulting modified Dorfman-Steiner rule given by:

\[
[2] \quad \frac{A}{(1 - w) \cdot P \cdot Q} = \left( \frac{P - MC}{P} \right) \left( \frac{\partial Q}{\partial A} \cdot \frac{A}{Q} \right) \left( \frac{(P - AC)}{P} \right)
\]

Linking the level of advertising expenditures with regulatory uncertainty makes the resulting rule differ in two ways. First, the denominator on the left-hand side is expected sales as opposed to sales. Secondly, the last expression on the right-hand side, which is subtracted from the ratio of elasticities, is the product of three terms: (1) a function that is increasing in the probability of regulatory action, \( w \), (2) the elasticity of advertising to regulatory action, and (3) the profit-to-sales ratio. This expression includes the indirect effect of promotion on profits via the probability of regulatory action. In essence, increasing promotional activities trades off higher likelihood of profit-lowering regulatory actions with higher profits in the event that such regulatory action is not taken. For a more general regulatory action, the modified rule suggests that the expected advertising-to-sales ratio is a weighted average of demand, advertising, and regulatory elasticities.

Under oligopoly, each of the dominant players has some influence on the market price of the product as well as the total market demand. However, such influence is limited because action of any one supplier can result in counter action by competitors. Taking the case of duopoly (firm \(K\) and firm \(G\), allowing for uncertainty and strategic competition, we model the expected profits maximization problem faced by firm \(K\). The resulting modified Dorfman-Steiner rule is given by:

\[
[3] \quad \frac{A}{(1 - w) \cdot P \cdot Q} = \left( \frac{P - MC}{P} \right) \left( \frac{\partial Q}{\partial A} \cdot \frac{A}{Q} \right) \left( \frac{\partial C}{\partial A} \cdot \frac{A}{C} \right) \left( \frac{\partial (P - AC)}{\partial P} \right)
\]

The second term captures the regulatory effect, which is composed of a direct effect of own advertising on the likelihood of regulatory action, and an indirect strategic effect of own advertising on the likelihood of regulatory action through the effect that own advertising has on the rival’s choice of advertising expenditures.

The elasticity of advertising under monopoly may be larger than, equal to, or smaller than the elasticity of advertising under oligopoly. On one hand, a monopoly can fully appropriate its advertising expenditures, which is not the case under oligopoly. On the other hand, a monopoly would also “appropriately” all regulatory actions that stem from advertising expenditure. The effect that a switch from monopoly to oligopoly has on the advertising-to-sales ratio, market share, sales, and adverse events remains an empirical question.

3 EMPIRICAL ESTIMATION

Because Viagra appears in both a monopoly (1998-2003) and a competitive (2003 and on) setting, we focus on Viagra’s outcomes rather than those of Cialis and Levitra. In analyzing these outcomes, we study current and lagged spending on own and competitors’ advertising and promotion.

The data for this project comes from four sources: adverse drug reaction data from FDA’s Adverse Event Reporting System (AERS), prescription data from IMS’s National Prescription Audit (NPA), data on DTCA from the TMS Media AdSpender database, and data on professional promotion from IMS’s Integrated Promotion Service (IPS).

To estimate the effects of spending on market share and ADEs, we use a monthly time series of data from the sources described above. We specify a simple equation where the outcomes are determined by current and lagged spending on DTCA and promotion, along with year and month dummies to capture unobserved trends. We use ordinary least squares to estimate the coefficients, and all standard errors are adjusted for heteroskedasticity and autocorrelation according to Newey and West (1987), with a three period lag. Current spending pertains to the current month, and lagged spending pertains to the remaining eleven months in the current year (i.e. months t-1 through t-11).

For advertising and promotion expenditures, we consider current month expenditures as a flow measure, and the sum of expenditures for the previous eleven months (t-1 to t-11) as a measure of the existing stock of expenditures. The choice of number of months to use for the current period is not obvious since ADEs are reported throughout the month. It is therefore not clear that current month’s expenditures are appropriately matched to all observations. We also tested
models in which the flow measure includes both current and a one month lag, and results are similar. Note that since we are interested in the effects of the entry of Levitra and Cialis on Viagra’s outcomes, it is important to use only the current month’s expenditures. Details on these specifications are below. One last comment to point out is that for the stock values, we do not specify a depreciation rate. Rather, we let the coefficients on the stock reflect the product of the marginal effect and the depreciation rate. The coefficients should be interpreted accordingly.

4 RESULTS

We examine trends in prescriptions filled, DTCA, professional promotion, and ADEs between in 2002 and 2008. After peaking at 4.2 million prescriptions, Viagra’s prescription volume dropped when Levitra and Cialis entered the market. By 2008, Viagra held 52% of the total market, while Cialis and Levitra claimed 32 and 16 percent, respectively.

For total expenditures on DTCA and professional promotion, Pfizer outspends its competitors in almost all periods, peaking at 70 million dollars at the end of 2003 and leveling off to an annual average of approximately 45 million dollars after 2004. Spending on Cialis and Levitra tends to move together, falling initially from peaks of 70 and 50 million dollars, respectively. By the end of 2006, Levitra reaches a steady state of 20 million dollars, while Cialis slightly increases spending to 40 million dollars by 2008. While more volatile, the magnitude of expenditures on DTCA and professional promotion across drugs corresponds to their market share.

The DTCA-to-prescription ratio and the promotion-to-prescription ratio are constant for Viagra over the whole time period (0.004 and 0.01, respectively) whereas Levitra and Cialis have high ratios (combined mean of 0.045 and 0.06) initially that level off within three years (combined mean of 0.01 and 0.015). This is not surprising, as entry by new drugs is often accompanied by both massive promotion effort and relatively low prescription volume, leading to high advertising-to-prescription ratios.

Table 1 contains regression results for Viagra’s monthly market share. Three different models are shown. All models include Viagra’s current and stock of expenditures for the 62 months where Viagra faces competition from both Levitra and Cialis. The first column includes Levitra’s current and stock values of expenditures, while the second column includes Cialis’s expenditures. The last column sums Levitra’s and Cialis’s expenditures to generate the sum of competitors’ spending, which avoids a multicollinearity problem, as these competitors have similar spending patterns.

The results of Table 1 show that spending by Pfizer on the promotion of Viagra is associated with an increase in the market share of the drug. F-tests on the joint statistical significance of the current and stock of expenditures reveal that these coefficients are jointly significant, although the stock value generally drives these results. In terms of magnitude, every $1 million increase in the stock value of national professional promotion spending is associated with an average monthly increase in market share of 0.10 to 0.18 percentage points. However, spending on professional promotion by Viagra’s competitors is associated with a decrease in Viagra’s market share. Again, the stock values drive the results, with a $1 million increase in the stock value of spending by the two competitors associated with an average monthly decrease in market share of 0.08 percentage points.

The effects of DTCA expenditures on Viagra’s market share are also included in the models shown in Table 1. As with professional promotion, an increase in the stock of own spending on DTCA is associated with an increase in market share. The magnitude is smaller, with each $1 million increase in promotion associated with an average monthly increase in market share of 0.05 to 0.07 percentage points.

| Table 1: Effects of Professional Promotion and DTCA on Viagra’s Market Share |
|-------------------------------|-----------------|-----------------|-----------------|
|                               | 1               | 2               | 3               |
| Current promotion (V)         | 0.215           | 0.157           | 0.156           |
|                               | (4.94)          | (1.53)          | (1.82)          |
| Stock promotion (V)           | 0.176           | 0.097           | 0.119           |
|                               | (5.21)          | (2.10)          | (2.46)          |
| Current promotion (L)         | 0.018           |                 |                 |
|                               | (0.10)          |                 |                 |
| Stock promotion (L)           | -0.144          |                 |                 |
|                               | (-4.74)         |                 |                 |
| Current promotion (C)         |                 | -0.076          |                 |
|                               |                 | (-0.62)         |                 |
| Stock promotion (C)           |                 | -0.091          |                 |
|                               |                 | (-3.79)         |                 |
| Current promotion (L+C)       |                 | -0.082          |                 |
|                               |                 | (-0.85)         |                 |
| Stock promotion (L+C)         |                 | -0.077          |                 |
|                               |                 | (-3.91)         |                 |
| Current DTCA (V)              | 0.044           | 0.043           | 0.057           |
|                               | (0.79)          | (0.55)          | (0.83)          |
| Stock DTCA (V)                | 0.049           | 0.070           | 0.077           |
|                               | (2.47)          | (1.92)          | (2.73)          |
| Current DTCA (L)              | 0.009           |                 |                 |
|                               | (0.16)          |                 |                 |
| Stock DTCA (L)                | -0.058          |                 |                 |
|                               | (-3.03)         |                 |                 |
| Current DTCA (C)              |                 | 0.053           |                 |
|                               |                 | (0.57)          |                 |
| Stock DTCA (C)                |                 | -0.013          |                 |
|                               |                 | (-0.45)         |                 |
| Current DTCA (L+C)            |                 | 0.026           |                 |
|                               |                 | (0.55)          |                 |
| Stock DTCA (L+C)              |                 | 0.007           |                 |
|                               |                 | (0.27)          |                 |

Table 2: Effects of Professional Promotion and DTCA on Viagra’s Share of Reported Adverse Drug Events

<table>
<thead>
<tr>
<th></th>
<th>All ADEs</th>
<th></th>
<th></th>
<th>Severe ADEs</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Viagra current promotion</td>
<td>1.929</td>
<td>1.179</td>
<td>1.377</td>
<td>3.232</td>
<td>1.707</td>
<td>2.054</td>
</tr>
<tr>
<td></td>
<td>(1.89)</td>
<td>(1.06)</td>
<td>(1.17)</td>
<td>(2.32)</td>
<td>(1.01)</td>
<td>(1.13)</td>
</tr>
<tr>
<td>Viagra stock promotion</td>
<td>-0.051</td>
<td>-0.225</td>
<td>-0.361</td>
<td>-0.173</td>
<td>-0.651</td>
<td>-0.826</td>
</tr>
<tr>
<td></td>
<td>(-0.15)</td>
<td>(-0.72)</td>
<td>(-0.80)</td>
<td>(-0.32)</td>
<td>(-1.76)</td>
<td>(-1.32)</td>
</tr>
<tr>
<td>Levitra current promotion</td>
<td>1.946</td>
<td></td>
<td></td>
<td>3.278</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(1.43)</td>
<td></td>
<td></td>
<td>(1.49)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Levitra stock promotion</td>
<td>0.961</td>
<td></td>
<td></td>
<td>1.797</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(3.95)</td>
<td></td>
<td></td>
<td>(4.46)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cialis current promotion</td>
<td></td>
<td>0.689</td>
<td></td>
<td>1.435</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>(1.08)</td>
<td></td>
<td>(1.67)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cialis stock promotion</td>
<td>-0.261</td>
<td></td>
<td></td>
<td>-0.480</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(-1.71)</td>
<td></td>
<td></td>
<td>(-2.29)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Levitra + Cialis current promotion</td>
<td></td>
<td>0.798</td>
<td></td>
<td>1.627</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(1.46)</td>
<td></td>
<td></td>
<td>(2.23)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Levitra + Cialis stock promotion</td>
<td></td>
<td>-0.032</td>
<td></td>
<td>-0.086</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(-0.18)</td>
<td></td>
<td></td>
<td>(-0.28)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Viagra current DTCA</td>
<td>0.487</td>
<td>1.304</td>
<td>0.698</td>
<td>0.954</td>
<td>2.725</td>
<td>1.489</td>
</tr>
<tr>
<td></td>
<td>(0.77)</td>
<td>(1.92)</td>
<td>(0.95)</td>
<td>(1.12)</td>
<td>(2.20)</td>
<td>(0.95)</td>
</tr>
<tr>
<td>Viagra stock DTCA</td>
<td>0.876</td>
<td>1.336</td>
<td>0.904</td>
<td>1.318</td>
<td>2.254</td>
<td>1.428</td>
</tr>
<tr>
<td></td>
<td>(5.09)</td>
<td>(4.26)</td>
<td>(2.76)</td>
<td>(4.08)</td>
<td>(5.81)</td>
<td>(2.52)</td>
</tr>
<tr>
<td>Levitra current DTCA</td>
<td>0.340</td>
<td></td>
<td>-0.179</td>
<td>0.563</td>
<td>1.123</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.33)</td>
<td></td>
<td>(-0.11)</td>
<td>(2.53)</td>
<td>(4.12)</td>
<td></td>
</tr>
<tr>
<td>Levitra stock DTCA</td>
<td>-0.632</td>
<td></td>
<td>-1.200</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(-3.19)</td>
<td></td>
<td>(-3.36)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cialis current DTCA</td>
<td>0.058</td>
<td></td>
<td>-0.103</td>
<td>0.563</td>
<td>1.123</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.08)</td>
<td></td>
<td>(-0.11)</td>
<td>(2.53)</td>
<td>(4.12)</td>
<td></td>
</tr>
<tr>
<td>Cialis stock DTCA</td>
<td>0.176</td>
<td></td>
<td>0.384</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.72)</td>
<td></td>
<td>(0.99)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*NOTE: T-statistics are in parentheses. N = 62*

The table also reports cross brand effects. The cross DTCA spending results are interesting in that there appears to be little effect of the competitors’ spending on Viagra’s market share. Only in the model that considers spending on Levitra do we find a negative and statistically significant cross effect.

Table 2 contains models that are similar to that of Table 1, but here the outcome variable is Viagra’s share of ADEs, including severe ADEs and all types of ADEs. Severe ADEs are based on the FDA definition from the AERS reporting instructions, and include: death, life-threatening injury, hospitalization, disability or permanent damage, and congenital anomaly/birth defect. We find the results to be generally insensitive to the seriousness of the ADEs. Pfizer’s expenditures on professional promotion of Viagra are generally not associated with increases in ADEs, while the stock of own expenditures on DTCA have a positive and statistically significantly effect. This DTCA result is consistent with the results of David et al. (2010), showing that the advertising of certain lifestyle drugs may worsen the match between the patient and the drug, increasing the likelihood of an adverse drug event.

Results in Table 2 also show that professional promotion spending by Viagra’s competitors adversely affects its share of ADEs, especially when serious ADEs are considered. Here, increases in current month spending on professional promotion by Levitra and Cialis are associated with an increase in Viagra’s share of ADEs of over one percentage point. However, the Cialis effect is mitigated by a smaller negative stock effect. When combined, current professional promotion expenditures are associated with an increase in Viagra’s share of ADEs by 1.6 percentage points (see Column 6).

DTCA by the competitors has differential effects on Viagra’s share of ADEs, with an increase in the stock of
Levitra’s DTCA associated with decreases in Viagra’s share of ADEs, while an increase in the stock of Cialis’s DTCA is associated with an increase in Viagra’s share. When the DTCA expenditures for the competitors are summed, the resulting coefficient is statistically insignificant and reflects the average of the positive and negative effects. It is not clear why DTCA by Levitra would induce the opposite effect on patients’ match with the drug compared with DTCA by Cialis.

5 DISCUSSION
Our empirical analysis confirms the prediction that own spending on DTCA and promotion increases own market share, while competitors’ spending decreases own market share. While this finding is not unique to the pharmaceutical industry, we show that spending on DTCA and promotion can also result in increased ADEs, which has been shown to increase the probability of regulatory actions (David et al. 2010). In particular, DTCA by the incumbent brand (Viagra) increases its share and the number of ADEs, and the own spending effects appear to be constant throughout the changes in the market structure. With a few exceptions, spending on DTCA and promotion by entrants (Levitra and Cialis) also increase the incumbent’s share and count of ADEs.

In summary, since regulatory agencies are sensitive to post-marketing safety indicators, firms chose the level of advertising and promotional expenditures strategically. Like the drugs themselves, competition in the pharmaceutical industry has side-effects. Beyond the well documented strategic interactions, like opportunities for free riding on rivals’ advertising and promotional campaigns, there is a potential spillover effect from rivals’ inappropriate market expansion in the form of increased reporting of adverse drug reactions.

6 REFERENCES


A Comparison of U.S. Auditing Reporting Standards vs. International Reporting Standards

Robert R. Davis, PhD, CPA
Department of Accounting
Canisius College
2001 Main Street
Buffalo, NY 14208 – 1098
716-888-2866
davis@canisius.edu

Abstract
This study will focus on the major differences between current U.S. auditing reporting standards and objectives as issued by the American Institute of Certified Public Accountants [AICPA] vs. the International Accounting and Assurance Standards Board (IAASB) pronouncements. In accenting the contrasts between the current domestic and international standards, the study may identify future changes that will eventually not only be reflected in the auditor’s reporting for U.S. public companies but will also be incorporated in audit reports of private companies [nonissuers].

The AICPA has supported the global convergence effort to developing one set of high-quality auditing [Generally Accepted Auditing Standards or GAAS] and assurance standards. The AICPA is committed to play a critical role in the development of harmonizing auditing standards to meet the demand by various stakeholders for uniform procedures for financial statement auditing in the continued expansion of the global economy.

Keywords
Auditing, U.S. Auditing Standards, International Auditing Standards

Background
The website (http://www.ifac.org/iaasb) of the International Federation of Accountants (IFAC), identifies their following mission: to serve the public interest by setting high-quality auditing and assurance standards and by facilitating the convergence (harmonization) of international and national auditing and assurance standards, thereby enhancing the quality and consistency of practice throughout the world and strengthening public confidence in the global auditing and assurance profession.

In fulfilling this objective, the International Accounting and Assurance Standards Board (IAASB) along with the International Accounting Standards Board (IASB) develops and issues, among other statements, International Standards on Auditing (ISAs), an ethical code and also guidelines concerning the education and competence requirements for qualifying to be a member of the profession. The IASB plays a critical role in the development of harmonizing auditing standards to meet the demand by various stakeholders for uniform procedures for financial statement auditing in the continued expansion of the global economy.

On November 15, 2007 the U.S. Securities and Exchange Commission (“SEC”) adopted rules that permit foreign private issuers to include in their filings with the SEC financial statements prepared in accordance with International Financial Reporting Standards (“IFRS”) as issued by the IAASB without reconciliation to U.S. generally accepted accounting principles (“U.S. GAAP”).

Although harmonization of global accounting and auditing standards is enthusiastically endorsed and encouraged by such organizations as the European Union (EU), the International Organization of Securities Commissions (IOSCO) and the World Trade Organization (WTO), the SEC’s commitment to adopting a time frame has been subject to skepticism. “The SEC’s proposed road map for the adoption of global standards is “doable” as are the road maps of Canada, China and Japan.”

The American Institute of Certified Public Accountants [AICPA] has supported the global convergence effort to developing one set of high-quality auditing [Generally Accepted Auditing Standards or GAAS] and assurance standards. However, the role of the Public Company Accounting Oversight Board (PCAOB) may forestall this effort. Presently, the non-U.S. jurisdictions where


PACOB is prevented from inspecting PACOB-registered firms are the 30 European countries that are required to follow the European Union's Directive on Statutory Auditors, China, Hong Kong, and Switzerland. “The PACOB has no official mandate to involve itself in global convergence and related activities, except to the extent that those efforts are related to improving the conduct of audits of public companies in the United States. Projects that might interfere with or delay the PACOB’s efforts will likely expose the board to significant criticism from Congress...” ³

The rationale underlying the justification for this study is the underlying presumption that market, rather than political, forces will drive the use of global reporting standards in the U.S. And, that ultimately, the U.S. cannot afford to be a bilingual country in terms of financial reporting according to Bunting.

Present study
The end product of any audit is the issuance of an audit report which communicates the audit findings to interested users. Unfortunately, the brevity of the audit report suggests that it lacks substance. However, the audit report is the only public announcement that summarizes what the auditor has done and what the auditor has found.

This study will focus on the major differences rather than the commonalities between U.S. auditing reporting standards and objectives as issued by the AICPA [AU 508]⁴ vs. the IAASB’s pronouncements [ISA’s]. In accenting the contrasts between the current domestic and international standards, the study may identify future changes that will eventually not only be reflected in the auditor’s reporting for U.S. public companies but will also be incorporated in audit reports of private companies.

Before any essential differences in reporting standards are noted, the stated objectives of an audit follow [emphasis added]:

<table>
<thead>
<tr>
<th>GAAS – Statement on</th>
<th>ISA 200</th>
</tr>
</thead>
</table>


⁴ AU Section 508: Reports on Audited Financial Statements, Codification of Statements on Auditing Standards, American Institute of Certified Public Accountants, Inc., New York, NY, 2010. The AICPA standards will be utilized in this study inasmuch as the PCAOB has adopted these as interim standards as of April 2003. Except for some minor reference language [PCAOB AS No.1], the reporting standards are basically identical. The requirements of PCAOB AS No. 5 dealing with reporting on internal control are not addressed in this study.

### Auditing Standard No.1 [SAS]

**Overall Objectives of the Independent Auditor and the Conduct of an Audit in Accordance with International Standards on Auditing**

The objective of the ordinary audit of financial statements by the independent auditor is the expression of an opinion on the fairness with which they present, in all material respects …with generally accepted accounting principles. These standards require him to state whether, in his opinion, the financial statements are presented in conformity with generally accepted accounting principles and to identify those circumstances in which such principles have not been consistently observed in the preparation of the financial statements of the current period in relation to those of the preceding period.

The purpose of an audit is to enhance the degree of confidence of intended users in the financial statements. This is achieved by the expression of an opinion by the auditor on whether the financial statements are prepared, in all material respects, in accordance with an applicable financial reporting framework. In the case of most general purpose frameworks, that opinion is on whether the financial statements are presented fairly, in all material respects, or give a true and fair view in accordance with the framework. An audit conducted in accordance with ISAs and relevant ethical requirements enables the auditor to form that opinion.

Commentary:
The ISA’s reference to enhancing the confidence on the part of the user captures the true essence of any audit.

The IFAC phrase “applicable financial reporting framework” refers to financial reporting framework adopted by management and, where appropriate, those charged with governance in the preparation of the financial statements that is acceptable in view of the nature of the entity and the objective of the financial statements or that is required by law or regulation. In most instances, the framework term relates to a recognized national standards setting organization.

The concept of a true and fair view is a concept that does not appear in U.S. standards and probably never will be embraced in this country because of the inherent connotations.

Finally, the only reference to ethics in the present Codification publication refers to a footnote relating to the Professional Ethics Division. The inclusion of this phase in the GAAS objectives section would strengthen and recognize the profession’s commitment to ethical conduct.
It is interesting to note that the AICPA in 2003 [SAS No. 102/AU 120.04] refined the responsibility of the auditors in adhering to SASs depending upon the language used in the standards. If the standard contains the words must or is required, this is an example of an unconditional requirements wherein the auditor is required to comply. If the standard uses the word should [presumptively mandatory requirements], the auditor is permitted a departure from the SAS with appropriate documentation and justification. On the other hand, the term shall permeate the ISAs.

AU 508: Reports on Audited Financial Statements and ISA 700 Forming an Opinion and Reporting on Financial Statements governs this section.6

<table>
<thead>
<tr>
<th>AU 508</th>
<th>ISA 700 Forming an Opinion and Reporting on Financial Statements</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Introduction</strong></td>
<td><strong>The auditor must</strong> either express an opinion regarding the financial statements, taken as a whole, or state that an opinion cannot be expressed, in the auditor’s report. The objective of the fourth standard is to prevent misinterpretation of the degree of responsibility the auditor is assuming when his or her name is associated with financial statements.</td>
</tr>
<tr>
<td><strong>Commentary:</strong></td>
<td>The italicized phrases identify the major differences between the two standards. Although the term general purpose financial statements is not part of the AU standards, the term as used in describing U.S. financial reporting objectives is very similar to the ISA definition. There is no reference to the term fraud* in the present U.S. reporting standards.</td>
</tr>
</tbody>
</table>

**The Auditor's Standard Report**

<table>
<thead>
<tr>
<th>AU 508</th>
<th>ISA 700</th>
</tr>
</thead>
<tbody>
<tr>
<td>The auditor's standard report states that the financial statements present fairly... in conformity with generally accepted accounting principles [GAAP].</td>
<td>The auditor shall express an unmodified opinion when the auditor concludes that the financial statements are prepared, in all material respects, in accordance with the applicable financial reporting framework.</td>
</tr>
</tbody>
</table>

**Commentary:** The meaning of “present fairly” has been historically controversial. The AICPA has withdrawn SAS No. 69, [The Meaning of Present Fairly in Conformity With Generally Accepted Accounting Principles] effective September 2009. The phrase generally suggests that most auditors posit that the financial statements fulfill this definition when the statements are in accordance with GAAP. However, one observer comments “there is

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5 U.S. auditing standards are issued by the Auditing Standards Board whereas the International Auditing and Assurance Standards Board (IAASB) are responsible for ISAs.

6 In September 2009, the ASB issued an exposure draft that significantly changed the reporting standards enumerated in AU 508. This exposure draft is discussed at the end of the paper. Changes to the current auditing standards will be designated by an *.
nothing to tell auditors, much less users, what it is supposed to mean. *Weird, but true.*”

<table>
<thead>
<tr>
<th>Structure of the Auditor’s [Standard] Report</th>
<th>AU 508</th>
<th>ISA 700</th>
</tr>
</thead>
<tbody>
<tr>
<td>Written requirement</td>
<td>Written does not appear in this standard.*</td>
<td>The auditor’s report shall be in writing. A written report encompasses reports issued in hard copy format and those using an electronic medium.</td>
</tr>
<tr>
<td>Title</td>
<td>No significant difference.</td>
<td></td>
</tr>
<tr>
<td>Addressee</td>
<td>The auditor’s report is normally addressed to those for whom the report is prepared – company, its stockholders or the board of directors.</td>
<td>The auditor’s report shall be addressed as required by the circumstances of the engagement. Law or regulation often specifies to whom the auditor’s report is to be addressed in that particular jurisdiction. The auditor’s report is normally addressed to those for whom the report is prepared.</td>
</tr>
</tbody>
</table>
| Management’s Responsibility for the Financial Statements | Stated in the opening paragraph of the report with a blanket statement that management is responsible for the financial statements that were audited. | A separate paragraph with this heading. The illustrative report in this standard contains this language: *and for such internal control as management determines is necessary to enable the preparation of*

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<table>
<thead>
<tr>
<th>Departures from the Standard (Unqualified) Report</th>
</tr>
</thead>
<tbody>
<tr>
<td>This next section deals with situations that may require the auditor to add an explanatory paragraph to the standard report, after the opinion paragraph, without affecting the issuance of an unqualified opinion. ISA 705 [Modifications to the Opinion in the Independent Auditor’s Report] and ISA 706 [Emphasis of Matter Paragraphs and Other Matter Paragraphs in the Independent Auditor’s Report] identify these conditions as requiring the auditor to include an Emphasis of Matter paragraph in the auditor’s report. U.S. standards do not require a heading to this explanatory paragraph.</td>
</tr>
</tbody>
</table>

**Opinion based in part on the utilization of another auditor**

Circumstances exist wherein part of an audit engagement is performed by other auditors due to a variety of reasons. In this situation, a principal auditor [ISA: group engagement partner] will sign the audit report for the consolidated entity. The principal auditor will make a decision as to the quality of the work performed and evaluate the type of opinion rendered by the other auditors. This process is referred to as the division of responsibility decision. The ISA standards [ISA 600: Audits of Group Financial Statements (including the work of component auditors)] refer to this situation where Group financial statements are defined as: “Financial statements that include the financial information of more than one component.”

<table>
<thead>
<tr>
<th>Departure</th>
<th>AU 508</th>
<th>ISA 600</th>
</tr>
</thead>
<tbody>
<tr>
<td>The auditor’s opinion is based in part on the report of another auditor.</td>
<td>Paragraphs .12 – .13 identify the following options:</td>
<td></td>
</tr>
<tr>
<td>- Make no reference to the other auditors.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Make reference to the other auditors [shared unqualified opinion]</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Qualify the opinion.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Ref: Para 11: …the auditor’s report on the group financial statements shall not refer to a component auditor, unless required by law or regulation to include such reference.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Under the appropriate circumstances, a qualified or disclaimer of opinion may be rendered.</td>
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</tr>
</tbody>
</table>

**Departure from GAAP**

In very rare circumstances in practice, the auditor is permitted to issue an unqualified opinion when the entity’s financial statements depart from GAAP. This practice is permitted under Rule 203 of the AICPA Code of Professional Conduct. This situation is known as a [Justified] Departure From a Promulgated Accounting Principle [AU 508.14]. The auditor must demonstrate that due to unusual circumstances, the financial information would be misleading if the entity complied with the promulgated principle. In a separate explanatory paragraph or paragraphs, the auditor must explain the financial impact of the departure from GAAP along with a statement that the auditor acquiesces with management’s decision.

ISA 700 paragraph 7(b) (ii) states …that it may be necessary for management to depart from a requirement of the [financial reporting] framework to achieve fair presentation of the financial statements. Such departures are expected to be necessary only in extremely rare circumstances.  

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*Other events that may require an explanatory language as detailed by AU 508.11 but not examined in this paper include:
Information required by the SEC as a part of the quarterly financial data has been omit-ted or has not been reviewed:. The company is required to provide supplementary information by a standard setting body (such as the FASB or GASB) and that information is either not provided, is not presented according to the guidelines, or the auditor has not been able to perform what-ever procedures are required related to the information; Other information in a document that includes the audited financial statements (such as when the audited financial statements are in the annual report) is materially inconsistent with information in the financial statements.
circumstances. However, ISA 700 along with ISA 705 and ISA 706 do not provide any professional guidelines or language that addresses the reporting modifications or disclosures.

The PCAOB in AS 6 did not adopt the AICPA ethics rule [203] that allows this exception.

Substantial Doubt about an Entity’s Ability to Continue as a Going Concern

The auditor has a responsibility under AU 341 to evaluate the entity’s ability to continue as a going concern for a reasonable period of time for a period normally not to exceed one year from the balance sheet date. The present standard requires the auditor to evaluate certain financial statement metrics along with other audit evidence that may suggest that the client is in financial distress. The auditor is also required to evaluate any plans management has been devised to alleviate the conditions. If, after performing the foregoing audit procedures, the auditor decides that there is substantial doubt about the entity’s ability to continue as a going concern, and that there are the proper financial statement disclosures, the auditor adds an explanatory paragraph.

ISA 570 Going Concern enumerates both the auditor’s investigative responsibilities along with the reporting requirements. Although this standard is more expansive in its listing of events and/or conditions that may cast suspicion about an entity’s going concern than AU 341, it surprisingly does not address the auditor’s documentation obligations. The reporting duties parallel those in AU 508.

Lack of consistency

The second standard of reporting requires that the auditor must identify in the auditor’s report those circumstances in which such principles have not been consistently observed (or their method of application) in the current reporting period in relation to the preceding period. These changes can be voluntarily or mandated by a new Statement of Financial Accounting Standard [SFAS]. The assumption is that the auditor concurs with the change which should improve the reporting of business operations. The auditor must notify the user through the utilization of an explanatory paragraph (after the opinion paragraph) and refer the reader to an explanatory financial statement footnote which discusses the change. Presently, there is no language in the ISAs that explicitly addresses this issue.

Emphasis of a matter

AU 508.19 allows the auditor to add a paragraph to the audit report, after the opinion paragraph, to emphasize a matter that is included in the financial statements. The standard provides the following examples:

- That the entity is a component of a larger business enterprise.
- That the entity has had significant transactions with related parties.
- Unusually important subsequent events.
- Accounting matters, other than those involving a change or changes in accounting principles, affecting the comparability of the financial statements with those of the preceding period.

Auditors have highlighted the presence of a major uncertainty, e.g. litigation, using this practice even though the financial statements have properly accounted for and disclosed the presence of the situation.

The ISA addresses this issue in ISA 706: Emphasis of Matter Paragraphs and Other Matter Paragraphs in the Independent Auditor’s Report a 3,400 word document vs. the AICPA’s standard that contains approximately 140 words. The purpose of this standard is to: Draw users’ attention to a matter or matters presented or disclosed in the financial statements that are of such importance that they are fundamental to users’ understanding of the financial statements; or other than those presented or disclosed in the financial statements that are relevant to users’ understanding of the audit, the auditor’s responsibilities or the auditor’s report.*

When the auditor employs an Emphasis of Matter paragraph, the auditor shall include it immediately after the opinion paragraph with the appropriate heading such as Emphasis of Matter.

The standard provides the following examples:

- An uncertainty relating to the future outcome of exceptional litigation or regulatory action.
- Early application (where permitted) of a new accounting standard (for example, a new International Financial Reporting Standard) that has a pervasive effect on the financial statements in advance of its effective date.
- A major catastrophe that has had, or continues to have, a significant effect on the entity’s financial position.

The auditor is cautioned that an expansive use of these paragraphs diminishes the effectiveness of the auditor’s communication of such matters.

The auditor is also permitted to include an Other Matter Paragraph and labeled as such for the following circumstances:

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9 The Financial Accounting Standards Board (FASB) recently issued an Exposure Draft (draft) that would, if adopted, change U.S. Generally Accepted Accounting Principles associated with the going concern assumption. The draft would align existing guidance with IFRS. The proposed language would be one year from balance sheet date or longer if necessary (or one year from date statements could be issued for nonpublicly traded entities).
Departures from Unqualified Opinions: Qualified Opinions

AU 508.20 identifies a qualified opinion as one that states, except for the effects of the matter to which the qualification relates, the financial statements present fairly, in all material respects, financial position, results of operations, and cash flows in conformity with generally accepted accounting principles (emphasis added). The reason for the qualification must appear in a separate paragraph(s) preceding the opinion paragraph with the appropriate qualifying language. Generally, there are two major conditions that trigger a qualified opinion: (1) scope limitations and (2) accounting deficiencies.

Scope limitations relate to the auditor’s inability to obtain sufficient appropriate audit evidence to conduct an audit in accordance with generally accepted auditing standards. Situations may include client-imposed restrictions upon the audit evidence collection procedures such as the limitation of the observation of inventories, confirmation of accounts receivable and/or denying access to critical evidence like corporate board minutes. Time dimensions, geographical limitations, and restrictions beyond the client’s control, for example, due to a natural disaster such as Katrina, may limit the acquisition of the necessary conclusive audit evidence. All of these scope limitations may hinder the issuance of an auditor’s unqualified opinion. AU standards caution that when an auditor qualifies his or her opinion because of a scope limitation, the wording in the opinion paragraph should indicate that the qualification pertains to the possible effects on the financial statements and not to the scope limitation itself.

Accounting deficiencies pertain to the client’s failure to follow GAAP, inadequate financial statement disclosures (fair presentation) or unreasonable accounting estimates. The omission of a cash flow statement is considered an inadequate financial statement disclosure.

When the client fails to follow GAAP, the auditor must not only identify this failure in an explanatory paragraph preceding the qualified opinion paragraph but must also, if possible, disclose the financial impact of such departure on the financial statements in this paragraph.

Accounting estimates involve the outcome of future events. Significant accounting estimates made by management include the realization of accounts receivable, the realizable value of inventory items, and the adequacy of the provision for product warranties. Unreasonable estimates suggest that inappropriate accounting principle may have been applied or selected by management thus creating a case for a qualified opinion.

ISA 705 Modifications to the Opinion in the Independent Auditor’s Report provides direction on the issuance of qualified opinions. There are two conditions explicitly stated that may prompt the qualified opinion: (1) financial statements are materially10 misstated or (2) the inability to obtain sufficient appropriate audit evidence. A misstatement is defined as a difference between the amount, classification, presentation, or disclosure of a reported financial statement item and the amount, classification, presentation, or disclosure that is required for the item to be in accordance with the applicable financial reporting framework. This definition also refers to inadequate disclosure.

The reference to the lack of sufficient appropriate evidence is similar to scope limitations previously iterated although this standard is much more expansive in the discussion and examples of scope limitations than the U.S. standard.

There are no references to the improper use of accounting estimates as a condition requiring a qualified opinion under ISA standards.

ISA 700 imposes certain structural reporting requirements on the format of the auditor’s qualified report that is absent from the AU 508 standards:

1. First, in the Auditor’s Responsibility* section, the auditor must insert the following: “We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our qualified audit opinion.”

2. Next, the paragraph that describes the qualification must use the heading: “Basis for Qualified Opinion.”*

3. Finally, when the auditor modifies the audit opinion, the auditor is required use the heading “Qualified Opinion.” *

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10 The discussion of the materiality element is discussed later on in this paper.
Adverse and Disclaimer Audit Reports

The decision to issue a qualified audit report is based to a great extent on the auditor’s subjective assessment of the materiality factor made by the CPA, based upon his/her professional judgment, which is in turn is influenced by a perception of the needs of a reasonable person who will rely on the financial statements.

The concept of the materiality factor can be captured as follows: a matter is material if its omission would reasonably influence the decisions of a user of the auditors’ report; in addition, a misstatement is material if it would have a comparable impact. Materiality is a concept that is incapable of mathematical definition inasmuch as it has both qualitative as well as quantitative features.

Auditors should consider materiality in all three stages of the audit process; that is, planning, field work, and report preparation. In the reporting stage, if the item(s) are deemed to be immaterial, the client receives an unqualified opinion. If however, the auditor deems the condition is material, whether the appropriate opinion is qualified, adverse or a disclaimer of opinion depends on the material, whether the appropriate opinion is qualified, adverse or a disclaimer of opinion depends on the materiality of the effects of the departure. According to ISA 200: In general, misstatements, including omissions, are considered to be material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of the financial statements as such) will explain the circumstances of the material misstatement but without the paragraph heading.

A Disclaimer of Opinion is a formal expression that the auditor is unable to express an opinion regarding the fairness of the financial statements. This type of opinion is the result of a major scope limitation affecting the collection and evaluation of audit evidence as a basis for an audit opinion. A disclaimer is also necessary when the auditor is not independent. The introductory paragraph is modified to state: We were engaged to audit... The report does not contain a scope paragraph. The auditor’s report disclaiming an opinion includes a paragraph stating the reason(s) for the disclaimer. The expression: Because we were unable to... we do not express or we are unable to express an opinion...is required in the opinion paragraph.

The inability to obtain sufficient appropriate audit evidence that is material in nature serves as a basis under ISA 705 for a disclaimer of opinion. The structure of the audit report appears as follows:

1. The first paragraph labeled as Report on the Financial Statements states that: We were engaged to audit... This expression is similar to AU 508.
2. The Auditor’s Responsibility paragraph includes the language: Because of the matter described in the Basis for Disclaimer of Opinion paragraph, however, we were not able to obtain sufficient appropriate audit evidence to provide a basis for an audit opinion. This assertion is not part of the AU standards.
3. The Basis forDisclaimer of Opinion paragraph identifies the circumstances underlying the
4. The Disclaimer of Opinion paragraph states Because of the significance of the matter described in the Basis for Disclaimer of Opinion paragraph, we have not been able to obtain sufficient appropriate audit evidence to provide a basis for an audit opinion. The AU standards paragraph identifies the reasons for the disclaimer while the ISA standards refer the reader to the previous paragraph for the disclaimer justification.

Proposed update to ASB reporting standards

The ASB has issued an exposure draft (draft): Forming an Opinion and Reporting on Financial Statements Modifications to the Opinion in the Independent Auditor’s Report Emphasis of Matter Paragraphs and Other Matter Paragraphs in the Independent Auditor’s Report. This proposed auditing standard (Forming an Opinion and Reporting on Financial Statements) is to converge with ISA 700, 705 and 706. The proposed SAS would be effective for audits of financial statements for periods beginning on or after December 15, 2010.

Some of the highlights of the proposed standard are as follows:

- The auditor’s report should be in writing.
- The draft advances the term unmodified opinion.
- Management’s responsibility now includes an explanation that management is responsible for the preparation and fair presentation of the financial statements … whether due to fraud or error.
- The draft identifies the following new paragraph headings:
  - Report on the Financial Statements if conditions such as a paragraph Report on Other Legal and Regulatory Requirements is required.
  - Management’s Responsibility for the Financial Statements. This paragraph now includes a reference to the concept of fraud that may contribute to financial statement misstatements.
    - Auditor’s Responsibility.
    - Opinion.
  - The new SAS would require a description that the financial statements are prepared in accordance with a particular applicable “financial reporting framework” but the phrase itself is not included because the draft fails to define quoted term.
  - The auditor’s report should name the city and state where the auditor practices.
  - The new SAS embellishes the interpretation of the term Pervasive as part of an overall Glossary section to describe the effects on the financial statements of misstatements. Illustrative captions are utilized to assist the auditor in the issuance of modified opinions.
- No significant changes are proposed from existing standards relating to the conditions underlying the issuance of modified audit opinions.
- The draft proposes the introduction of Other Matter Paragraphs. The proposed SAS emphasizes that the major distinction between an emphasis of matter paragraph which refers to a matter appropriately presented or disclosed in the financial statements while the other matter paragraph refers to a matter other than those presented or disclosed in the financial statements that, in the auditor’s judgment, is relevant to users’ understanding of the audit, the auditor’s responsibilities, or the auditor’s report. Hence, the notion of an explanatory paragraph would cease to exist in U.S. GAAS.
- The SAS proposes that when the auditor modifies the audit opinion, the auditor should use the heading Qualified Opinion, Adverse Opinion, or Disclaimer of Opinion, for the opinion paragraph.
- A paragraph heading: Basis for Modified Opinion would be required under this new SAS.
- The draft suggests that when there is a management imposed scope imitation, the auditor should consider withdrawal from the engagement under such circumstances.

The proposed draft, as indicated earlier, reinforces and elucidates the concept of pervasive/pervasiveness in this document. The ASB believes that the extended attention given to this concept will help auditors more effectively implement the concepts of materiality along with pervasiveness in determining whether a modification to the opinion in the auditor’s report is appropriate. The illustration illustrated in the draft on page nine follows:

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<table>
<thead>
<tr>
<th>Nature of Matter Giving Rise to the Modification</th>
<th>Auditor’s Judgment About the Pervasiveness of the Effects or Possible Effects on the Financial Statements</th>
</tr>
</thead>
<tbody>
<tr>
<td>Financial statements are materially misstated</td>
<td>Material but Not Pervasive: Qualified opinion        Material and Pervasive: Adverse opinion</td>
</tr>
<tr>
<td>Inability to obtain sufficient appropriate audit evidence</td>
<td>Material but Not Pervasive: Qualified opinion        Material and Pervasive: Disclaimer of opinion</td>
</tr>
</tbody>
</table>

Summary
This paper compared the present U.S. reporting requirements to the International Auditing Standards. The recent exposure draft released by the ASB attempts to reduce the divergence between the established standards. The suggested changes in the AU standard are a welcomed enhancement which not only advances the goal of harmonization but also improves the communication aspects of the auditor’s report. Although most of the report modifications appear to be cosmetic in nature, the structural refinements should not be dismissed as superficial based upon the history of the development of the auditor’s report.\(^\text{15}\)

A significant disappointment in the revision of the reporting standards is the lack of any reference to the compliance with ethical standards. The ASB defends this omission by stating that auditors must comply with the ethical standards contained in the AICPA Code of Professional Conduct [Code]. Therefore, such ethical standards are not reflected in the auditing standards. The Code is administered by The Council of the American Institute of Certified Public Accountants who is authorized to designate \textit{bodies to promulgate technical standards} (emphasis added) under the Rules and the bylaws require adherence to those Rules and standards. However, Rule 202 (Compliance with Standards) requires the member, i.e. the CPA, to comply with standards promulgated by bodies designated by Council. Hence, the reluctance to include any reference to an ethical framework in the auditor’s report is puzzling.

\(^{15}\) The current reporting format is based on SAS No. 58 \textit{Reports on Audited Financial Statements} issued in April 1988 which is effective for reports issued or reissued on or after January 1, 1989. This SAS replaced report language that was in effect from 1949 through 1988. The two paragraph body of the 1948 report contained approximately one hundred twenty words. The 1988 revision expanded the report to three paragraphs containing two hundred words. The proposed SAS will contain approximately three hundred eighty words. Hence, changes in the standard report for nonissuers are very infrequent and deliberative.
DETERMINANTS OF RETAIL PATRONAGE: A CROSS CULTURAL EXPERIMENT

NEJDET DELENER, Ph.D.
Dean and Professor of Marketing & International Business at the School of Business,
State University of New York-OW
223 Store Hill Road, Old Westbury, Long Island, New York 11568
E-mail: delener@gbata.org

Keywords
Retail patronage; store choice; store loyalty; religiosity; cross-cultural research

INTRODUCTION

The retail environment will remain intensely competitive in the future due to market saturation, stagnant real incomes among consumer segments, and a general sameness in merchandise. In such an environment, the understanding of patronage behavior is becoming a primary focus of retailing research. Strategies concerning merchandising, pricing, promotion, and location can all be addressed by examining their impact on consumer patronage. This is especially true in mature markets where consumers must be pulled from other shopping alternatives to increase the profitability of a given store.

There is also the pervasive trend towards globalization of marketing. At a time when global business forges a network of international linkages, cross national research aimed at the determination of similarities and dissimilarities among global markets can provide valuable insights into the formulation of international marketing strategies (Bradley 1987; Delener 2004; 2010). Furthermore, store choice and patronage patterns are the result of processes in which consumer perceptions, images, and attitudes toward stores are formed and reformed on the basis of cultural values and consumer needs. Retail research incorporating cultural values generally has failed to consider the dynamic nature of these determinants of choice. Failure to include an element of process may result in inadequate models of consumer store choice behavior, as well as suboptimal managerial strategies. This study, therefore, aims to compare two countries (United States and Israel) and the determinants which consumer use to choose a place to shop for groceries.

RESEARCH HYPOTHESES

There are very few cross cultural studies on store choice. One of the first cross cultural studies on store choice was conducted by Cavusgil, Yavas and Elvey (1991) studied factors which consumers use to choose a place to shop for groceries in United States and Turkey. They reported that U.S. consumers require greater accessibility and convenience while Turkish consumers appear to expect a wider range of in-store services when shopping for groceries. Kaynak (1987) also studied food buying behaviors of Turkish consumers and found that location, credit facilities offered, low price, honesty of weights and measure, familiarity of the store and its personnel and attitude of the store personnel towards customers were cited by the respondents as the most important factors considered in deciding where to shop. Gripsrud and Horverak (1986) reported the results of their experiment, showing that proximity to a liquor store and extension of opening hours were significant determinants of sales and number of customers in food retailing in Norway. Based on these findings the following hypotheses are suggested:

H 1a: American consumers would expect greater convenience, product selection, accessibility and economics (price and quality and in-store services) when shopping for groceries.

H 1b: Israeli consumers would expect greater in-store services (personal service and store credit) when shopping for groceries.

Since Israel is less developed than the U.S.A., the role of male/female is more clear and it is expected that Israeli women to be more in charge of household chores, including shopping for groceries. Furthermore, consumers in the developing countries tend to view shopping as a social activity therefore they tend to like shopping for groceries. This leads to the following hypotheses:
H 2: More Israeli women than American women would do most of the shopping for groceries for their families.

H 3: Israeli consumers would like to do shopping for groceries more than American consumers.

Literature suggests that older consumers have problems with such in-store factors as lighting and temperature (Mason and Bearden 1978), lack of rest areas (Lambert 1979), package sizes and small print (Sciglimpaglia and Schaninger 1981). Those with mobility limitations would be more likely to also exhibit physical limitations and consequently place more emphasis on these factors.

Hansen and Deutscher (1978) studied patronage behavior of grocery stores and department stores and found several differences between demographic segments with regard to store attribute importance. They suggested that older consumers and those with lower income and educational levels tend to place more weight on store advertising and its policy on adjustments. In contrast, younger and higher educated consumers are more concerned about prices and convenience. This leads to the following hypotheses:

H 4a: Younger Americans and Israelis would place more importance on such related factors as price and convenience than their older counterparts.

H 4b: Americans and Israelis with higher educational levels would place more importance on such related factors as price and convenience.

In developing countries, food retailers cater to the customers living in the immediate neighborhood. Most of the customers shop regularly at the same place and they usually divide their grocery purchases among a number of different types of food outlets. They buy groceries in the grocery store; fresh meat from the butcher; and dairy products, eggs, and fresh-baked goods in other specialty food stores. Purchases are usually small in quantity and the shopping trips are frequent (e.g., Kaynak 1985). The following hypothesis are therefore suggested.

H 5a: More Americans would shop for groceries in supermarkets.
H 5b: More Israelis would shop for groceries in local grocery stores or markets.

Virtually all retail patronage paradigms include various consumer characteristics, particularly as to their effect on retail store attribute importance. Cultural values, more explicitly religious orientation of the consumer is not specifically addressed. It has been suggested that an individual's shopping motives are shaped by both personal determinants and product determinants. Delener (1994) and Sheth (1983) have identified "religion" as a major determinant of personal values. It is proposed that "a person's religious orientation as with other personal traits such as sex, age, ethnicity, and race, acts as a determinant of a consumer's general shopping motives across a broad spectrum of product classes. The religiosity variable is, therefore, expected to significantly influence consumer evaluative criteria of various retail stores and the extent to which key retail store attributes are viewed as important to consumers. This expectation is explored in the following hypotheses:

H 6a: A positive relationship exists between religious orientation and the importance placed by an individual on retail store evaluative criteria dealing with in-store services.
H 6b: A positive relationship exists between religious orientation and store loyalty.

**METHODOLOGY**

**Sample**

Data was collected from a sample of Jewish households residing in the United States and Israel. A stratified sampling method was used to obtain respondents' names and addresses from various lists. A detailed and comprehensive questionnaire was developed in English. It was translated into Hebrew using the back-translation method (Douglas and Craig 2005). The drop-off method was used to collect the data. Questionnaires were hand delivered and picked up two weeks later by trained field workers. A total of 625 questionnaires were delivered to qualified households, 225 in the United States and 400 in Israel. After discarding unusable questionnaires due to severe omissions and end-piling, 395 of the collected questionnaires (132 in the United States and 263 in Israel) were included in the data base, yielding a response rate of 63 percent (59 percent in the United States and 66 percent in Israel).

**RESULTS**

**American and Israeli attitudes to store attributes**

H1a tests the Hypothesis that in the United States consumers would expect greater convenience,
accessibility and economics when shopping for groceries while H1b tests the hypothesis that Israeli consumers would expect greater in-store services. We measured convenience by the store's product selection, accessibility by store location, economics by price and quality and in-store services by personal services, store atmosphere and store credit.

Store location and product selection, which measure accessibility and convenience are statistically significant and confirm the hypothesis. Of the two variables that measure economics, products' quality is in the right direction but not significant while price is highly significant but contradicts the hypothesis, namely, more important to Israeli rather than American consumers. Findings show that of the three attributes assumed to be more important to Israeli consumers, personal services is significantly more important to American rather than to Israeli consumers, while the differences between the two sub-samples with regards to store atmosphere and store's credit and not significant.

Considering both rating and ranking results, H1a can be accepted only for location. It is rejected with regard to product selection and product quality. With regard to price H1a is not only rejected, but there is significant evidence to the contrary, i.e., it is more important to Israeli rather than to American respondents. H1b can be accepted with regard to store credit and rejected with regard to personal service and store's atmosphere. Given these inconclusive results, H1a and H1b cannot be accepted. It can be concluded that consumers' decision where to shop for groceries is a rather intricate process.

American and Israeli Shopping Behavior

According to the findings, doing grocery shopping is a housewife's chore in the United States, where 76% of the respondents identify the wife as the main shopper for the household. The remaining 24% identify the husband as the main shopper. While in Israel half of shopping is done by the wife (50%) and a third by the husband, 16% is done by other members of the household. These highly significant results (p<0.000) contradict H2. Based on these results, we reject H2 and note that there is a strong evidence to the contrary, i.e., that in the USA rather than in Israel the housewife is more frequently the main household grocery shopper.

Findings suggest that significant differences (p<0.000) between the American and Israeli respondents in their liking to do shopping for groceries. Most Israelis (66%) like to some degree to do shopping for groceries while less than a third (31%) of American respondents do so. To assure that these differences are caused by the tested variable and not by others, we conducted ANCOVA of "liking to do shopping" with all key demographic variables as either classification variables or covariates. Out of 6 variables included in the analysis, only Country was found to significantly relate with the dependent variable. Since one may question the validity of treating this dependent variable as continuous, the relationship between this variable was tested with each nominal or ordinal variable using cross tabulation and Chi Square analyses. The results confirm the conclusions drawn from the analysis of variance. Based on these results H3 is accepted.

Demographic characteristics and attitude to store attributes

In similar analyses, but using age and education as explanatory variables hypotheses H4a and H4b were tested. Of all store attributes, only personal services whose importance increase with age (p=0.004) and price whose importance decrease with age were found to be statistically significant. However, when the same analyses were conducted layered by country results were inconsistent. Education was found to be statistically associated only with location (p=0.000) whose importance increases with the level of education. This relation was found to be significant only in the Israeli sample (p= 0.048). Neither price nor product selection were found to be associated with the level of education. Based on these results H4a and H4b are rejected.

The vast majority of Americans report shopping in supermarkets (85%), about 10% shop in local grocery stores and negligible proportion shop in local market (3%) or some other outlet (2%). While about half of the Israeli respondents shop in supermarkets, 33% shop in local grocery stores and 6% in local market or some other outlet (9%). These differences between the two countries are highly significant (p<0.000). In specifying the other outlets in the open-ended part of this question, the most common response in Israel was "mini-market," which is a relatively large local grocery store that sells also fruits and vegetables and its layout facilitates self-service. Adding those responding "other" to "local grocery store" in the Israeli sample, we find that 43% Israelis shop in local grocery or mini-market stores. Based on these results hypotheses H5a and H5b are accepted.
Religiosity and Attitude to Store Attributes

Hypotheses H6a and H6b relate religiosity to consumer behavior. H6a tests the hypothesis that a positive relationship exists between religious orientation and the importance placed by the individual on retail store evaluative criteria dealing with in-store services. As noted above, three variables were used to measure in-store services. Religious orientation was measured by classifying respondents as being antireligious, nonreligious, extrinsic, intrinsic, or proreligious oriented. Only personal services was found to be significantly associated with religious orientation, were the more positive the religious orientation, the more important is this attribute of in-store service. However, a cross-tabulation analysis of this relationship layered by country shows that the above relationship is found only in the Israeli sample. Thus, while there is some evidence to confirm it, H6a cannot be accepted.

Religiosity and Store Loyalty

Four questions "I usually do most of my shopping in the same store;" "Once I get used to where things are in a supermarket, I hate to change stores;" "I like things the old established way;" and "Once I have selected a store, I am likely to shop there without trying other stores" measured respondents' store loyalty.

ANOVA analysis of the three-item loyalty scale as dependent variable with all religiosity classification variables as independent variables indicated no relations. The results were verified by cross-tabulation and chi-square analyses of each loyalty question with each religiosity classification questions. Based on these results hypothesis H6b is rejected.

CONCLUSION

Cross-cultural examination of the store patronage behavior could have value for several reasons. First, most retailers are very much aware of the importance of the consumer's store choice process. They realize that consumers can purchase the same or similar merchandise in any number of outlets. Thus, they undertake a number of activities to attract and keep consumers coming back to their stores. What many retailers are not aware of are the broader cultural shopping mode choices of consumers. Next, future success in customer targeting strategies in supermarket industries and other retail industries will increasingly depend on the ability to segment the market effectively. The findings of this study should therefore lead to significantly improved understanding of the global retail market and, ultimately, better strategic decisions by retail firms.

References and statistical tables will be provided upon request.
Teaching Economics Using Current “Real-life” Examples from The New York Times

Maryann J. Fogarty Di Liberto, Ph.D.
Division of Accounting, Business, CIS, and Economics
Bloomfield College
53 Fremont St.
Bloomfield, NJ 07003
(973) 748-9000
maryann_diliberto@bloomfield.edu

ABSTRACT
The New York Times provides an excellent teaching tool for economic and business professors. Current events offer exciting “real-life” examples of economic theory and policy applications. An active learning environment is created through a lively classroom discussion of today’s economic issues, deepening a student’s learning experience and reinforcing economic lessons.

Too often today’s students obtain their news in short “sound bites” that briefly summarize the events without any in-depth analysis of the issues. Reading a newspaper story followed by a thoughtful discussion can be a new experience for some students. The connection between the news and the content of an economics course demonstrates how economics provides greater insight and a deeper understanding of the world in which we live. This connection adds to the course’s relevance, which increases a student’s motivation to learn and plays a very important role in the process of learning.

Incorporating The New York Times into the class enhances student learning of the course material, increases a student’s critical thinking skills, and offers the added bonus of making the student more thoughtful about domestic and world issues. If students make oral presentations or write about articles, their communication skills can also be enhanced.

Keywords
Economics, teaching, active learning, “real-life” examples

1 INTRODUCTION
This paper will examine the impact on student learning from the incorporation of The New York Times into a college economics class. The many expected learning outcomes that can enhance a student’s overall educational experience will be reviewed. The regular reading of a newspaper during a student’s college education can also contribute to his/her interest in life-long learning.

There are a variety of ways that an instructor can integrate the newspaper into the course. For example, a discussion of relevant articles from the day’s newspaper can be led by the instructor, by a student, or by a group of students. By using a search engine on The New York Times website and the archives that are available back to 1851, an instructor has innumerable possibilities at his/her disposal for illustrating a day’s lesson. The professor can combine examples from the present and the past that will develop a student’s understanding of historical events, economic history, as well as economic theory. The New York Times website offers lesson plans and examples of ways to use the newspaper in the classroom. In this paper, the author will relate her own classroom experiences using The New York Times in her principles of macroeconomics and money and banking courses and how it has enhanced her teaching of economics.

2 LEARNING ECONOMICS WITH THE NEW YORK TIMES
Economic professors would like students not only to learn economic theory but also to learn it well enough that they will be able to apply these concepts to future situations (Colander, 2009 and Hansen, 2009). Learning economics is a complicated process, and there is no guarantee at what level it will occur or even if it will occur. Any college instructor can attest from grading exams that many students can correctly parrot back an economic principle as defined in the text, but they fall short a few questions later when asked to apply the very same concept. The future application of a newly learned concept, which is referred to as the transfer of learning by cognitive psychologists, requires a very deep level of learning that physically transforms the brain by laying down new neural connections.


The New York Times as an Aid to Learning
For the deep level of learning required for application, the brain must transfer the economic lesson from short-term memory and pass it on to long-term memory for storage.
two main determinants of this process are the relevance and understanding of the material (Sousa, 2006). The use of media such as The New York Times can give a boost to both.

Articles from the newspaper can enhance a student’s understanding of economic concepts by providing a “real-life” example. By providing a connection to a student’s experience and prior knowledge, the “real-life” example can improve a student’s understanding. In addition, further class discussion of the article provides added rehearsal time. Rehearsal is another factor critical to the deep learning process and any future application of the economic concept. It occurs when the brain tries to bring together the new material with existing prior knowledge and creates a new revised understanding (Sousa, 2006).

Using the news media such as The New York Times in an economics class can also raise students’ opinions on the relevance of economic theory. Not only can current events enhance a student’s comprehension of economics, but economics can enhance a student’s understanding of the day’s events. When this occurs, economics too becomes relevant and offers students a tool that can be of value in making sense of the future.

**The New York Times as an Aid to Future Application**

In addition to helping the deep learning process by increasing understanding and the relevance of economics, the use of The New York Times can raise the probability that future application of the economics lessons will take place. The stronger the similarity that exists between a new situation and a memory stored in long-term memory, the greater the probability that a student will relate the two ideas and successfully apply the concept. By widening the scope of “real-life” examples, an instructor can increase the probability that students will be able to make the connection and relate a future situation to an economic principle by linking it to an example stored in their long-term memory.

The number of “real-life” examples can be further increased by using additional news articles from the recent period or past by using The New York Times website (http://www.nytimes.com/). Articles can be located through the website’s search engine or through Times Topics. The Times Topics page collects current and past information with audio and video clips on hundreds of topics.

To make the historic economic events come alive, new stories are available from the searchable archives dating back to 1851, which are easily located through the site map.

The New York Times has many blog pages on their website on topics ranging from politics, to the arts, to dining. In the section on the Economy under the Business tab, there is a link to *Economix* (http://economix.blogs.nytimes.com/), which is a blog that has posts and podcasts by economists discussing current issues. This page offers varied opinions on economic issues that can be useful for class discussions and assignments. The blog page is searchable and older posts are also available.

### 3 HOW TO INCORPORATE THE NEW YORK TIMES INTO AN ECONOMICS CLASS

The New York Times website, The New York Times in College (http://www.nytmartketing.whsites.net/incollege/), is specifically designed for college instructors. The NYT in Your Course page offers videos, comments, and essays by faculty on their experiences using the newspaper. Classroom strategies by professors from numerous disciplines are also available. On the Faculty Resources page, there is an Instructional Strategies Libraries that includes how six professors of economics make The New York Times a part of their courses. The instructors varied widely in their student assignments with some making group projects. Some professors used the printed newspaper in the classroom, asking students to use economics to explain current events. Other instructors made use of the online site, asking students to locate the stories to explain a concept or to describe the economic conditions of a year from the past.

*The Learning Network* is another blog page on the newspaper’s website that focuses on “teaching and learning with The New York Times”. There are lesson plans available for many disciplines, including economics.

For many years, I have included The New York Times in the syllabi of macroeconomics and money and banking courses, using the newspaper in class and focusing on current events. It has become a very effective tool in both classes. Given our rapidly changing world, I find the newspaper to be an intrinsic part of these courses. In the money and banking class, we watched the events of the financial crisis unfold and discussed the new money policy tools as they were applied. Last semester, information on the slow recovery from the recent recession provided many exciting and interesting class discussions.

### 4 STUDENT REACTION

It has been my experience that students very much enjoy learning more about current events and appreciate having an instructor to answer their questions on what is happening. They often get excited during the classroom discussions. For some, this is a totally new experience, and many students reported that this was the first time that they had ever actually read a newspaper.

I allowed my students to select their stores from the day’s newspaper as long as the articles were on topic. The college students were particularly interested in economic issues that related to their own lives, such as articles on student loans, the returns from investing in education, unemployment by educational level, and anything to do with finding a job. They also liked to learn more about the financial crisis, home foreclosures, and the changing oil and gas prices.

When asked, students told me in a reaction essay that they found the experience to be useful in understanding a
particular topic or chapter in their courses. Many said that it also made them more aware of what was happening in the United States as well as globally. They now feel that they better understand how the economy affects people.

During the Financial Crisis of 2007-2009, the students in my money and banking class reported that they were shocked by how little their classmates in other classes understood what was happening, and they credited their reading of The New York Times for keeping them informed.

5 OTHER BENEFICIAL OUTCOMES
In addition to illustrating economic concepts and adding to a student’s awareness of current local and global events as discussed above, using The New York Times in a course has many other beneficial learning outcomes. Detailed articles with deep analysis of issues followed by lively class discussions offer students an opportunity to hone their critical thinking skills. Too often students learn about current events from “sound bites” and short video clips on the Internet or television, and rarely do they take the time to analyze and think deeply about the day’s issues and their consequences. In addition, assignments can provide students an opportunity to improve their written or oral presentation skills.

It is my intention that students learn how important it is for them to be aware of the world around them. This is an important lesson for them to remember throughout their lives and careers. Through The New York Times, they can further develop their skills as lifelong learners.

6 SUMMARY
Integrating news media such as The New York Times into the economics class experience can increase the probability the economic lessons will be learned at the necessary deep level to permit the application of these concepts years in the years to come. By consciously relating current events to economic principles and using “real-life” examples from The New York Times, instructors can raise the probability of learning by increasing the number and variety of examples, extending rehearsal time, and strengthening a student’s understanding. In addition, the likelihood that a connection will be made to some future event is increased, and the principle learned long ago in an economics class can then be applied successfully, increasing the former student’s understanding and insight into the new situation.

There are many ways to incorporate The New York Times into an economics course. Current events can be used to illustrate economic concepts, or students themselves can locate the articles that are available from any year back to 1851.

Reading a newspaper and in-class discussions can make students more aware of local and global events, and assignments can improve their critical thinking, writing, and oral presentations skills. Most students enjoy the experience reading The New York Times, and they learn how to use a newspaper in their careers and become a lifelong learner.

REFERENCES


ABSTRACT
This paper uses co-integration and error-correction models to analyze the causal relationship between R&D (research and development) expenditure and economic growth (GDP) in Turkey. The study applies a number of econometric techniques: ADF unit root test, Johansen co-integration test, vector error correction model (VECM), and Granger causality test using the quarterly data for the period 1992:01-2006:04. It is shown that there is a causality relationship between the R&D expenditures and the economic growth (real GDP). The direction of this causality is from R&D investment to economic growth. That is, any increase in the R&D expenditures causes a positive impact on economic growth.

Keywords
R&D, economic growth, Johansen co-integration method, VEC model

1 INTRODUCTION
Research and Development (R&D), defined as “creative work undertaken on a systematic basis in order to increase the stock of knowledge and the use of this stock of knowledge to devise new applications” (OECD, 1993), leads to new technological breakthroughs, thereby increases productivity, economic growth. The added value of innovative product and process development, and therefore, technological change, in turn, is the primary driver of economic growth. Recently, the relationship between R&D investment and growth has attracted a great deal of attention amongst. Both theoretical and empirical literatures have shown that investments in R&D are crucial for economic growth. In the theoretical front, many models (e.g., Romer, 1990; Grossman and Helpman, 1991; Aghion and Howitt, 1992) illustrate the function of R&D as a growth engine, and demonstrate that government must have a role in achieving an optimum level of R&D. Empirical studies also show the importance of the R&D returns. For example, Griliches (1992) reported that R&D is responsible for at least half of all increases in per capita output. Additionally, Jones and Williams (1998) found that optimal R&D investment is at least four times greater than actual spending. Consequently, investments in R&D seem to have very high social returns and to be a key component of economic growth and development. As a result of the findings of these studies and the general awareness about the contribution of R&D to economic growth, governments have tried to bolster research spending via numerous policy initiatives. The aim of this study is to investigate the effects of R&D expenditure on the economic growth in Turkey by using quarterly data covering the period 1992:01-2006:04.

2 METHODOLOGY
In order to explore the relationship between R&D expenditure and economic growth, Johansen co-integration test, Granger causality test and error correction model method have been applied in the analysis. The first step of the study is determining the relationship between R&D and economic growth whether the series are stationary or not. If a series is non-stationary, then all the usual regression results suffer from spurious regression problem. We investigate the stationary properties of GDP and R&D and the order of integration of the data using the Augmented Dickey Fuller Test and Phillips Perron (PP) performed both on the levels and the first differences of the variables. Then, the short run dynamic and long run co-integration relationship are investigated by using the Johansen co-integration test and its vector error correction model (VECM). Having verified that the variables are co-integrated and then Granger-causality test is employed.

3 DATA
The data for Turkey used in this study consist of quarterly time series for R&D expenditure and real Gross Domestic Product (GDP) over the period 1992:01 and 2006:04.

R&D data is annual series and GDP is quarterly series gathered from Turkish Statistical Institute electronic data distribution system. We have used Friedman (1962) interpolation technique to interpolate the yearly R&D expenditure data to the quarterly data based on Industrial production index data. Industrial production index is highly correlated with R&D expenditure and it was used in the
interpolation. The R&D expenditure and GDP is computed by deflating the retail price index (1997=100). It is used the natural logarithm of real R&D expenditure and real GDP.

4 EMPIRICAL STUDY

4.1 Unit root test
We first carried out the unit root test. The most commonly used methods of unit root test are ADF in which the null hypothesis is non-stationary.

The ADF model used is given as follows:

$$
\Delta Y_t = \alpha_0 + \alpha_1 T + \alpha_2 Y_{t-1} + \sum_{j=1}^{p} \phi_j \Delta Y_{t-j} + \varepsilon_t
$$

where $\alpha_0$ is the intercept term, $\alpha_2$ is the coefficient of interest in the unit root. In the case, the null hypothesis of the unit root test is $H_0: \alpha_2 = 0$, while the alternative hypothesis is $H_1: \alpha_2 \neq 0$.

As shown in Table 1, ADF results are larger (in absolute values) than the Dickey–Fuller critical value, given by MacKinnon the null hypothesis of the unit root cannot be rejected at the 5% level for all options including intercept. To see whether they are integrated of order one $I(1)$ at the 5% level, we perform augmented Dickey–Fuller tests on first differences. The results show that the first differences of both series are stationary which are found to reject the null hypothesis of unit root. Therefore we can conclude that all series involved in the estimation procedure are regarded as $I(1)$, and it is suitable to make co integration test. Moreover, the Philip- Perron (PP) Unit Root Test is implemented to justify the results of the ADF test. Therefore we consider that a variable Granger-causes the other if it helps predict its future values. The VECM model is used in analysis is given below:

$$
\Delta Y = \alpha + \beta - 1 Y_{t-1} + \sum_{j=1}^{p} \phi_j \Delta Y_{t-j} + \varepsilon_t
$$

4.2 Co-integration test and ECM analysis
Given the results of unit root tests, GDP and R&D are integrated of order 1 (namely $I(1)$), then we now use the Johansen techniques to test for co-integration between the variables within a VEC model. Johansen co-integration test determines whether the long-term relationship occurs in variables or not. The test investigate that there can be just one relationship between variables in long term.

Johansen (1992) develops two test statistics: the trace test and the maximum eigen value test. Trace statistic tests the null hypothesis that $r=0$ (no co-integration) against alternative hypothesis of $r>0$ (co-integration). The maximum eigen value statistic tests the null hypothesis that the number of co-integrating vectors is $r$ against the specific alternative of $r+1$ co-integrating vectors. The $t$ statistics obtained from the trace test and maximum eigen value tests are compared against the asymptotic critical values the two test statistics by Johansen and Juselius.

Before applying the Johansen’s procedure it is necessary to determine the lag-length. The lag length was determined as $l=6$ by using Akaike information criterion (AIC) and Schwarz information criterion (SCI).

The co-integration tests results are reported in table 2. In the table, the trace test rejects both the null hypothesis of zero co-integration rank and the null of at most one co-integration rank with no linear trend. Therefore, Co-integration test results indicate that there are stable relationships between GDP and R&D investment in Turkey.

<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>Alternative</th>
<th>Statistics</th>
<th>Critical</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trace Statistic</td>
<td>$r=0$</td>
<td>$r \geq 1$</td>
<td>15.50343</td>
</tr>
<tr>
<td></td>
<td>$r \leq 1$</td>
<td>$r = 2$</td>
<td>0.196816</td>
</tr>
<tr>
<td>Eigenvalue ($\lambda_{\text{max}}$) Statistics</td>
<td>$r=0$</td>
<td>$r \geq 1$</td>
<td>15.30662</td>
</tr>
<tr>
<td></td>
<td>$r \leq 1$</td>
<td>$r = 2$</td>
<td>0.196816</td>
</tr>
</tbody>
</table>

4.3 Granger causality test
Having verified that the variables are co-integrated, then Granger-causality must exist in at least one direction. This result is a consequence of the relationships described by the error-correction model. Thus, we proceed to test for error correction by using the vector error correction method (VEC). Since the variables may share common stochastic trends, then the dependent variables in the VECM must be Granger-caused by lagged values of the level variables. Therefore we consider that a variable Granger-causes the other if it helps predict its future values. The VECM model used in analysis is given below:

$$
\Delta Y_{t} = \alpha_0 + \sum_{i=1}^{r} \alpha_i \Delta Y_{t-i} + \sum_{i=1}^{r} \beta_i \Delta Y_{t-i} + \varepsilon_t
$$

Therefore we can conclude that all series involved in the estimation procedure are regarded as $I(1)$, and it is suitable to make co integration test.
Table 3 reports the findings for Granger causality tests, based on error-correction models. The results indicate that R&D Granger cause economic growth and economic growth Granger does not cause R&D which means that there is evidence of one-way Granger causality from R&D to GDP.

Table 3. Granger causality test

<table>
<thead>
<tr>
<th>Null hypothesis</th>
<th>Statistic F</th>
<th>Prob.</th>
<th>Decision-making</th>
</tr>
</thead>
<tbody>
<tr>
<td>The change of GDP is not reason of the change of R&amp;D investment</td>
<td>2.0559</td>
<td>0.1017</td>
<td>Reject</td>
</tr>
<tr>
<td>The change of R&amp;D investment is not the reason for the change of GDP</td>
<td>2.7386</td>
<td>0.0395</td>
<td>Accept</td>
</tr>
</tbody>
</table>

5 CONCLUSION
This paper examines the causal relationship between economic growth (GDP) and R&D investment of Turkey over the period 1992:01-2006:04. We employ ADF unit-root test, Johansen co-integration test, ECM model, Granger causality models. The empirical study shows the existence of a relationship between R&D expenditure and economic growth. The results suggest that there is a co-integration relationship between the R&D and GDP which means a long-run relationship really exists. Furthermore, the findings of this study indicate one-way causal relationship from R&D to GDP which evidenced that the R&D expenditure is one of the key factors of economic growth. It implies that intensive input of R&D expenditure may be urgent in the sense that it may positively affect on economic growth because of an increase in R&D input may lead to an promotion of GDP output. It also implies a R&D intensive planning policy may be feasible to promote Turkey’s economic growth and a sustainable development strategy may be feasible with higher level of R&D investment. Therefore, government policies encouraging R&D spending plays an important role on economic growth.

REFERENCES
ABSTRACT

We study the impact of foreign direct investment (FDI) on the rate of net entry, i.e. registered new domestic firms. The impact of FDI on domestic entrepreneurship is part of a debate in international economics about what is the net spillover effect of FDI to domestic economies. Domestic firms are expected to benefit from the know-how that multinational enterprises (MNEs) transfer, but at the same time they are expected to be hurt by the competition that MNEs create on both domestic product and domestic factors markets. The current paper studies this effect of FDI on entrepreneurship using a sample of eighty countries and 5 years (2004-2008) of data. Our conceptual model takes into account domestic economies’ “doing business” conditions (following the World Bank “doing business indicators”), as well as the macroeconomic conditions of the domestic economy. We run the model by sub-samples of countries based on economic development, following the WB classification and find that FDI affects entrepreneurship only in the middle income country group and this effect is a positive one. This result is consistent with what previous studies have found the FDI at the firm level to be in the long run.

Keywords
Entrepreneurship; Firm entry; Foreign direct investment; Spillovers

1 INTRODUCTION

Entrepreneurial activity is vital for the health of any economy, but especially for developing countries. Especially important is the role of small and medium enterprises (SMEs), which spread out jobs, enrich the variety of goods and services, improve international competitiveness of local economies, and elevate domestic living standards in both rural and urban areas, as well as among both unskilled and skilled workers. In times of economic crisis, entrepreneurial activity at SMEs makes economies more resilient and in periods of economic upheaval, it serves as an incubator for new ideas. At a downright practical level, entrepreneurial activity provides local communities with an example of how starting up a business can elevate people from poverty.

One of the important determinants of entrepreneurial activity at the macroeconomic level is the volume of foreign direct investment (FDI) to the domestic economy. FDI has the potential to spur innovation and lead to creation of new SMEs, while serving as a vehicle for healthy growth and sustainable development. Attracting inward foreign direct investment (FDI) has been high on the agenda of all governments. FDI has been viewed as an important vehicle of economic development and in the past decade has produced some of the most significant volumes of capital inflows to developing countries. Policy makers around the world have supported FDI-pursuing agendas because of the positive spillovers of FDI to domestic economies that a number of macroeconomic studies have demonstrated.

Typically, at the macroeconomic level, studies have found that when certain requirements about the level of domestic human capital and financial sector development are met, the effect of FDI on growth is positive (Borensztein et al., 1998; Alfaro et al., 2004). Meanwhile, micro-level studies find mixed evidence about limited positive spillovers of multinational enterprises (MNEs) to domestic firms (Haskel et al., 2007; Blalock and Gertler, 2003) or negative or no spillovers (Aitken and Harrison, 1999; Gorg and Strobl, 2001; Lipsey, 2003, 2004). The conflicting results between the macro and the firm-level of analysis are settled at the sector level.

At the sector level, Doytch and Uctum (2011a) demonstrate that the spillovers from FDI can be either positive or negative depending on the industry, the level of development of the economy, and the structure of the economy with respect to its manufacturing/services sector mix. These authors also illustrate that even in the case of positive spillovers from technology, there could be negative spillovers that occur through competition at both product and factor markets. For example, if large foreign firm competes in quantity at the domestic market, capturing market shares from domestic firms, this can cause a negative externality, shrinking industrial output (Aitken and Harrison, 1999). A similar outcome is
possible, if the competition occurs at the factor market as well. For example, MNEs can “brain-drain” local labor market from its top-quality human capital. Thus, the productivity effect of MNEs on domestic firms is uncertain. (Markusen and Venables, 1999; Rodriguez-Clare, 1996; Rivera-Batiz and Rivera-Batiz, 1991).

This study aims at filling the literature gap around the effect of FDI on entrepreneurship. We argue that in the presence of strong linkages between MNEs and domestic firms, FDI could spearhead the creation of local business establishments through transfer of knowledge, through entrepreneurial training, as well as through locally-based R&D activities. Alternatively, FDI could suppress domestic entrepreneurship through posing a competition threat, capturing a large share of the local market and thus pushing up average cost of production for domestic firms, squeezing them to spread out their average fixed costs over smaller market shares.

In the current paper, we examine the link between FDI and entrepreneurship for a sample of eighty developed and developing countries during the period 2000-2009. We also contribute by applying a dynamic panel econometric methodology, the Blundell-Bond system GMM estimator. This dynamic methodology allows us to both exploit the time-varying characteristics of the data, while controlling for omitted variable biases and endogeneity issues of the data.

Further, the study is organized as follows: section 1 reviews the existing literature on the FDI-entrepreneurship link; section 2 discusses the model and the empirical methodology; section 3 describes the results and the last section concludes.

2 LITERATURE REVIEW

According to Schumpeterian approach to economic growth, new entrepreneurial activities play a central role in the process of creative destruction that fosters innovation, employment, and economic growth (Aghion and Howitt, 1997). The core idea is: entrepreneurs set up new businesses and the new businesses create more jobs, intensify competition, and increase productivity through technological change. The determinants of entrepreneurship have been studied primarily from the perspective of regulation and little from the perspective of externalities, caused by international linkages.

Economic theory outlines two opposing views about role of regulation in economic activity in general. According to public choice theory, regulation is socially inefficient, because it leads to rents granted by laws, which benefit either industry insiders or politicians themselves. And according to public interest theory regulation cures market failures and thus leads to better social outcomes. Cross-country empirical studies so far have predominantly supported the public choice hypothesis. Probably the most influential study in this area is “The Regulation of Entry” in QJE by Djankov et al. (2002), which finds that burdensome business regulation is tightly linked to lower levels of democratic accountability, higher levels of corruption, larger unofficial economies and overall to lower levels of wealth in societies. It has triggered a wide policy response with many EU countries transforming their regulatory environments to reduce their barriers to creation of new businesses.

In this respect, researcher have outlined three types of regulatory constraints that have a potential impact on the speed and ease with which new business are created: regulation of entry, regulation of contract enforcement, and regulation of labor (Ardagna and Lusardi, 2008). Regulation of entry is found to delay new product development (Ciccone and Papaioannou, 2006; Desai et al., 2003; Guiso and Schivardi, 2006), where especially damaging are tax policies and credit constraints (Djankov et al., 2007; Gentry and Hubbard, 2000; Evans and Jovanovic, 1989; Guiso et al., 2004; Hurst and Lusardi, 2004 and 2008). Regulation that protects investors is found to enhance access to credit and rates of entrepreneurship (Klapper et al., 2006).

Contract enforcement regulation and the regulation of labor markets have opposite effects on the decisions to start new business (Djankov et al., 2003; Desai et al., 2003; La Porta et al., 1998 and La Porta et al., 2000). At the micro-level, regulation is found detrimental to entrepreneurship, since it affects social networks, business skills, attitudes toward risk, and working status in a negative way and gender, age, and education are found to be important determinants of entrepreneurship (Ardagna and Lusardi, 2008; Djankov et al., 2005; 2006a; 2006b; and 2008).

The macro-level link between FDI and entrepreneurship has remained not well examined. In one of a few existing studies Van Stel et. al (2008) demonstrate that a country’s proportion of export-oriented new ventures is a result of knowledge spillovers that stem from foreign direct investment (FDI) and international trade and that this proportion of export-oriented new ventures affects the subsequent emergence of new businesses. Leitão & Raposo (2007) look at effects of inward FDI in parallel with the effects of ICT investment on entrepreneurship in two countries- Finland and Portugal, and find that FDI has little effect on Portuguese entrepreneurship but at the same time it has a significant impact on Finnish entrepreneurship. ICT helps pull inward FDI in both countries.

Recently, Barrios, Gorg and Strobl (2005) have developed a theoretical model analyzing the impact of foreign direct investment (FDI) on local firms, differentiating between a competition effect, which deters
entry of domestic firms, and a positive market externality effect, which fosters local industry development. For a sample of Irish firms, the authors empirically proved that the number of domestic firms follows a u-shaped curve: the competition effect dominates at first dominates but is gradually outweighed by the positive externalities from FDI. Consistent with this finding is the result by De Backer and Sluegwaegen (2003) that the effect of FDI differs in the short and the long run and that in the short run FDI tends to crowd-out domestic investment, but in the long run it stimulates domestic firm entry due to positive structural effects, such as demonstration, networking, and technological spillovers. Their study is based on entry and exit of firm data for the Belgian manufacturing industry.

3. EMPIRICAL MODEL AND METHODOLOGY

We capture the effect of FDI on entrepreneurship by controlling for the level of income, the level of physical capital, the level of human capital and the environment of doing business:

\[
\log(\text{ent}_t) = \beta_0 + \beta_1 \log(\text{ent}_{t-1}) + \beta_2 \log(\text{capital}_t) + \\
\beta_3 \log(\text{human}) + \beta_4 \log(\text{dobusi}) + \beta_5 FDI_t + \beta_6 D + \epsilon_t
\]

with \( \mu_t \sim i.i.d. (0, \sigma_\mu) \), 
\( \epsilon_t \sim i.i.d. (0, \sigma_\epsilon) \), \( E[\mu, \epsilon] = 0 \) and where \( \text{ent} \) is a measure of entrepreneurship, \( \text{capital} \) is a measure of physical capital, \( \text{human} \) is a measure of human capital, \( \text{dobusi} \) is a list various indicators from the World Bank doing business indicators, and \( \text{FDI} \) is the net FDI inflow share of GDP. The coefficient we are interested in \( \beta_5 \). If \( \beta_5 > 0 \), FDI has net positive impact on domestic entrepreneurship. If \( \beta_5 < 0 \), FDI the net effect is negative.

Our empirical methodology is based on the method of dynamic panel estimation, known as the “Blundell-Bond Generalized Method of Moments” or “system GMM” (Alonso-Borrego and Arellano, 1996 and Blundell and Bond, 1998). In principle, simplest econometric methodology that exists for panel estimation is the cross-sectional method of pooled OLS. This method fails to account for the time-series dimension of data as it puts all observations together into a “pool” and creates two major flaws: failure to account for the unobserved country-specific effects and failure to control for a potential “endogeneity” and reverse causality problem. For example, it is not only FDI that affects domestic entrepreneurship; the level of domestic entrepreneurship can affect FDI back. An alternative static method is the method of fixed effects, which allows for controlling for the unobserved country-specific effects. However, it does not correct for endogeneity and reverse causality either and is therefore not appropriate for our study.

The most widely used alternative to the fixed effects estimation is the methods of GMM. There several kinds of GMM methodologies, including Arellano-Bond difference GMM Arellano and Bond (1991) and Blundell-Bond system GMM (Alonso-Borrego and Arellano, 1996 and Blundell and Bond, 1998). Both are specifically designed to capture the joint endogeneity of some explanatory variables through the creation of a matrix of “internal” instruments. Arellano-Bond difference GMM uses lagged level observations as instruments for differenced variables. Blundell-Bond system GMM uses both lagged level observations as instruments for differenced variables and lagged differenced observations as instruments for level variables. Both estimators have one set of instruments to deal with endogeneity of regressors and another set to deal with the correlation between lagged dependent variable and the induced MA(1) error term.

4. DATA AND SOURCES

The measure for entrepreneurship we are using is newly registered firms density, defined as the number if newly registered limited liability companies per 1,000 working-age people (ages 15-64). The source for the variable WBGEM.

Gross fixed capital formation as a share of GDP consists of plant, machinery, and equipment purchases, construction of roads, railways, and the like, including schools, offices, hospitals, private residential dwellings, and commercial and industrial buildings, land improvements (e.g., fences, ditches). According to the 1993 SNA, net acquisitions of valuables are also considered capital formation. The source of data is WDI.

Gross secondary school enrollment ratio is the ratio of total enrollment, regardless of age, to the population of the age group that officially corresponds to the level of education shown. The sources of data are UNESCO and WDI.

The World Bank Doing-business indicator presents comparable quantitative indicators on business regulations and the protection of property rights. The indicators used in the are:

The key dependent variables are disaggregated FDI flows measure in current USD taken in proportion to GDP, also measured in current USD. All FDI series are net flows, accounting for the purchases and sales of domestic assets by foreigners in the corresponding year. The sources for the FDI are OECD and UNCTAD.

FDI is defined as an investment that “reflects the objective of obtaining a lasting interest by a resident entity in one economy (‘‘direct investor’’) in an entity
resident in an economy other than that of the investor ("direct investment enterprise") (OECD, International direct investment database, Metadata). This lasting interest implies the existence of a long-term relationship between the direct investor and the enterprise and a significant degree of influence on the management of the enterprise. Direct investment involves both the initial transaction between the two entities and all subsequent capital transactions between them and among affiliated enterprises, both incorporated and unincorporated (OECD, International direct investment database, Metadata).

The World Bank Doing Business Indicators used alternatively are:

Cost of starting up a business is recorded as a percentage of the economy’s income per capita and includes all official fees and fees for legal or professional services. Number of procedures, necessary to start up a business-where a procedure is defined as any interaction of the company founders with external parties, such as government agencies, lawyers, auditors or notaries. Number of days, it takes to start up a business; Paid-in minimum capital requirement is the amount that the en-entrepreneur needs to deposit in a bank or with a notary before registration and up to 3 months following incorporation and is recorded as a percentage of the economy’s income per capita.

Getting credit: strength of legal rights index- The strength of legal rights index measures the degree to which collateral and bankruptcy laws protect the rights of borrowers and lenders and thus facilitate lending. Paying taxes: total tax rate share of profits- Doing Business measures all taxes and contributions that are government mandated (at any level—federal, state or local), apply to the standardized business and have an impact in its income statements.

5. EMPIRICAL RESULTS

The empirical results are presented in the Summary table #1 and full regression tables 2-7. The full regression tables list the estimates of all regression coefficients along the rows and models run according to country groups by level of development along the columns. A set of alternative models is run based on alternative doing business indicators. The two numbers in each cell represent the regression estimate and the z-statistic. The notation “*”, “**” and “***” respectively indicates levels of marginal significance of 1%, 5% and 10 % or less.

An examination of table 1 immediately shows that FDI has no impact on entrepreneurial activity in either the low income or the high group. This results repeats in all regressions, regardless of which doing business indicator is used. Most of these FDI coefficients are significant at the 1% level.

Our interpretation of the results is that there is a necessary minimum level of development to be reached for the positive spillovers from FDI to be absorbed by the local economy. This minimum level of development translates in good institutions, well developed physical infrastructure, present financial infrastructure etc. and explains the FDI-absorptive capacity by middle income countries. If this requirement is not met, FDI does not have an effect. However, in the case of developed economies, FDI does not have an effect for different reasons. We assume that in this case the level of the productivity spillovers generated is much lower, since the FDI source country is significantly more developed.

6. CONCLUSION

In this study we examine the impact of foreign direct investment inflows on host country entrepreneurship. We employ a model that uses various WB doing business indicators as explanatory variables in addition to FDI. We run the model by sub-samples of countries based on economic development, following World Bank classification. We find that FDI affects entrepreneurship only in the middle income country group and this effect is a positive one. This result is consistent with what previous studies have found the FDI at the firm level to be in the long run. The policy implications of the study address the need for a greater focus on absorptive capacity determinants: when a certain level of development is reached, FDI can be used as booster for entrepreneurial activity.

REFERENCES


**APENDIX 1:COUNTRY LISTS**

**Low income country group:** Burkina Faso, Cambodia, Ethiopia, Ghana, India, Kenya, Kyrgyz Republic, Madagascar, Malawi, Pakistan, Rwanda, Senegal, South Africa, Tajikistan, Uganda, Uzbekistan, Zambia.

**Middle income country group:** Argentina, Armenia, Azerbaijan, Belarus, Belize, Bhutan, Bolivia, Brazil, Bulgaria, Chile, Colombia, Costa Rica, Croatia, Dominican Rep., El Salvador, Gabon, Georgia, Guatemala, Hungary, Indonesia, Jamaica, Jordan, Kazakhstan, Latvia, Lithuania, Malaysia, Mauritius, Mexico, Moldova, Morocco, Oman, Panama, Peru, Philippines, Poland, Romania, Russian Federation, Serbia, Seychelles, Slovak Republic, Suriname, Thailand, Tunisia, Turkey, Ukraine, Uruguay.

**High income country group:** Antigua and Barbuda, Australia, Austria, Bahamas, Belgium, Brunei Darussalam, Canada, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hong Kong SAR China, Iceland, Ireland, Israel, Italy, Japan, Korea, Rep., Netherlands, New Zealand, Norway, Portugal, Slovenia, Spain, Sweden Switzerland, United Kingdom.
**Appendix 2: Tables**

**Table 1: Summary of FDI coefficients.**

<table>
<thead>
<tr>
<th>Log of Entry Density</th>
<th>All countries</th>
<th>Low income level countries</th>
<th>Middle income</th>
<th>High income countries</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Model with Cost of Starting up a Business</td>
<td>.387 (1.01)</td>
<td>1.025 (0.88)</td>
<td>2.078** (2.48)</td>
<td>.098 (0.72)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Model with Number of procedures to start a business</td>
<td>.353 (0.98)</td>
<td>.898 (0.81)</td>
<td>1.664** (2.41)</td>
<td>.068 (0.70)</td>
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<td>1.961*** (2.63)</td>
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<td>Model with Paying Taxes: Total Tax Rate (%profits)</td>
<td>.410 (0.92)</td>
<td>1.094 (0.81)</td>
<td>2.223*** (2.62)</td>
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ABSTRACT

The latest economic downturns that began in 2000, coupled with numerous tax-cut measures by the federal government have led to a significant decline in tax revenues for states. States have been forced to reduce spending and search for a means to replace lost revenues. One recent trend, tax amnesty programs, has provided states with an opportunity to fill budget gaps. But, do these programs work? Are they revenue producers or a license to cheat? This paper will discuss tax amnesty programs with a focus on New Jersey’s tax amnesty programs and results.

In addition, a survey of recent approaches used by states to address revenue shortfalls will be provided. These efforts include: sales and use tax compliance, increase in sales tax rate, expansion of sales tax base, the imposition of additional taxes (such as New Jersey’s “mansion tax”), budget cuts, and states efforts to persuade Congress to pass legislation whereby the States would be able to require vendors to collect and remit sales tax on certain interstate sales.

Keywords
Taxes, States, amnesty programs, revenue measures

1 INTRODUCTION

The latest economic downturns that began in 2000 coupled with numerous tax-cut measures by the federal government have led to a significant decline in tax revenues for states. States have been forced to reduce spending and search for a means to replace lost revenues. One recent trend, tax amnesty programs, has provided states with an opportunity to fill budget gaps.

Amnesty Programs - Background
Tax amnesty programs provide taxpayers with an opportunity to come clean and pay back taxes. Whether an individual or entity was unable to or intentionally avoided tax obligations, the amnesty programs grant relief without serious repercussions. Rules and regulations of programs vary; however, most offer a waiver or reduction in interest and/or penalties. Characteristics of the programs also differ by state, including the types of taxes covered, eligibility requirements and the procedures for obtaining amnesty.

There are both direct and indirect benefits of offering amnesty programs. Primarily, tax amnesty is intended to increase revenues. A residual effect is the enhancement to the state’s database of taxpayer data for future monitoring and compliance.

Critics of the programs, however, disagree about the advantages of offering these programs. Are they revenue producers or a license to cheat? Objections center on the issue of whether additional revenues are being generated or just a postponement of collection. In addition, the programs appear to run counter to initiatives of voluntary compliance and administration.

An examination will be made of the recent amnesty efforts by the State of New Jersey and an analysis of its success. A limited survey of amnesty programs of two additional states is included.

Amnesty – New Jersey
New Jersey has had four tax amnesties with the first one occurring in 1987 which produced 87 million dollars of tax revenue. Nine years later, New Jersey initiated another tax amnesty program. That program produced 244 million dollars of tax revenue. In 2002, six years later, Governor James E. McGreevey instituted a third tax amnesty program. That program generated 277 million dollars of additional tax revenue to the state’s coffers.

The most recent tax amnesty program was instituted under Governor John S. Corzine. The program commenced on May 4, 2009 and ended on June 15, 2009. It covered taxes and fees that were payable to the Division of Taxation and owed on returns due after January 1, 2002 up through February 1, 2009. Liabilities due to other divisions of the State or local governments were excluded. The guidelines
is that the taxpayer must receive a tax amnesty notice from

The major difference in the Massachusetts amnesty program was that he/she had to contact the Massachusetts Dept. of Revenue to determine whether he/she qualified for tax amnesty. This program falls short of the New Jersey and Connecticut programs that relied on the taxpayer to apply for amnesty while Massachusetts sent out notices to taxpayers for amnesty.

Amnesty – Connecticut

Connecticut’s tax amnesty program started on May 1, 2009 and ended on June 25, 2009. Connecticut’s taxpayers were eligible for any tax period which ended on or before November 30, 2008. There would be no time limit on how far back an applicant may go to become current with his/her taxes. Connecticut also allowed just about any taxes which were administered by the Connecticut Dept. of Revenue Services to be eligible for tax amnesty. Connecticut’s tax amnesty did not cover any tax or fee which was not administered or collected by the Dept. of Revenue Services i.e. payroll taxes owed to the Dept. of Labor or local property taxes and auto-carrier road taxes. However, the State also enacted legislation that authorized Connecticut’s municipalities to offer tax amnesty program for property taxes, assessments, fees, fines, or any other payment owed to municipalities. That would all be administered at the local level. Connecticut’s program eliminated civil penalties and provided for a twenty-five percent reduction in interest in favor of any taxpayer that filed an amnesty application. The Act also provided that the government would not seek any criminal prosecution for any taxpayer that files an amnesty application.

Amnesty – Massachusetts

Massachusetts took a somewhat different approach with their tax amnesty. The amnesty period began on March 1, 2009 and ended on April 30, 2009. This was a limited amnesty program with the program applying to tax years or periods ending on or before December 31, 2007. The limitation was to individual’s existing personal income tax liabilities, existing personal use tax liabilities, and/or existing cigarette excise liabilities. The Commissioner of Revenue for the State of Massachusetts would forward a tax amnesty notice to taxpayers and this notice would notify the taxpayers of their eligibility to participate in this amnesty program. The taxpayer must pay the full amount of tax and full amount of interest for the period which was shown on the tax amnesty notice while all unpaid penalties would be waived.

The major difference in the Massachusetts amnesty program is that the taxpayer must receive a tax amnesty notice from

the state. The only way that a taxpayer who did not receive a tax amnesty notice can participate was that he/she required to collect the tax from the purchaser and send it to the state. A 1987 statutory provision defined "retailer
maintaining a place of business in this state" so as to include every person who engaged in regular or systematic solicitation of a consumer market in the state. "Regular or systematic solicitation" was defined in state regulation to include three or more advertisements within any 12-month period.

The State of North Dakota filed suit in a state trial court to mandate the payment of taxes and related interest and penalties commencing July 1, 1987 for all such sales made by Quill Corporation after that date. The business defended the action by arguing that the tax statute, as applied to it, violated Art I, 8, cl 3 of The United States Constitution (commerce clause) and the Fourteenth Amendment of the US Constitution specifically the due process clause. The trial court ruled against the State and in favor of the mail-order house. The court decided that the State of North Dakota failed to establish a sufficient nexus between the business and the State.

The state sought review to the Supreme Court of North Dakota. The Court reversed the trial court. It found that (1) a physical-presence nexus with the state was not required under either the commerce clause or the due process clause as a basis for the state to legitimately exercise state power over a business located out-of-state; and (2) the economic presence in the state by the out-of-state retailer required benefits and services provided by North Dakota which included the establishment of an economic climate that created demand for the company’s sales. Further, to protect the market, a legal infrastructure existed in North Dakota. Also the flyers and mailings (24 tons of solid waste) required disposal by the state. Accordingly a constitutionally sufficient nexus existed which justified the imposition of the duty to collect the use tax (470 NW2d 203).

The company sought certiorari to the US Supreme Court which was granted. The US Supreme Court reversed the decision of the North Dakota Supreme Court. The Court decided on the one hand that (1) the due process clause did not prevent collection of the use tax against the retailer as (a) it had directed its activities purposely at North Dakota residents, (b) due process requirements were met by the magnitude of such contacts, and (c) exacting the use tax related to the benefits that the mail-order business derived from access to the state. However, on the other hand, (2) under the commerce clause a vendor lacks the substantial nexus with the taxing state where the only connection with customers residing in the taxing state is through common carriers or the United States Postal Service will be free from state-imposed duties to collect sales and use taxes, and (3) Congress is free to decide whether, when, and to what extent the states may burden interstate mail-order with a duty to collect use taxes

As a result of this case the US Supreme Court has left it up to Congress to change the law. It is free to permit states to increase revenue on this burgeoning area (i.e. internet sales). To date Congress has not done so.

Conclusion

States are desperate for ways to fill budget gaps and stay in the black. Amnesty programs, new taxes, expansion of existing taxes, and a push of Congress to allow states to collect sales and use taxes on internet sales are among the measures being implemented. Only time will tell which are successful and whether repercussions - such as offering Amnesty at the expense of voluntary tax compliance, and increasing tax rates at the expense of forcing individuals and businesses to relocate - exist.
ABSTRACT

The goal of continuous improvement in academics requires educators to frequently examine and consider alternative teaching methods. William Paterson University adopted an innovative learning system in technology education referred to as lecture capture. The product selected by our school is offered by Tegrity, Inc. Tegrity Campus 2.0 “makes class time available by capturing, storing and indexing classes on campus for replay by students.” Examples of implementation with online and traditional classes, and supplemental applications will be offered as we share this innovative and effective strategy.

Keywords

Education technology, lecture capture, Tegrity

1 INTRODUCTION

The goal of continuous improvement in academics requires educators to frequently examine and consider alternative teaching methods. Lecture capture offers an innovative learning system in technology education. In 2004, William Paterson University (WPU), a State University in New Jersey, adopted a product offered by Tegrity, Inc. Tegrity Campus 2.0, “makes class time available all the time by automatically capturing, storing and indexing every class on campus for replay by every student.”

http://www.tegrity.com/about

From Pilot Program to Implementation

From our first use of Tegrity on a cart to the implementation of Tegrity Campus 2.0, WPU has grown both in the amount of usage and type of usage as each professor has different teaching needs. At first, Tegrity was used for supplementing traditional classes or strictly online. However, as classroom capture escalated elsewhere, WPU turned to Tegrity to fulfill this need as well. A pilot was conducted in Fall 2009 in which several different faculty used Tegrity in the ways listed above along with classroom capture. Students and faculty were surveyed; students reported use of the captured lectures for an average of 1-5 times during the course of the semester. One biology class lectures were viewed 217 times! Sixty percent of the students who responded felt that Tegrity made study much more or somewhat more effective than normal, and fifty-five percent indicated that Tegrity would be good in other courses. One hundred percent of the faculty who responded indicated that it would be good as well. Open-ended comments from the students included the following:

- it helped me notice things that I may not have caught during the lecture;
- it helped more than ever before finals to capture the materials that I forgot;
- I love it! I would use it to study for all of my tests; and
- I was able to review the lecture from the convenience of my home/any place with an internet connection.

It is important to note that research from our study and other universities using Tegrity clearly shows that students still prefer to come to class and use Tegrity to pick up what they missed in the lecture and for review. At Saint Mary's University (SMU) of Minnesota, seventy percent of STEM faculty used Tegrity and forty-four classrooms were configured for class capture recording with Tegrity. Dr. Patrick Barlow, Director of College Assessment at SMU, quoted, “When comparing cumulative GPAs between students who use Tegrity and those who don't, the results are clear. Tegrity offers a significant academic advantage.”

Pilot results at WPU led to expanding to Campus 2.0 with more faculty coming on board with a variety of uses.

Using Tegrity to Teach Taxation

As the University grows with Tegrity, faculty in the WPU
College of Business hope to transform teaching and enhance student learning. One Economics professor pre-recorded a number of lectures to use in teaching an on-line course. Another member of the Department of Accounting and Law consistently recorded his classroom lectures in order to assist students in their review of difficult legal concepts. Following is my rookie perspective concerning full integration of Tegrity into my taxation classes.

I was introduced to this innovative and effective strategy in the Spring 2010 semester. My hopes were to implement lecture capture in the Fall 2010 semester. In reality, I am technologically challenged and failed in my efforts. I tried again and, after a number of mechanical mix-ups: lectures recorded without audio or video, I claimed success! I recorded almost all of my lectures during the semester.

Fall 2011 marks my first semester of full integration of lecture capture. I am teaching two classes: Tax 1 – individual income taxation; and Regulation: Taxation – masters level tax course. I will use slightly different approaches for each class.

In Tax 1, I will record in-class lectures and post them on Blackboard. My primary goal is to enable students to review difficult concepts and homework. Secondarily, if a student misses a class, he/she can review the recording. It should be noted that I have an attendance policy and in-class projects/assignments which will discourage students from missing classes and simply examining the recordings.

If I have to miss a class due to inclement weather or attendance at a conference, I am able to pre-record the lecture and post it. I am also able to create a report which will tell me which students have viewed the recording and for how long.

I have and will continue to save classroom time by recording exam review sessions and solutions to comprehensive homework problems and tax returns. This will enable me to further challenge my students by working on more in-depth topics and assignments.

In the Master’s class, the required readings are so substantial, we do not have sufficient lecture time to cover the materials in detail. Students are required to read the materials, obtain a basic understanding of topics and complete assignments with little pre-instruction. I hope to record a review of various chapters in advance and post them on Blackboard for students. My intentions are to provide them with additional guidance in understanding some very difficult terms and concepts.

Results

Since my use of Tegrity in the classroom is limited, survey results are minimal. However, through classroom discussions, I have been told that most students appreciated having the recordings to fall back on. A large number used them when studying for exams, and wished more faculty members would adopt this approach.

I will survey students this semester to further understand their thought and needs concerning this learning tool.

Using Recordings Outside of the Classroom

I wear two additional hats at my University: academic advisor and Director of a Program titled, the Professional Enrichment Program. This semester, I plan on exploring how Tegrity will assist with both of these roles. For example, I am working with our advisement center on how to assist students with registering for classes. Since students respond well to visual instruction, videos using Tegrity have been developed to take students through the advisement process step by step.

The Professional Enrichment Program is designed to enhance our students’ college education by providing opportunities for them to meet and network with area specialists, hear business leaders speak, and attend various seminars and forums that deal with professional development and contemporary work related issues. Students earn points through their attendance at these events; all students must accumulate a certain number of points as they progress through their business program towards graduation.

This experiential learning requirement is often difficult to satisfy as students work, have a number of other personal and education responsibilities that conflict with scheduled events. We are exploring how we can use Tegrity to record professional development workshops and make them available to students at their leisure. Our thoughts are to create a Blackboard course shell which will play host to the videos, as well as include a testing mechanism to serve as proof of “attendance.”

Conclusion

My goal of continuous improvement in academics has led me to lecture capture. Positive feedback from students and the possibility of supplemental uses has pushed me to explore how I can best use this approach to assist our students. I hope you found it useful.
The Importance of Organizational Leadership Self-Efficacy in a World of Uncertainty

Terry Ellis
Doctoral Student – Fielding Graduate University, Human and Organizational Development
45 Ridings Way
Chadds Ford, PA 19317
(610) 365-7448
tellis@stratezone.com

ABSTRACT

One of the important factors to sustain an organization’s existence or success is to have effective leadership to navigate the waves of uncertainty and minimize the resulting anxiety levels within the organization. The purpose of this paper is to discuss how leaders with high levels of self-efficacy are able to differentiate themselves through the capability to navigate uncertain and anxiety-ridden circumstances imposed on an organization. Through the exploration of self-efficacy situated in adult development, we can understand how leaders can become more agile with a strong sense of autonomy and self-awareness for enabling an organization to execute strategies to achieve goals and maintain competitiveness.

Keywords
Leadership, self-efficacy, adult development, agility, psychodynamics, organizational behavior, decision-making

1 INTRODUCTION

In today’s turbulent environment, organizations have the heavy burden to somehow succeed and sustain in an unpredictable and uncertain globalized environment. During these uncertain times, an organization faces many challenges in dealing with volatile external influences such as changes in behavior of competitors and customers, constantly changing communication technologies, political and economic changes, and the list goes on (McCully & McDaniel, 2007). Such an environment of uncertainty and risk may result in anxiety and fear by the members and leaders in the organization leading to a lack of confidence, irrational behavior, and poor decision making. How can this anxiety and fear be overcome to ensure organizational effectiveness in executing strategies for success in a world of uncertainty? It is critical for an organization to find ways to sustain and succeed through these turbulent times.

One of the important factors to sustain an organization’s existence or success is to have effective leadership to navigate the waves of uncertainty as well as minimize anxiety levels within the organization. The purpose of this paper is to demonstrate how leaders with high levels of self-efficacy are able to differentiate themselves through the capability of navigating these uncertain and anxiety-ridden circumstances imposed on an organization. Through the exploration of self-efficacy situated in adult development, we can understand how leaders can become more agile with a strong sense of autonomy and self-awareness for enabling an organization to execute strategies to achieve goals and maintain competitiveness. Furthermore, it is with this self-efficacy and agility that a leader can gain foresight to dodge the trap of disruptive social defenses that erupt due to the fear and anxiety driven by the uncertainty and risk faced by the organization in the context of change or competitive environments.

2 OVERVIEW OF SELF-EFFICACY

In context of the world of uncertainty, one would wonder how a person can succeed and overcome the anxiety of facing challenges that others would perceive unattainable. How do people face these challenges with a sense of purpose, and exert determinative influence on their actions? It is through a strong sense of self-awareness that they are self-examiners of their cognitive, affective, and behavioral functioning (Bandura, 1999). These characteristics are describing self-efficacy.

Self-efficacy is situated in social cognitive theory, and adopts the agentic perspective of intentionally making things happen by one’s own actions (Bandura, 2001). How people perceive their self-efficacy impacts their beliefs in their capabilities to perform in such ways that enable a sense of control over the events that affect their lives (Bandura, 1999). These beliefs build the foundation of human agency. “Agency allows us to stay on course in the face of confusion, conflict and distraction along our life journey” (Phillips, 2005). With its emphasis on individualism, exercising one’s agency includes creating and/or taking advantage of opportunities, risk-taking behavior, assertiveness in the protection of one’s rights and in the pursuit of one’s goals, persistence in goal pursuits, and willingness to change one’s situation to achieve a better fit with interests, aspirations and expectations (Sadri, 1996).
Self-efficacy is the core mechanism of personal agency by one’s ability to believe that he or she is capable of organizing and executing the necessary actions which lead to desired outcomes of material consequences, social reactions, or self-reactions (Avolio, Hannah, Harms & Luthans, 2008; Bandura, 1977, 2001; Phillips, 2005). It is essential for a leader of an organization facing significant challenges in a fast-paced world of change to possess a strong sense of perceived self-efficacy. One may acquire this perception of a strong belief in capabilities to successfully lead such an organization by the factors which fuel self-efficacy, which include: personal mastery experiences; vicarious experiences; social persuasion; physical and emotional states (Bandura, 1999).

Psychodynamics and social defenses resulting from anxiety and fear can influence self-efficacy not only through others that we observe through vicarious experiences and through social persuasion, but we also could personally be prone to act out irrational behavior if we don’t have sufficient self-awareness. If we let anxiety and fear drive our emotional state, our behavior may reflect social defenses to avoid such anxiety and fear, and this irrational behavior may affect our self-efficacy (Hirschhorn, 1992, 2007). Furthermore, not only will we engage in behaviors that will prevent us from our potential performance—or significantly impair our performance—but unconsciously we are letting anxiety and fear influence how we perceive our self-efficacy.

An important aspect to emphasize is that the factors fueling self-efficacy, as it relates to agency, will impact a person’s beliefs about their capabilities rather than the behavior itself (Phillips, 2005). It is possible that a person may inaccurately believe he or she has a competence level, and takes action accordingly. The reverse is also possible; a person may inaccurately not believe he or she has a competence, and does not take action to achieve their potential. Therefore, to state that these factors fuel self-efficacy in isolation would suggest limited thinking. These factors need to be considered in conjunction with the stages of adult development and evolvement with which self-efficacy is closely tied. The strength of self-efficacy in a particular context or situation is dependent upon a person’s stage of development. An exploration of self-efficacy situated in adult development will enable further understanding of how they impact each other.

3 SELF-EFFICACY SITUATED IN THE STAGES OF ADULT DEVELOPMENT

The psychological construct of self-efficacy has been acknowledged as one of the most important evolutions in psychology (Pajares & Urdan, 2006). Phenomena such as human motivation, learning, self-regulation, and accomplishment cannot be explained without emphasizing the role played by self-efficacy beliefs. In looking at self-efficacy situated in the context of adult development, we can see how it can become more evolved and strengthened in later stages of adult development. The later stages are not necessarily based on age, but based on how we psychologically develop as adult human beings; however, the analysis conducted here is focused on adult development.

Kegan’s Cognitive Perspective

If we look at adult development from Kegan’s (1982) cognitive perspective, human development in terms of self and personality evolves through five stages, with adult development, in most cases, primarily focused on the later stages. Through these stages, recurring issues between differentiation and integration occur and become resolved. This is demonstrated through lifelong tensions between the yearnings of inclusion and autonomy or distinctness. A person works through these tensions when progressing through each stage; therefore, each stage is considered a temporary solution to the tension. There is a continual moving back and forth between tension resolutions favoring autonomy in one stage and favoring inclusion in the next stage. Given this moving back and forth, development is not linear; consequently, we cycle through old issues while evolving to new levels of complexity.

If we trace self-efficacy through Kegan’s (1982) five stages of development, we will see that as we evolve ourselves to the next stage for a particular context, our self-efficacy becomes stronger. It is likely that at times, an event viewed as a setback will temporarily weaken our self-efficacy, and may set us back in previous stages as we deal with the conflict. However, chances are if we had a strong level of self-efficacy before the setback, we can overcome such barriers and push ourselves into the next stage (Kegan, 1982). For the purposes of this paper, stage 4 institutional balance and stage 5 interindividual balance deserve the analytical focus in context of self-efficacy.

Stage 4 Institutional Balance

In stage 4, a person no longer is completed by someone else and now has a capacity for independence: a person now owns oneself (Kegan, 1982). No longer are the pieces of one shared or identified with others. However, the “self” is identified with the organization one is trying to lead, and derives meanings out of the organization, “rather than deriving the organization out of her meaning/principles/purposes/reality” (Kegan, 1982, p. 101). The problem with this stage is that a leader can’t bring his or her “self” to the organization to influence the constraints or challenges since the leader’s “self”, its ‘source,’ its ‘truth’ is invested within these operational constraints” (Kegan, 1982, p. 102), challenges, and boundaries. In this stage there is enough self-efficacy to manage an organization, however, the leader may not have a sufficient level of self-efficacy to
look beyond the existing constraints and challenges and position the organization to preventatively and proactively overcome upcoming challenges or even inevitable unforeseen challenges. In other words, the leader does not have the self-efficacy to effectively lead an organization into the unknown, but maintains focus on what is known and what can be controlled. Furthermore, at this development stage, the danger is that the leader most likely does not realize his or her limitations and maintains a high perceived self-efficacy until unforeseen rapid change occurs. At this point in time, the leader may realize his or her limitations, which then may not only impact the level of self-efficacy, but could cause fear and anxiety which could lead to social defense behavior (Hirschhorn, 1992).

Stage 5 Interindividual Balance

Stage 5 picks up from stage 4 where an adult constructs a sense of community as an individual: one who is “known ultimately in relation to their actual or potential recognition of themselves and others as value-originating, system-generating, history-making individuals” (Kegan, 1982, p. 104). It is in this stage where the “self” no longer maintains the organization within the current constraints and challenges, but evolves to a self who “runs” the organization. This person can create and execute vision with insight or awareness of potentially inevitable unknown and unexpected circumstances. With this increased capacity in stage 5, we are able to hear and seek out information that enables us to judge and correct our behavior, and become fully capable of intimacy, which was not able to be achieved in a previous stage. When we are no longer located in the institutional, but instead coordinate the institutional, we become more free and capable of self-sharing and autonomy. Self-sharing and autonomy are driven by the self-awareness and intimacy revealed in this stage. Upon this stage, extreme self-efficacy has been discovered by acknowledging and believing that any challenge or conflict can be overcome. This point in adult development is aligned with and further explained by Roger’s (1961) humanism perspective of “becoming a person.”

Rogers’ Humanism Perspective

From a humanism perspective, Rogers (1961) explains human development through a process that is experienced in a therapeutic or helping relationship, and enabled in an atmosphere of freedom. This atmosphere facilitates the discovery of self and progression through a process of becoming a person. Feelings play a factor in this process in terms of attitude toward others, self acceptance, and acceptance of positive feelings from others which contribute to a helping relationship. When the person participates in the process, an increase in self discovery and awareness is achieved through experience, feelings, and relationships. To fully become a person, Rogers (1961) claims one must achieve an internal locus of evaluation, where a person feels they are making choices for themselves and evaluating circumstances based on the depth of satisfaction derived from his or her way of living. Hence, this level of becoming a person can be related to Kegan’s stage 5 of interindividual balance.

Both theorists have commonality in terms of self discovery, self acceptance, relationships, and experiences. Through these common human development themes, an adult is able to develop or evolve into one’s potential self with the ability to be open and share one’s self with the world as a fully functional person who is in charge of one’s own life. This significantly contributes to the developmental drivers for self-efficacy. When a person feels they are able to make choices for themselves, is capable of self-regulating, and is ultimately succeeding in the way he or she wants to achieve goals, the extreme level of self-efficacy has been acquired.

4 IMPORTANCE OF SELF-EFFICACY FOR ORGANIZATIONAL LEADERS

As we look how adults evolve through the stages of development, their development serves as critical input to their behavior as a leader. If we look at the unprecedented challenges for leaders “as organizations struggle to adapt to ever-accelerating rates of change both internally and with the external environment in which they are embedded” (Avolio, Hannah, Harms & Luthans, 2008, p.669), strong leadership capabilities are required to meet such demands. To become a strong leader with such capabilities, a leader must get beyond what is required to just maintain an organization on its current course. The leader must understand how to navigate, or coordinate, into the unknown. To fully become effective in this context, a leader must achieve stage 5 of adult development, and achieve a level of self-efficacy founded upon truly becoming a person (Kegan, 1982; Rogers, 1961). At this point in a leader’s development, he or she is prepared to make necessary changes in an organization’s direction or strategies, demonstrate agility in the face of these changes, and lead organizations in adapting the changes and becoming more agile. Further understanding of how self-efficacy and adult development impact a leader’s ability can be achieved by gaining an understanding of leadership agility.

Definition and Analysis of Leadership Agility

“Agility is the ability of an organization to sense environmental change and respond efficiently and effectively to that change” (Plummer & McCoy, 2006, p. 1). Agile companies can be defined as “organizations that anticipate and respond to rapidly changing conditions by leveraging highly effective internal and external relationships” (Joiner & Josepohs, 2007, pp. 5-6). An agile leader is one that can transform a company into an agile
organization. Joiner and Josephs (2007, p. 6) further explain that “leadership agility is directly analogous to organizational agility: It’s the ability to take wise and effective action amid complex, rapidly changing conditions.” Through their research, they discovered that executives prefer agility to similar-sounding competencies like flexibility and adaptability which, independently, imply a passive, reactive stance; however, agility implies an intentional, proactive stance.

As a person in a leadership role develops and evolves as a human and a leader, there are five levels of leadership agility that can be mastered through this development: Expert; Achiever; Catalyst; Co-Creator; Synergist (Joiner & Josephs, 2007). Leadership agility competencies further evolve as each level is mastered, and each level builds upon the competencies developed at the previous levels. An interesting point about these levels is that they are categorized into two different mindsets: heroic and post-heroic (Joiner & Josephs, 2007). These two mindsets can be linked to the progression through adult development and self-efficacy.

**Heroic**

The heroic mindset includes the Expert and Achiever levels, and tends to “assume sole responsibility for setting their organization’s objectives, coordinating the activities of their subordinates, and managing their performance” (Joiner & Josephs, 2007, p. 7). According to Joiner and Josephs (2007), this makes up about 90% of all managers/leaders. In a world of constant change and the need for collaborative teamwork and problem solving, the heroic mindset is insufficient since it overly controls and underutilizes subordinates. “It discourages people from feeling responsible for anything beyond their assigned area, inhibits optimal teamwork, and implicitly encourages subordinates to use the heroic approach with their own units” (Joiner & Josephs, 2007, p. 10).

The heroic mindset aligns with Kegan’s (1982) stage 4 institutional balance of adult development. The “self” is only capable of maintaining the institution / organization and not going beyond the current constraints, challenges, and boundaries. In the heroic context, the leader may influence subordinates and peers to remain within stage 4 or possibly a lower stage in their development by imposing strict boundaries, maintaining a controlling and non-collaborative atmosphere, and not making adequate use of subordinates potential (Joiner & Josephs, 2007). This leads to subordinates—who may also be leaders at various levels of the organization—feeling undervalued, which influences the factors which fuel self-efficacy.

**Post-Heroic**

For an organization to sustain success in such a dynamic environment, leaders must surpass the heroic mindset and achieve the post-heroic mindset to go beyond the accountability and authority of the leader and “create highly participative teams and organizations characterized by shared commitment and responsibility” (Joiner & Josephs, 2007, p. 120). According to Joiner and Josephs, only 10% of leaders fall into this mindset.

The post-heroic mindset aligns with Kegan’s stage 5 interindividual balance of adult development and Rogers’ “becoming a person.” This alignment is achieved through having a great sense of self-awareness, “coordinating” the organization for the common good, and having the distinct ability to lead through chaotic and unforeseen situations (Kegan, 1982; Rogers, 1961). This leader is no longer concerned about how the current known challenges of the day will be overcome nor threatened by the potential failure in carrying out such tasks. The leader is now in a place of ultimate autonomy and uses a high level of self-efficacy to be successful in today’s ever-changing conditions by looking beyond the everyday challenges and gaining foresight in how to strategically lead the organization. There is a significant increase in self-awareness and a feeling of control of one’s life that enables a freedom to ensure one is living and leading according to one’s values and choices, while fully recognizing and accepting that one may make mistakes that will require changes in course. Developing into this level of adult development, the factors fueling self-efficacy are positively impacted.

**5 IMPACT OF SELF-EFFICACIOUS AND AGILE ORGANIZATIONAL LEADERS ON STRATEGY EXECUTION**

In ever changing times, an organization needs to maintain focus on its vision. The vision may be where the organization needs to be in 5 years, 10 years, or 20 years. There may be goal posts along the way to ensure the organization is on track to achieving the vision. Those goal posts require strategies to be successfully executed for achieving that vision. These strategies may need to change, adapt, and evolve in such turbulent times in an unpredictable environment. A leader may understand the importance of strategy and may make best efforts in achieving strategy, but leaders cannot do this alone. In most cases, strategies fail because of an organization’s inability to execute them (Casey & Goldman, 2010; Kaplan & Norton, 2008; Palladium Group, Inc., 2010). Typically, the reasons for these failures are due to the inability to articulate the strategy and focus the organization’s efforts and energy on the strategic objectives to be met for successfully carrying out the strategies to achieve the vision (Kaplan & Norton, 2008; Palladium Group, Inc., 2010). These strategies may change due to environmental influences or identification of course corrections if they aren’t achieving as intended.
Leaders at all levels of the organization need to acquire the ability of strategic thinking in order to comprehend all that is involved for aligning the organization to execute strategies (Kaplan & Norton, 2008; Palladium Group, Inc., 2010). These leaders need to be capable and empowered to make decisions that will serve the effort of achieving strategy, but that assumes a clear understanding and alignment to the vision and scope (McCully & McDaniel, 2007). As Casey and Goldman (2010) point out, to evaluate and measure strategic thinking is a difficult task. Leaders need to engage in the type of activities associated with strategic thinking, which includes being open to feedback, questioning decisions made, and being prepared to let go of a set direction. An agile organization willing to adapt and learn is needed, as well as agile leadership with a strong sense of self-efficacy for making good decisions and acknowledging the bad decisions (Casey & Goldman, 2010; McCully & McDaniel, 2007).

Pereira (2005) makes some points about how leadership develops in arriving at a strategic way of thinking for bringing about change to achieve vision and strategy. He discusses how the dynamics involved will cause the leaders to feel fear, insecurity, and anxiety. If these feelings are not addressed, systemically this will have an affect not only on the individual but the collective, and potentially extend beyond the organization to affect the society as a whole. Pereira (2005) suggests that leadership takes place upon crisis; however in today’s world, organizations can’t wait for a crisis. This thinking would be reflective in the heroic stages of agility and earlier stages of adult development. Waiting for or even anticipating crisis would also feed into psychodynamics and social defenses to protect against the fear and anxiety experienced from a crisis (Hirschhorn, 1992). With an agile leader with strong self-efficacy, the crisis could potentially be foreseen and mitigated, or the leader would be able to act efficiently and effectively to solve the problem driven by a post-heroic mindset.

Gerras, Pricone, Swengros & Wong (2003) further this point when they discuss the leadership competencies needed for the 21st century, as stated in findings from the Army Training and Leader Development (ATLD) Panel. Self-efficacy was a parallel concept to two leadership competencies that were emphasized: self-awareness and adaptability. Self-efficacy is needed to be able to determine strengths and weaknesses in the environment, and be able to sustain the strengths and correct the weaknesses. Furthermore, one needs to recognize the changes in the environment and what is to be learned from those changes, and be able to change course based on that learning process. They relate this to the Mann Gulch analogy used by Karl Weick (1996) where a leader with a high sense of self-efficacy and agility is able to drop heavy tools—or perspectives, methods, and assumptions—that are used in a predictable and stable world, and be open to find innovative ways to sustain and succeed in a world of uncertainty. From Gerras, et al.’s (2003) perspective, a strategic leader in the world of uncertainty needs to be mentally agile enough to process information from a systems perspective by challenging assumptions, facilitating constructive conflict of opinions, and analyzing second and third-order consequences of their decisions. These mentally agile leaders can perform these strategic functions with limited information available, and through self-efficacy they know when to act and when to experiment to validate beliefs or assumptions (Gerras, et al., 2003; Joiner, 2009). Once this information is processed to the point that the agile leader can envision the future effect of that information, they are able to adapt and implement ways of learning to align processes, structure, and behaviors of the organization to achieve the vision for the future (Gerras, et al., 2003).

6 CONCLUSION

There is no doubt that the expectations of leadership need to change to keep up with the fast-paced, turbulent environment that organizations face today. Many organizations are recognizing that a differentiated leader is a critical factor to their success in terms of executing strategies to achieve goals and vision to survive the thrive in an ever-changing competitive environment. Unfortunately, what is lacking is a clear understanding by organizations of how this leader is differentiated. There are a lot of leadership buzz words used in organizations such as agility; however, it seems the true meaning is not entirely understood. Through understanding self-efficacy situated in adult development, it is easy to see how it is interrelated with leadership agility and rational decision making. This interrelatedness is the missing factor for organizations’ understanding of what they need to look for in a leader. This paper has explained this interrelatedness and the importance of the differentiated leader that organizations need in this volatile, uncertain, complex and ambiguous world.

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Available upon request.
ABSTRACT
The paper contributes to the empirical literature by investigating the hypothesis that foreign direct investment (FDI) inflows yield positive spillovers to MENA economies. Using panel data regression models, the paper finds that FDI may yield insignificant spillovers to many MENA countries. This may be due to the weakness of technological and human capabilities in MENA countries. In addition, most of foreign direct investments do not flow to manufacturing sector, which is most relevant for deepening spillovers.

Keywords
Foreign Direct Investment, Foreign Affiliates, productivity growth, Absorptive Capacity, Middle East and North Africa (MENA) Countries.

MENA Countries:
According to World Bank (2010), Middle East and North Africa (MENA) region includes 21 countries: Algeria, Bahrain, Djibouti, Egypt, the Islamic Republic of Iran, Iraq, Israel, Jordan, Kuwait, Lebanon, Libyan Arab Jamahiriya, Malta, Morocco, Oman, Qatar, Saudi Arabia, Syrian Arab Republic, Tunisia, the United Arab Emirates, Palestine, and the Republic of Yemen.

1 INTRODUCTION
It is well known that FDI inflows is the main channel of technology transfer (Lall, 2001). FDI inflows to MENA region are sharply increased both in terms of its level and its share in global FDI in past decade. High GDP growth rate, which is mainly due to high oil prices and improved policies toward FDI, is the main reason for this increase (UNCTAD, 2006). However, these inflows are highly concentrated in terms of host country and specific sectors. For example, 59% of FDI inflows to MENA countries in 2010 went to only four countries: Saudi Arabia (37%), Egypt (8%), Israel (7%), and Qatar (7%). In addition, most of FDI inflows to MENA region went to natural resources, tourism, banking, and construction sectors, which are less relevant to technology diffusion compared to manufacturing sector (OECD, 2004).

Barro and Sala-i-Martin (1997) indicate the importance of technology diffusion as a channel of economic growth in developing countries. Fransman (1985) indicates that international technology diffusion has two different types of transactions. The first one is called “formal” transactions, which include joint ventures, licensing, and goods trade. The second one is called “informal” transactions, which includes linkages between multinational enterprises (MNEs) and the local firms and scientific exchange. In both modes, the MNEs are the main source of technology diffusion (Lall, 2001).

Blomstrom and Sjoholm (1998) argue that foreign affiliates may affect the productivity of local firms through two aspects. Firstly, the multinational enterprises (MNEs) have new advanced technology that allows them to compete strongly with local firms. Secondly, the entry of MNEs affects the equilibrium in the market by forcing local firms to improve their capabilities to maintain their market shares. This may force local firms to change their production techniques and their managerial skills. With these two aspects in mind, this study will investigate the ability of Middle East and North Africa (MENA) countries to absorb the technology diffusion from FDI.

The remainder of this study is organized as follows. Section 2 discusses the main theoretical approaches and empirical difficulties in testing the technology diffusion from FDI. Section 3 is the empirical specification. Section 4 discusses the data sources. Section 5 is the empirical findings. Section 6 is the conclusion and policy implications.

2 THEORETICAL APPROACHES AND EMPIRICAL DIFFICULTIES IN TESTING THE SPILLOVERS FROM FDI
The theory of industrial organization focuses on the indirect or external effects of FDI. More specifically, industrial organization theory tells us that foreign affiliates should have non tangible productive assets in order to compete successfully in international markets (Aitken and Harrison,
1999). Findlay (1978) presents a theoretical approach to modeling the role of FDI in the international technology diffusion. He argues that the FDI is the main determinant of technological efficiency in developing countries. Findlay argues that the technological efficiency growth rate in developing economy is a function of both FDI and its technology level. Sadik and Bolbol (2001) present another theoretical approach to model the impact of FDI on the growth and productivity by the following equation:

\[ Y = A (\text{FDI}_S) K^{\alpha} L^{1-\alpha} \]  

(2.1)

Where: FDI\_S is the FDI stock. The above equation indicates that FDI is a main determinant of the growth of total factor productivity.

Caves (1974) provides evidence of a positive relationship between labor productivity and the share of foreign firms employment for twenty three Australian manufacturing industries in 1966. Similar results can be found in Globerman (1979), Blomstrom and Persson (1983), and Blomstrom (1986). However, an outstanding study that focuses on the nature of spillovers’ efficiency in depth is Blomstrom (1986).

The results of recent studies seem to be quite different from those generated in early literature in the case of developing countries. Aitken and Harrison (1999) show that the relationship between the productivity growth of domestic plants and the presence of foreign affiliates is negative in Venezuelan manufacturing during the period 1976-1989. They examine the following two hypotheses: (1) there is a relation between foreign equity participation and the increase in a firm’s productivity. (2) Foreign ownership in an industry has an impact on the productivity of local firms in the same industry. They indicate that the negative spillovers (i.e. reducing productivity of local firms) stem from the difference in capabilities between foreign affiliates and local competitors. The foreign affiliates may crowd out the local firm if these foreign affiliates have lower marginal cost. This can cause a decline in the demand of local firm and forcing them to decrease their production. This result runs counter to the cross-section study of the early literature. Aitken and Harrison explain the early results as being due to the use of cross-section data on average industry characteristics. Therefore, this positive and significant relationship between industry productivity and foreign ownership means that those foreign direct investments likely flow into high-productivity industries, rather than that FDI raises host-country productivity (Hanson, 2001). Similar results are obtained by Haddad and Harrison (1993).

Therefore, recent studies, relying on firm-level data, yields results contradicting those generated from early literature, which relied on industry-level analysis. However, these single-country studies are difficult to generalize. For this reason, some recent studies use absorptive capacity approach (e.g Xu (2000) and Borensztein and et al. (1998)) to explain why some countries have higher technology spillovers from FDI than others.

Recent studies examine the channels of technology diffusion from FDI (see Lipsey (2004) for a survey). Blomstrom and Kokko (1997) identify five channels. The first channel is constituted of the linkages between foreign affiliates and domestic firms; however, the efficiency of this channel may be limited if the technology gap between MNEs and local firms is too big. The other channels are the R&D efforts undertaken by the MNEs’ affiliates, training of local employees in the foreign affiliates, demonstration effects of FDI on local firms, and the ownership sharing of foreign affiliates.

3 EMPIRICAL SPECIFICATION

To test the hypothesis that FDI has positive and significant impact on labor productivity in MENA countries, we specify the following panel data regression:

\[ \text{LPg}_{it} = \sum_{j=1}^{N} \beta_{j} D_{jt} + \beta_{1} \text{FDI}_{1, it} + \beta_{2} \text{GAP}_{2, it} + e_{it} \]  

(Equation 3.1)

Where: LPg variable is the growth rate of GDP per worker (constant 1990 PPP $). Equation (2.1) can be justified by the existing models in the literature as follows. We use labor productivity rather than total factor productivity (TFP) as measure of host country productivity growth. FDI variable is the foreign direct investment, net inflows (% of GDP) The impact of FDI on host country productivity is extensively examined in the literature (see for example, Blomstrom (1986)). GAP variable is the technology gap, measured by the difference between labor productivity in a GCC country and the average of labor productivity in the the average of labor productivity in Organisation for Economic Co-operation and Development (OECD) countries. The GAP variable is calculated based on Li and Liu (2005). Some previous studies (e.g. Kokko, 1994) used labor productivity gap as a measure of technology gap. The use of labor productivity gap is justified in the previous section.

4 DATA

The panel dataset of this study contains data for ten MENA countries: Bahrain, Egypt, Jordan, Kuwait, Malta, Morocco, Oman, Saudi Arabia, Syria, and Tunisia. The other MENA countries are excluded due to the unavailability of data (World Bank, 2010). The FDI variable is the foreign direct investment, net inflows (% of GDP). LPg variable is the growth rate of GDP per worker (constant 1990 PPP. LPg and FDI are collected from the World Bank (2010).

Table 4.1 here
5 EMPIRICAL FINDINGS

The data for ten MENA countries from 1992 to 2008 are pooled. In panel data models, the economic data are a composition of time series and cross sections. Modeling the panel dataset calls for some complex stochastic specifications. When we estimate panel data, we should take into account two basic points. First point is the differences in behavior across cross-section units. Second point is the differences in behavior within cross-section units over time.

The panel data fixed and random effects models assume that individuals are heterogeneous. This main advantage of panel data avoids the risk of obtaining biased results that may happen in time series and cross-section studies. Sometimes the choice between fixed and random effects may depend on the Hausman test which is provided by Hausman (1978). Since our panel dataset has time periods relatively large to the Hausman test which is provided by Hausman (1978). The second fact is that most of FDI inflows to MENA region goes to natural resources sector which is less relevant to technology transfer than manufacturing sector. In consequences, governments in MENA countries should focus on improving the technological capabilities of local firms and deepen the linkages between local firms and foreign affiliates. In addition, the governments should significantly increase their expenditures on R&D, which may increase the level of technological capacity in MENA countries.

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ABSTRACT:
Using Two-stage Least Square (TSLS) regression for cross-sectional observations of 197 countries for the year 2009, the study estimates the impact of: i) the improvement in the quality of governance on per capita income, and ii) the increase in per capita income on the quality of governance. In line with previous empirical studies, the results suggest a positive strong statistical significant causation from quality of governance to per capita income. In addition, the results suggest a statistically significant causation from per capita income to quality of governance. The estimation results are used to interpret the relationship between governance and growth for the 22 MENA countries. A striking result suggest that despite the relatively low performance of most of these countries on almost all of the six measures of governance, their estimated levels per capita of income are relatively higher than the rest of the countries in the sample. This implies that most MENA countries have achieved relatively high but fragile standard of living for their citizens that is not based on sound governance. The fragility of standard of living in most these countries was manifested by the latest up rise in Tunis followed by Egypt and Libya. Two policy implications; first development requires a strong intervention in improving governance and secondly, though with a lesser extent, improving governance requires an exogenous increase in income through multilateral aid for instance.

JEL Classification Numbers: O16; O43; N20
KEYWORDS: MENA; Corruption; Democracy; Political Freedoms; Economic Growth

I. INTRODUCTION
From the moment that the first protests erupted in Tunisia in December 2010, following the decision of a vegetable cart owner, Mohamed Bouazizi, to immolate himself over the confiscation of his cart and produce, economic grievances have played a pivotal role in fueling the wave of protests and uprisings in the Arab world that have already toppled the regimes of Tunisian President Zine El Abedine Ben Ali and Egyptian President Hosni Mubarak, and more recently Libyan President Muammar El Gaddafi, and have created serious political strife in Bahrain, Yemen, and Syria. With the exception of oil and gas-rich Bahrain, where tensions have been exacerbated by an age-old divide between the country’s Shi’a majority and Sunni political and economic elite, every Arab nation whose political foundations have been seriously threatened over the last three months has a per capita income that places it squarely in middle or lower-income status – and often with high income inequality attached. Popular anger over the economic mismanagement demonstrated by various autocratic Arab governments – and the poverty, unemployment, and limited options for upward mobility that have resulted from it – has arguably been as important a factor during the “Arab Spring” in uniting fractured societies in opposition to the status quo as the yearning for greater political freedoms. Likewise, one could argue that, while far from the only motivating factor, economic discontent has played a meaningful role in driving the protest movement in Iran in recent years. This paper considers the historical reasons cited for such failures of governance among MENA states, and seeks to assign relative levels of importance to each of these factors with regards to their harmful effect on both macroeconomic growth, and the actual economic opportunities available to the general populace of these nations. By the standards of virtually any significant metric measuring the quality of governance in a particular country, the nations of the Middle East and North Africa routinely rank well below the global average. The findings of the World Bank’s Worldwide Governance Indicators (WGI) project provide
perhaps the starkest evidence of the mismanagement and misrule produced by many of the region’s governments. The WGI project seeks to measure the quality of governance in a particular nation using six metrics: Voice and Accountability, Political Stability, Government Effectiveness, Regulatory Quality, Rule of Law, and Control of Corruption. These metrics are measured both by a Governance Score that ranges from -2.5 to +2.5, and a Percentile Rank relative to nations worldwide.

For the Voice and Accountability metric, 19 of the Middle East and North Africa region’s 20 largest countries by population were given a negative Governance Score, and ranked in the 36th percentile or lower. 14 out of 20 ranked below the 25th percentile. For the Political Stability metric, 13 out of 20 ranked in the 41st percentile or lower; and two of the nations ranked above the 50th percentile (Tunisia and Libya) at the time of the project’s last report (2009) would likely see their rankings drop in an updated study. For the Government Effectiveness metric, 12 out of 20 nations had negative scores, and 5 out of 20 ranked below the 25th percentile. For Regulatory Quality, 10 out of 20 had negative scores, and 5 out of 20 again ranked below the 25th percentile. For Rule of Law, 11 out of 20 had negative scores, and 4 out of 20 ranked below the 25th percentile. And for Control of Corruption, negative scores were given to 11 out of 20 nations, with 6 out of 20 ranking below the 25th percentile.

Explanations for the failure of the governments of various MENA states to provide the kind of sound governance for their populations that can deliver strong economic growth and meaningful upward mobility have tended to fall into one of three categories: the implementation of misguided economic policies that provided government officials with an excessive amount of authority over the allocation of national resources, dating to the time of the Cold War; the presence of rampant corruption and cronyism throughout the organs of the state; and the lack of accountability caused by a dearth of democracy and political freedoms. For impoverished states with little natural resource income relative to the size of its population, critiques of economic policy have revolved around the socialist, state-driven economic models adopted by many Arab governments from the 1950s onward. These models, with their emphasis on state control of major industries, the delegating of major resource-allocation decisions to central planners, and stringent controls on foreign trade and capital inflows, have been cited as a key reason why resource-poor Arab nations have failed to keep pace with countries possessing more market-oriented economic policies. For nations awash in natural resource wealth, economic policy critiques have shined a light on both the harmful impact of heavy-handed state control by politicians and bureaucrats, and a general disinterest that’s often seen with regards to the development of export-oriented industries that are not tied to resource extraction.

The explanations for poor governance that center on institutional corruption, meanwhile, are often quick to point to international studies and rankings that give many MENA states poor marks with regards to corruption and government transparency. The harmful impact of the widespread need for bribes and kickbacks on both the cultivation of domestic industry and the attracting of foreign investment is well-documented, as is the effect of lucrative business deals and favorable regulatory treatment being provided to the cronies and family members of prominent government officials. And researchers have noted that the lack of political liberty not only prevents autocrats and their underlings from being held accountable for their poor economic judgment, by means of elections, but also prevents critics and whistleblowers from pointing out government incompetence, corruption, and malfeasance to their fellow countrymen.

Considering the impact that the embrace of market reforms, and their implicit reduction of the economic authority of government officials, has had on many developing economies throughout the world, it is not difficult to argue that questionable decision-making by government authorities in MENA countries with statist economic systems has been a major detriment to economic growth. In her paper, *Parameters of Economic Reform in North Africa*, Karen Pfeifer takes account of the economic damage done to Tunisia by its bloated, inefficient public sector enterprises (PSEs), which grew in number from 25 in the 1960s to 400 by 1989 (448), and the government dictats that kept them in this state. With PSEs “assigned objectives other than profit-maximization such as producing import substitutes...and not free to fire workers or raise prices,” their losses ended up accounting for 20% of government outlays between 1977 and 1981 (449). The failures of Tunisia’s PSEs, and the laws that left them in a particularly woeful state, undoubtedly played a large role in Tunisia’s GDP per capita growth declining from an annual rate of 5.1% from 1970-1980 to merely 1.1% from 1980-1990 (449).

Egypt was also criticized by Pfeifer for its heavy-handed support of PSEs. In Egypt’s case, not only did massive state investment in PSEs have a detrimental effect on the domestic economy due to their inefficiency, they required enormous imports of capital, technology, and other inputs in order to functions – thereby ironically thwarting the Egyptian government’s stated goal of import substitution. Moreover, as the Egyptian government officials took an active role in managing quantities and prices for various inputs and outputs, Pfeifer notes that “central planning became very complex (442).” After achieving 5.7% annual growth from 1970-1980, Egypt’s per capita GDP grew only 2.4% per year from 1980-1990, and declined by 0.5% per year from 1990-1995. As with many other developing economies, a state-driven approach to industrializing what was initially a predominantly agrarian economy yielded healthy economic growth at first, but then witnessed increasingly diminishing returns due to inefficient capital spending and general mismanagement.

That corruption and arbitrary rule-enforcement is widespread and deeply institutionalized in many MENA countries is
undeniable. Relying on ten indicators from several major think tanks, economist Tarik M. Yousef sought to compare “Institutional Quality,” which measures factors such as corruption, the size of the black market, the enforcement of rules and rights, and the quality of bureaucracy, in the OECD and six different sets of developing nations, sorted by geography. In Yousef’s study, found in his 2004 paper Development, Growth and Policy Reform in the Middle East and North Africa since 1950, the Middle East and North Africa was given an Institutional Quality score of -0.32 – ahead of only South Asia and Sub-Saharan Africa, and well behind the OECD, which had a score of 1.38 (98). To make matters worse, with a score of -0.78, the Middle East and North Africa ranked last (by far) in Yousef’s rankings of “Public Accountability,” which measured factors such as political participation, civil liberties, and government transparency and responsiveness. OECD nations, by contrast, reported a score of 1.89 (98). Needless to say, Yousef’s findings dovetail very well with the WGI project’s ratings of MENA nations in the areas of Voice and Accountability, Regulatory Quality, and Government Effectiveness.

However, the endemic corruption found within many governments cannot merely be attributed to the failings of autocratic governments: in many situations, cultural factors also appear to play an important role. In his paper, Expecting the Unexpected: The Cultural Components of Arab Governance, Lawrence Rosen remarks that “Arabs tend to characterize corruption not as abuse of some formal set of criteria associated with a given position but as the failure to share whatever largesse comes one’s way with those to whom one has forged ties of obligation (171).” Rosen goes on to note how certain informants of his half-jokingly remarked that “corruption is our form of democracy,” since it allows individuals to disregard an autocrat’s rules in exchange for a bribe. Thus, “corruption” can sometimes take on a whole different meaning than what it is typically viewed as in the West, with the Western concept of corruption being sometimes tolerated, depending on the circumstances. And so, while potentially detrimental to economic growth, corruption in the Western sense of the term could remain in place to some extent even if political elites show a commitment to clean, transparent government.

The historical “democracy deficit” of the Middle East and North Africa has clearly kept many autocrats (and until recently, a couple of others) from being held to account for their failure to deliver economic growth, as well as major improvement in other human development indicators. The chilling effect of the broader lack of political freedoms in a number of countries in the region, as manifested by the widespread reports of journalists, writers, and activists being arrested and/or beaten, has also contributed to the lack of accountability for poor governance, as many potential critics are frightened into silence, lest they run afoul of the state. And on a micro level, evidence appears to exist that a lack of political freedom has a strongly negative effect on the governing competence of the state. In their paper, Civil Liberties, Democracy, and the Performance of Government Projects, Jonathan Isham, Daniel Kaufmann, and Lant H. Pritchett sought to examine the relative effectiveness of World Bank-financed government projects in nations that do and don’t possess civil liberties, human rights achievement, media pluralism, and the freedom to organize, after controlling for economic, project, and regional variables. While the study found little relationship between the freedom to organize and performance, it found a moderately positive relationship with human rights achievement, and a highly positive relationship with civil liberties and media pluralism (229-230).

Given the evidence, sound arguments exist for all three of the analyzed factors – unsound economics doctrines, rampant corruption, and a lack of political accountability – having a harmful effect on the quality of governance in MENA countries, and thereby damaging economic growth. But at first glance at least, economic policy appears to be the largest culprit, given that it can be harmful not only in its own right, but to the extent that it can aggravate the other two factors. Given the extent of the cultural roots of corruption in many MENA nations, it could be argued that the most effective solution for minimizing its economic impact is to migrate away from a centrally-planned economy and thereby eliminating the power of fallible government officials to “manage” the economy. And to the extent that misguided economic policies can stunt socioeconomic development, they can also inhibit a variety of factors (higher education levels, a more developed civil society, greater exposure to the outside world that serve to increase the demand for political reform. Thus, while the effects of an improved economic policy on the general quality of governance may vary tremendously from nation to nation, its positive ripple effects are likely to be considerable.

II. EMPIRICAL SPECIFICATION

The main focus of this section is to estimate the causal effect of governance on per capita income. The model is first estimated using Ordinary Least Squares (OLS) and Two-stages Least Squares (TSLS). The model is estimated using the cross-sectional data of the 197 countries in 2009. Next the estimation results are used to interpret the relationship between governance and growth for 22 MENA1 countries.

Following Kaufmann and Kraay (2002), equation (1) below provides a parsimonious specification of the model;

\[ pgdp_i = \alpha + \beta \cdot gov_i + e_i, \]

Where \( pgdp \) is the log per capita income, \( gov \) is governance, \( e \) represents all the other factors not included in this parsimonious equation, and finally the subscript \( i \) represent the country. The model is complemented with the following equation;

1 Algeria, Bahrain, Cyprus, Djibouti, Egypt, Iran, Iraq, Israel, Jordan, Kuwait, Lebanon, Libya, Morocco, Oman, Qatar, Saudi Arabia, Syria, Tunisia, Turkey, United Arab Emirates, West Bank and Gaza, and Yemen.
\[ \text{gov}^*_i = \text{gov}_i + u_i \] (2)

Where \( \text{gov}^*_i \) refers to the observed governance which is a noisy measure of actual governance and with a measurement error \( u_i \). The measurement error is assumed to have a zero mean and variance \( \sigma_u^2 \).

The main aim of the model above is to estimate the impact of governance on per capita income over the long run. The governance indicator covers six main areas of governance including voice and accountability, political stability, government effectiveness, rule of law, regulatory quality, and control of corruption. Accordingly, equation (1) above is estimated six times for each type of governance in a turn.

The second part of the empirical model aims at estimating the reverse causality, the impact of income per capita on governance. This relationship is represented by equation (3) as follows;

\[ \text{gov}_i = \mu + \gamma \text{pgdp}_i + \delta x_i + u_i \] (3)

Where \( \text{gov} \) and \( \text{pgdp} \) are as defined above and \( x \) represents geographic location measured in latitudes. Similar to \( e \) in equation (1) above, \( U \) is the measurement error term with zero mean and a variance \( \sigma_U^2 \) and it captures all other factors not included in this simple parsimonious model. Following Kauffman and Kraay (2002), it is assumed that the error terms, or the omitted variables, of equations (1) and (3) could be correlated together such that \( E[e, u] = \rho \sigma_e \sigma_u \) and this allows for the possibility that other factors affecting income per capita could be related with other factors affecting governance.

Finally, as in equation (2) above, the observed level of per capita income \( \text{pgdp}^*_i \) is a noisy measure of actual per capita income such that;

\[ \text{pgdp}^*_i = \text{pgdp}_i + w_i \] (4)

where \( w \) refers to the measurement error with zero mean and variance \( \sigma_w^2 \).

The leading study by Acemoglu et al. (2001) uses settler mortality as an instrument for institutions assuming a high the settler mortality in a country is an indication of bad institutions. Hall and Jones (1999) have used colonial origin measured by the percentage of the population speaking a major European language. Kaufman and Aary (2002) in their sample of 156 countries, use tropical location and colonial origin to impute the missing values of Acemoglu’s settler mortality data that is only available for 56 countries. Moreover, Easterly and William (2002) find that tropics, germs, and crops have an indirect effect on development that passes through institutions.

Based on previous empirical literature on institutions, geographic location or tropical location is proved to be correlated with the level of governance and can be assumed as an exogenous variable in equation (3), or not correlated with other factors affecting per capita GDP of equation (1). Accordingly, without going through the relevance and exogeneity tests it is fair to assume that \( x \) is a valid instrument for governance.

### III. DATA

The data set consist of cross-sectional observations for 197 countries for the latest available data on governance in 2009. The parsimonious model under study includes economic growth as the dependent variable measured as the log of per capita GDP (constant 2000 US$) and taken from the World Development Indicators (WDI) of the World Bank database. Data on the six areas of governance including voice and accountability, political stability, government effectiveness, regulatory quality, rule of law, and corruption are all taken from the Worldwide Governance Indicators (WGI) project, World Bank database and constructed by Kaufman, Aary, and Massimo. Finally, data on latitudes were taken from the CEPII research center databases.

### IV. ESTIMATION RESULTS

The main aim of the model represented in equation (1) is to estimate the impact of different areas of governance on economic growth. The equation was estimated six times with the log of per capita GDP as the dependent variable each time and the six types of governance as regressors each one in a turn. Table (1) below shows the results of estimating equation (1) using both the Ordinary Least Squares (OLS) as well as Two-stage Least Squares (TSLS).

In line with previous empirical research, our results confirm the positive impact of improving governance on log of per capita GDP. All the coefficients show a positive and a statistical significant impact of governance on economic growth. For instance, using OLS Column (1) shows that a one standard deviation increase in regulatory quality measure increases per capita income by nearly threefold in the very long run. Similar magnitude is shown for the impact of rule of law measure on per capita income.

Using country latitudes as the selected instrument, Column (2) of Table (1) shows the results of the TSLS. Two things to notice about the results; first the signs of all the six governance measures are positive and statistically significant confirming the results of the OLS. Secondly, in line with previous empirical literature, such as Kaufmann and Kraay (2002), the estimated coefficients of the TSLS are larger than the OLS. For instance, using the TSLS, the impact of one standard deviation increase in the rule of law measure leads to eight fold increase in per capita income in the very long run as compared with only three folds using OLS.

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2 Centre d’Etudes Prospective et d’Informations Internationales (EPII) http://www.cepii.fr/anglaisgraph/bdd/bdd.htm
Table 1: The Causal Effect of Governance on Income Per Capita

<table>
<thead>
<tr>
<th>Regressors</th>
<th>Ordinary Least Squares (1)</th>
<th>Two-stage Least Squares (2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>7.932</td>
<td>7.987</td>
</tr>
<tr>
<td></td>
<td>(0.091)</td>
<td>(0.199)</td>
</tr>
<tr>
<td>Voice and Accountability</td>
<td>0.992</td>
<td>3.422</td>
</tr>
<tr>
<td></td>
<td>(0.093)</td>
<td>(1.168)</td>
</tr>
<tr>
<td>No. of observation</td>
<td>189</td>
<td>189</td>
</tr>
<tr>
<td>$R^2$</td>
<td>0.38</td>
<td>0.38</td>
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<tbody>
<tr>
<td>Intercept</td>
<td>7.883</td>
<td>7.880</td>
</tr>
<tr>
<td></td>
<td>(0.065)</td>
<td>(0.071)</td>
</tr>
<tr>
<td>Government Effectiveness</td>
<td>1.353</td>
<td>1.747</td>
</tr>
<tr>
<td></td>
<td>(0.067)</td>
<td>(0.217)</td>
</tr>
<tr>
<td>No. of observation</td>
<td>188</td>
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</tr>
<tr>
<td>$R^2$</td>
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<td>0.63</td>
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<tbody>
<tr>
<td>Intercept</td>
<td>7.868</td>
<td>7.859</td>
</tr>
<tr>
<td></td>
<td>(0.074)</td>
<td>(0.079)</td>
</tr>
<tr>
<td>Regulatory Quality</td>
<td>1.279</td>
<td>1.660</td>
</tr>
<tr>
<td></td>
<td>(0.077)</td>
<td>(0.230)</td>
</tr>
<tr>
<td>No. of observation</td>
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<tr>
<td>$R^2$</td>
<td>0.59</td>
<td>0.54</td>
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</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>7.929</td>
<td>7.936</td>
</tr>
<tr>
<td></td>
<td>(0.068)</td>
<td>(0.077)</td>
</tr>
<tr>
<td>Rule of Law</td>
<td>1.327</td>
<td>1.836</td>
</tr>
<tr>
<td></td>
<td>(0.070)</td>
<td>(0.244)</td>
</tr>
<tr>
<td>No. of observation</td>
<td>189</td>
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<tr>
<td>$R^2$</td>
<td>0.66</td>
<td>0.56</td>
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<th>Regressors</th>
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<tbody>
<tr>
<td>Intercept</td>
<td>7.894</td>
<td>7.891</td>
</tr>
<tr>
<td></td>
<td>(0.078)</td>
<td>(0.110)</td>
</tr>
<tr>
<td>Control of Corruption</td>
<td>1.178</td>
<td>2.242</td>
</tr>
<tr>
<td></td>
<td>(0.079)</td>
<td>(0.434)</td>
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<td>$R^2$</td>
<td>0.55</td>
<td>0.10</td>
</tr>
</tbody>
</table>

Notes: The dependent variable is log per capita GDP. The table summarizes the results of running six different regressions. The numbers in parentheses are the standard errors.

Figures 1 through 3 show the estimation of log per capita income regression on the six governance measures with a 95% confidence interval. Concerning the voice and accountability measure, as obvious from the graph on the left of Figure 1, almost all MENA states lie above the average estimated income per capita for all the countries in the sample. This is very obvious for countries such as Qatar, Bahrain, Kuwait, Oman, Libya, and Saudi Arabia. Few countries in the MENA region performed below the average of the 197 countries in the sample in terms of the voice and accountability measure. More specifically, only three countries out of the 22 MENA countries, namely Djibouti, Iraq, and Yemen, lie below the regression line. Similarly, with the exception of Djibouti and Yemen, most of the MENA states lie above the average of the 197 countries in terms of political stability measure.

A striking feature of this figure suggest that except for only two countries, namely Cyprus and Israel, all of the MENA countries have a below zero of the voice and accountability measure. Moreover, except for Libya, Oman, Qatar, United Arab Emirates, all countries are around the zero political stability no violence measure. This feature suggests that for many MENA countries, the estimated high per capita income is derived from other sources other than firm governance.

Next concerning government effectiveness, as Figure 2 shows except for four countries namely Cytrus Jordan, Morocco, and Tunisia, all the MENA states perform on or above the fitted per capita regression line. A country such as Libya with a low measure of government effectiveness performs a way above the average of the sample per capita income. Similarly, regarding the regulatory quality measure, Lybia is a way above the average of the sample per capita income while countries such as Egypt, Tunis, and Yemen perform relatively below the average per capita income of all the countries in the sample.

Figure 1: Voice & Accountability and Political Stability MENA countries

![Figure 1: Voice & Accountability and Political Stability MENA countries](image)

Figure 2: Government Effectiveness and Regulatory Quality in MENA countries

![Figure 2: Government Effectiveness and Regulatory Quality in MENA countries](image)
Next, regarding the performance of MENA countries in the rule of law measure, as obvious from the left panel of Figure 3, despite the fact that only 8 countries in the MENA region are scoring above zero in the rule of law measure, the majority of these countries are performing above the fitted regression line. For example, countries such as Lebanon and Libya with a rule of law score of only -0.63 and -0.75 respectively are performing highly above the regression line.

Finally, despite the fact that almost half of the MENA countries are performing poorly on the corruption measure only five countries (namely Djibouti, Jordan, Morocco, West Bank and Gaza and Yemen) are performing below the regression line.

Figure 3: Rule of Law and Corruption in MENA countries

The second part of estimating the results concerns the estimation of the reverse causality from per capita income to governance. The main idea behind this estimation is to check whether the increase in income can lead to a better improvement in governance or not. By observing the performance of developed countries for instance, it is expected that countries with high income levels are also able to buy high quality governance.

Table 2: The Causal Effect of Income Per Capita on Governance

Notes: The table summarizes the results of running six different regressions. The numbers in parentheses are the standard errors.

Table 2 below shows the results of estimating equation (3) six times with each governance indicator as the dependent variable in a turn and per capita income and latitudes as independent variables. For the sake of brevity, column (1) of the table below shows the estimates of $\gamma$ in equation (3). As obvious from the results, the increase in per capita income has a positive and a statistically significant impact on all governance measures. For instance, a one percent increase in per capita income leads to around 0.4 points increase in voice and accountability or political stability and around 0.5 increase in government effectiveness or regulatory quality or rule of law or corruption measure.

The results of the reverse causality suggest that there is also a feedback from income to governance. An exogenous increase in income, from multilateral aids for instance, leads to better institutions. Thus the results suggest the presence of “virtuous circles” in which economic development feeds in better institutions.

It is important to note, however, that estimating the reverse causality robustly requires estimating equation (3) using instrumental variable regression. The problem is, finding an instrument for per capita income is not an easy task and there are no good instruments for income in the literature. To tackle the instrument problem, future extension of this study will follow Kaufmann and Kraay (2002) methodology to infer the slope of effect of income on governance indirectly through comparison of OLS and IV results.
V. CONCLUSION

Explanations for the failure of the governments of various MENA states to provide the kind of sound governance for their populations that can deliver strong economic growth and meaningful upward mobility have tended to fall into one of three categories: the implementation of misguided economic policies that provided government officials with an excessive amount of authority over the allocation of national resources, dating to the time of the Cold War; the presence of rampant corruption and cronyism throughout the organs of the state; and the lack of accountability caused by a dearth of democracy and political freedoms.

Despite such poor governance in MENA states, a striking result of the study suggests that for many of these countries their estimated levels per capita of income are relatively high when compared to the rest of the countries in the sample. This implies that many of the MENA countries have achieved relatively high but fragile standard of living for their citizens that is based on other factors, such as the abundance of natural resources, but not sound governance. For instance, the main source of wealth for Qatar is derived from pearling, fishing, oil, gas, and trade. Countries such Libya, Saudi Arabia, Kuwait, Oman, Bahrain, and United Arab Emirates depend on oil exports as their main source of income. And main sources of income in Egypt are derived from tourism, remittances from Egyptians working abroad, revenues from the Suez Canal and oil. Progress towards democracy in most MENA countries has been very slow with citizens not enjoying any social, economic or political freedom. The fragility of standard of living in most these countries was manifested by the latest up rise in Tunis followed by Egypt and Libya.

One policy implication of the study suggest that a strong intervention is required for improving the regulatory quality and effectiveness, controlling corruption, improving the rule of law, achieving political stability, reducing internal violence, and improving the voice and accountability of their own citizens. Furthermore, though with a much lesser extent, an exogenous increase in income through multilateral aid for instance, will feed in better governance. Future extension on this study will work on testing the robustness of the later implication by calibrating the reverse causality regression and comparing the results of the TSLS with the OLS.

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THE IMPORTANCE OF USING STRUCTURAL EQUATION MODELING TO TEST INTERACTION EFFECTS: A THEORETICAL STUDY

Yvette Essounga-Njan, Ph.D.
Fayetteville State University
1200 Murchisson Road.
SBE Rm 388
Fayetteville, NC 28301
(910) 672-1764
yessoung@uncfsu.edu

ABSTRACT
A review of the literature on interaction effects in structural equation modeling has been conducted, and unearthed the recurring notion of the difficulty in estimating and testing these relationships. Nevertheless, it was found that fields as various as management, marketing, psychology, education, health, information systems, and insurance often utilize interaction effects estimation in order to improve the predictive and explanatory power of models tested. The critical importance of testing these relationships has been established. Lastly, the implications, and limitations of this study, as well as future research directions have been offered.

Keywords
Interaction effects, Structural Equation Modeling, Management, Predictive power

1 INTRODUCTION
The extant literature on interaction effects in structural equation modeling (SEM) underscores the complexity of modeling these relationships (Bollen & Paxton, 1998; Jaccard & Turrisi, 2003; Li, Harmar, Duncan, Duncan, Acock & Boles, 1998; Wen, Marsh & Hau, 2002). For instance, one study (i.e., Jaccard & Turrisi, 2003) suggested the fact that “the interaction idea can be hard to grasp” (p. vi) may be the reason of the paucity of studies testing these relationships. Accordingly, even when interaction relationships merit modeling, they seem not to be encountered often in the literature (Bollen & Paxton, 1998). One of the studies previously mentioned (i.e., Li, et al., 1998), concurred with the afore-mentioned idea and pointed to the complexity of models dealing with interactive effects. Another study (i.e., Wen, et al., 2002) underlined the difficulty inherent to the assessment of interactive effects.

The manner in which individuals behave is seldom predicated by a single factor (Iwasaki & Mannell, 1999). In fact, it often appears that in any measurable event, the outcome tends to be motivated by several factors, ranging from those pertaining to the situation at hand, to those related to the individuals involved in a transaction. For instance, when someone makes a statement, the individual listening to that statement will tend to judge the person’s stance on the issue at hand, according to the listener’s own position on the issue, but also based on the way the listener may feel toward the person uttering the statement (Bollen & Paxton, 1998; Locker & Kienzler, 2009).

Studies of behavior and process in organizations have the tendency to evolve around constructs which span across several dimensions (Colquitt, Lepine, & Wesson, 2011; Essounga-Njan & Gnepa, 2010; Williams, Edwards, & Vanderberg, 2003). As an example, a company studying the impact of measures taken in order to get employees to become satisfied may want to investigate what particular measures caused employees to become satisfied with certain aspects of their work. At a different level, the company may also want to consider if employees, as a result of measures advocated, are solely satisfied with some aspect of their work, or if they simply feel an overall satisfaction with their job. (Williams et al., 2003). Race is often linked to educational achievement. However, when other variables are introduced in the equation, it appears that race may have no correlation with education attainment (Essounga-Njan & Gnepa, 2010) but factors with no relationship with ethnicity are at the root of the problem. In other terms, the “none-some-all problem” (Hutchinson, Wagner, & Kamakura, 2000, p. 325) is often encountered in all fields of research involving the quintessential issue of partitioning what particular variable or factor has an impact on the outcome being studied.

Researchers in fields as diverse as management (Conway & Briner, 2002; Allen, Shore, & Griffith, 2003; Sue-Chan & Ong, 2002; Williams, et al., 2003), marketing (Agarwal & Malhotra, 2005; Bagozzi, 1982; Burke & Edell, 1989; Hutchinson, et al., 2000; Mackenzie, Lutz, & Belch, 1986; Ping, 1995), psychology (Iwasaki & Mannel, 1999; Priel & Shatar, 2000; Rosen-Grandon, Myers & Hattie, 2004), education (Bennett, Weigel & Martin, 2002; Christian, Morrison, & Bryant, 1998), health (Neumark-Sztainer, Wall, Perry, & Story, 2003), information systems (Chin, Marcolin, & Newsted, 2003), and insurance (Dimakos & DiRattalma, 2002) underscored the critical importance of estimating interaction effects in order to enhance the model’s potential to predict outcomes (Argawal & Malhotra, 2003; Allen, et
al., 2003). Furthermore, several studies (i.e., Bollen & Paxton, 1998; Jaccard & Turrisi, 2003; Kline, 1998; Kline, 2000; Li, et al., 1998; Li & Duncan, 2000; Schumacker & Lomax, 2004; Wen, et al., 2002) investigated interaction effects in structural equation modeling (SEM), adding in the comprehension of these non-linear relationships.

2 RESEARCH QUESTION
Does the lack of predictability (Iwasaki & Mannell, 1999) and complexity (Williams, Edwards & Vanderberg, 2003) of human behavior make it relevant or even imperative to continue using SEM, regardless of the reported complexity pervading the modeling and assessment of the relationships between human actions and the assumed antecedents or consequences of their actions? In other words, would it not be more productive and beneficial if we favored identifying the appropriate predictors and results of social phenomena despite the added level of analysis required to reach that goal?

3 PURPOSE OF THE STUDY
Although numerous studies have explicated and stressed the vital role of estimating interaction effects in research, studies underscoring the varied fields in which these relationships are investigated remain sparse. Also, it is of pertinence to make inferences from the fields of research modeling interaction effects, to the functions these serve in explicating the different trends studied, in order to make an interpretation of the reasons interaction effects remain so seldom found in the literature, despite their known usefulness.

This review seeks to address the issue of the continued paucity in the literature, of interaction effects, even as their explicative power is undeniable, as regards to the factors motivating particular events and trends. In the course of addressing this issue, this discussion will focus on some fields of research in which interaction effects have been estimated, in order to assess the functions engaging in this process serves. Afterward, studies expounding the concept of interaction effects will be introduced, clarifying the reasons these relationships remain sparsely used by researchers. Lastly, interpretations will be made as to the reasons it appears of critical importance that researchers endeavor to incorporate these relationships in their studies. To conclude, implications, limitations and future research direction will be offered.

4 VALUE OF THE STUDY
If a person were prescribed ibuprofen because he or she was seen as having migraines resulting from exposure to the sun, the individual taking the prescribed medication would feel terrible upon learning he or she ingested ibuprofen to no avail. In effect what looked like a migraine from sun exposure was really an allergic reaction to pollen after gardening in the sun. If the doctor had diagnosed the patient correctly, this doctor would have prescribed an antihistamine to the patient, not a pain killer. Ceteris paribus, governments today face situations in which pinpointing the exact cause of social phenomena is a determining factor for effective government intervention. This discussion should be of interest to policy-makers who often need to identify the particular cause or causes underlying certain occurrences, in order to tackle their root-cause, and thus solve a particular issue at hand. A review of this nature will also benefit SEM experts who may see an opportunity to work on developing ways to make it possible for consumers and providers of research to easily model these relationships, in the quest of achieving the best predictive validity possible for their models. Lastly, the information contained in this discussion will appear of value to academicians and researchers who will develop an acute awareness of the loss incurred in terms of explicative power, whenever relationships are solely modeled in a linear fashion, neglecting the consideration of interaction effects, which, albeit their non-linear character, tend to hold a considerable explanatory or predictive power, when used properly (Chin, et al., 2003; Schumacker & Lomax, 2004).

5 INTERACTION EFFECTS
Interaction effects, in general terms, are said to be “non-linear” (Kline, 2000, p. 1). These relationships are also understood as consisting in “moderator effects that occur, when, in their most basic form, the relation of one variable to another changes across the levels of a third” (p. 2). Another study (i.e., Jaccard & Turrisi, 2003) also conceptualizes interaction effects as being present when the influence of predictor variables over indicators is a function of the index of a “third” factor usually labeled “the moderator variable” (p. 3). Still concurring with the two previous definitions, one study (i.e., Chin, et al., 2003) introduces an encompassing conceptualization of the notion of interaction, by underscoring that such concepts as moderation and mediation are all expressions used to identify interaction effects under the big umbrella of “contingency theory” (p. 188). The idea of equating the notion of interaction effects to that of mediation and moderation is indeed a recurring one in the literature, and one which is underscored by a number of studies (Allen, et al., 2003; MacKenzie, et al, 1986; Priel & Shahar, 2000; Rosen-Grandon, et al., 2004; Sue-Chan & Ong, 2002). This, in turn, stresses the concept of interactions as one to be understood as being non-linear.

In the full version of this paper, we continue discussing these relationships, providing illustrations as well as examples spanning across various disciplines, in order to shed light on the usefulness of this process, as unearthed in the extant literature on SEM.

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The Connectionist Expert System Approach for Classification decisions in Health Care

Mohamed EL Etribi, Ph.D.
Kaplan University
38 Timbercrest Lane
South Setauket
NY  11720, USA
011-631-736-1317
meletribi@kaplan.edu

ABSTRACT

Expert Systems process knowledge sequentially, represent its explicitly and use deductive resonating. By contrast Neural Networks use parallel approach to stimulate human intelligence. ES and NN have each displayed some advantages and disadvantages. ES errors in classification are underassessment. NN errors are over assessment. The combination of the two systems into Connectionist Expert System will improve the classification of personnel.

Keywords
Artificial Intelligence, Expert Systems, Neural Networks & OR in health Services.

1. Introduction

The Clinical Laboratory Amendment (CLA’88) specifies the classification of Laboratory personnel working in clinical laboratories. The study will compare the classifications of personnel by ES, NN and the connectionist expert system developed by the author. The systems are developed by commercially available packages for ES and NN. Then ES&NN is designed for evaluating Cytology personnel. A questionnaire of fifty different cases which covers the twenty possible CLIA’88 codes was developed and sent to three hundred evaluators in the field of clinical laboratories. Eighty-six valid responses were received and analyzed.

Expert Systems use deductive reasoning in which the knowledge and facts were given to the system. Neural Networks use the inductive approach that is driven by data. NN and ES have different data requirements. ES requires that the knowledge be coded in advance as production rules. NN requires a massive amount of data in its raw form.

The integration of ES and NN has enabled the author to combine the advantages of these two different approaches. There are many different combinations for assembling the ES and NN systems. The personnel classifications are done in the NN and the unqualified cases will be connected to ES for further evaluations and to identify the causes of rejection.

ES and NN provide methods for formulating qualitative aspects of business problems. Although ES and NN have a common goal of simulating human intelligence, they use different methods. ES assumes that the brain is a black box and imitates the human reasoning process. It processes knowledge sequentially and represents explicitly using deductive reasoning. Learning takes place outside the system. By contrast NN trains the brain as a white box. NN uses parallel approach to simulate human intelligence. It represents knowledge implicitly and applies inductive reasoning. Learning takes place within the system. ES and NN integration provides a powerful tool for dealing with classification and pattern recognition problems. Both ES and NN aspire to imitate human intelligence.

2. Methodology

I developed the rules for VP-Expert to identify the different categories of cytology personnel based on CLIA-88 regulations. ES will give explanations for rejections and reasons for the different personnel classifications.

In this paper I investigated the different applications of Expert system, Neural Network and Connectionist Expert Systems in evaluating the cytology personnel according to CLIA’88 requirements. We can generalize and apply the study to the 300,000 technical personnel evaluated yearly according to CLIA’88 regulations. It can also expand to cover similar situations in different fields where personnel evaluations are required.
3. Discussion and Analysis

There are two areas in which the results will be presented in this paper. The first is the comparison of the performance of ES, NN, and ES&NN systems. The second is examination of the performance with human experts. A three grading system was used as follows: Underassessment, correct assessment and over assessment. Underassessment will decrease the number of qualified personnel who has the options of appealing for reevaluation. Some human evaluators are risk seeking, who tries to underestimate in their evaluations. Other evaluators are risk averts who avoid complaints. They tend to overestimate in their personnel evaluations. Unqualified cytology personnel will be introduced in the system. This will increase the error rates in cytology screening. These errors can cause death or injury to patients. Under evaluating cytology specimens will cause late treatments of cancer which can cause death. Overestimating cytology specimens can cause unnecessary surgery. Patients can lose their healthy organs due to these false evaluations. These errors will increase malpractice suits which increase the health care costs. These errors will increase malpractice suits which increase the health care costs. The introduction of artificial intelligent systems will ultimately decrease these errors in interpreting cancer cells due to employing only qualified personnel. Also, the cytology personnel evaluations will be more consistent, by applying these artificial intelligent systems.

4. Conclusions and future research

The advantages recognized from ES, NN, and ES&NN artificial systems are:

- They increase the efficiency of carrying CLIA’88 regulations by decreasing the time and minimizing human errors. Human experts can focus on other operations that require their special skills such as quality assurance and quality control requirements.
- They enhance consistency in decision-making, increasing both accuracy and precision of personnel evaluations. This will significantly reduce the number of unqualified personnel in the field of cytology. Ultimately it will greatly decrease the errors in screening cancer cells which will save lives.
- The utilization of Expert systems and Neural Networks technologies can be expanded to any classification and pattern recognition problems. They can be used for screening candidates for employment and for accepting students in universities. This will make a contribution to any multiple-criteria decision-making problems. It will also be used as training tool for new evaluators.

Several enhancements to these Artificial Intelligence programs can be designed to make them more useful:

- b. The applicant data will be updated continuously at any place and anytime through the network system. Due to the networking, the system can update its records. For example if a state revokes a license of a laboratory worker in one state he or she will not be able to work in another state.
- c. It will make it is easier for jobs relocations.
- d. A falsification in documents or information will be detected by comparing the different data throughout the network system.

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ABSTRACT
Successful Entrepreneurial behavior produces economic value. Hence, growth in rates of return informs entrepreneurship expressed as a percentage change in economic value. This paper examines the measurable rates of return produced by entrepreneurial organization. The authors employ data supplied by a NSF grant in a 2004 study produced by John Cochrane of the University of Chicago and a separate study by Michael Ewens, University of California. Data used by Cochrane and Ewens supports evidence that the rates of return on venture capital funds investing in early stage enterprise are significantly greater than returns on investments in mature firms in efficient markets. This study applies said data to the field of entrepreneurship to demonstrate the very high rates of return produced by entrepreneurial behavior during early periods of high growth. Annualized rates of return greater than 500% are reported, supporting the postulate that entrepreneurial organizational behavior can produce extraordinary multipliers of economic value that are substantially greater than the rates produced by mature firms. Empirical evidence of the extent and range of high rates of return are important to both investors and entrepreneurial practitioners as they require nominal values to set appropriate goals in business planning.

Keywords
Entrepreneurship, Venture Capital, Private Equity, Rates of Return

INTRODUCTION
Within this paper the authors specifically search for the highest rates of return produced over relatively short holding periods produced by investments in high-potential, fast-growing entrepreneurial ventures. The reported results are not intended to describe the returns to the average investor investing in the average (non-growth) entrepreneurial company. Average (non-growth) mean returns are usually not greater than returns available to nominal public equity investments. Shane, (2008, p. 103), writes, “… the financial returns that entrepreneurs earn on the capital they invest in their companies… on average… is the same as they would have gotten had they invested their capital in publicly traded stocks.” The recent average return on NASDAQ small stocks is about 14.2% (Shane, p. 20). Furthermore, if firm failures and shutdowns are included, the mean return is most likely negative. Shane acknowledges the returns on nominal entrepreneurial activities are low, he continues (p. 106), “The average outcome is negative…” Bygrave et al, (1989) also found that the mean return for venture funds were typically below 20%.

RESULTS
From Cochrane’s (2004) data, we report rates of returns without a sample selection correction. Cochrane states, (p. 20) “These must be the highest average returns ever reported in the finance literature...” From the data, we report the twenty highest rates of return in Table 1. Holding periods between evaluations are also reported.
TABLE 1
TWENTY HIGHEST RATES OF RETURN
1987-2000 VentureOne Database

<table>
<thead>
<tr>
<th>Rank</th>
<th>Company</th>
<th>Arithmetic Return</th>
<th>Annualized Return</th>
<th>Log Return</th>
<th>Log Ann. Return</th>
<th>Holding Period (days)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Yahoo</td>
<td>136,738%</td>
<td>122,249%</td>
<td>722%</td>
<td>711%</td>
<td>371</td>
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<tr>
<td>2</td>
<td>Juniper Networks</td>
<td>76,209%</td>
<td>792%</td>
<td>664%</td>
<td>219%</td>
<td>1,108</td>
</tr>
<tr>
<td>3</td>
<td>FreeMarkets</td>
<td>65,784%</td>
<td>505%</td>
<td>649%</td>
<td>180%</td>
<td>1,317</td>
</tr>
<tr>
<td>4</td>
<td>Cerent</td>
<td>42,080%</td>
<td>1,062%</td>
<td>604%</td>
<td>245%</td>
<td>900</td>
</tr>
<tr>
<td>5</td>
<td>Steel Dynamics</td>
<td>28,878%</td>
<td>12,651,064+E6%</td>
<td>567%</td>
<td>2,556%</td>
<td>81</td>
</tr>
<tr>
<td>6</td>
<td>Redback Networks</td>
<td>22,042%</td>
<td>672%</td>
<td>540%</td>
<td>204%</td>
<td>965</td>
</tr>
<tr>
<td>7</td>
<td>Qtera</td>
<td>18,573%</td>
<td>5,525%</td>
<td>523%</td>
<td>403%</td>
<td>474</td>
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<tr>
<td>8</td>
<td>Selectica</td>
<td>17,452%</td>
<td>406%</td>
<td>517%</td>
<td>162%</td>
<td>1,164</td>
</tr>
<tr>
<td>9</td>
<td>Portal Software</td>
<td>16,119%</td>
<td>411%</td>
<td>509%</td>
<td>163%</td>
<td>1,139</td>
</tr>
<tr>
<td>10</td>
<td>Data Critical</td>
<td>15,528%</td>
<td>117%</td>
<td>505%</td>
<td>77%</td>
<td>2,387</td>
</tr>
<tr>
<td>11</td>
<td>Scient</td>
<td>14,689%</td>
<td>3,266%</td>
<td>500%</td>
<td>352%</td>
<td>519</td>
</tr>
<tr>
<td>12</td>
<td>Exodus Communications</td>
<td>13,202%</td>
<td>1,044%</td>
<td>489%</td>
<td>244%</td>
<td>733</td>
</tr>
<tr>
<td>13</td>
<td>Oni Systems</td>
<td>13,107%</td>
<td>605%</td>
<td>488%</td>
<td>195%</td>
<td>913</td>
</tr>
<tr>
<td>14</td>
<td>ACLARA BioSciences</td>
<td>12,793%</td>
<td>170%</td>
<td>486%</td>
<td>99%</td>
<td>1,786</td>
</tr>
<tr>
<td>15</td>
<td>Covad Communications</td>
<td>12,788%</td>
<td>1,826%</td>
<td>486%</td>
<td>296%</td>
<td>600</td>
</tr>
<tr>
<td>16</td>
<td>Ciena</td>
<td>12,150%</td>
<td>446%</td>
<td>481%</td>
<td>170%</td>
<td>1,035</td>
</tr>
<tr>
<td>17</td>
<td>Ariba Technologies</td>
<td>10,406%</td>
<td>448%</td>
<td>465%</td>
<td>170%</td>
<td>999</td>
</tr>
<tr>
<td>18</td>
<td>VA Linux Systems</td>
<td>10,189%</td>
<td>5,982%</td>
<td>463%</td>
<td>411%</td>
<td>412</td>
</tr>
<tr>
<td>19</td>
<td>eToys</td>
<td>9,900%</td>
<td>2,233%</td>
<td>461%</td>
<td>315%</td>
<td>534</td>
</tr>
<tr>
<td>20</td>
<td>Actuate Software</td>
<td>9,874%</td>
<td>171%</td>
<td>460%</td>
<td>100%</td>
<td>1,689</td>
</tr>
</tbody>
</table>


Clearly, successful entrepreneurship in ventures exhibiting potential hyper-growing yields fantastic growth in economic value occurring over very short holding periods, yielding very high calculated rates of return. Yahoo’s non-annualized log returns of 722% are extremely high with an arithmetic return of 136,738% a $1 investment produced a gain of $1,367 in just over one year’s time.

In table 2, we present summary annualized arithmetic, log returns and median returns of all 3,595 firms.
TABLE 2

ANNUALIZED MEAN OBSERVED RATES OF RETURN OF FIRMS REACHING IPO OR ACQUIRED, N= 3,595 ALL AGES*

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Arithmetic Return:</td>
<td>698%</td>
</tr>
<tr>
<td>SD:</td>
<td>3,282%</td>
</tr>
<tr>
<td>Annualized Arithmetic Return:</td>
<td>3,700,000,000%</td>
</tr>
<tr>
<td>SD:</td>
<td>220,000,000,000%</td>
</tr>
<tr>
<td>Arithmetic Median:</td>
<td>184%</td>
</tr>
<tr>
<td>Log Return:</td>
<td>108%</td>
</tr>
<tr>
<td>SD:</td>
<td>135%</td>
</tr>
<tr>
<td>Annualized Log Return:</td>
<td>72%</td>
</tr>
<tr>
<td>SD:</td>
<td>148%</td>
</tr>
</tbody>
</table>

*Cochrane (2004), Table 6, P40. All holding investment periods.

We conclude that extreme rates of return exist for successful, surviving, and well-financed ventures. These are important results for business planning, investors and students of entrepreneurship.

These data answer a student’s frequent question; “What financial result can I expect if I am highly successful in organizing a innovative, fast-growing firm?” Clearly, capital can be multiplied at rates exceeding 500% in less than one-year’s time. From Cochrane’s data we investigate Rates of Return by the age of the investment and present results in Graph 1.

GRAPH 1

Average Log Rate of Return of IPO/Aquired Firms by Investment Age
CONCLUSIONS

Very high rates of return in excess of 500% are reported for new ventures. The construct of rate of return is an important indicator of entrepreneurship.

Ultra-successful entrepreneurship yielding very high rates of return are rare events. Less than 2% of professional investors in new start-ups are successful in producing ultra-high rates of return. Shane (2008) writes that these hyper-return events are rare, and likely less than 1% of all start-up entrepreneurial ventures.

Cochrane (2004, P.8) states “A few projects with “normal” returns in a very short time have astronomical annualized returns... a small number of observations... get a huge positive or negative return...”. Clearly there is a goal and hope for the creation of wealth by lucky or skilled entrepreneurs.

REFERENCES


Ewens, M., 2009, A New Model of Venture Capital Risk and Return, Department of Economics, University of California San Diego.


ABSTRACT
Prior studies document that stock prices continue to drift in the direction of the initial shock of an earnings surprise for a period of between 3-12 months. This post-earnings-announcement drift (PEAD) represents a seminal finding of apparent investor underreaction to news. Our study presents a psychological explanation for the drift: earnings’ lack of salience. Earnings information lacks salience because it usually lacks vividness, i.e. color, drama, spice. Consequently, investors do not pay adequate attention to the implications of an earnings surprise. In contrast to earnings news, drug companies often announce product news that tends to be rather vivid. We expect that, in contrast to their underreaction to earnings news, investors will overreact to such salient and vivid product news. We find that while investors underreact to earnings news, as manifested be post-earnings-announcement drift, they overreact to product news in the form of subsequent stock-price reversals of the initial reaction.

Keywords
Stock market underreaction and overreaction, post-earnings-announcement drift, drug industry, product news, information salience

1 INTRODUCTION
Various accounting studies document post-earnings-announcement drift in stock prices. This apparent violation of market efficiency has attracted considerable study, most notably by Bernard and Thomas (1990) who show that investors underreact because they do not fully appreciate the serial correlation in quarterly earnings changes. Why do investors and analysts underreact to the predictable autocorrelation in earnings changes? This study proposes a psychological explanation based on research in social psychology, cognitive psychology, and behavioral finance.

There exists a stream of literature in social and cognitive psychology on information salience, which refers to information qualities that attract disproportionate, unwarranted attention. The social psychology literature identifies one aspect of salience – vividness, while the cognitive psychology literature identifies another aspect – strength/consistency. The thesis of this study is that earnings data lack salience on both counts.

One reason for lack of salience, alluded to by Odean (1998), is that the earnings number provides a summary measure of firm performance rather than an emotionally interesting story such as the discovery of a miracle drug. Social psychologists find that people do not pay enough attention to abstract, summary data and pay too much attention to concrete “vivid” signals.

Another reason why an earnings surprise may lack salience is that while it represents a credible indicator of firm performance relative to expectations, investors may discount its relevance because it is a summary measure. For example, a company may report a positive earnings surprise accompanied with various additional pieces of good and bad news. Even though investors know (or should know) statistically and empirically to pay keen attention to the earnings surprise, it is human nature to discount a summary statistic when the data is not 100 percent congruent with the summary information (Griffin and Tversky, 1992). Product news, in contrast to earnings announcement, are more likely to be uniformly good or bad.

For both reasons, we expect there to be underreaction to earnings news, but no underreaction to product news. In fact, based on the social and cognitive psychology literature, we expect overreaction to product news.

The pharmaceutical and biotechnology industries feature characteristics that make these firms well suited to serve as the empirical setting for this study. The success of a few key products can drive a drug firm’s profits for years, and even decades, to come. These products in turn undergo a series of important news events beginning with their discovery and ending with legal challenges to their patents. Because of the vivid nature of such product news, the hypothesis predicts that investors underreact less to product news than to earnings surprises, and possibly even overreact to product news.
The sample consists of the 14 largest drug firms each year from 1995 to 2001, for a total of 20 unique firms and 98 firm-years. The small sample size belies its outsized economic significance, as the sample accounted for 9 percent of the $13.04 trillion in total U.S. stock-market capitalization at the end of 2001. To test the first hypothesis, I identify high and low earnings surprises from I/B/E/S, and good and bad product news from The Wall Street Journal. Examples of good and bad product news include the approval of a new drug by the U.S. Food & Drug Administration (FDA) and the announcement of a disappointing clinical trial, respectively. Such product stories are not abstract or summary data like earnings, but relate to specific, concrete developments and are therefore vivid and salient. Following previous research, we test for under- or overreaction by measuring post-event returns, and we find that investors underreact to earnings surprises but overreact to product news. Specifically, returns in the 70 trading days after high earnings exceed returns after low earnings by 3.20 percentage points. In contrast, returns after good product news fall short of returns after bad product news by 2.74 percentage points, indicating initial overreaction to product news. These findings are statistically significant and consistent with the predictions of the hypothesis.

There exists an extant literature of studies, including Chan (2003), Daniel and Titman (2006), Loughran and Marrietta-Westberg (2005), and Pritamani and Singal (2001) that compare future returns after earnings and non-earnings news. Our study’s differential contribution is that it motivates its hypothesis with the notion that earnings differs from product news due to its vividness.

2 HYPOTHESIS

Our hypothesis is that while investors underreact to earnings news of drug firms, they overreact (or at least underreact less) to product news of such firms. Underreaction is present when the subsequent stock price movement after the initial reaction continues to drift in the same direction as the initial reaction. Such a drift implies that the initial reaction was inadequate and therefore constituted an underreaction. Overreaction is present when the subsequent stock price movement after the initial reaction partially or fully reverses the initial reaction. Such a reversal implies that the initial reaction was excessive and therefore constituted an overreaction.

We expect an overreaction to product news because of its vivid nature. Nisbett and Ross (1980) define the nature of vivid information and present possible reasons why people overweight vivid information relative to pallid information. They define vivid information as (i) emotionally interesting; (ii) concrete and imagery-provoking – providing detail about actors, actions, and situational context; and (iii) proximate in a sensory, temporal, or spatial way. They also offer several explanations for why people react more to vivid information than to pallid information: (i) vivid situations provide a larger quantity of information and therefore receive more attention and time in thought; (ii) vivid information recruits additional vivid information already stored in memory; and (iii) more vivid information will be pondered and rehearsed.

Hypothesis

Investors underreact to earnings news and overreact to product news of drug firms.

3 RESEARCH DESIGN

The sample consists of the 14 largest profitable, U.S.-based drug firms (Compustat SIC 2834 and 2836, pharmaceutical and biotechnology) in each year from 1995 to 2001. We limit the sample to these firms because, as shown below, extensive Wall Street Journal coverage of product news is limited to the 14 largest firms. Table 1 ranks the 14 firms by end-of-year market value and indicates the median number of product stories (described later) for each rank. The table also indicates a median of zero product stories for the fifteenth largest firm. The sample therefore only includes the 14 largest firms and consists of 98 firm years (14 firms per year for seven years) representing 20 unique firms.

Table 1  
Description of sample - 14 largest profitable, U.S.-based drug firms from 1995 to 2001 (98 firm years)

<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>MRK</td>
<td>MRK</td>
<td>MRK</td>
<td>MRK</td>
<td>MRK</td>
<td>MRK</td>
<td>PFE</td>
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<tr>
<td>2</td>
<td>JNJ</td>
<td>JNJ</td>
<td>JNJ</td>
<td>PFE</td>
<td>PFE</td>
<td>JNJ</td>
<td>MRK</td>
</tr>
<tr>
<td>3</td>
<td>BMY</td>
<td>BMY</td>
<td>BMY</td>
<td>BMY</td>
<td>BMY</td>
<td>JNJ</td>
<td>MRK</td>
</tr>
<tr>
<td>4</td>
<td>ABT</td>
<td>PFE</td>
<td>PFE</td>
<td>JNJ</td>
<td>JNJ</td>
<td>PFE</td>
<td>BMY</td>
</tr>
<tr>
<td>5</td>
<td>PFE</td>
<td>ABT</td>
<td>LLY</td>
<td>LLY</td>
<td>LLY</td>
<td>LLY</td>
<td>LLY</td>
</tr>
<tr>
<td>6</td>
<td>AHP</td>
<td>LLY</td>
<td>ABT</td>
<td>ABT</td>
<td>SGP</td>
<td>WLA</td>
<td>AHP</td>
</tr>
<tr>
<td>7</td>
<td>LLY</td>
<td>AHP</td>
<td>AHP</td>
<td>AHP</td>
<td>SGP</td>
<td>AHP</td>
<td>AMGN</td>
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<td>8</td>
<td>SGP</td>
<td>SGF</td>
<td>SGF</td>
<td>SGF</td>
<td>SGF</td>
<td>AHP</td>
<td>PNU</td>
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<tr>
<td>9</td>
<td>WLA</td>
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<td>WLA</td>
<td>WLA</td>
<td>WLA</td>
<td>AHT</td>
<td>WLA</td>
</tr>
<tr>
<td>10</td>
<td>AMGN</td>
<td>AMGN</td>
<td>PNU</td>
<td>PNU</td>
<td>PNU</td>
<td>AHP</td>
<td>AMGN</td>
</tr>
<tr>
<td>11</td>
<td>MKC</td>
<td>WLA</td>
<td>AMGN</td>
<td>AMGN</td>
<td>AMGN</td>
<td>DNA</td>
<td>IMNX</td>
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<tr>
<td>12</td>
<td>DNA</td>
<td>RPR</td>
<td>RPR</td>
<td>DNA</td>
<td>DNA</td>
<td>PNU</td>
<td>AGN</td>
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<tr>
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<td>PNU</td>
<td>DNA</td>
<td>DNA</td>
<td>CHIR</td>
<td>BGEN</td>
<td>IMNX</td>
<td>AZA</td>
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<tr>
<td>14</td>
<td>RPR</td>
<td>CHIR</td>
<td>BGEN</td>
<td>AZA</td>
<td>CHIR</td>
<td>BGEN</td>
<td>MEDM</td>
</tr>
<tr>
<td>15</td>
<td>CHIR</td>
<td>BGEN</td>
<td>AGN</td>
<td>BGEN</td>
<td>AGN</td>
<td>MEDM</td>
<td>IDPH</td>
</tr>
</tbody>
</table>

Legend

ABT (Abbott Laboratories), AGN (Allergan), AHP (American Home Products), AMGN (Amgen), AZA (Alza), BGEN (Biogen), BMY (Bristol-Myers Squibb), CHIR (Chiron), DNA (Genentech), IDPH (Idexx Pharmaceuticals; not included in the sample but listed as the 15th largest firm for 2001), IMNX (Immunex), JNJ (Johnson & Johnson), LLY (Eli Lilly), MEDM (MedImmune), MKC (Marion Merrell Dow), MRK (Merck), PFE (Pfizer), PNU (Pharmacia & Upjohn), Upjohn was succeeded by Pharmacia & Upjohn, which was in turn succeeded by Pharmacia.), RPR (Rhone-Poulenc Rorer), SGF (Schering-Plough), WLA (Walter-Lambert).

The earnings data consists of 384 quarterly earnings announcements during 98 firm years. Some firms have less than four announcements per year because these firms were acquired by another firm during the year. Table 2 assigns the 384 earnings observations to low (bottom two quintiles),
intermediate, and high (top two quintiles) groups of unexpected earnings. I/B/E/S is the source of actual earnings, expected earnings (based on the three most recent forecasts), and price deflators.

Table 2
Description of sample, earnings surprises

<table>
<thead>
<tr>
<th>quintiles</th>
<th>n</th>
<th>Mean</th>
<th>median</th>
<th>Min</th>
<th>Max</th>
</tr>
</thead>
<tbody>
<tr>
<td>(low UE)</td>
<td>1</td>
<td>154</td>
<td>-0.00024</td>
<td>-0.00005</td>
<td>0.00004</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>76</td>
<td>0.00009</td>
<td>0.00009</td>
<td>0.00004</td>
</tr>
<tr>
<td>(high UE)</td>
<td>4</td>
<td>154</td>
<td>0.00058</td>
<td>0.00035</td>
<td>0.00015</td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>76</td>
<td>0.00009</td>
<td>0.00009</td>
<td>0.00004</td>
</tr>
<tr>
<td>overall</td>
<td>384</td>
<td>0.00015</td>
<td>0.00009</td>
<td>-0.00037</td>
<td>0.00043</td>
</tr>
</tbody>
</table>

The 554 product news stories were obtained from The Wall Street Journal. Panel A of table 3 indicates how these stories were identified. The Wall Street Journal Index contains 2,391 entries for the 98 firm-years in the sample. Of these, I retain the 933 product-specific stories and discard the remaining stories, which relate to corporate events such as earnings, dividends, and mergers. Of the 933 stories, we eliminate 337 because they were not unambiguously good or bad news (the nature of which is described in panel B below). We eliminate another 33 stories that appeared on the day following another product story for the same firm. A further 9 stories are eliminated due to redundancy (another product story with the same tone on the same day) or contradiction (another product story with a contradictory tone on the same day, in which case both are eliminated).

Table 3
Description of sample, product news

Panel A indicates how the 554 product stories were identified from The Wall Street Journal. Panel B indicates the content and tone of these product stories. Examples of FDA actions: (i) FDA approves or rejects an application for a new drug, a new use, or a new formulation, (ii) FDA advisory-panel recommends approval or rejection of an application, (iii) FDA clears a new substance for clinical trials, (iv) FDA warns the firm about marketing practices, and (v) FDA orders the removal of a drug from the market. Examples of news about laboratory tests and clinical trials: (i) an experimental compound performs well or poorly in tests on laboratory animals or in human clinical trials, (ii) a competitor or an independent party reports that the firm’s drug performed well or poorly compared to a competing drug. Examples of intellectual-property news: (i) legal challenge to a firm’s patent, (ii) accusation of patent infringement against the firm, (iii) legal ruling on a patent challenge or accusation. Examples of other product-specific news: (i) product tampering and liability, and (ii) voluntary product withdrawal.

The remaining 554 product stories represent the product news sample for the test of the first hypothesis. The maximum number of stories per firm-year is 17, and the minimum is zero (5 instances). Panel B summarizes the content of these stories. Positive and negative FDA actions such as approvals and rejections of new drugs account for a respective 163 and 55 observations (combined 39 percent of the total). Positive and negative results from laboratory tests and clinical trials account for 115 and 57 observations (combined 31 percent of total). Positive and negative intellectual-property news, such as successful defenses and challenges to patents, account for 30 and 32 observations (combined 11 percent of total). Other positive and negative product news account for 22 and 80 observations (combined 18 percent of total). Examples of ‘other’ stories include news about product liability and voluntary product withdrawals. The 554 product news observations, along with the 384 earnings announcements, will be used to test the first hypothesis.

4 REGRESSION MODEL
The model pools into a single regression those observations representing good product news, bad product news, high earnings surprises (top two quintiles of UE), and low earnings surprises (bottom two quintiles of UE). The dependent variable is future returns, and the return period begins after a contemporaneous period which allows for initial reaction. Higher subsequent returns after high earnings than after low earnings would indicate underreaction to earnings. Similarly, higher subsequent returns after good product news than after bad product news would indicate underreaction to product news. Overreaction to product news would be indicated by lower subsequent returns after good product news than after bad product news.
The dependent variable of future returns represents returns in the 70 days after the dissemination of the product news or earnings announcement. As stated earlier, I choose a window of 70 day because Bernard and Thomas [1990] find that a substantial portion of the drift occurs around the next earnings-announcement date, and there are approximately 63 trading days between earnings announcements. For earnings observations, the post-event return period begins two days after the IBES announcement date to ensure that the dependent variable measures post-event drift rather than contemporaneous reaction. For product news, the post-event period begins on the day after the Wall Street Journal publication date.1

\[ RET_{70it} = b_0 + b_1HIGHEARN_{it} + b_2PROD_{it} + b_3GOODPROD_{it} + e_{it} \]  

(1)

where \( RET_{70it} \) = 70-day buy-and-hold returns for firm \( i \) beginning two days after the I/B/E/S announcement date (\( t \)) for earnings news and on the day after the Wall Street Journal publication date (\( t \)) for product news, adjusted for value-weighted market index. \( HIGHEARN_{it} \) = a dummy variable that equals one if firm \( i \) reported high unexpected earnings at \( t \) (in the top two quintiles of unexpected earnings), and equals zero otherwise. \( PROD_{it} \) = a dummy variable that equals one if firm \( i \) reported good or bad product news at \( t \), and zero otherwise. \( GOODPROD_{it} \) = a dummy variable that equals one if firm \( i \) reported good product news at \( t \), and zero otherwise.

Hypothesis: \( b_1 > 0, b_3 < 0 \)

5 EMPIRICAL FINDINGS AND CONCLUSIONS

Panel A of Table 4 presents two-day contemporaneous and 70-day future market-adjusted returns for earnings and product news. Investors react contemporaneously to both earnings news and product news, they underreact to earnings news, and they overreact to product news. The first two columns indicate higher contemporaneous returns for high earnings and good product news than for low earnings and bad product news. The contemporaneous reactions indicate that the research design successfully identified high and low earnings as well as good and bad product news.

---

1 The data sources for earnings and product news, IBES and the Journal, have differing levels of timeliness. The IBES announcement date represents the actual release date, often after the close of trading for the day. The contemporaneous reaction therefore takes place in day \( t+1 \), and the measurement period for future returns begins in day \( t+2 \). For product news, contemporaneous reaction is complete by the end of the publication date, since the Journal appears before the start the day’s trading. Day \( t+1 \) therefore begins the measurement period for future returns for product news.

---

Table 4

Empirical results, Contemporaneous and future returns for earnings and product news (308 earnings and 554 product news observations)

Panel A presents contemporaneous and future returns for earnings and product news. The 308 earnings observations represent the bottom two and top two quintiles of unexpected earnings (from panel B of table 2), and the 554 product news observations represent good and bad product news (from panel C of table 3). The first two columns present contemporaneous two-day returns for earnings and product news. The contemporaneous period for earnings news consists of the day of and day after the I/B/E/S announcement date, and the contemporaneous period for product news consists of the day before and day of The Wall Street Journal publication date. The third and fourth columns present returns for the 70 trading days that begin after the contemporaneous two-day period ends. Returns are buy-and-hold, adjusted for the value-weighted market index. Some firms were bought out and therefore lack 70 days of future returns, and in such cases future returns consist of returns over a period of less than 70 days (excluding these observations does not affect the inferences or robustness of the results). Panel B presents regression results of model (1).

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The third and fourth columns present the empirical data relevant to model (1). The third column indicates underreaction to earnings, which manifests as higher returns after high earnings than after low earnings (difference of 3.20 percentage points, t-statistic of 1.85). The fourth column indicates overreaction to product news, which manifests as lower returns after good product news than after bad product news (difference of 2.74 percentage points, t-statistic of 2.16). The reversals in returns for product news indicate that the initial, contemporaneous returns constituted an overreaction. These results are consistent with the prediction of the first hypothesis.
At first glance, it seems puzzling that future market-adjusted returns are positive for all four types of news. To understand why this is so, I measure market-adjusted returns for the sample firms over the entire 1995-2001 period and discover that the returns exceeded the market by an average of 3.08 percentage points during all possible 70-day return periods. If one subtracts an additional 3.08 percent constant from the market-adjusted returns in the third and fourth columns, the returns after low earnings and good product news turn negative, and this is consistent with underreaction to earnings and overreaction to product news.2

Panel B of table 5 presents the results of the model (1) regression of future returns on the HIGHEARN, PROD, and GOODPROD dummies. The coefficient on HIGHEARN \((b_1 = 3.20)\) indicates underreaction to earnings surprises, while the coefficient on GOODPROD \((b_2 = -2.74)\) indicates overreaction to product news. An F-test confirms the first hypothesis that investors underreact more to earnings news than to product news and rejects the null \(h_1 \leq b_1\) (p-value = 0.0027).

Interestingly, the findings suggest that investors overreact to product news but then proceed to ‘overcorrect’ their initial overreaction. Note that the difference in contemporaneous returns for good versus bad product news is 2.74 percentage points, but the 2.74 percentage-point reversal in the subsequent 70 days exactly offsets the contemporaneous reaction. The size of the correction therefore seems perplexingly high given the size of the initial reaction.

We conjecture two explanations for the apparent overcorrection of the initial overreaction. One explanation is that two-day returns understate the initial reaction because news leakage before the Journal publication date. To investigate this possibility, I examine the combined returns for the contemporaneous period plus the 70 days prior to the contemporaneous period, and find that these combined contemporaneous and pre-event returns are 5.27 percentage points higher for good product news than for bad product news (untabulated). Seen in this context, the size of the correction appears more reasonable, as it reverses only 52 percent of the initial reaction during the pre-event period and the contemporaneous period.

\[2 \text{ Returns for these firms were also considerably larger than for the industry as a whole, and so industry adjustment would be no more effective than market adjustment. An alternative adjustment of individual returns by the sample average is not viable since the sample consists of only 14 firms at a time, and extreme returns for any of the other 14 firms would dramatically effect the adjusted returns for the other 13 firms.} \]
Suggested Track: Economic Education

Yesterday, Today and Tomorrow
How Can We Distribute Production When Paid Jobs Are No Longer Needed?

Elliott Frauenglass, PhD
Cornell University, efglass10@gmail.com

ABSTRACT

In the next 50 years (the need for) almost all production and most office jobs will have been eliminated by automation and computerization. Service jobs (teaching, landscaping, plumbing, carpentry, electrical and automotive) will continue to grow, but not enough to replace more than a small fraction of the jobs lost. How can government help? Our government must start discussing and passing laws today, both for educating people to live fulfilled lives in that future and for distributing and circulating money as needed to accomplish that. This paper calls on all educated people, especially economists, to make suggestions for Congress and the Administration. Ideas are needed for a transition without violence, to a bright future civilization where people do not have to work except for their own fulfillment.

KEY TERMS:

INTRODUCTION

Creating Jobs has been the focus of the three NBEA Conference Papers from 2009-2011 in this series. Jobs and income from other sources are a big concern for most people today.

The first paper, in NBEA 2009, described the problem where developed countries around the world, including the US, had trade deficits and were losing jobs to low wage - developing countries. A simple solution that does not violate international trade agreements, (originally proposed to Congressional representatives in 1990) was offered that would keep trade free and balanced. It was called TNT, the Trade Normalization Tax: If you gradually increased a tax on foreign purchases of property in any specific developed country, the exchange rate of that country’s money would decrease until that country’s trade became in balance! The second paper, in NBEA 2010, addressed a different job-killing problem: mechanization and automation were eliminating people’s jobs around the world in both developed and developing countries! Even in poor countries, machinery was replacing people, some of whom were earning only pennies per hour! Many people are searching for ideas for jobs that cannot be replaced by automation. Of the proposals listed, we strongly recommended modern, hi-speed train projects using magnetic trains, because of the large number of jobs that would be created quickly, and for other reasons below. Here is a summary with additional information, which has been sent to Congress to help get the project moving:

Magnetic trains were invented in America more than 50 years ago! And they were approved twenty years ago by the US Department of Transportation! More information and videos are available at www.NAMTI.org.

Magnetic trains are already in use in China and other countries. They are much smoother (no vibration), much faster, cheaper to operate and much safer than our existing trains. For example, magnetic trains don’t slip on ice, are not blocked by snow and do not lose parts, like the old-fashioned (metal wheels on metal rails) trains do, because of vibration. Because of this vibration, the steel wheel-steel-rail trains have 20 times as much down time cost for maintenance and safety.

Best of all, the enthusiasm and pride of Americans everywhere will be tremendous, because, magnetic train technology can get America, BACK INTO SPACE, by cutting out 90% of the cost! Unfortunately, ALL current Hi-Speed Train Projects in the US are planning to use the same kind of heavy steel wheel-steel rail trains that were in use in 20-150 years ago. Out-of-control political lobbying, instead of compromising by both the steel wheel promoters and the magnetic train promoters, is the cause. The steel wheel-steel rail trains will always be used for freight, because magnetic trains can’t be used for heavy loads! But to keep our country from falling further behind, Steel Wheel-Steel Rail companies should support now, a few small magnetic train projects on the condition that they can participate and gain the experience to be able to compete in that field in the
future. Let’s be patriotic, people! Incidentally, the safe high speed of the new steel/steel trains is 85 miles per hour, vs. 300 mph for the magnetic train (which has been operating continuously in Shanghai, China for three years.) Many countries in Europe and Asia have tested or are testing these modern magnetic trains. China has offered to help the United States get started! Let’s get back on track for America and catch up with the rest of the world!

1. WHAT MOTIVATES PEOPLE?

People in America are more concerned today about getting and holding their jobs than at any time in the last 75 years. Any public official or politician who helps provide Americans with more and better jobs today will earn lasting support from the voters.

What kind of jobs do people want? To help answer that, we must ask, “What motivates people?” Abraham Maslow, an American psychologist, wrote about this subject. Maslow gave us a simple summary of the human needs that drive our life’s actions. He put them in a pyramid with Safety at the bottom and Self Actualization at the highest point.

From this rough diagram we can see that safety comes first, safety from wild animals, earthquakes, war, criminals, and things that can kill you and your family, are most important. After that, in number 2, we want our food, clothing and shelter to be adequate, - and some psychologists include, romance and raising a family. Number 3 means a job, church or social organization where you are accepted and allowed to participate with other members in the workforce, organization or team. Number 4 means you did a good job or something great for the community or the civic or other groups you are in, - and they give you an award, or your wife bakes a special pie for you to show that she appreciates you for repairing the garage door – or you get a promotion or a raise at work – or you just feel appreciated for helping people in your church, school or community.

Number 5, self-actualization is often used to describe people who do great things in art, literature, science, philosophy and other fields, - not because they expect any fame or remuneration, - but because they feel in their own spirit, mind or soul, that these things should be done and/or that they should do them. Our purpose here widens the definition so that people in the future economy should/must have opportunities to do their own art, poetry, sports, craft work, gardening, go exploring, climb mountains, do body building, and so forth. The definition I prefer for self-actualization is “to satisfy our built-in curiosity by doing and experiencing as much as possible without hurting other people. It can also include doing things for other people without desiring or experiencing appreciation, except in your own mind.

There are several basic guidelines that we can draw from the first four levels of this diagram: For example: Government and society will have conflicts if their people are facing a war that they don’t support. If there is discrimination in jobs or public facilities, there will be conflicts. And, if jobs or alternate incomes are NOT available for large numbers of families, there will be conflict. And remember, in the American democracy, the people are in charge (through their representatives), so…. We can give suggestions to our representatives in the House and Senate and offer solutions to some problems, BEFORE they occur. That’s where we, economists, and others can help.

Our suggestions should be based on exchange of ideas representing all views. This will help America and other countries to peacefully adapt to an ever more civilized world in the future, where work and wages are less and less common, yet things that we need or want are more plentiful, but food, clothing and shelter and many things to possess or experience are available just for asking for them. (For example, free internet and drinking fountains are available in many communities.) As economists looking at the future, we have to gather information by posing questions to people on all sides of an issue:

2. CAN CONGRESS MODIFY U.S. LAWS TO HELP AMERICAN FAMILIES WHO ARE FACING THE BIGGEST DECREASE IN JOBS AND WORKERS NEEDED IN TO PRODUCE GOODS AND SERVICES?

People need to be motivated and doing jobs that are useful and worthwhile, and that they believe are useful and worthwhile. New jobs and new kinds of employment need to be created. If nothing is done, then more and more families will have no wage-earning employment. Without enough new job creation, there is a chance that there could be violence developing, as in the Luddite fight against the industrial revolution in England, or even worse, extreme violence, as in the French Revolution, when a shortage of bread overthrew and killed the monarchy and led to Napoleon’s war throughout Europe.

The United States of America is a government “Of The People, By The People and For The People,” according to
the Declaration of Independence, which founded this country 235 years ago, and the Constitution, which was ratified by all thirteen original states. It is not just a government for the rich people, and not just for the poor people. It is for all the people. It is a representative government wherein all of the adult people elect the people who make the laws (Congress) and the people who administer the laws (the President, Governors, Mayors and so forth.) And an independent court system was established to make sure that the laws passed and administered did not violate the Constitution.

Congress, representing all the people, can pass as many laws as are needed for America to make a smooth transition to the future where most workers (in production and service jobs) will not be needed. Congress has the authority to make laws governing Inheritance taxes, Income Taxes, Property Taxes, and Distribution of Benefits. The objective is to preserve our country with freedom, justice and opportunity for all, not just for the very wealthy. This discussion has been going on since the founding of our country. Remember to ask people on all sides of a question, before making up your own mind. Here are some suggestions regarding today’s situation, to add to the discussion:

**INHERITANCE TAXES:** Inheritance laws in the US vary from state to state in the amount that can be given to an heir without being taxed. It might be desirable to set a federal limit on that. The goal is to prevent individuals from abusing power over others. Generally, having to earn large amounts of money teaches a lot more respect for others, than having the same amount of money given to you. Without a law like that it might result in a small ultra-elite inheriting enough money to run the country through control of politicians and

**INCOME TAXES:** It is a normal tendency for some people who earn millions or billions of dollars to feel that they are self-made and owe almost all of their success to their own intelligence and hard work. But even those people would have to admit that they couldn’t have made such a success in the middle of a desert or in most of the other countries of the world. The system that a person achieves success in is also responsible for his or her success. The place in which a person achieves success, is largely responsible for that success. Our country with all of its natural resources, its people, its government and economic systems is largely responsible for the success of its rich people. That said, Congress, which represents all of the American people and their country, should hold open hearings on how much to increase taxes on the wealthy, because other people in our economy are suffering. By suffering we mean lack of food, clothing, shelter, medical and old age care and educational and training opportunities to live a full life. The argument that the government should reduce wasteful spending by becoming more efficient so they can cut taxes does not address the need to increase help to our poorer citizens. It does not increase jobs for the unemployed. Reducing government expenditures by making government more efficient always means laying people off, which creates more unemployment.

The claim that the rich people are the “job creators” is false. It’s not nearly as bad as calling Hitler a humanitarian, but it is false. When companies make more money, they do it by spending less on labor, usually by using automation and computers to reduce the need for human workers. They not only lay off their own workers, but they successfully compete with other companies and force the other companies to reduce expenses by laying off some of their workers, too. Big corporations give bonuses and promote their executives for laying people off (reducing labor costs, and sometimes closing whole plants). [In the extreme – in the far future - you could speculate that one person could own a machine that supplied all the food, and goods and services at lowest cost for all the people in his state, and then nobody else would have a job.] The purpose of this paragraph is to emphasize that we need new kinds of employment and new kinds of distribution of goods and services to unemployed people, because unemployment is getting out of control, for the unprecedented reasons of automation and computerization and the various improved efficiencies that go with them.

The general feeling of people is that the rich get richer and the poor get poorer, and that “it will be harder for a rich man to get into heaven, than for a camel to go though the eye of a needle”. However, many rich people set up foundations and donate large amounts of tax deductible money to help the poor through education and other worthy methods. These tax deductions are alternate methods of paying taxes and should still be allowed.

A big problem today, is that groups of rich people support politicians and hire political promoters to sell to the public, the idea that the rich are paying too great a share of the taxes that support the government. The promoters are out of control, because they are not paid to make sure that families stay above the poverty level, or that poor children have a chance at a better education and a good life. It is not a balanced argument. If the rich are paying a larger share of taxes, it is because the poor are paying a smaller share, which, of course, is because the poor are earning less money, have greater unemployment, etc. So the argument should not be to tax the poor more, and reduce their benefits more, but to get jobs for the unemployed poor and better jobs for the rest. Then they can pay a larger share of the taxes than they
are paying now. If a rich man hires workers to run his factory, and if the workers are almost below the poverty line, the answer is not to pay the workers less, or lay off some, or tax them more. The answer is to increase sales so that the company earns more and hopefully gives raises to the workers, so that everyone earns more.

Distribution of food, clothing and shelter to people who have no resources (widows, orphans, aged, and sick) has always been a part of community life in the United States. Our religious heritage (Christian, Moslem, Jewish and others) all emphasize caring for the poor as part of the obligations we have for being created. Now, as we move toward that future civilization where all supplies are available to people who want them, we need to go to an intermediate goal of gradually expanding the food stamps program to more people to cover more things, up to televisions, and then cheap cars, and college educations and so on. The rich and the poor will all get more. And it will give enough time for the philosophers and psychologists to guide us without conflicts to that future civilization where almost everything is available to almost everyone.

PROPERTY TAXES:

Don’t worry about running out of land to build on. If a ship came from outer space and landed in the center of the United States today, the odds are there would not be any buildings or signs of civilization within 20 miles. There’s plenty of land. But if a rich man bought up land where the workers lived, and then made the property more expensive to the point where the poor could not afford to live there, that would be wrong and laws should be written to prevent it.

Perhaps Congress should pass laws requiring higher taxes for huge land ownership that shuts out most Americans from use of the property.

DISTRIBUTION OF BENEFITS:

The basic part of the problem facing us in a smooth transition to a future (a la “Star Trek”) where people can get whatever supplies they need without the use of money, is how can people start getting the supplies they want, now or in the near future? What kind of a program can we set up?

I feel that money will still be used to measure and control the flow of the different parts of the economy during such a transition to the far future. The initial distribution of that money can be done by the established techniques of existing food stamps or state and federal unemployment payment programs. That being the case, the problem is easier to handle, and the decisions and their results will be easier to manage, measure and change gradually to make it able to continually improve and evolve into that desired future.

Please realize that this is not a subject for any one person to cover completely or even give a very large start. Some things we can say, because they are obvious to us today: People need to be secure for their safety, and basic needs, and acceptance (function) in the community as a whole. Then they need to have some things to work on that they think are worthwhile. These could include helping the handicapped, teaching the young, learning to create and perform music, create art or, doing physical or chemical or biological or medical research, exploring the earth and other planets, … . You understand the idea: Once our society can move to a state where all of its citizens are given what they need, then we must still have rewards of recognition and self-satisfaction to give them a purpose in that future life.

Post Script: I want to make it possible for future generations and individuals to also achieve success in a variety of fields. And I want to help make sure that no individual or group of individuals achieves the power to prevent others from achieving success.

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5. “Launch and ascent system.


A Comparison of the Polish Economic Model to the Irish Economic Model

Michael J. Gallagher, PhD
DeSales University
2755 Station Avenue
Business Department
Center Valley, PA 18036 USA
(610)-282-1100 ext. 1838
michael.gallagher@desales.edu

Dr. Wayne Buchanan
Defiance College
701 N Clinton
Business Department
Defiance, OH 43512
419-783-2334
wbuchanan@defiance.edu

ABSTRACT

A Comparison of the Polish Economic Model to the Irish Economic Model

The Irish economy experienced significant growth during from 1990 to 2007. The “Celtic Tiger” became the model for the expanded European Union with their economic growth fueled by globalization. The “Taming of the Celtic Tiger” was the result of the global economic crises that resulted from a flat growth rate from 2007 - 2010 in the Gross Domestic Product (GDP) of the United States. The Polish economy experienced rapid economic growth from 1990 to 2010.

This paper will analyze the changes of the GDP of the Irish economy and the Polish economy. The Polish economy is still considered a developing economy whereas the Irish economy peaked in 2007. The “Taming of the Celtic Tiger” may have been caused by the reliance of the economic growth on the global economy and in particular the economy of the United States. The time period from 1990 to the 2015 estimates will be used for this trend analysis.

KEY WORDS: GLOBALIZATION, IRISH ECONOMY, POLISH ECONOMY, ECONOMIC FREEDOM

The Gross Domestic Product (GDP) of the United States rose every year from 1990 until 2009. This rise in America’s GDP also helped to propel global rises in GDPs and stimulate growth across various markets within individual countries. The housing market could not sustain this boom and prices began to fall in mid-2006. As prices declined at an accelerating rate, the boom in home construction collapsed and in late 2008, America’s economy stagnated under this housing and subprime market failure (Buchanan, 2009; Shiller, 2008).

Unfortunately, this crisis caused financial failures in Germany, France, and most notably Northern Rock Building Society in the UK (Shiller, 2008). Not reported as much, was what the boom and bust of the US housing market did to the housing market of the Republic of Ireland. The Polish housing market also declined during this time period but this decline may have been caused by the oversupply of housing in the post 1990’s transformation of the Polish economy to a market based theory (Tradingeconomics.com, 2010).

The Taming of the Celtic Tiger and the change to Market-Based Principles in the Polish Economy

The economy of Ireland was booming in the 1990’s because of an influx of resources from the European Union (EU) starting in 1993 and it continued through 2004 when the EU expanded to 25 countries. The growth of the Irish economy was assisted by the growth of the global economy. The Irish economy generated an increase in Gross Domestic Product (GDP), an increase in real estate values, high employment, and an increase in immigration. The United States economy was also growing during this period along with many of the globalized economies throughout the world.

The Polish economy shifted from a socialistic to a market economy in the early 1990’s. This change began an increase in the Gross Domestic Product of Poland of 1.1 times. Poland’s economic growth did not stagnate from 2007 -2010 as did the Unites States economy and did not decline by the 10% experienced by the Irish economy.

This section of the paper will compare the changes in GDP, in real estate values, unemployment rates, and immigration of Ireland to Poland (Barrett, Kearney, & Goggin, 2009; Duffy, 2009, p3; Ruhs, 2009).

Gross Domestic Product

The Gross Domestic Product in Ireland showed an increase of 6% in 2007 before a drop of 3% in 2008 followed by a 7.9% expected drop in 2009 and a further expected decrease of 2.3% in 2010 (Barrett, Kearney, & Goggin, 2009).
Ireland’s real GDP outpaced both the United States and the European Union from 1970 to 2004 (Dorgan, 2006). This was a period of time when the idea of globalization was the economic model that fueled the Celtic Tiger.

This economic growth continued into 2007 as the GDP rose 6% but then the Irish economy showed a decrease in 2008 and expects a further decrease in 2009 and 2010. The Economic and Social Research Institute (ESRI) says the “contraction in the economy is expected to continue through this year and into next, with a very modest rate of growth now expected to emerge in mid-2010. By the end of 2010 GNP per head is expected to be lower than its value in 2002” (Fинфacts Team, 2009a, page 1). The result of the globalisation policies tied to the United States economy helped cause a collapse of the Irish economy that may have exceeded that of the United States. This economic crisis is also evident in the Irish housing market.

The Polish economy shifted to a market-based economy in the early 1990’s growing at approximately 5% per year (Global, 2011). The Eastern European countries (with the change to market-based economics) became emerging markets similar to the Irish economy before the “Celtic Tiger”. The influence of the United States economy along with global principles allowed the Polish economy to continue even though a worldwide recession was evident in the mature economies of Europe.

Housing

The Irish housing market experienced a remarkable increase in value from the first quarter of 1995 to the peak value in 2007 when the United States housing market also started a decline. “At their peak, average new house prices were 327 per cent higher than quarter 1, 1995, while the average price of an existing dwelling was 451 per cent higher” (Duffy, 2009, page 3). This remarkable increase in value caused the Irish housing market to create a “bubble” that resulted in recessionary pressures in the Irish economy. “The dramatic fall off has been caused by the decline in all sectors of the construction industry including residential, commercial, public sector and civil engineering” (Fинфacts Team, 2009c, page 1).

The United States housing market has not demonstrated as volatile a change as the Irish housing market. This may be caused because the housing market in the United States had less growth than the Irish market during the same period (first quarter of 1995 compared to the first quarter of 2007) (Census.com, n.d.). The average price of a home in January of 1996 in the United States was $155,300 as compared to $329,400 in the first quarter of 2007 (Census.com, n.d.). Irish housing markets show a greater decrease than the United States housing market. The average value of a home in 1996 in Ireland was 75,000 euros as compared to 311,078 euros in 2007 (Global, 2008). The dependence on the globalized marketplace places Ireland at risk from economic turn downs caused by policies of countries that influence this global economy. The Irish housing market was down 23% from the first quarter of 2007 to the second quarter of 2009 (Fинфacts Team, 2009b). The decline in the United States housing market over this same period was 16% (Dorgan, 2006). The reliance on globalization resulted in a dramatic increase in housing cost in Ireland. The resulting housing crises caused in part by United States economic and lending practices caused a decrease in housing cost and possibly recessionary pressures. The Irish economy would have been considered an emerging economy showing economic growth from 1970 though the expansion of the European Union in 2004 to 25 countries. The Irish housing market may now be considered in a mature stage that may be greatly influenced by the global economy.

The Polish housing economics had a different dynamic caused by “the massive economic transformation during the 1990’s that led to a decline from an average of 130,000 dwellings in the early 1990’s to an average of 75,000 dwellings from 1994 -1999” (Global, 2011, page 1). This change in market structure created a delayed demand for housing fueled by rapid economic growth. “This economic growth created a surge of more than 150% in the average price of newly-launched housing units during the time period 2001 to 2008” (Global, 2011, page 1). Other factors created volatility of the Polish housing market including the inclusion of Poland in the European Union in 2004. “No less than 60% of outstanding housing loans in Poland are denominated in foreign currency, mainly the euro and Swiss francs” (Global, 2011, page 1).

The housing market in Poland is not tied with the United States housing market and the global economy because of several overriding factors such as the foreign investment, the change to a market-based economy and the ability of the Polish economy to grow even while a global recession was evident especially in mature European economies including Ireland.

Immigration and Employment

The Irish migration pattern could be classified in five phases caused by several events including “net emigration prior to the 1990’s, increased immigration from 1990 to the early 2000’s caused by the rapid economic expansion including assistance from the European Union (EU) economic policies, increased immigration from 2001-2004 from non EU countries, 2004-2007 increased immigration from the 10 new members of the EU, and reduced immigration from 2007-2009” (Ruhs, 2009, page 1). The “Celtic Tiger” was assisted by the number of Irish nationals who were well educated in the Irish school system but left the country before the 1990’s.

The higher education system of Ireland always had a strong influence on the Irish economy—even when the Irish economy was struggling. The result then was that although the Irish were well educated, many went abroad to work in
more developed countries. Several sources stated that “our biggest export was people” when referring to the graduates of the universities in the Republic of Ireland (Gallagher, Niese, & Liechty, 2006). These returning Irish citizens provided the well-trained workforce necessary for the economic boom in the country. The immigrants from non-EU countries were able to provide services for jobs not requiring the educational background of the returning Irish.

The Irish workforce continued to expand 2004-2007 as a result of the globalized economy in the country. These workers traveled from the 10 countries of the expanded European Union. Many of these workers were well trained and were able to step into the jobs necessary for as the still continuing economic growth. Many of the 10 countries had a well trained workforce but did not have positions to utilize their skills. This is similar to the Irish before the 1990’s. In addition, immigrants for the expanded EU countries were able to fill the jobs not requiring the higher levels of training. The Irish economy was able to add these immigrants seamlessly to the workforce of the still expanding Irish economy.

The years 2007-2009 were a period of reduced immigration to the Republic of Ireland. The Irish economy experienced a maturation stage at this point but employment was still stable and immigration was slowing. The Republic of Ireland has reversed back to a state of net emigration because of the economic recession. This recession has hit the non-Irish workers at a higher rate than the Irish Nationals. “The immigrants from the EU-10 are generally a highly educated group (meaning they have a postsecondary degree) but not all immigrants are employed in occupations that fully reflect these high education levels. Immigrants have also been shown to earn less than their Irish counterparts. EU-10 migrants tend to have the lowest occupational attainment. The recession has hit non-Irish nationals harder: their unemployment was 14.7 percent in the first quarter of 2009 compared to 9.4 percent for Irish nationals” (Ruhs, 2009, page 1).

“Ireland’s Gross Domestic Product (GDP) fell by 12% by 2010. Unemployment increased by 17% by the end of the 2009” (McDonald, 2009, page 1). “The number of emigrants from Ireland increased by over 40% from 45,300 to 65,100, while the number of immigrants continued to decline over the same period, from 83,800 to 57,300” (Finfacts Team, 2009d, page 1). The “Celtic Tiger” has been tamed by the global economic recession. The Irish economy may have been hit harder because of the rapid expansion of the last 25 years and because the Irish economy relied on globalization to a higher degree than other developed economies. Immigration and Unemployment in Poland

The migration pattern in Poland for more than a century was that of one of the largest sending areas in Central and Eastern Europe (Iglicka, 4/11/2011). The pattern in Poland was similar to that of Ireland from 1989 until the “Celtic Tiger” transformed Ireland into a net immigration country. It has been said at one point that the most important export of Poland and Ireland were the people. This was exacerbated in 2004 when Poland was admitted to the European Union. The annual emigration was anywhere from almost 2 to 1 to over 4 to 1 in 2006 (Iglicka, 4/11/2011). This pattern was changed in 2009 when the worldwide economic slowdown produced a pattern of a relatively equal amount of immigration and emigration. The mature countries of Europe (now including Ireland) were no longer in need of the Eastern European workforce and many of the citizens returned home because many of these European countries favored their citizens for the remaining jobs.

The unemployment rate in Poland has been high since 2003 and before ranging from a low of 9.8% and a high of 20% (CIA World Factbook, 4/11/2011). The Polish economy and the unemployment rate is not as highly correlated with the mature economies in Europe. The patterns are lagging because of the dependence on the Polish labor force when economic prosperity exists in the “Euro Zone” but consistent in the country of Poland because the Polish economy is still an emerging economy. The growth pattern in Poland has been consistent because the internal sales sustain the economy when the global economy stalls.

Conclusion

The subprime mortgage market collapse illustrates a potential problem when economic decisions are not based on the free enterprise system. The government subsidies to allow housing purchases created an inflated value within the housing market. This may be a factor in a globalized recession that has spread throughout the global markets through the current period (fourth quarter of 2009).

This paper illustrates that economic development may be hit harder when their economic prosperity is based on global economic policies. The housing market in Ireland grew at a faster rate than the housing markets in the United States and other more established economies. Ireland may be classified as a mature economy based on their economic position moving into the next decade (2010). The “Celtic Tiger” was once considered a model of economic growth for countries in the expanded European Union. The recent events from 2007 to the current period may provide these countries with ideas of economic policies that will take advantage of their emerging nation position but in addition will provide caution of the depending on global economies for a high percentage of their Gross Domestic Product.

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Market Value and Disclosure of Corporate Environmental Risk: Evidence from the Electric Utility Sector in the U.S.

Elizabeth Connors
Northeastern University
e.connors@neu.edu

Lucia Silva Gao
University of Massachusetts Boston
lucia.silva-gao@umb.edu

Abstract
In this paper we study investors’ perception of corporate environmental risk and disclosure. We consider that both environmental performance and environmental disclosure have an impact on the cost of equity capital, and empirically test a model that includes a measure of environmental performance and a measure of environmental disclosure. Our measure of environmental performance is the level of chemical emissions, obtained from the Toxics Release Inventory. Our measure of environmental disclosure is based on the index proposed by Clarkson et al. (2008). For a sample of electric companies, we find that the cost of equity decreases with better environmental performance as well as with environmental disclosure and disclosure quality.

Keywords
Cost of equity, environmental performance, environmental disclosure.

1 Introduction

There is evidence that environmental performance is valued by investors (e.g. Hamilton, 1995; Konar and Cohen, 2001; King and Lenox, 2002; Clarkson, et al., 2004). The market value of firms reflects both expectations of future cash flows and investors’ perception of the riskiness of these cash flows, usually expressed through the implied cost of equity (e.g. Guay et al., 2005; Easton and Monahan, 2005; Botosan and Plumlee, 2005). We consider that both environmental performance and the disclosure of environmental information can have an impact on corporate risk and investigate to what extent environmental risk and disclosure is value relevant and priced by equity markets. For this purpose, we study the relationship between the implied cost of equity and measures of environmental performance and environmental disclosure.

The disclosure of environmental performance is likely to provide additional information that allows investors to better estimate the firm’s future cash flows and reduce implied uncertainty. Several studies in the accounting literature show that disclosure quality has an impact on the cost of equity capital and that this impact can be attributed to a reduction in estimation or information risk (e.g. Barry and Brown, 1985; Coles et al., 1995; Diamond and Verrecchia, 1991; Leuz and Verrecchia, 2001, Labert et al., 2006).

Many companies disclose environmental information well beyond what is required by law or regulatory requirements (Cormier, 1999; Cormier and Magnan, 2001; Cormier et al., 2005). Voluntary disclosure provides information beyond what is disclosed in financial statements and companies’ annual reports that may be value relevant for investors (Leuz, 2003; Healy and Palepu, 2001).

Healy and Palepu (2001) argue that demand for financial reporting and disclosure arises from information asymmetry and agency conflicts between managers and outside investors. Information asymmetry results from managers having superior information to outside investors regarding the firm’s future prospects (Grossman, 1981; Milgrom, 1981). According to Myers and Majilupf (1984), equity and debt are costly for companies that cannot resolve information asymmetry. Therefore, managers who anticipate external financing have incentives to provide voluntary disclosure and reduce the information asymmetry problem (Healy and Palepu 1993, 1995). There is also evidence that higher disclosure quality reduces information asymmetry, increases the certainty of future returns and lowers transaction costs for investors (Lev, 1988; Lang and Lundholm, 2000).

Lambert et al. (2007) develop a framework that links the disclosure of accounting information to the cost of capital, despite the forces of diversification, and demonstrate that the quality of accounting information influences a firm’s cost of capital, both directly by affecting market participants’ perceptions about the distribution of future cash flows, and indirectly by affecting real decisions that alter the distribution of future cash flows. Barry and Brown (1985, 1986) and Merton (1987) reach a similar conclusion by modeling the premium that investors demand for bearing information risk when there is information asymmetry.

A higher level of environmental disclosure may also have drawbacks. The disclosure of “bad news” that is not yet reflected in financial statements negatively affects firm value (Barth and McNichols, 1994). However, it may also enhance the credibility of other reported information released, improves the firm’s reputation (e.g., Blacconiere and Patten, 1994) and consequently reduce the cost of capital (Skinner, 1994, Botosan and Plumlee, 2002; Clarkson et al., 2004).

This study finds, in a sample of electric companies during the period of 2001-2007, that better environmental performance is associated with lower implied cost of equity.
We also find that more environmental disclosure and disclosure quality decrease the cost of equity.

2 PREVIOUS LITERATURE AND HYPOTHESES DEVELOPMENT

In an earlier study, Garber and Hammitt (1998) examined the effect of Superfund liabilities on the cost of equity, measured using CAPM and beta, for a sample of companies in the chemical industry. They found no relationship measured using CAPM and beta, for a sample of companies on the effect of Superfund liabilities on the cost of equity, for a sample of companies. It should be noted that Superfund liabilities reflect cleanup costs for past emissions and spills as well as costs to cleanup purchased properties in which the party responsible for cleanup was not the cause of the pollution. As such, Superfund liabilities entail a high level of uncertainty related to final cleanup costs but may not provide a strong signal of future environmental performance.

Additionally, the findings of Feldman, et al. (1997) support a positive association between qualitative measures of environmental practices and TRI emissions on firm beta and stock price. Sharfman and Fernando (2008) corroborate these results and find that TRI emissions reductions and high social performance scores are associated with lower weighted average cost of capital for a sample of S&P 500 firms.

On the theoretical side, Heinkel et al. (2001) introduced a model to show that exclusionary ethical investing leads to polluting firms being held by fewer investors because green investors will not invest in polluting firms' stock. This lack of risk sharing among non-green investors leads to lower stock prices for polluting firms and to an increase in their cost of capital. These results are in agreement with the model of capital market equilibrium with incomplete information developed by Merton (1987) in which the firm's cost of equity declines as its investor base expands.

We investigate whether environmental risk affects corporate risk by measuring if it is priced in the cost of equity capital. Formally, our first hypothesis is:

Hypothesis 1: Better environmental performance is associated with a lower cost of equity capital.

Several papers study the market value impact of environmental disclosure. For example, Cormier et al. (2001) do not find a direct relationship between environmental information disclosed in firm's annual report and its stock market value for a Canadian sample in annual reports for 1986–1993 period. However, they do find a negative association between voluntary environmental reporting and stock market value for firms incurring fines and penalties, and experiencing pollution levels that are in excess of government standards. Cormier and Magnan (2007) find that environmental reporting affects a firm's earnings valuation multiple, for a sample of Canadian, French and German firms during the period 1992-1998. They found that while environmental reporting potentially reduces German firms' cost of equity capital, as captured by the net income-stock market price relation, it has a neutral effect for French and Canadian firms.

Aerts et al. (2008) document that North American firms, operating in a more regulated context than continental European firms with respect to environmental disclosure, release more environmental disclosure related to expenditures, risk and remediation than their European counterparts do, but observe the opposite with respect to less regulated disclosure of information concerning sustainable development and environmental management. They find that print environmental disclosure is associated with a decrease in analysts' forecast dispersion both in continental Europe and in North America but web-based disclosure is less relevant for financial analysts in North America.

We test the hypothesis that environmental disclosure decreases estimation risk and implied uncertainty in future cash flows. Formally, our second hypothesis is:

Hypothesis 2: A higher level of corporate environmental disclosure is associated with a lower cost of equity capital.

3 METHODOLOGY AND EMPIRICAL DESIGN

To investigate whether environmental risk is priced by the market, we estimate the cost of equity capital employing models based on ex ante expectations by investors and on analysts’ forecasts. There are several recent papers that examine empirical methods for computing the implied cost of equity capital given stock prices and expectations of future earnings (e.g., Botosan 1997; Gebhardt et al. 2001; Claus and Thomas 2001; Botosan and Plumlee 2002; Easton and Monahan 2003; Gode and Mohanram 2003; Easton 2004; Easton and Monahan 2005; Ohlson and Juettner-Nauroth 2005). These models use forecasts of future earnings expectations and the current stock price as inputs in a valuation model in order to derive the cost of capital. However, different estimation methods use distinct valuation models and different assumptions regarding terminal value computation.

Botosan and Plumlee (2005) evaluate five methods to estimate the implied cost of equity. They found that the methods introduced in Botosan and Plumlee (2002) and in Easton (2004) dominate the alternative methods and estimates from these two methods are consistently and predictably related to market risk, leverage risk, information risk, residual risk and growth. We use Easton (2004) to estimate the cost of equity capital, also for the simplicity in its implementation.

Easton (2004) shows that under the assumption of zero dividends and no growth in abnormal earnings beyond the forecast horizon (after year 2) the cost of capital is
proportional to the inverse of the PEG ratio and can be estimated as:

\[ R_e = \sqrt{\frac{FEPS_2 - FEPS_1}{P_0}} \]

where:

- \( R_e \) = implied cost of equity capital;
- \( P_0 \) = price at time 0;
- \( FEPS1 \) = analysts forecasts one-year ahead;
- \( FEPS2 \) = analysts forecasts two-years ahead.

**Model Specification**

There are several risk factors that have been shown in the literature to affect the cost of equity capital, including market beta, leverage, information risk, firm size, and growth. We estimate the following model, based on the risk proxies used by Botosan and Plumlee (2005):

\[
re = \gamma_0 + \gamma_1 UBETA_{it} + \gamma_2 BM_{it} + \gamma_3 MVE_{it} + \gamma_4 LEV_{it} + \gamma_5 DISP_{it} + \gamma_6 LTG_{it} + \gamma_7 EMISS_{it} + \gamma_8 DISCLOSURE_{it} + \gamma_9 YEAR_{it} + \epsilon_{it}
\]

where:

- \( re \) = risk premium of equity capital
- \( UBETA \) = unlevered beta;
- \( BM \) = book to market;
- \( MVE \) = market value of equity;
- \( LEV \) = leverage;
- \( DISP \) = dispersion measure of one-year ahead analysts’ earnings forecast;
- \( LTG \) = mean analysts’ forecasted long term growth rate;
- \( EMISS \) = tons of chemicals emissions divided by US sales
- \( DISCLOSURE \) = includes four proxies - REPORT, CLRV, QUANTITATIVE and QUALITATIVE

**Measuring environmental performance**

The variable \( EMISS \) in our model proxies for environmental performance. Consistently with several prior studies (Clarkson et al. 2006, 2004; King and Lenox, 2002; Konar and Cohen, 2001) we measure environmental performance using annual TRI emissions in pounds.

The TRI provide information regarding annual emissions of each listed chemical and a summary of emissions released as air emissions, surface water discharges, released to land, underground injection and transfer to off-site disposal. For the purposes of this study, annual emissions have been aggregated across chemicals and across the various methods of release. The EPA reports TRI at the facility level. We have aggregated the TRI reports to the parent company level. Facility ownership has been determined by the review of SEC filed forms 10-K, corporate and facility websites, and through public announcements of acquisitions and disposals of subsidiaries and facilities.

**Measuring environmental disclosure**

We construct four measures to proxy for environmental disclosure. The first measure, denominated \( \text{REPORT} \), is a dummy variable equal to 1 if the company released an environmental report in the year corresponding to the observation. Companies sometimes issue their own, unaudited, Environmental/Sustainability Reports in order to describe social and environmental policies, policies, strategies and performance. There is no standard reporting format for Environmental/Sustainability Reports and the types of actual disclosures vary from company to company and year to year.

Our second measure of environmental performance, denominated \( \text{CLRV} \), is based on the index proposed in Clarkson et al. (2008) to assess the discretionary disclosures about environmental policies, performance and inputs in environmental reports. This index is based on the Global Reporting Initiative Sustainability Guidelines of 2002. The index items are classified in two categories: “hard” and “soft” disclosures. Hard disclosures include governance structure and management system (A1), credibility (A2), environmental performance indicators (A3), and environmental spending (A4). Soft disclosure items include vision and strategy claims (A5), environmental profile (A6), and environmental initiatives (A7).

The variable \( \text{QUANTITATIVE} \) includes the sum of the scores from the groups of items A3 and A4 of the \( \text{CLRV} \) measure. The variable \( \text{QUALITATIVE} \) includes the groups A1, A2, A5, A6 and A7. As such, the variable \( \text{QUANTITATIVE} \) indicates the disclosure of numerical environmental information and the variable \( \text{QUALITATIVE} \) indicates the disclosure of qualitative environmental information.

**4 DATA AND EMPIRICAL ESTIMATION**

Our sample is comprised of companies in the electric (SIC 49) industry that file with reportable TRI emissions and have information available both in the I/B/E/S, CRPS and Compustat databases between 2001 and 2007. We selected the electric industry for study because, during the time period of interest, they have among the highest total emissions and the highest number of public companies. Previous literature show that environmental disclosure is conditioned by industry membership (Cornier and Magnan, 2003) and increases with firm's exposure to environment related legal proceedings or fines related to the environment (Deegan and Rankin, 1996; Neu et al., 1998). We have excluded all observations for which data necessary to compute any of the three approaches of cost of capital is
missing. Our final sample includes a total of 326 company/year observations.

The Easton (2004) model is estimated using mean one-year ahead earnings and two-year ahead earnings analysts’ forecasts from the I/B/E/S database. In years for which we cannot obtain two-year ahead earnings forecasts from I/B/E/S, we estimate this value as equal to $FEPS1 \times (1 + LTG)$, where $FEPS1$ is one-year ahead earnings forecasts and $LTG$ is the long term growth rate analysts’ forecast. As is conventional, we use 10-year Treasury Bonds rates as proxies for the risk free rate when estimating risk premiums.

5 RESULTS

Table 1 presents regressions of estimates of cost of equity capital on the measures of environmental performance and disclosure. All variables that proxy for risk factors are statistically significant except DISP. Cost of equity should increase with variability in analysts’ earnings forecasts due to a perceived increase in information risk. The variable MVE, an explanatory variable that proxies for size, presents a sign opposite of the predicted, suggesting that the cost of equity is larger for larger companies.

After controlling for systematic risk, book-to-market, leverage, size, information risk and expected growth in earnings, our results show that the variable that accounts for the levels of chemical emissions (EMISS) significantly explains variation in the risk premium (t-stat. = 3.087, p<0.01), as shown in Model 1 in Table 3. This result supports the prediction from Hypothesis 1 of that better environmental performance decreases the cost of equity.

The environmental disclosure variables are also significant and show that environmental disclosure decreases the equity risk premium, as predicted in Hypothesis 2. REPORT, an indicator variable for the release of environmental report is significant at the 5% level (t-stat. = -2.549, p<0.05). The Clarkson et al. (2008) is also significant in explaining the risk premium but at the 10% level of significance (t-stat. = -1.876, p<0.10). The coefficients of the variables QUALITATIVE (t-stat. = -2.039, p<0.05) and QUANTITATIVE (t-stat. = -1.666, p<0.10) are both statistically significant.

6 CONCLUSION

The purpose of this study is to investigate the effect of environmental performance and disclosure on firm-level cost of equity capital. More specifically, we study the relationship between cost of equity and environmental disclosure after controlling for environmental performance. Consistently with previous papers that study the use of TRI as proxy for environmental performance, our results for a sample of electric companies show that cost of equity capital is reduced for companies with lower levels of TRI emissions.

Our results also support the hypothesis that better environmental disclosure reduces uncertainty for equity investors. We find that firms that release an environmental report have lower cost of equity. Our results also provide support for the idea that investors value better quality in environmental reporting, with qualitative information being slightly more valuable than quantitative information. One explanation for this result may arise from the fact that the disclosure of quantitative information does not provide incremental information beyond what is revealed from the TRI.

Table 1. Regressions of Estimates of Risk Premium on Risk Proxies, Levels of Emissions and Variables of Environmental Disclosure

<table>
<thead>
<tr>
<th></th>
<th>(1)</th>
<th>(2)</th>
<th>(3)</th>
<th>(4)</th>
<th>(5)</th>
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<tr>
<td>Interc.</td>
<td>-0.065</td>
<td>-0.075</td>
<td>-0.071</td>
<td>-0.071</td>
<td>-0.070</td>
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<tr>
<td></td>
<td>-2.96***</td>
<td>-3.42***</td>
<td>-3.23***</td>
<td>-3.23***</td>
<td>-3.19***</td>
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<td>BETA</td>
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<td>0.062</td>
<td>0.063</td>
<td>0.062</td>
<td>0.063</td>
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<tr>
<td></td>
<td>3.92***</td>
<td>3.88***</td>
<td>3.89***</td>
<td>3.84***</td>
<td>3.91***</td>
</tr>
<tr>
<td>BM</td>
<td>0.013</td>
<td>0.014</td>
<td>0.014</td>
<td>0.014</td>
<td>0.014</td>
</tr>
<tr>
<td></td>
<td>1.89</td>
<td>2.04**</td>
<td>2.07**</td>
<td>2.09**</td>
<td>2.03**</td>
</tr>
<tr>
<td>ln(MVE)</td>
<td>0.004</td>
<td>0.005</td>
<td>0.005</td>
<td>0.005</td>
<td>0.005</td>
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<tr>
<td></td>
<td>1.79</td>
<td>2.54***</td>
<td>2.25**</td>
<td>2.28***</td>
<td>1.99**</td>
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<tr>
<td>LEV</td>
<td>0.017</td>
<td>0.016</td>
<td>0.016</td>
<td>0.016</td>
<td>0.016</td>
</tr>
<tr>
<td></td>
<td>5.86***</td>
<td>5.85***</td>
<td>5.71***</td>
<td>5.69***</td>
<td>5.74***</td>
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<tr>
<td>DISP</td>
<td>0.019</td>
<td>0.016</td>
<td>0.017</td>
<td>0.017</td>
<td>0.017</td>
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<tr>
<td></td>
<td>1.32</td>
<td>1.16</td>
<td>1.21</td>
<td>1.20</td>
<td>1.23</td>
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<tr>
<td>LTG</td>
<td>0.002</td>
<td>0.002</td>
<td>0.002</td>
<td>0.002</td>
<td>0.002</td>
</tr>
<tr>
<td></td>
<td>4.97***</td>
<td>4.99***</td>
<td>4.95***</td>
<td>5.01***</td>
<td>4.92***</td>
</tr>
<tr>
<td>EMISS</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
</tr>
<tr>
<td></td>
<td>3.09***</td>
<td>3.07***</td>
<td>3.03***</td>
<td>2.98***</td>
<td>3.06***</td>
</tr>
<tr>
<td>REPORT</td>
<td>-0.011</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>-2.55**</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CLRV</td>
<td></td>
<td>0.000</td>
<td>-1.88*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>QUALIT</td>
<td></td>
<td>-0.001</td>
<td>-2.04**</td>
<td></td>
<td></td>
</tr>
<tr>
<td>QUANT</td>
<td></td>
<td></td>
<td></td>
<td>0.000</td>
<td>-1.66*</td>
</tr>
<tr>
<td>R^2</td>
<td>0.417</td>
<td>0.429</td>
<td>0.424</td>
<td>0.425</td>
<td>0.423</td>
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<td>F-stat.</td>
<td>16.87</td>
<td>16.41</td>
<td>16.04</td>
<td>15.69</td>
<td>16.04</td>
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<tr>
<td>No.Obs.</td>
<td>326</td>
<td>326</td>
<td>326</td>
<td>326</td>
<td>326</td>
</tr>
</tbody>
</table>

Notes: We also include dummy variables for years. t-statistics are reported below each coefficient in italic. The significance levels for the independent variables are given by: *** = p < 0.01, ** = p < 0.05, * = p < 0.10.
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Assessing Performance of Business Education:  
A Student Perspective

Rosane K. Gertner  
Business Department  
College of Staten Island - CUNY  
2800 Victory Boulevard  
Staten Island, NY 10314, USA  
1(718)982-2964  
Rosane.gertner@csi.cuny.edu

Thomas Tellefsen  
Business Department  
College of Staten Island - CUNY  
2800 Victory Boulevard  
Staten Island, NY 10314, USA  
1(718)982-2952  
Thomas.Tellefsen@csi.cuny.edu

ABSTRACT  
The quality of undergraduate education is an ongoing concern on college campuses nationwide. Most American colleges have used surveys of students’ perceptions to evaluate the quality of instruction and measure some course and instructor characteristics. Few attempts have been made to assess students’ perceptions of more global issues such as their personal learning experiences and other facets of their lives while in college. Among these attempts, a number of studies have established that this is a multi-dimensional construct (Brooks, 2005).

Some researchers have assessed student perspectives using SERVQUAL (Arambewela and Hall, 2006). However, other researchers have suggested that the critical dimensions (and hence the scales) must be tailored to the particular form of education under study (Emanuel and Adams, 2006; Hensleigh, Eddy, Dorman, Glessner, Green, and Lara-Alecio 2007; Tan and Kek 2004).

This research project takes the second approach in order to measure students’ perceptions of the educational process as well as their perceptions of their personal learning experiences while in college. This paper presents fifty items to measure eleven constructs, and reports their reliability, dimensionality, and validity.

Keywords  
Business Education, Exit Survey

1 METHODOLOGY  
Scale development was completed in five steps: literature review, qualitative research, item generation, scale construction/purification, and final testing. At the start of the project, the existing scales of education or service quality/satisfaction proposed in the literature were reviewed. However, as noted, these scales did not appear to address the richness of the issue.

Accordingly, interviews were conducted with 27 undergraduate seniors. They were asked to respond to a series of open ended questions that elicited their views on the most important aspects of business department performance. These interviews also helped to identify the typical phrases that students used to express these issues. The results suggested 11 constructs that could be measured with 74 items.

A preliminary questionnaire was tested in the spring of 2008 with data from 92 business seniors. These scales were tested for reliability, dimensionality, and discriminant validity. Weak items were deleted and the scales were trimmed to a total of 50 items. The final scales had excellent diagnostic properties, i.e., (i) Location and dispersion: Means ≈ 3+ with standard deviations ≈ 1 on a 5 point scale; (ii) Reliability: Most alphas were 0.9 or higher; (iii) Dimensionality: each scale loaded on a single factor; (iv) Discriminant Validity: all alphas were larger than the correlations on the same row/column of the correlation table.

2 FINDINGS  
In spring 2009 and 2010, data were collected from 83 and 86 business seniors respectively to test the new scales. The results suggested that the scales were stable. As shown in Table I, the Cronbach's Alpha’s were very similar for the two samples. In addition factor analysis identified consistent loadings, and the alphas remained above the same row/column on the correlation tables. Finally, most means and standard deviations remained in the range of 3+ and the standard deviations were approximately 1+. This suggested that there was no end piling and that there was substantial variation in the data.

3 CONCLUSIONS  
Taken together, these results suggested that the scales were stable and provided strong evidence of uni-dimensionality, reliability, and discriminant validity. The consistency of these results suggests that these scales may serve as useful tools to track graduating students’ evaluations of Business Department performance over time.
<table>
<thead>
<tr>
<th>SCALE</th>
<th>SUMMARY OF ITEMS</th>
<th>ALPHA 2009</th>
<th>ALPHA 2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bus Professors’ Classroom Conduct</td>
<td>Courteous, attentive, enthusiastic, knowledgeable</td>
<td>.8939</td>
<td>.9113</td>
</tr>
<tr>
<td>Bus Professors’ Ability to Inspire</td>
<td>Know &amp; care about students, relate to real world, inspire</td>
<td>.8570</td>
<td>.8784</td>
</tr>
<tr>
<td>Bus Prof’s Grading practices</td>
<td>Fair, consistent, reliable, timely</td>
<td>.8874</td>
<td>.8725</td>
</tr>
<tr>
<td>Bus Prof’s Academic Advice</td>
<td>Available, helpful, good advice</td>
<td>.9364</td>
<td>.9091</td>
</tr>
<tr>
<td>Bus Dept. Staff</td>
<td>Helpful, courteous, patient, good information</td>
<td>.9614</td>
<td>.9324</td>
</tr>
<tr>
<td>Bus Class Scheduling and Size</td>
<td>Classes available when needed, good sizes, hands on</td>
<td>.7645</td>
<td>.7718</td>
</tr>
<tr>
<td>Learning and Growth in Bus Program</td>
<td>Helped choose major, prep for career, learn on own</td>
<td>.7770</td>
<td>.8526</td>
</tr>
<tr>
<td>Learning and Growth in Gen Ed</td>
<td>Helped understand life, personal interests &amp; choose major</td>
<td>.8775</td>
<td>.8835</td>
</tr>
<tr>
<td>Personal Growth at CSI.</td>
<td>Improve ability for communications, analysis, problem solving</td>
<td>.9341</td>
<td>.9096</td>
</tr>
<tr>
<td>Career Preparation</td>
<td>Mastered material in discipline, prepared for career</td>
<td>.9426</td>
<td>.9348</td>
</tr>
<tr>
<td>CSI Overall evaluation</td>
<td>Good choice, good education, proud of CSI, would recommend</td>
<td>.8633</td>
<td>.8618</td>
</tr>
</tbody>
</table>

**TABLE I**
RELIABILITY SURVEY 2009 VS SURVEY 2010

**ACKNOWLEDGMENTS**
The authors wish to acknowledge the business faculty members for their support in collecting data.

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Green Power Communities: The Role of Renewable Energy in Local Climate Mitigation Policies

Soma Ghosh
Economics and Business Department
Albright College
13th and Bern Streets
Reading, PA 19612
(610)-929-6724
sghosh@alb.edu

ABSTRACT
Increasingly in the United States, policymakers at sub-national levels are engaged in climate change mitigation planning or actions to reduce their communities’ greenhouse gas emissions. Green Power Partnership (GPP) is a voluntary environmental program launched by U.S. Environmental Protection Agency (EPA) in 2001 that encourages the purchase of green power as a way to reduce the environmental impacts associated with electricity use. More than 1,300 participants from Fortune 500 companies, businesses from a varied range of sectors, colleges and universities, and federal and state governments are currently buying nearly 20 billion Kwh of green power, annually. Local governments are also partnering with EPA to become Green Power Communities (GPCs). This study is a preliminary exploration of the 34 GPCs that are currently participating in the program. The GPC-experience suggests that in addition to reducing GHG emissions, communities realize co-benefits that engage the environmental, economic, political and social life of its citizens. The analysis contributes to the understanding of partnerships between the federal and local government, particularly in a time when the development and use of renewable energy is an important policy agenda for decision-makers.

Keywords
Climate change, greenhouse gas, local government, EPA, renewable energy.

1 INTRODUCTION
In the U.S., the primary greenhouse gas (GHG) emitted by human activities is carbon dioxide (CO₂), representing approximately 83 percent of total GHG emissions.¹ The findings, from over 120 researchers working with the Intergovernmental Panel on Climate Change (IPCC) recently concluded that nearly 80 percent of the world’s energy supply could be met by renewables by mid-century if backed by the right enabling public policies.² Renewable energy capacity (excluding hydropower) in both the world and the United States has more than tripled between 2000 and 2009. In the U.S., renewable energy provided 10 percent or 425 billion kilowatt-hours (kWh) of electricity in 2010.³ Local action to mitigate climate change in the United States is voluntary. There are no federal or state laws which require local governments to report GHG emissions or engage in specific GHG mitigating activities, nor are there requirements for electric utilities to source or sell specific percentages of renewable energy. Despite this, local governments nationwide have identified and implemented concrete measures and are continuing to achieve their GHG reduction goals. Krause (2011) identified 26 distinct GHG-reducing activities undertaken by 329 cities in the U.S. Moreover, the study finds that cities are more inclined to engage in projects that contribute directly to energy savings and GHG-reduction than on policies which institutionalize climate protection.

2 LOCAL GOVERNMENTS AND GHG-REDUCING INITIATIVES
The first GHG reduction target adopted by a local government was put forward by Toronto, Canada in 1989. This inspired the launch of the Urban CO₂ Reduction Project in 1991 by ICLEI- Local Governments for Sustainability.⁴ Over the past 20 years, ICLEI has grown from 200 to over 1220 members from 70 different countries, 550 of which are U.S. local governments. ICLEI’s Cities for Climate

⁴ The organization’s original name was International Council for Local Environment Initiatives but in 2003, ICLEI’s membership voted to go by the acronym ICLEI-Local Governments for Sustainability.
Protection (CCP) campaign urges members to reduce local GHG emissions by following five pre-specified milestones. ICLEI provides its members with software, training, technical and policy expertise to help quantify and reduce GHG emissions. On February 16, 2005, Seattle Mayor Greg Nickels launched the Mayors’ Climate Protection Agreement (MCPA) committed to advance climate protection at the local level. Sponsored by the US Conference of Mayors, the MCPA reflects the commitment of signatory cities to reduce their GHG emissions by 7% below their 1990 levels by 2012, in line with the Kyoto Protocol. As of August 2011, 1054 mayors have signed the MCPA representing over 88 million Americans in 50 states, District of Columbia and Puerto Rico.

EPA’s Local Climate and Energy Program helps local governments meet multiple sustainability goals with cost-effective climate change mitigation and clean energy strategies. The activities that have been typically undertaken are developing a Climate Change Action Plan, creating a GHG inventory, pursuing Leading by Example (LBE) programs, and the Climate Showcase Communities program. In 2001, EPA launched a voluntary program called the Green Power Partnership (GPP), to help increase the use of green power among U.S. organizations. The GPP participants include a wide variety of organizations such as Fortune 500 companies; small and medium sized businesses; federal and state governments; manufacturers and retailers; and schools, colleges and universities. Recently, a growing number of local governments have joined the program to become Green Power Communities (GPCs). The motivation behind this study is to conduct a preliminary analysis of the characteristics of GPCs, particularly in a time when the development and use of renewable energy is an important policy agenda for decision-makers at all levels of the government.

3 GREEN POWER COMMUNITIES

GPCs are towns, villages, cities, counties, or tribal governments in which the local government, businesses, and residents must collectively buy green power in amounts that meet or exceed EPA’s GPC purchase requirements. Green power is a subset of renewable energy and EPA defines green power as electricity produced from solar, wind, geothermal, biogas, certain types of biomass, and low-impact small hydroelectric sources. The minimum GPC purchase requirements are inversely related to the community’s current annual electricity use. For example, the minimum purchase requirements for a community with annual electricity usage of less than or equal to 1,000,000 kWh is 20 % and that for a community with annual electricity usage of more than 100,000,000 kWh is 3%. Upon meeting the purchase requirements, the local government submits the GPC Partnership Agreement to EPA. GPCs commit to initiate and support a campaign to encourage residents, businesses and non-profit organizations to buy green power and provide annual updates of community-wide electricity use and green power use data. Currently, there are 34 GPCs representing 13 states and the District of Columbia. Oregon leads the nation with 12 GPCs, followed by Maryland (4) and Utah (3). California, Texas, Washington and Wisconsin each have two GPCs while Washington, DC and all the other remaining states each have only one GPC. The City of Moab located in southeast Utah is the oldest partner that joined the program in August 2004. Since then partnership has grown slowly but steadily with many communities entering while some others leaving this voluntary program. The highest growth has been in the past couple of years, going from 17 members in 2008 to 34, as of August 2011, a growth of 100%. Table 1 provides a list of the GPCs, the date of joining the program and the percentage of green power used by each community.

4 BENEFITS OF A GREEN POWER COMMUNITY

Local communities have compelling and unique abilities to help facilitate the transition to a “clean energy, green economy” and the GPP program offers an innovative and incentive-based approach to make this commitment. Participation in this program is likely to have an “all-encompassing” effect, reducing not only the carbon footprint of the community, but engaging and influencing the environmental, economic, political and social life of its citizens. Further, a GPC can reap multiple benefits in the short-and long run that extend beyond the boundaries of its jurisdiction.

The community can reduce GHG and other emissions, maximize cost savings on energy bills, reduce dependence on fossil fuels and hedge against unstable or rising energy costs, act as a leader in the purchase of green power and encourage residents and businesses to follow suit, gain positive publicity and recognition for its commitment, leverage this campaign to create future clean energy activities and more sustainable action within the community, build and reinforce positive relationship with stakeholders within and outside the community, and foster economic development and job creation by attracting new businesses.

EPA commits to some direct benefits by providing the following: tools and resources such as technical assistance and expert and timely advice on procurement questions, peer exchange opportunities for communities to share information on best practices and lessons learned about

5 Details on the Green Power Community purchase requirements and agreement is available at http://www.epa.gov/greenpower/communities/become.htm
Green Power Community Challenge ranks GPCs according rising to 11% to 50% among the users on the high end. The GPCs to a moderate 5.1% to 9.4% among 12 GPCs, and power varies significantly from a low of 2% to 4.9% in 11 by a community as of August 2011. The usage of green power indicates the green power percentage of total electricity used simplest level, these observations may be interpreted as (Salem, Cottage Grove, and Beaverton) have experienced a August 2011. Conversely, some communities in Oregon has seen a very small increase in the percentage of green power, rising from 3% to 3.1% from September 2010 to 2011. However, the usage in Brookeville has remained constant at 50% over the same time period. In contrast, the oldest community of Moab Area, UT (a member since 2004) has seen a very small increase in the percentage of green power, rising from 3% to 3.1% from September 2010 to August 2011. Conversely, some communities in Oregon (Salem, Cottage Grove, and Beaverton) have experienced a decrease in the percentage of green power usage. At the simplest level, these observations may be interpreted as

5 CHARACTERISTICS OF GREEN POWER COMMUNITIES

(i) Green Power Usage: The last column in Table 1 indicates the green power percentage of total electricity used by a community as of August 2011. The usage of green power varies significantly from a low of 2% to 4.9% in 11 GPCs to a moderate 5.1% to 9.4% among 12 GPCs, and rising to 11% to 50% among the users on the high end. The Green Power Community Challenge ranks GPCs according to two award categories, the community that has the highest green power percentage and the community that uses the most kWh of green power. GPCs are ranked according to the two award categories on EPA’s website on a quarterly schedule. According to the latest release, Brookeville, MD ranked first with respect to percentage of green power usage (50%) while Washington, DC prides itself as the largest user of green power (745,598,550 kWh).

(ii) Duration of Partnership: It might be argued that the progress in the purchase and use of renewable energy is positively correlated with the time that the city has been a partner in the program. But exploring the data in columns 2 and 3 of Table 1 does not provide support for this hypothesis. For example, communities such as Brookeville, MD and Hillsboro, OR are relatively new participants (both joined the program in 2010) with the highest and second highest percentages of green power usage. More interestingly, the green power usage in Hillsboro has increased from 2% in September 2010 to 35.7% in August 2011. However, the usage in Brookeville has remained constant at 50% over the same time period. In contrast, the oldest community of Moab Area, UT (a member since 2004) has seen a very small increase in the percentage of green power, rising from 3% to 3.1% from September 2010 to August 2011. Conversely, some communities in Oregon (Salem, Cottage Grove, and Beaverton) have experienced a decrease in the percentage of green power usage. At the simplest level, these observations may be interpreted as

(iii) ICLEI and MCPA Members: Previous research has raised the question of whether cities that are members of a climate protection network pursue mitigation more or differently than those which are not (Krause, 2011). Table 1 reveals the GPCs that are also members of the ICLEI or MCPA or both. There are 20 GPCs that are also signatories of the MCPA and 15 GPCs that are members of the ICLEI. Among the 14 communities that have committed to both ICLEI and MCPA, three communities namely Bellingham, WA, Park City, UT and Portland, OR have made additional commitments such as creating a GHG inventory, developing a Climate Change Action Plan or being designated as a LBE community. Although we cannot support claims that these network memberships causes increased action, it is evident that these GPCs have taken concrete steps to reduce GHG emissions, thereby distinguishing themselves through their use of renewable energy.

(iv) Socioeconomic Characteristics: Data on socioeconomic characteristics are obtained from the U.S. Census Bureau’s American Factfinder, 2005-2009 American Community Survey (ACS) 5-year estimates. The summary statistics are reported in Table 2. The population in the GPCs varied enormously-from 134 in Brookeville, MD to 601,723 in Washington, DC. While 19 communities with 25,000 or less people formed the largest group, those with populations of 2,500 or less and 100,000 or higher were equally represented (17.6% each). Prevalence of interests favoring climate protection or awareness is measured with the relatively crude proxy of educational attainment (percent of the population 25 years and above with a Bachelor’s degree or higher). The mean value of the variable Education is 41.26 % which is much higher than the national average of 27.5%. Communities with higher financial resources are not only more likely to afford the upfront capital investments required to support renewable energy development, but their residents are also more financially capable of purchasing green power. Hence, median household income in 2009 inflation-adjusted dollars serves as a measure of the financial status of a community. On an average, GPCs are financially well off with an average Median Household Income of $65,473 which is about $14,000 more than the U.S. average. Another indicator of the economic well-being of a community is the percentage of owner-occupied housing units. It might be argued that the local government in a community with a larger percentage of owner-occupied

6 Hillsboro, OR was a member of ICLEI and MCPA before it joined the Green Power Program. Moab Area, UT has the lowest median household income ($34,935), among the GPCs.
housing is more likely to influence its residents (owners) to buy green power as they have the decision-making power with respect to purchase of electricity. However, the statistics reveal that on an average Owner-Occupied Housing for GPCs is lower than the U.S. average of 66.9%. Previous studies have hypothesized that cities where manufacturing remains economically important with a larger percentage of the population being employed in this sector may be less inclined to adopt GHG reducing initiatives than those that have a service or technology-based economy (Krause, 2010; Sharp et al., 2011). The variable, Manufacturing, is the percentage of civilian population 16 years or over employed in manufacturing and ranges from 0% in Brookeville, MD to more than 20% in four of the GPCs. The average of Manufacturing in GPCs is 8.5% which is about 3% lower than the national average. Overall, it is important to note that, at best, the above summary statistics provide a closer look at the communities that are actively involved in the purchase and use of green power but further investigation is required before we can generalize the results.

**Table 2. Socioeconomic characteristics of Green Power Communities**

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>Std.Dev.</th>
<th>Min.</th>
<th>Max.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Population</td>
<td>73,202</td>
<td>139,620</td>
<td>134</td>
<td>601,723</td>
</tr>
<tr>
<td>Education</td>
<td>41.26</td>
<td>19.70</td>
<td>7.7</td>
<td>78.7</td>
</tr>
<tr>
<td>Median Household Income</td>
<td>65,473</td>
<td>33,593</td>
<td>34,935</td>
<td>207,917</td>
</tr>
<tr>
<td>Owner-Occupied Housing</td>
<td>57.32</td>
<td>10.85</td>
<td>41.9</td>
<td>83.3</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>8.54</td>
<td>6.01</td>
<td>0</td>
<td>21.9</td>
</tr>
</tbody>
</table>

**6 FINAL NOTE AND NEXT STEPS**

While cities are viewed as key drivers of climate change, they are also the level of government closest to the citizen, with the unique ability to affect behaviors that result in GHG emissions. Therefore, cities have the opportunity to serve as leaders and can take direct measures to reduce their carbon footprint.

This preliminary investigation of GPCs has revealed an extremely diverse group, in reference to both socioeconomic profile and use of green power. Therefore, the question of who comprises these communities, there does not appear to be a “typical” community. Small and large communities were equally represented with a wide variation in the education level and financial status. Only 13 states and the District of Columbia are currently participating in the program, with the highest representation from the state of Oregon. Questions arise, for example, as to whether this variation in participation is influenced by differences in the state-level policy. Further, 14 of the 34 GPCs are also members of the ICLEI and MCPA which suggests a strong linkage between these initiatives. It also brings to the forefront those communities that have distinguished themselves by undertaking multiple pledges and the responsibilities that come with them. This calls for the question whether cities that are members of a climate protection network like ICLEI and the MCPA are more or less likely to adopt and implement additional climate action strategies? In addition, what specific role, if any, do these networks play in convincing local policy makers to take these actions? This study is the first attempt to explore a voluntary partnership between the US government and its local entities and opens the gateway to answering the above questions.

Finally, the main contribution of this study is that it offers insight into the GPP program as an incentive-based approach that is motivating local governments to reduce their GHG emissions through the voluntary purchase of green power. Policymakers have the unique opportunity to use current participants as role models of coordinated efforts between business, residents, and local government. Most importantly, GPCs demonstrate the enormous potential that cities have with respect to the development and deployment of renewable energy in the U.S.

**ACKNOWLEDGEMENTS**

The author is grateful for the Summer Faculty Scholarship Award 2011 received from Albright College for assistance on this research.

**REFERENCES**


Table 1. Green Power Communities (as of August 2011)

<table>
<thead>
<tr>
<th>GPCs</th>
<th>Member Since</th>
<th>% of Green Power</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alamo Heights, TX</td>
<td>09/01/2010</td>
<td>3.3</td>
</tr>
<tr>
<td>Aurora, IL M</td>
<td>12/01/2010</td>
<td>2.1</td>
</tr>
<tr>
<td>Beaverton, OR M, I</td>
<td>08/01/2007</td>
<td>4.5</td>
</tr>
<tr>
<td>Bellingham, WA M, I, L,G</td>
<td>04/01/2007</td>
<td>16</td>
</tr>
<tr>
<td>Bend, OR M</td>
<td>03/01/2008</td>
<td>7.7</td>
</tr>
<tr>
<td>Brookeville, MD</td>
<td>08/01/2010</td>
<td>50</td>
</tr>
<tr>
<td>Cannon Beach, OR</td>
<td>05/01/2007</td>
<td>6.1</td>
</tr>
<tr>
<td>Clayton, MO M, I</td>
<td>12/01/2010</td>
<td>2.4</td>
</tr>
<tr>
<td>Cordova, AK</td>
<td>01/01/2009</td>
<td>5.6</td>
</tr>
<tr>
<td>Cornwall, CT</td>
<td>06/01/2010</td>
<td>5.1</td>
</tr>
<tr>
<td>Corvallis, OR M, I</td>
<td>10/01/2005</td>
<td>18.8</td>
</tr>
<tr>
<td>Cottage Grove, OR</td>
<td>10/01/2008</td>
<td>3.7</td>
</tr>
<tr>
<td>Durango, CO M, I</td>
<td>10/01/2009</td>
<td>11</td>
</tr>
<tr>
<td>Edmonston, MD M</td>
<td>04/01/2011</td>
<td>5.1</td>
</tr>
<tr>
<td>Gresham, OR M</td>
<td>03/01/2008</td>
<td>11.1</td>
</tr>
<tr>
<td>Hillsboro, OR M, I</td>
<td>06/01/2010</td>
<td>35.7</td>
</tr>
<tr>
<td>Hood River, OR</td>
<td>02/01/2009</td>
<td>6.3</td>
</tr>
<tr>
<td>Hyattsville, MD I</td>
<td>05/01/2011</td>
<td>5.2</td>
</tr>
<tr>
<td>Lacey, WA M</td>
<td>10/01/2007</td>
<td>5.9</td>
</tr>
<tr>
<td>Lake Oswego, OR M, I</td>
<td>10/01/2009</td>
<td>9.4</td>
</tr>
<tr>
<td>Moab Area, UT M</td>
<td>08/01/2004</td>
<td>3.1</td>
</tr>
<tr>
<td>Palo Alto, CA M, I</td>
<td>07/01/2006</td>
<td>7.7</td>
</tr>
<tr>
<td>Park City, UT M, L, G</td>
<td>08/01/2006</td>
<td>7.5</td>
</tr>
<tr>
<td>Pendleton, OR</td>
<td>10/01/2008</td>
<td>2.3</td>
</tr>
<tr>
<td>Portland, OR M, I</td>
<td>10/01/2010</td>
<td>9.3</td>
</tr>
<tr>
<td>River Falls, WI M</td>
<td>12/01/2008</td>
<td>14.9</td>
</tr>
<tr>
<td>Rockville, MD M, I</td>
<td>03/01/2011</td>
<td>3</td>
</tr>
<tr>
<td>Salem, OR</td>
<td>11/01/2006</td>
<td>3.5</td>
</tr>
<tr>
<td>Santa Clara, CA M, I</td>
<td>03/01/2008</td>
<td>8.1</td>
</tr>
<tr>
<td>Springdale, UT</td>
<td>10/01/2008</td>
<td>5</td>
</tr>
<tr>
<td>Stoughton, WI</td>
<td>01/01/2009</td>
<td>3</td>
</tr>
<tr>
<td>Swarthmore, PA</td>
<td>10/01/2007</td>
<td>27.9</td>
</tr>
<tr>
<td>Universal City, TX</td>
<td>10/01/2009</td>
<td>2</td>
</tr>
<tr>
<td>Washington, DC M, I</td>
<td>03/01/2011</td>
<td>8.3</td>
</tr>
</tbody>
</table>


Note: ‘I’ represents a ICLEI member,
‘M’ represents a MCPA signatory,
‘G’ denotes GHG inventory,
‘L’ stands for Lead By Example (LBE),
‘C’ stands for Climate Change Action Plan.
The Economic Impact of the Arts: Increasing Lifelong Participation

Georgette Grier-Key, MA  Nicole Jean Christian, MPA
Dowling College, Ed.D. student  Walden University, doctoral student
1300 William Floyd Parkway  150 Idle Hour Blvd.
Shirley, NY 11967  Oakdale, NY 11769
USA  USA
631-415-8463  (631) 879-1588
gxg30@dowling.edu or georgette.bric@gmail.com  nicolejchristian@gmail.com

ABSTRACT
The purpose of this paper is to explore and synthesize
literature related to how participation in cultural activities
and specifically how arts education can increase lifelong
participation and contribute to the economy because
“nonprofit arts and culture organizations are active
contributors to the business community. They are employers,
producers, consumers, and members of chambers of
commerce, as well as key partners in the marketing and
promotion of their cities and regions” (Americans for the
Arts Report, Prosperities, p.7). Art participation research is
useful to help arts administrators with advocacy,
development, planning, and evaluation (NEA, 1995). More
research is needed on particularity what significant art
education experience or activity has benefits that contributes
to lifelong participation in the arts (Jackson, Kabwasa &
Herranz, 2006).

Keywords
Arts, economic impact, cultural institutions, NACO’s
(nonprofit art cultural organizations)

1 INTRODUCTION
Maintaining established cultural activity for future
generations is defined as “cultural sustainability”
(Gilhespy, 1999). Gilhespy (1999) identified several
criteria related to the sustainability of cultural institutions
such as diversity and access, participation levels, community
involvement, level of local government and the survival rate
warns that the survival rates of the art institutions are at
stake with today’s public and political climate. Survival of
the arts has depended on support and contribution from
public and private sectors (Chandler, 2000). “With
government and private sector threats to funding,
privatization, corporate downsizing, and fewer philanthropic
dollars, the survival of artist and cultural organizations that
have historically been well-served by these resources is at
risk” (Chandler, 2000, p.244). Her study finds some hope
that by identifying a slumping funding environment many
cultural leaders have been able to adapt from other nonprofit
and for profit models to defray financial curves and use their
resources more efficiently (Chandler, 2000).

Dewey, (2003) credits economic changes with forcing a shift
in the arts funding system and thus “new funding models
reflect changes in the mix of public vs. private and earned
vs. contributed income” (p. 4). She also pointed out that the
continuum of budget cuts and funding termination on both
state and local levels is calling for a continuous evaluation of
funding sources and incorporation of diversified funding
sources. Radbourne (2003) described a project model that
concluded that a geographic area will be “culturally
sustainable when the economic activity is at a level
sufficient to continue employment and the provision of
particular service and when a balance is reached between
social and artistic concerns” (Radbourne, 2003, p.214).
Radbourne focused on art leadership and uncovered three
linkages: local government; higher education; art and
cultural centers. It was found that these three linkages
provide regional resources such as physical locations,
coalitions, financial support and artistic merit. “Then, using
a set of economic, social, and artistic indicators, we
measured the influence of leaders on their region through
resources they support, create, or manage” (Radbourne,

2 VALUE, POLICY AND THE ARTS
The social and cultural impact of the arts is clearly
distinguishable from the economic impact of the arts. Social
and cultural impacts are clearly seen, felt and experienced
through galleries, exhibits and other art outputs. However,
the arts community has often had a challenging time
justifying its economic impact. By and large, arts
organizations are under tremendous pressure to “justify their
funding in terms of the social and economic outcomes they
deliver to society” (Stanziola, 2008, p. 317), therefore art
administrators and professionals are actively seeking
collective ways to develop models to show the impact the
arts has on society at all levels. Stanziola (2008) cautions
practitioners against developing new models but encourages
“academics, policy makers and practioners” (Stanziola, p.
318) to make a joint effort to root out the confusion and
conflicts that are common in determining the value of
“interdisciplinary work” (Id.). Instead, collectively, those in
positions of influence must develop understanding within the
political and policy constraints of the current climate. Also, using the current “governmental operationalizations of value” (Stanziola, p. 319) to demonstrate to the broader public assessments of value as it relates to the arts is critical; in other words, any value derived should have meaning in to policy makers and government and other public funders.

2 ECONOMIC IMPACT ASSESSMENT AND THE ARTS
The most relevant and insightful report to be published in recent years, the AEP study, conducted in 2003, found that NACO’s (Nonprofit arts and cultural organizations) produced over $134 billion in economic output and $24.4 billion in federal tax revenues (Sterngold, 2004, p. 167). However, Sterngold (2004) cautions us about using economic impact studies to justify the arts because when the arts and culture are seen through a completely revenue-generating lens, this can lead to faulty policy making and funding decisions. Often times when impact studies are used they slant funding decisions in the direction of tourism and entertainment which, although, effective in producing profit and attendance, are often lacking in long-term cultural impact. The purpose of the arts is not just to generate profit but also to stimulate thinking, feeling and connection to others and the world around us. So what is the answer? Sterngold (2004) echoes similarly Stanziola’s (2008) argument that arts and culture economic assessment models must be used within acceptable parameters that can be translated to policy makers and funders while remaining true to the core function of the arts and culture. If the arts and culture are seen only as revenue generators what will happen is that while funding may increase, the quality of the art activities may decrease (Sterngold, 2004).

Although, art and cultural institutions are pressured to show evidence of impact on the sector and local economy in order to get funding, we should not discount the fact that arts and culture generate economic impact but that is not the only important measure of its value (Stanziola, 2008). The economic impact of the arts is well documented; the arts contribute nationally, regionally and locally to the economy. External benefits of the arts industry spill over to the tourism industry (Americans for the Arts Report, Prosperity III) are vital to economic development specifically; the arts contribute to downtown revitalization and local economies. Reaborne (2003) found that arts activity is related to economic and social dimensions of community development including jobs, education and community relations and she further concluded that “the arts fosters regional sustainability” (Radbourne, 2003, p.211).

“Nonprofit arts and culture organizations in the United States drive a $166 billion industry—a growth industry that supports 5.7 million full-time jobs and generates nearly $30 billion in government revenue annually” (Americans for the Arts Report, Prosperity III, 2006, p.13).

4 MODELS OF ECONOMIC IMPACT – THE ARTS “NEW FRONTIER”
In Coming Changes in Public Arts by Terry Ray Hiller, Hiller argues for infusion of technological advances as the catchment of a broader audience. He projects that audience attendance will be of staple importance as in the past consideration but used in a different way. He notes that revenue generated from ticketed events is a micro contribution to the overall impact. Inclusion of virtual audience will provide income with minimum cost. The traditional brick and mortar arts organization will have to incorporate some contemporary develop models to survival. “Arts are economically stimulus and “administrators will need to redefine and understand how and where revenues are generated in their profit making” (Hiller, 2001 p. 5).

In this current economic climate stakes are high, art organizations must reconsider cultivating their revenue streams (Hiller, 2001). Hiller has proposed changes that may affect financial sustainability through entrepreneurial enterprise models. It is important to circumvent coming challenges for future art organizations. Hill (2001) foresees satellite locations that are self contained traveling exhibitions and retail spaces that are hybrid-virtual extension within local communities. Gee (2007) observed that technology is rapidly changing the terms of delivery of arts participation through digital presentations of new content, and affordability for participation. Arts participation such as attendance of exhibitions and or performances in museums/galleries, theaters, concert halls, festivals, even participation through electronic media like broadcasting and broadcast streaming, YouTube, or social networks has increased (Rabinkin & Hedberg, 2011). Additionally, the Internet provides access to art, art research, and art products and arts information. Utilizing technology for personal fulfillment of art whether it is posting artwork, literal arts, and video or watching performances, the use of technology is also positively associated with arts education (Rabinkin & Hedberg, 2011).

5 CONCLUSION
This review of the related literature indicates how art education, lifelong participation lead to economic impact that can influence and sustain economic deliverables that impact the economy. The relationships among art education and lifelong participation need to be examined carefully so it may better inform how trends and patterns are related to economic impact; furthermore an examination of measurement criteria for the impact of the arts needs to be fully explored. Sterngold (2004) argues that the gross measurement does a disservice and isn’t a true measure of the impact and weakens advocates argument. Ebewo &
Sirayi (2009) reported that “Many arts advocates and some renowned economists have come to embrace the arts as engines of economic growth and development” (Ebewo and Sirayi 2009, p.290) which can be scientifically measured and can be used as a tool for advocacy. Hill (2001) warns that unforeseen challenges lie ahead and now is the time to shore up economic integrity. He adds that cultural organizations need to rethink how they operate and equally important is the rethinking process itself and recognizing and understanding why the rethinking process is necessary. To take a note from Dr. W. Edwards Deming, continuous improvement is necessary to improve processes, learning and implementation of quality for optimum operation.

If we are to add to the discussion of economic impact of the arts we have to re-examine the measurement tool. It is clear that art education influences art participation which leads to lifelong participation in arts and cultural organizations. Life long participation appears to be the unexamined factor in the gross economic impact of the arts equation. Hill (2001) concluded that ticket sales alone is a small part of the pie and argues for multiple access and entry points and rejects the singular disillusionment of the past.

Hill (2001) points to economic impact of the arts as a continuous cycle, a repeat customer or patron as economic impact and art / cultural organizations must be ready to provide art experiences that align with coming trends that enhances delivery of services and secure the future of cultural enterprise.

Sterngold (2004) and Stanziola (2008) add that the traditional trajectoryed measurement of economic impact of the arts must be dissected to uncover an authentic measurement that can be translated into and a combination of value, assessment and impact which will inform the treatment cultural institutions apply to patrons for lifelong participation.

ACKNOWLEDGEMENTS
The author wishes to acknowledge the support and guidance of the faculty at Dowling Collage, Dr. Maureen Mackenzie, Dr. Stephanie Tatum, Dr. Robert Manley and Nicole Christian. Also, I would like to acknowledge the support and love of my husband Melvin, my father George Grier and my Grandfather Reverend Doctor Dodenhuff Green.

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ABSTRACT

The current generation of business students is digital technology natives with great sophistication in the uses and potential of social media. Which is good because at the same time businesses and other organizations are expecting today’s business graduates to be highly proficient in these technologies (Wankel). Social media tools are disruptive technologies that radically alter the way people view and use communication. The task of knowledge construction is thus now being shared among the instructor, students and other interested individuals who share an interest for the subject (Grover and Steward).

This article focuses on the author’s continuing efforts using social media to enhance undergraduate business students learning experiences. His College makes available to instructors an online course management system (CMS) and training but for traditional courses leaves its use to the instructor. The author thus uses the CMS’s features such as bulletin boards, wikis, and online meetings but also incorporates the use of other tools like blogs, podcasts, really simple syndication (RSS), and twitter. Though incorporating social media into a course requires considerable time and effort the results to date have exceeded the author’s expectations.

KEYWORDS: Undergraduate business education, social media, wikis, online meetings, blogs, podcasts.

INTRODUCTION

Social media tools are disruptive technologies that radically alter the way people view and use communication. Their emergence has significantly impacted the way students learn and the way instructors teach. The task of knowledge construction is now being shared among the instructor, students and other interested individuals who share an interest for the subject (Grover and Steward).

The influence of social media on learning and teaching environments is growing more each year. Social media applications can reinforce class material and positively influence discussions, collaborative work, and authoring. Educators and researchers are constantly experimenting with social media technologies hoping to stimulate critical thinking, collaboration, and knowledge construction.

Social media technologies offer the capability to both receive and create content with the hope a collective intelligence emerges. The goal is to improve students’ learning experiences to prepare them to enter a workforce that is not geographically constrained and expects them to have highly developed online collaboration skills. The pursuit of such benefits drives academics to incorporate new technological approaches in their teaching methodology (Goode and Caicedo).

These new technologies that are changing the way instructors teach and students learn include the following:

- Weblogs. Weblogs or blogs, as they are known, are easily created and updateable web sites that allow authors to publish instantly to the Internet thus allowing instructors and students to communicate easily.
- Wikis. A Wiki is a collaborative web space where anyone can add or edit content that has already been published.
- Really Simple Syndication (RSS). RSS allows users to subscribe to news feeds originating either from blogs or more traditional web spaces like newspapers and magazines. The content comes to the reader instead of the reader having to retrieve the content.
- Social Bookmarking. Bookmarking sites allow users to save and archive entire web pages. This enables users to produce a searchable personalized Internet.
- Online Photograph Galleries (OPG). OPGs allow the posting of photographs that support sharing of ideas and experiences.
- Audio/Video Casting (AVC). AVC makes it easy to produce digital voice and video files, and
publish and distribute them over the Internet. It also supports basic live streaming TV online.

- Twitter. Twitter is a powerful tool for easily connecting with others and sharing content.
- Social Networking Sites (SNS). In addition to supporting wide area communication in both audio and video formats SNSs help teach the network illiteracies that are required to navigate these new connections (Richardson).

**APPROACH**

Incorporating the use of social media into a business course can allow a diverse group of interested individuals to engage in the creation and development of content and to gather online to share knowledge, information, and opinions (Kaplan and Haenlien). In the author’s BUS 3010 – Production Systems Management traditional semester course this group included himself, the students in the course, adjunct faculty who teach other sections of the course, and select members of the local section of the America Production and Inventory Control Society (APICS). APICS is an international operations management educational society of which the author is an active member.

It was necessary to switch from the traditional lecture and questions/answers approach to better use the various social media tools. The author redesigned BUS 3010 to incorporate blogs for use by students to support closer collaboration on team projects. The teams were also encouraged to use and monitor RSSs containing operations and supply chain information, and utilize social bookmarking. Wikis were set up for a number of purposes. Individual wikis were set up as homework help lines where the author posted some answers and hints for completing homework assignments. Wikis were also used for polling students about changes in assignments and presentations’ dates, and as class meeting make-up dates. Twitter was used along with email for one to one communication.

**STUDENT EXPERIENCE**

A survey conducted in the first class meeting found only three of eighteen (~17%) students had previously used either Wikis or a social networking site in a college business course, and none had used twitter. By the end of the course all students had tried or used Wikis, social networking sites, Really Simple Syndication, social bookmarking, and twitter as part of the course. In addition, each project team incorporated the use of online photograph galleries and audio/video casting techniques in their course research presentations.

When surveyed at the last class meeting student feedback included the following findings:

- Though most students had used social media such as Facebook and Twitter in their personal lives they needed instruction as how to use them safely in an educational setting. A social media usage agreement (appendix A) was quickly established that addressed basic safety practices.
- While some students quickly embrace the use of social media in the course others initially questioned its value and the need to learn something else besides required course content. Other time the major of the students developed an appreciation for its use.
- Some students expected the use of social media to correct some of the traditional problems associated with group projects, namely, uneven participation. They learned they could use blogs and twitter to keep all team members more fully engaged in the projects.
- Students felt the use of social media heighten their project presentations. In particular, they cited RSS and social bookmarking as helping them easily collect current information on their topics. Audio/Video casting also allowed them to distribute their presentations via the Internet to interested members of the local section of APICS.
- Students felt the inclusion of the APICS members as blogs and wikis members added real world knowledge to their learning and the course in general.
- Students viewed having used and somewhat mastered a variety of social media approaches as helping them better prepare for a career in business management.
- Students liked the inclusion of social media in the course and recommended it be used in all higher level business courses.

The overall favorable acceptance of the use of social media in BUS 3010 is causing the author to incorporate its use in an upcoming business capstone course that will be taught over a span of six weeks.

**FACULTY EXPERIENCE**

This early use of social media approaches in a traditional business course changed the classroom behavior of both the instructor and students. The instructor saw his role evolve from being primarily a presenter of knowledge to being a more of a facilitator and mentor. This role change was also accompanied by changes in the pedagogy followed in the course as the instructor had to learn how to set up and use effectively several social media approaches.
As importantly, students grew from being passive to active learners. Lessons learned from these early attempts include the following:

- Instructors must design into their course syllabi time and opportunities for the use of social media activities. Though this may initially be viewed as taking time away from important course topics, these opportunities can be viewed as alternative ways to cover these topics and even a means for introducing additional topics.
- Both instructors and students need to realize their roles in the course and behavior in the classroom will change significantly. The complexity and number of student questions rose significantly resulting in a much more dynamic learning environment.
- Both instructors and students must be open to learning and using new social media classroom approaches that extend and enhance instructor-student interactions.
- Instructors must realize not all students will embrace all elements of all social media approaches. Some students will initially be more comfortable just using one or two approaches, and will need time to expand their skill set.
- Incorporating social media approaches allow guest lecturers to participate remotely if necessary. Also, it allows instructors to incorporate many free weblogs thus exposing students to new and different professional opinions.
- Student presentations distributed via the Internet can be viewed by a much wider audience on an on-demand basis.
- Incorporating social media approaches in the course contributed to extending student learning outside the classroom as it was especially easy for students to form study groups.
- Many ideas for student group projects came from students having contact with members of the local sections of APICS. This helps keep the group projects relevant to current issues and often provides welcoming venues for student presentations.
- Students have different academic strengths and skill sets, and working together allows students the opportunity to develop them to their project’s advantage.
- Smaller in size and/or scope group projects are best as social media allows students to receive timely feedback from a number of sources. Students need to experience the beginning, middle, and end of a project.
- Class size needs to be limited to a reasonable number. If no graduate assistants are available this experience suggests no more than twenty students should be in the course.
- Instructors must be prepared to allocate more time supporting courses with social media components.

These findings support the argument that utilizing social media in business courses is critical because every person with access to the Internet has the ability to contribute ideas and experiences to the larger body of business knowledge (Rushkoff). Social learning is becoming an indispensable tool in the education of today’s students (NetDay News).

CONCLUSION

The use of social media approaches was found to enhance the learning experiences of undergraduate business students. Their use though caused both the instructor and students to realize their roles in the course and behavior in the classroom had to change significantly. Though incorporating social media approaches may be viewed as taking time away from important course topics, they should be viewed as alternative ways to cover topics and even as a means for introducing additional topics.

REFERENCES


Appendix A: Social Media Usage Agreement

Social Media Terms and Conditions

1. Students are expected to act safely by keeping personal information out of their posts.
2. Students agree not to use their family name, password, school name and location, or any other information that could enable someone to locate and contact them.
3. Students are to use social media as an academic resource only and therefore behavior as in the classroom.
4. Students should not respond to comments that make them uncomfortable. Instead, they should report these comments to the instructor immediately.
The Relationship between Ethical Sensitivity and Interpersonal Orientation Personality Scale

Costas Hadjicharalambous
SUNY College at Old Westbury
costas@oldwestbury.edu

ABSTRACT
Numerous studies examined the role of age, area of study, and gender on ethical sensitivity. An extensive literature review reveals that the role of personality traits on ethical behavior received limited attention. The present paper is an attempt to close this gap by focusing on the relationship between ethical sensitivity and personality traits. Specifically, the study examines the relationship between ethical sensitivity and the three dimensions of the interpersonal orientation personality scale CAD which classified individuals as “compliant”, “aggressive”, or “detached”.

Keywords: ethics, ethical sensitivity, personality traits.

1. INTRODUCTION
The recent financial crisis, the collapse of Wall Street icons, and the responsibility of their executives guarantee that business ethics will continue to get the attention of academic scholars, the press, and business professionals. Business Ethics has been defined as “the moral principles and standards that guide behavior in the world of business” (Ferrell and Fraedrich, 1991, p. 5). A number of authors investigated the topic from different perspectives and examined the effects of different variables on ethical behavior.

2. LITERATURE REVIEW AND HYPOTHESES
A literature review demonstrates that the issue of ethics and ethical behavior received a lot of attention. For a comprehensive review refer to Borkowski and Ugras (1998), Ford and Richardson (1994) and O’Fallon and Butterfield (2005).

O’Fallon and Butterfield (2005) review of the empirical ethical decision-making literature found that the majority of studies examined the relationship between ethical decision-making and gender, religion, age, educational level, and course of study. Their review of one hundred seventy four articles found that the role of personality traits on ethical behavior received limited attention. In this paper we attempt to close this gap by focusing on the relationship between ethical sensitivity and personality traits. The study examines the relationship between ethical sensitivity and the three dimensions of the interpersonal orientation personality scale.

Individuals' interpersonal orientations are classified as "compliant," "aggressive," or "detached" (CAD) based on Karen Horney’s (1945) neo-Freudian tripartite theory of personality (Cohen 1967). Based on the three personality traits and their characteristics the following research hypotheses have been proposed:

H1: Compliance is positively related to ethical sensitivity.
H2: Aggressiveness is negatively related to ethical sensitivity.
H3: Detached is negatively related to ethical sensitivity.

3. METHODOLOGY
This study is a component of a larger study which examined the effects of gender, ethnicity/race, area of study, and personality traits on ethical behavior. Participants were asked to evaluate 30 ethically related alternative decision making scenarios. Data was collected using a self-administered questionnaire from students attending a Comprehensive College in the Northeast region of the United States. The cluster sampling technique was utilized to select classes to be included in the sample. No credit or other incentive was given to participants for completing the survey. The overall response rate was 74.6% yielding a total sample size of 648 useable questionnaires.

Measures
Ethical Sensitivity (ESS) was measured using 30 items of ethically related decision making statements/scenarios. These statements covered ethical dilemmas about using company resources for personal gain, relationships with co-workers, personal job performance, company policies, and gift utilization to obtain/provide preferential treatment. The items for the ethical sensitivity scale were taken from the study by Stevens, Harris and Williamson (1993). Each item scores 1 = Very Unethical to 5 = Not at all Unethical. Thus the lower the score (sum of the 30 items) on ESS scale, the higher the ethical sensitivity.

Interpersonal orientation personality traits of compliant, aggressive and detached were measured using the CAD scale developed by Cohen (1967). The original 35 items included by Cohen (1967) were used for the purpose of this study. Each item scores 1=extremely desirable to 5=extremely undesirable. The reliability and validity of the CAD scale was established in previous studies (Ryan and Becherer 1976; Tyagi, 1983).

4. DATA ANALYSIS
The hypotheses were tested using directional t-tests. Two groups were formulated using the median of the respective
scale as the cutting point. Individuals with summed scores below the median were part of the first group, while individuals with summed scores above the median were part of the second group. Table 2 presents correlations among the measures relevant to hypotheses. Table 3 presents the directional t-test results.

Table 1: Correlation Coefficients

<table>
<thead>
<tr>
<th></th>
<th>CMPL</th>
<th>AGGR</th>
<th>DTCH</th>
<th>ESS</th>
</tr>
</thead>
<tbody>
<tr>
<td>mean</td>
<td>15.95</td>
<td>29.90</td>
<td>27.27</td>
<td>64.58</td>
</tr>
<tr>
<td>st.dev.</td>
<td>4.29</td>
<td>6.67</td>
<td>4.86</td>
<td>20.73</td>
</tr>
<tr>
<td>N</td>
<td>643</td>
<td>631</td>
<td>639</td>
<td>616</td>
</tr>
</tbody>
</table>

| CMPL | 1 |
| AGGR | -.010 (.797) | 1 |
| DTCH | -.055 (.166) | .276** (.000) | 1 |
| ESS  | .279** (.000) | -.324** (.000) | -.122** (.003) | 1 |

p-values in parenthesis
* Correlation is significant at the 0.05 level (2-tailed).
** Correlation is significant at the 0.01 level (2-tailed).

5. CONCLUSION

Results demonstrated that there is a relationship between the dimensions of interpersonal scale (CAD) and ethical sensitivity. The correlations reported in Table 2 and the corresponding p-values provide support for all three hypotheses.

H1: Compliance is positively related to ethical sensitivity (supported p=.000).

H2: Aggressiveness is negatively related to ethical sensitivity (supported p=.000).

H3: Detached is negatively related to ethical sensitivity (supported p=.003).

This is a preliminary analysis. Additional analysis is needed to investigate further the conflicting finding about hypothesis 3 (H3). Whereas the correlation between scores of ethical sensitivity and “detached” is significant a directional t-test indicates no support for this hypothesis (t=1.43, p-value=.015). An explanation may be a possible interaction between “detached” and one of the other two dimensions of the CAD scale.

Present results reaffirmed evidence obtained from a previous studies that there are differences between males and females. Females are more sensitive than males about ethical issues and demonstrate higher ethical sensitivity, (t=5.82, p-value=.00).

Human recourses managers, as well as officers responsible for developing ethics programs, will find the results useful. Ethics development and ethics orientation programs need to account for differences in personality characteristics implied by the CAD interpersonal orientation scale. This is consistent with Hogan and Holland (2003) that argued that there is a link between personality traits and workplace behavior.

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Quantitative Evaluation of the Struggle of Economic Performance: The Case MENA Countries

Noha Emara, Ph. D. *

Helwan University
nme2109@columbia.edu

ABSTRACT:
The recent political up-rise in the Middle East and North African (MENA) economies sparks the light on evaluating the so called structural reforms that aimed at achieving economic freedom. This paper examines the impact of liberal policies on the economic performance of labor and capital productivity in MENA economies. Using non linear Panel Least Square regression with regional dummies and period fixed effects (LSDV) for a sample of 18 MENA countries over the period 1995-2009, the study estimates the impact of different aspects of economic freedom on labor and capital productivity. The economic freedom measure encompass different areas including freedom of fiscal, monetary, trade, investment, labor, financial, and freedom from corruption. The results of the study suggest a non-uniform impact of different areas of economic freedom on output per worker, capital intensity, human capital per worker, or total factor productivity. For instance while trade freedom, fiscal freedom, monetary freedom, investment freedom, financial freedom, and freedom from corruption enhances output per worker, through the increase in human capital per worker, it do worsens it through a negative impact on capital intensity and total factor productivity. Furthermore, the study finds a significant reverse causality that runs from enhancing either output per worker or its three components on the economic freedom measure. While increasing output per worker or human capital per worker is reflected in an improvement in economic freedom measures, the opposite is found for the increase in capital intensity or total factor productivity. An important policy implication in this respect suggests that liberal economic policies in MENA countries might not be a pre-requisite for their enhanced future productivity.

JEL Classification Numbers: O16; O43; N20

KEYWORDS: MENA; Economic Freedom; Political Freedoms; Productivity; Corruption

I. INTRODUCTION

Almost all of the MENA states suffer from a fragile economic growth; a growth mostly based on revenues from natural resources and less based on sound economic performance. The main aim of the paper is to examine how economic freedom, if allowed in these countries, can affect output per worker. In addition, we take one step further and we explore how economic freedom can affect the three main components of output per worker namely; capital intensities, human capital per worker, and total factor productivity.

The literature on the importance of strong institutions, either legal or financial institutions, is rapidly growing. A leading paper of this literature is La Porta, Florencio, Andrei and Robert (1997) in which legal and financial institutions proved important for a firm’s decisions. Within same lines, Rodrik (1999) shows that countries with the sharpest drop in growth after 1975 had weak institutions, as measured by rule of law, democratic rights, and social safety nets. Similarly, Acemoglu et al. (2003) shows that institutions have more important effects on growth as compared with the role of economic policy. Once the institutions variable is included their regression, the coefficient of the macroeconomic policy turns insignificant. Easterly (2004) confirms these results. In contrast to Acemoglu et al. (2003) and Easterly (2004), in a cross section of 91 countries, Fatas and Mihov (2005) studied the effect of fiscal policy volatility, institutions, and growth. Their results showed that fiscal policy volatility has a significant negative impact on growth; in addition, they showed that institutions affect growth only through their effect on policy, particularly the policy’s volatility.

In line with the results of Acemoglu et al.(2003) and Easterly (2004), using a panel data on hundred countries from 1975-1999, Veiga and Aisen (2006) find a positive association between greater fragmentation, polarization, and political instability as forms of market frictions and inflation volatility. Moreover, Veiga and Aisen finds that forms of market frictions are the main determinants of inflation volatility. Finally, Alexandrakis and Livanis (2010) explores the impact of economic freedom on output per worker for Latin American countries. The results suggest that different areas of economic freedom have a non-uniform impact on affect economic performance.

*Assistant Professor, Faculty of Commerce and Business Administration, Helwan University
Small government and strong protection of property rights seem to be good for economic performance while freedom to access international market negatively impact it.

Given the latest up-rise in many MENA countries, the main aim of the paper is to explore the extent to which the economic performance in these countries could be affected if their citizens were given the freedom to access international market, freedom to gain more control on their holdings of wealth, freedom to enjoy a stable currency and market determined prices, freedom to invest with least obstacles on new and existing projects, freedom to borrow from financial intermediaries, and freedom from all sorts of corruption.

II. EMPIRICAL SPECIFICATION

This section estimates the impact of different areas of economic freedom on output per capita in MENA states. Following Jones and Hall, we estimate the natural logarithm of output per worker as given by the following equation

\[ \ln y_{i,t} = \frac{\alpha}{1-\alpha} \ln k_{i,t} + \ln h_{i,t} + \ln A_{i,t}, \quad (1) \]

Where \( y_{i,t} \) stands for output per worker, \( k_{i,t} \) refers to the ratio of physical capital to output or capital intensity, \( h_{i,t} \) refers to human capital per worker, \( A_{i,t} \) refers to total factor productivity, and finally the subscript \( i \) and \( t \) refers to the country and the time period respectively.

As equation (1) suggests, output per worker depends mainly on three main determinants, physical capital, human capital, and productivity. Following Alexandrakis and Livonis (2010), the extent to which output per worker is affected by different areas of economic freedom such as trade freedom, monetary freedom, fiscal freedom, investment freedom, financial freedom, and freedom from corruption.

To perform this task, equation (2) below is estimated using Panel Least Square regression with regional dummies and period fixed effects (LSDV) for a sample of 18 MENA countries over the period 1995-2009.

\[ \ln y_{i,t} = \beta_0 + \beta_1 EF_{i,t} + d_i + d_t + e_{i,t}, \quad (2) \]

Where \( EF_{i,t} \) stands for the economic freedom index for either one of the six different areas discussed above, \( d_i \) and \( d_t \) stands for the regional dummy and the period dummy respectively, and finally \( e_{i,t} \) reflects all other factors affecting output per worker that are not included in the model or omitted variables.

To explore the channel through which economic freedom affects output per worker, the three independent variables of equation (1) are estimated;

\[ \frac{\alpha}{1-\alpha} \ln k_{i,t} = \beta_0 + \beta_1 EF_{i,t} + d_i + d_t + u_{i,t}, \quad (3) \]

\[ \ln h_{i,t} = \beta_0 + \beta_2 EF_{i,t} + d_i + d_t + v_{i,t}, \quad (4) \]

\[ \ln A_{i,t} = \beta_0 + \beta_3 EF_{i,t} + d_i + d_t + w_{i,t}. \quad (5) \]

Where again \( EF_{i,t} \) stands for the economic freedom index for either one of the six different areas discussed above, \( d_i \) and \( d_t \) stands for the regional dummy and the period dummy respectively, and finally \( u_{i,t}, v_{i,t} \) and \( w_{i,t} \) reflects the omitted variables of each model.

III. DATA

The data set consist of 18 MENA countries spanning the period 1995-2009. The data on output per worker is constructed from the data on GDP per capita (constant 2000 SUS) and labor force collected from the World Development Indicators, World Bank database. The data on Economic Freedom measures are collected from the website of the Heritage Foundation database. Next, data on stock of capital is constructed from the domestic investment, a.k.a. gross capital formation (at constant prices) data compiled from the Penn World Tables. More specifically, using the perpetual inventory method and assuming that capital equation is as follows;

\[ k_i = (1-\delta)k_{i-1} + I_{i-1} \]

where \( \delta \) stands for depreciation and \( I_{i-1} \) denotes investment level of last period.

Where the initial level of capital is equal to \( k_0 = \frac{I_0}{g+\delta} \).

Following Hall and Jones (1999) and Alexandrakis and Livonis (2010), depreciation rate is assumed equal to six percent and following Bernanke and Gurkaynak (2001) and Alexandrakis and Livonis (2010), \( g \) is equal to the rate of growth of GDP during the decade in which investment is taken at the initial year.

Next, the data on human capital are collected from Barro and Lee (2000) as the average years of schooling referring to educational attainment. Finally, following Alexandrakis and Livonis (2010), the data on productivity is constructed from the data of output per worker, human capital per worker, and capital intensity as follows

\[ A_{i,t} = \frac{y_{i,t}}{h_{i,t}^\alpha (1-\alpha)} \]

where \( \alpha \), or the share of physical capital, is assumed to be equal to 0.33 following Mankiw (1992).

IV. ESTIMATION RESULTS

In this section, the coefficients of equation (2), (3), (4), and (5) are estimated and reported in Table (1). Each equation was estimated using LSDV and was repeated for each of the six measures of economic freedom each one in a turn. For seek of
brevity, only the coefficients of the six measures of economic freedom are reported in the table.

As obvious from Column (1), any improvement in any of the six measures of economic freedom; either trade, fiscal, monetary, financial, investment, or corruption enhances output per worker. The coefficients are all positively and statistically significant at the one percent. This suggest that when the citizens of MENA countries can be allowed more control on their disposition of their own wealth, when they enjoy a stable currency and market determined prices, open wide opportunities in front of new and existing businesses, when they can enjoy wide access to financial intermediaries, and when they suffer less from bribery and dishonesty all will feed into higher output per worker or higher standard of living in general.

Next, to explore the channel through which economic freedom feeds into output per worker, equations (3), (4), and (5) are estimated and reported in the table above. It was surprising to find that the six measures of economic freedom exerts negative and significant impact on capital intensity, as shown in Column (2). Similarly, Column (4) shows that the enhancement in economic freedom measures seems to reduce productivity in MENA countries. All coefficients are negative and statistically significant except for the impact of trade freedom on productivity. The result seem to surprisingly suggest that the less freedom in trade, fiscal, monetary, investment, financial, and corruption the more is either the capital intensity or the total factor productivity. The result seem surprising but in line with the results of Alexandrakis and Livanis (2010).

Finally, it was interesting to find that all six measures of economic freedom increases human capital per worker. As shown in Column (4), all coefficients are positive and statistically significant. This result might suggest that the positive impact of the enhancement in economic freedom measures on output per worker arises mainly from their positive impact on human capital per worker. This positive impact seems to out-weigh the negative impact of the enhancement of these measures on either capital intensity or total factor productivity.

The second part of the estimation procedure is related to the reverse causality. The main question here is whether liberal economic policies are pre-requisite or not for future economic productivity in the MENA region. To answer this question we estimate equations (2), (3), (4), and (5) but with switching the dependent and the independent variables. For example, when estimating the reverse causality of in equation (2), our dependent variable is the economic freedom index and the dependent and the independent variables. For example, when estimating the reverse causality of in equation (2), our dependent variable is the economic freedom index and the dependent variable is output per worker. Each equation is estimated six times with each time one of the economic freedom measures is taken as the dependent variable each one in a turn. The results show a significant reverse causality that runs from enhancing either output per worker or its three components on the economic freedom measure. While increasing output per worker or human capital per worker is reflected in an improvement in economic freedom measures, the opposite is found for the increase in capital intensity or total factor productivity. An important policy implication in this respect suggests that liberal economic policies in MENA countries might not be a pre-requisite for their enhanced future productivity.

**CONCLUSION**

Improvement in any of the six measures of economic freedom; trade, fiscal, monetary, financial, investment, or corruption enhances output per worker. When the citizens of MENA countries can be allowed more control on their disposition of their own wealth, when they enjoy a stable currency and market determined prices, open wide opportunities in front of new and existing businesses, when they can enjoy wide access to financial intermediaries, and

**Table 1: Impact of Economic Freedom on Output/worker, Capital intensity, Human Capital/worker, and Productivity**

<table>
<thead>
<tr>
<th>Regressors</th>
<th>Output per Worker regression (1)</th>
<th>Capital Intensity regression (2)</th>
<th>Human Capital per Worker regression (3)</th>
<th>Productivity Regression (4)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trade Freedom</td>
<td>0.0218 (0.003)</td>
<td>-0.011 (0.003)</td>
<td>0.015 (0.003)</td>
<td>-0.014 (0.014)</td>
</tr>
<tr>
<td>No. Observations</td>
<td>239</td>
<td>239</td>
<td>219</td>
<td>203</td>
</tr>
<tr>
<td>$R^2$</td>
<td>0.32</td>
<td>0.06</td>
<td>0.22</td>
<td>0.01</td>
</tr>
<tr>
<td>Fiscal Freedom</td>
<td>0.008 (0.002)</td>
<td>-0.011 (0.002)</td>
<td>0.012 (0.002)</td>
<td>-0.04</td>
</tr>
<tr>
<td>No. Observations</td>
<td>239</td>
<td>239</td>
<td>219</td>
<td>203</td>
</tr>
<tr>
<td>$R^2$</td>
<td>0.17</td>
<td>0.10</td>
<td>0.24</td>
<td>0.05</td>
</tr>
<tr>
<td>Monetary Freedom</td>
<td>0.013 (0.003)</td>
<td>-0.022 (0.003)</td>
<td>0.014 (0.003)</td>
<td>-0.05</td>
</tr>
<tr>
<td>No. Observations</td>
<td>239</td>
<td>239</td>
<td>219</td>
<td>203</td>
</tr>
<tr>
<td>$R^2$</td>
<td>0.19</td>
<td>0.25</td>
<td>0.22</td>
<td>0.07</td>
</tr>
<tr>
<td>Investment Freedom</td>
<td>0.008 (0.002)</td>
<td>-0.009 (0.002)</td>
<td>0.008 (0.002)</td>
<td>-0.050</td>
</tr>
<tr>
<td>No. Observations</td>
<td>239</td>
<td>239</td>
<td>219</td>
<td>203</td>
</tr>
<tr>
<td>$R^2$</td>
<td>0.17</td>
<td>0.07</td>
<td>0.17</td>
<td>0.10</td>
</tr>
<tr>
<td>Financial Freedom</td>
<td>0.013 (0.002)</td>
<td>-0.011 (0.002)</td>
<td>0.01 (0.002)</td>
<td>-0.400</td>
</tr>
<tr>
<td>No. Observations</td>
<td>239</td>
<td>239</td>
<td>219</td>
<td>203</td>
</tr>
<tr>
<td>$R^2$</td>
<td>0.26</td>
<td>0.12</td>
<td>0.22</td>
<td>0.05</td>
</tr>
<tr>
<td>Freedom from Corruption</td>
<td>0.012 (0.002)</td>
<td>-0.018 (0.002)</td>
<td>0.013 (0.002)</td>
<td>-0.040</td>
</tr>
<tr>
<td>No. Observations</td>
<td>239</td>
<td>239</td>
<td>219</td>
<td>203</td>
</tr>
<tr>
<td>$R^2$</td>
<td>0.27</td>
<td>0.35</td>
<td>0.28</td>
<td>0.09</td>
</tr>
</tbody>
</table>

Notes: Estimation using LSDV. The numbers in parentheses are the standard errors.
when they suffer less from bribery and dishonesty all will feed into higher output per worker or higher standard of living in general.

In contrast to the results of Alexandrakis and Livanis (2010) and Blyde and Fernandez-Arias (2006), our results suggest that enhancing economic freedom in MENA states feeds into higher output per worker only through its impact on human capital per worker. Both the capital intensity channel and the total factor productivity channel do not seem to boost output per worker. Furthermore, our results show a significant reverse causality running from either output per worker, capital intensity, human capital per worker, or total factor productivity to economic freedom measures. An important policy implication in this respect suggests that liberal economic policies in MENA countries might not be a prerequisite for their enhanced future productivity. In a future extension of this study, the model will be estimated with instrumental variables to check on the robustness of these results.

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Aligning Social Media, Social Networking and Social Marketing: Engagement as the Key to Healthcare Marketing

Anne M. Hewitt, PHD
Seton Hall University
400 South Orange Avenue
South Orange, NJ 07079
(973) 275-2070
Anne.hewitt@shu.edu

ABSTRACT
The hyper-competitive healthcare marketplace challenges organizations to reconfigure marketing strategies based on emerging communication theories and social networking options. Aligning marketing strategies that integrate social media, social networking and social marketing constructs requires a thorough grounding in all related theories and approaches. Special attention should be paid to understanding the relationships between these three social communication components in order to maximize marketing outcomes and impact. A proposed framework detailing the functional role of each social component is presented along with a bridge construct (social connectedness) that facilitates meaningful alignment among these three distinct social communication phenomena. Sontag’s social connectedness model suggests that the affordances of social networking technology allows persons to move through the stages of linking, lurking and lunging in order to reach engagement. As outlined by Ferguson, e-patients who reach the engagement stage participate in their health and healthcare decisions. The primary and contemporary challenge for health marketers is to develop integrated social communication frameworks that align the benefits of all three core components (social marketing, social media and social networking) and produces consumer engagement as the successful outcome. The purpose of this paper is to first, provide a brief overview of each these social communication components and highlight their traditional marketing function. Second, to introduce the concept of social connectedness as a relevant model for alignment and finally, to suggest a marketing framework that leads to engagement as an outcome.

2 SOCIAL COMMUNICATIONS AS A HEALTHCARE MARKETING STRATEGY

Although social communication models and approaches have been extensively discussed and defined in marketing literature, for purposes of this paper the three basic social phenomena examined include: social marketing, social media and social networking.

Social Marketing
The concepts of social marketing have existed for more than forty years and new definitions continue to emerge (Dann, 2010). In fact, social marketing perspectives are now being linked to consumer driven healthcare as a contemporary strategy (Kimball, Skiba, Paul, 2009). Originally, social marketing referred to an effort to facilitate voluntary change through the adoption of a positive idea, behavior or practice (Storey, Saffitz, Rimon, 2008). The key distinction of social marketing from commercial marketing is that it often targets communications rely on web-based (Web 2.0) digital applications. These applications support social networking tools that display and relay messages derived from social marketing constructs and strategies. While the use of social communication techniques has become fundamental for many health-related organizations, their potential for targeted healthcare marketing is just being explored. The primary and contemporary challenge for health marketers is to develop integrated social communication frameworks that align the benefits of all three core components (social marketing, social media and social networking) and produces consumer engagement as the successful outcome. The purpose of this paper is to first, provide a brief overview of each these social communication components and highlight their traditional marketing function. Second, to introduce the concept of social connectedness as a relevant model for alignment and finally, to suggest a marketing framework that leads to engagement as an outcome.
an “idea” instead of a product for the health benefit of an individual or a population. For example, social marketing would encourage daily exercise to reduce obesity and prevent the onset of diabetes. Social marketing as a strategy shares many of traditional marketing concepts, such as the use of exchange theory, audience segmentation and market research (Fertmann & Allensworth, 2010). Social marketing also extensively relies on the customization of the basic marketing concepts of the four Ps of marketing: product, price, place and promotion. Recently, two additional constructs, positioning and politics have been added to the core P’s (Gorin, 2006). Social marketing is an approach that is market based, seeks to influence behavior through voluntary activity and provides social benefit (Dann, 2010). It differs from both social media and social networking as it serves as a framework appropriate for health promotion program development and implementation. However, the ultimate goal of social marketing remains to influence health behaviors for the benefit of society (Kotler & Lee, 2008). Social marketing also reflects the global transition from the information age to the connected age (Zulenka, 2007) via its reliance on social media and social networking strategies.

Social Media
Social media, often categorized as the Web 2.0 movement or genre, refers to web-based, technology-enabled platforms for communicating and sharing (Murugesan, 2007). Common examples include interactive websites, blogs, wikis, podcasts, mash-ups, collaborative editing tools, social media sharing tools and social networking services. Collaborative editing tools allow participants from different locations the ability to produce a single product at the same time. Social networking tools allow for the convergence of individuals to form communities and include commonly recognized sites such as MySpace, Facebook, Twitter, and Linkedin. Social media sharing tools promote user-generated content designed for multi-purposes such as You-Tube videos and Flickr photos. Smart phone platforms and other handheld communication devices are exponentially increasing the proliferation of these tools (Galer-Unti, Alley, K., Pullian, R.M., 2010). Web 2.0 technologies benefit consumers as they encourage interaction and foster collective intelligence. Social media in healthcare facilitate stakeholder interactions that allow patients/consumers to connect, communicate, and collaborate (Thiest, 2010). Just as these social media technologies have significantly altered the educational learning environment through their accessibility, consumer-friendliness, interactivity, and networking capabilities, they also offer the potential for unique health marketing opportunities. In fact, many social networking tools have been readily adopted by hospitals and other related health organizations (Sharp, 2010).

Social Networking
Using social networking tools for health promotion activities and social marketing initiatives requires an understanding of social networks. Social networks refer to linkages between people that may or may not provide social support (Heaney & Israel, 2008). Social support is a broad construct that describes four types of support relationships: emotional, instrumental, informational and appraisal (House, 1981). The ability to create these types of support relationships is a primary advantage of social networking tools. Preliminary research suggests that health interventions based on social network linkages are most useful when the existing face-to-face network is not meeting the consumer’s needs or wants due to limited resources. The use of social networking as a social marketing tool has proliferated in recent years with niche social networking being a primary revenue enhancement strategy (Rutledge, 2008). Social network constructs are crucial to aligning the relationship with social marketing and social media to develop health marketing strategies that lead to consumer and patient engagement.

3 DISCUSSIONS AND RECOMMENDATIONS

The current alignment between the three social communication approaches can be depicted as an overlapping of social constructs with a core outcome of consumer/patient engagement. Figure 1 illustrates this perspective.

Figure 1. Aligning Social Media, Social Networking and Social Marketing
Facilitating meaningful alignment among these three distinct social communication phenomena requires a bridge construct which is both relevant and integral to each component. Ferguson, 2007, addresses this core outcome of consumer/patient engagement in his definition of an e-patient. E-patients are those individuals who are equipped, enabled, empowered and engaged in their health and healthcare decisions. This continuum adds an important perspective to the marketing context of engagement as it provides three prerequisite criteria before an individual becomes engaged. These criteria fit nicely with the core concepts of social marketing. How an individual reaches the final stage of engagement can be further explained by introducing the concept of social connectedness. Social connectedness has been proposed as a new engagement theory to describe the various phases of individual involvement in social media. This learning theory, developed by M. Sontag (2009), suggests that the affordances of social technology allow persons to engage at three social connectedness levels. These engagement levels, as proposed by Sontag, include linking, lurking and lunging. Linking refers to the cognitive stage where opportunities exist for navigation literacy of a social website. Lurking occurs when the individual participates in discovery-based learning as a personal activity. Finally, linking culminates when the individual participates in activities that require them to make reasoned judgments. These are the social activity steps that enable individuals to reach engagement. Figure 2 shows the parallel relationship between these two continuums.

Figure 2.

E-Patient Skill Stages

Equipped → Enabled → Empowered → Engaged

Social Networking Behaviors

Linking → Lurking → Lunging → Social Connectedness

Because of the recent emphasis on social communications as essential to health marketing approaches, highlighting the engagement aspect is key for reaching primary networks of interested consumers/patients and can lead to the desired outcome of social connectedness.

4 SUMMARY

This paper provides an overview of three social communication approaches: social marketing, social media and social networking and aligns them into a functional health marketing model. The underlying constructs of social marketing and social networks are reviewed and examples of social networking tools are presented to highlight the importance of developing strategies that successfully integrate benefits inherent in each health communication component. Social connectedness, as the core of the alignment model, requires patients/consumers to have passed through three e-patient pre-stages in order to reach the desired outcome of engagement. The social connectedness approach suggests that facilitating patients/consumers movement via social networking from linking and lurking to lunging activities will help them become engaged and encourage change in health behaviors and adoption of health promotion activities.

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Healthcare Marketing, 3(3).


A Study of Qualitative Feedback from Alumni and Employers: Aligning Business Curricula with Workplace Needs

Diane M. Holtzman
School of Business
Richard Stockton College of New Jersey
101 Vera King Farris Drive
Galloway, NJ 08205-9441
(609) 626-3528
DHoltzmad@stockton.edu

Ellen. M. Kraft
School of Business
Richard Stockton College of New Jersey
101 Vera King Farris Drive
Galloway, NJ 08205-9441
(609) 626-3549
Ellen.Kraft@stockton.edu

ABSTRACT
In this paper the researchers analyze qualitative data collected from alumni of Richard Stockton College of New Jersey and regional employers to determine the most important skills or competencies that business school graduates need based on feedback from alumni and employers. Both alumni and employers identified written and oral communication skills and business specific knowledge as the most important skills needed by graduates. Both the alumni and employers recommended that the college modify the curriculum by providing students with internships and real world experiences.

Keywords
Business curricula, assessment, accreditation, alumni, employers, AASCB

1 INTRODUCTION
Since the early 1990’s the accountability movement in education has gained national attention through reports by national task forces and commissions. These task forces and reports were established to monitor and guide efforts to provide high-quality education to students. Examples included national reports from the Partnership for 21st Century Skills (2011), College Learning for the New Global Century (2007), the Secretary’s Commission on Achieving Necessary Skills (1991), Rodriguez (1992), Van Horn (1995), the Business-Higher Education Forum (1999), and the American Council on Education (1997).

A regional report by Cleary and Fichtner (2007), of the John J. Heldrich Center for Workforce Development in the Bloustein School of Planning and Public Policy at Rutgers University, identified current and emerging workplace trends for the New Jersey State Employment and Training Commission by interviewing and conducting focus groups with over 163 New Jersey employers, economic forecasters, and other stakeholders.

The purpose of this research was to determine what skills alumni from Richard Stockton College of New Jersey (RSC) and regional employers think are important for the workplace. In this paper the researchers analyze qualitative data from alumni and employers to determine the most important skills or competencies that business school graduates need for the workplace. The results of the study are compared to the data obtained from the Cleary and Fichtner (2007) study.

2 METHOD
A survey packet was mailed during April 2008 to 2,383 alumni and 145 employers of The Richard Stockton College of New Jersey that explained the study, provided information on informed consent for participation in the study, and presented the questions for the study. Alumni were asked to provide answers to the following question:

1. What three skills or competencies do you believe are most important in your job?

2. Please provide any recommendations you have regarding how the business faculty at the college could revise the curricula to prepare students better for the workplace.

Employers were asked to provide answers to the following question:

1. What are the three most important skills or competencies you look for when hiring business degree graduates?

2. Please provide any recommendations as to how the business faculty at the college can revise the curricula to prepare students better for the workplace.

3 RESULTS
Alumni

Skills Identified by Alumni
Table 1 lists the skills identified by alumni as being one of the top three most important skills or competencies for their job. Communication skills (22%), specific business knowledge (17%), and computer skills (17%) were the three most important skills identified by alumni. Other important skills identified by at least 3% of alumni were time management/organization (9%), interpersonal skills (8%), Critical thinking/problem solving/analytical skills (6%), teamwork (4%), motivation/leadership (4%), and adapting to
change/ flexibility (3%).

Table 1: Skills Identified by Alumni as being one of the Top Three Most Important Skills for their Job

<table>
<thead>
<tr>
<th>Skill</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oral and Written Communication skills</td>
<td>22%</td>
</tr>
<tr>
<td>Specific Business knowledge</td>
<td>17%</td>
</tr>
<tr>
<td>Computer skills</td>
<td>11%</td>
</tr>
<tr>
<td>Time management/Organization</td>
<td>9%</td>
</tr>
<tr>
<td>Interpersonal/social/listening skills</td>
<td>8%</td>
</tr>
<tr>
<td>Critical thinking/problem solving/analytical skills</td>
<td>6%</td>
</tr>
<tr>
<td>Teamwork</td>
<td>4%</td>
</tr>
<tr>
<td>Motivation/Leadership</td>
<td>4%</td>
</tr>
<tr>
<td>Adapting to change/flexibility</td>
<td>3%</td>
</tr>
</tbody>
</table>

There was nine specific business knowledge or skills that alumni identified as one of the three most important competencies in their job. The skills are listed in Table 2.

Table 2: Specific Business Knowledge or Skills that Alumni Identified as one of the Three Most Important Skills or Competencies for their Job

<table>
<thead>
<tr>
<th>Skill</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accounting</td>
<td>23%</td>
</tr>
<tr>
<td>Budgeting</td>
<td>6%</td>
</tr>
<tr>
<td>Business acumen</td>
<td>1%</td>
</tr>
<tr>
<td>Client Management/relations</td>
<td>9%</td>
</tr>
<tr>
<td>Finance</td>
<td>14%</td>
</tr>
<tr>
<td>Forecasting</td>
<td>5%</td>
</tr>
<tr>
<td>Managing others</td>
<td>14%</td>
</tr>
<tr>
<td>Project Management</td>
<td>6%</td>
</tr>
<tr>
<td>Sales/marketing</td>
<td>19%</td>
</tr>
</tbody>
</table>

Accounting (23%), sales/marketing (19%), finance (14%), and managing others (11%) were the most frequently identified areas of business knowledge that alumni thought graduates should have. Other areas included client management/relations (9%), project management (6%), budgeting (6%), forecasting (5%), and business understanding (1%).

Employers

Skills Identified by Employers

Table 3 lists the skills identified by employers as being one of the top three most important skills or competencies for the workplace. The most important skills identified by employers were communication skills (17%), specific business knowledge (16%), motivation/leadership (13%), and interpersonal skills (11%). The specific business knowledge that employers identified varied. Three employers specifically said “knowledge” with one employer specifying knowledge of the industry, another stating “knowledge of field”, and another saying “practical knowledge of changing economy”. Other areas of business knowledge that employers identified were sales, school law, understanding a non-profit organization, ability to deal with money, accounting, entrepreneurial skills, formulating budgets, marketing, and “real world understanding of business”.

Table 3: Skills Identified by Employers as being one of the Top Three Most Important Skills in the Workplace

<table>
<thead>
<tr>
<th>Skill</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oral and Written Communication skills</td>
<td>17%</td>
</tr>
<tr>
<td>Specific Business knowledge</td>
<td>16%</td>
</tr>
<tr>
<td>Motivation/Leadership</td>
<td>13%</td>
</tr>
<tr>
<td>Interpersonal skills</td>
<td>11%</td>
</tr>
<tr>
<td>Computer skills</td>
<td>7%</td>
</tr>
<tr>
<td>Attitude</td>
<td>7%</td>
</tr>
<tr>
<td>Critical thinking/problem solving/analytical skills</td>
<td>6%</td>
</tr>
<tr>
<td>Ethics</td>
<td>5%</td>
</tr>
<tr>
<td>Good Grades</td>
<td>4%</td>
</tr>
<tr>
<td>Time Management/Organization</td>
<td>4%</td>
</tr>
</tbody>
</table>

4. COMPARISON TO CLEARY AND FICHTNER (2007) STUDY

The Cleary and Fichtner (2007) study provided benchmark data for this study because they presented analyses of input from employers who hired graduates from 4-year undergraduate programs that had a focus on liberal arts. The goal of this study was to identify the knowledge, skills, and competencies that employers believe are necessary for success in the workplace. The results of surveys administered to business alumni and employers of graduates our study supported the findings of Cleary and Fichtner (2007) study.

The Cleary and Fichtner (2007) study reported three major categories of skills that the majority of the New Jersey employers they surveyed wanted faculty in colleges and universities to place more emphasis on to prepare graduates for the global economy and workplace. These skill categories were information management and
communication skills, business skills, and adaptability skills. Many of the skills listed in the three categories by Cleary and Fichtner (2007) were also skills identified by employers and alumni in this study. The first column in Tables 4, 5, and 6 lists business skills, information management and communication skills, and adaptability skills categories respectively, identified by the employers surveyed by Cleary and Fichtner (2007). In the second column of Tables 4, 5 and 6 are corresponding skills identified by the employers and alumni participating in our survey as one of the top three skills or competencies they thought were necessary for the workplace or their job. The responses from the RSC alumni regarding specific business skills were listed earlier in the paper in Table 2.

Table 4
Comparison Business Skills Identified by Employers in Fichtner and Cleary Study (2007) and Participants in the RSC Study

<table>
<thead>
<tr>
<th>Skill Identified by Employers in Fichtner and Cleary Study (2007)</th>
<th>Skill Identified by Employers or Alumni in RSC Study</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project &amp; Product Management</td>
<td>Project Management</td>
</tr>
<tr>
<td>Sales &amp; Customer Service</td>
<td>Sales, Client Management</td>
</tr>
<tr>
<td>Product Marketing</td>
<td>Marketing</td>
</tr>
<tr>
<td>Basic Finance &amp; Management Skills</td>
<td>Finance, Managing others</td>
</tr>
</tbody>
</table>

The high-priority business skills identified by Cleary and Fichtner (2007) included (a) project and product management, (b) sales and customer service, (c) product marketing, and (d) basic finance and management skills. Similar skills for each these categories that were identified by RSC employers or alumni from Table 2 were (a) project management, (b) sales and client management, (c) marketing, and (d) finance and managing others. The business skills identified by the participants in the RSC study and the Cleary and Fichtner study were very similar.

Table 5 lists the information management and communication skills identified by the employers in the Cleary and Fichtner (2007) study. The skills identified by alumni and employers in the RSC study that are similar to the skills identified in the first column of Table 5 are listed in the second column of Table 5. The skills listed in the second column are adapted from Tables 1 and 3 in this paper.

The information management and communication skills identified as high priorities by Cleary and Fichtner (2007) included (a) gathering, prioritizing, and analyzing data and information; (b) conveying knowledge gained through analysis; (c) having cultural understanding and awareness; (d) having public speaking and presentation skills; (e) writing in a professional style; (f) participating in teamwork, group facilitation, and negotiation; (g) networking; and (h) knowing a foreign language. Employers and alumni in the Richard Stockton study specified the skills critical thinking/problem solving/analytical skills and oral and written communication skills as being in the top three critical skills and competencies required for their job or in the workplace. These skills are similar to the skills conveying knowledge gained through analysis and having public speaking and presentation skills, and writing in a professional style skills that were specified by employers in the Cleary and Fichtner’s (2007) study. Also employers and alumni in the RSC study identified teamwork and...
interpersonal/social/listening skills which are similar skills to participating in teamwork, group facilitation, and negotiation that was identified by the employers in the Cleary and Fichtner (2007) study. In a prior study by Holtzman and Kraft (2011) locating, organizing, and evaluating relevant information was rated as very important or important for the workplace by 95% of employers and 97% of alumni (Holtzman & Kraft, 2011). Respecting and valuing diversity issues rated as very important or important for the workplace by 84% of employers and 77% of alumni (Holtzman & Kraft, 2011). These findings are similar to the findings of Cleary and Fichtner (2007) study that identified gathering, prioritizing, and analyzing data and information and having cultural understanding and awareness as important information management and communication skills.

The importance of learning a foreign language and networking were not rated as one of the top three skills or competencies by the RSC alumni or employers. This finding this study did not agree with the respondents in Cleary and Fichtner’s (2007) who believed networking and knowing a foreign language were high priority information management and communication skills.

The high-priority adaptability skills identified by Cleary and Fichtner’s (2007) study and the corresponding skills that were identified by the alumni and employers in the RSC study are listed in Table 6. The high-priority adaptability skills included (a) critical thinking and problem solving, (b) managing organizational change, (c) lifelong learning, (d) time management, and (e) career management. Employers and alumni in this study did not agree with the respondents in Cleary and Fichtner’s (2007) study regarding the importance of lifelong learning, and career management skills.

The alumni and employers in this study emphasized information and communication skills and business skills. Some of the adaptability skills were mentioned, however, they were not emphasized as much as the information and communication skills and business skills.

The differences in the employers’ emphasis in the Cleary and Fichtner study on networking, knowing a foreign language, and career management may be attributable to the diversity of employers represented in Cleary and Fichtner’s (2007) study compared to the regional representation of employers and business alumni in the researcher’s study. It is reasonable to assume that respondents who represent businesses and industries without a global presence would not consider knowing a foreign language a vital skill. The employers in Cleary and Fichtner’s study were larger organizations that would have more career opportunities internally than small businesses which may explain why they have more emphasis on networking and career management.

Of the employers who responded to the researcher’s survey, 20% represented the fields of finance and insurance, 13% represented the health care industry, 13% represented professional service organizations, and 11% represented educational institutions. These fields reflect major areas of employment in the central and southern parts of the state of New Jersey, where the researcher’s college is located. Employers surveyed by Cleary and Fichtner (2007) came from the entire state of New Jersey and represented statewide industries and businesses that included specialized companies that are not major employers in the central and southern parts of the state, such as (a) pharmaceutical and biotech industries, (b) information technology businesses, (c) advanced manufacturing plants, and (d) telecommunication companies. The researcher believes that the employers’ answers to survey questions in both studies reflect the skills and competencies that are deemed important overall for industries throughout the state.

### Table 6: Adaptability Skills Identified by Employers in Fichtner and Cleary Study (2007) and Participants in the RSC Study

<table>
<thead>
<tr>
<th>Skill Identified by Employers in Fichtner and Cleary Study (2007)</th>
<th>Skill Identified by Employers or alumni in RSC Study</th>
</tr>
</thead>
<tbody>
<tr>
<td>Critical thinking and problem solving</td>
<td>Critical thinking/problem solving/analytical skills</td>
</tr>
<tr>
<td>Managing organizational change</td>
<td>Adapting to change/flexibility</td>
</tr>
<tr>
<td>Lifelong learning</td>
<td></td>
</tr>
<tr>
<td>Time management</td>
<td>Time Management/Organization</td>
</tr>
<tr>
<td>Career management</td>
<td></td>
</tr>
</tbody>
</table>

5. DISCUSSION

The Sample

Because data were collected in this study from respondents associated with only one college, the findings may not be generalized to other colleges or universities. In addition, data collected from employers and business alumni from the college were limited to the region in which they were located; few industries in the region had national or international interests.

Finally, because a convenience sample was used, distribution of respondents was skewed to two industries; 25% of the alumni and 16% of the employers worked in professional services, which included accountants, and 23% of the alumni and 24% of the employers worked in the finance and insurance sector. The high representation of
survey respondents from the professional services and finance and insurance industries may have influenced the results obtained.

6. RECOMMENDATIONS

Faculty in Schools of Business need to emphasize skills that focus on the graduate’s ability to manage the demands of the workplace along with discipline specific content such as accounting finance, marketing, or management. The employers in the Cleary and Fichtner (2007) study identified three categories of skills. Only one of these categories, business skills, emphasizes the traditional content that is taught in specific courses. The other two categories of skills are information and communication skills and adaptability skills.

Furthermore, based on the suggestions of alumni and employers, more cooperative programs should be developed between business faculty and career services personnel to provide students with a greater knowledge of career skills, help students become better prepared for jobs, and offer off-campus opportunities with employers for more real-world experiences.

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Strategic Management in Public Organizations: An Evidence Based Research Study

James V.M.L. Holzer
Doctor of Management Candidate
University of Maryland, University College
Adelphia, Maryland 20783
(661) 435-3998
ho_l_zerj@hotmail.com

ABSTRACT
As the number, authority, and responsibility of public organizations has increased around the world in recent years, governments are focusing more than ever on managing outcomes. Therefore a comprehensive, organized, and cogent study on the dominant theory and practice of the strategy in public sector may be of prime importance to public managers who are most likely in the position to exploit business or operational environmental changes.

The purpose of this study is to examine the strategy literature to determine if it supports the current understanding of public sector organizational outcomes in complex, turbulent environments. This study will utilize the Evidence Based Research (EBR) methods and techniques to identify the studies included. A systematic literature review is conducted to gather and synthesize seminal work and current studies on strategic management in public organizations. This study contributes to the growing body of knowledge on strategic management in the public sector by aiding our understanding of public manager’s decision-making and organizational outcomes.

Keywords
Strategy, strategic stance, strategic types, organizational strategy, private and public sector, regulation, and public organizational performance

INTRODUCTION
The early development of strategy theory focused largely on the organization, its business, or its operational environment uncertainty, and relied heavily on concepts from contingency theory. Within the contingency theory framework, strategy theorists operationalized this construct, in terms of an alignment or “fit” between an organization’s strategy and its environment, assuming that there is no single best way to organize a firm or organization.

Subsequent theorists developed generic strategies that have focused externally on environments as a way to gain competitive advantage. One of the most widely recognized and enduring examples of a generic competitive strategy construct is Michael Porter’s (1980) typology, in which he argues that competitive strategy must be the product of the understanding of the competition within the industry. Using this typology, an organization is able to examine its strategic position within an industry to develop its lines of business employing one of the five forces outlined by Porter.

Although Porter’s typology has dominated strategy research since its introduction, in the last 20 years strategy theorists have started to reexamine the strategy construct from a resource-based approach, which has its roots in economic theory, as a way to position an organization for future growth. In addition, strategy theorists have examined the relationships between the organization’s internal and external stakeholders as way to operationalize this construct. For example, strategic management theorists have explored the relationship between an organization and its customers (external stakeholders) and the relationship between an organization and its employees (internal stakeholders) (Barney & Arikan, 2006).

The role of strategic management and the subsequent development of typologies that explain causal relationships make them attractive areas for organizational and strategy scholars. Consequently, there have been substantial amounts of research exploring these cause and effect relationships in both the private and public sector. For instance, one of the earliest studies developed a four-category typology that includes both the private and public sector focusing on ownership and productivity (Blau & Scott, 1962).

One of the key issues associated with adapting theory for the public sector and practices intended for the private sector is how to explain the differences between the sectors – and the importance of these factors. These differences may help explain why, despite widespread attention and advocacy, strategic management practices have had limited success in public organizations (Halachmi & Bouckaert, 1996). Many public administrative theorists contend that theories intended for the private sector may not be valid for public organizations or that some of the assumptions cannot readily be imported into the public sector.

This study explores and examines the Miles and Snow strategic typology in the private and public sector from 1978 – 2009 to explicate the differences of the public and private sector. Perry and Rainy (1988) note “that organization theorists have paid too little attention to unique
characteristics of public bureaucracies, whereas political scientists have applied too few of the concepts from organization theory to the study of public bureaucracy” (p. 182). Keeping this admonishment in mind, this study examines and explains how this strategic typology can be of value to the public manager’s decision-making.

PURPOSE AND SCOPE OF STUDY
The purpose of this study is to examine the strategy literature to determine how the Miles and Snow strategic typology may add additional insights into public sector causal relationships in complex and turbulent environments. The research has four general objectives: 1) examine to what extent the Miles and Snow typology has been employed to organize decision-making outcomes in a coherent fashion; 2) explore how the Miles and Snow typology may explain decision-making and outcome relationships in public organizations; 3) describe how the Miles and Snow typology may explain and reveal differences among public and private sector organizations in terms of size, settings, and focus of activities; and 4) uncover how the Miles and Snow typology may reveal decision-making and causal relationships in public organizations.

The strategy construct has been defined in many different ways, but for the purpose of this study, strategy is viewed as the formal and deliberate decision-making process within the organization to plan what actions the organization should take to achieve long-term goals and how to allocate limited resources to best position the organization to achieve the mission of the organization. Organizations in the public sector, however, include a variety of types and settings, such as local, state, and federal governments, as well as nongovernmental organizations. As such, it may have limited generalizability to other settings, organizations, and environments.

The scope of this paper is limited to public organizations, their strategy, and performance. The empirical research being reviewed tests and validates key assumptions of the strategy construct and environmental characteristics of public organizations, and their performance. There are limitations in this approach as the strategic management literature is largely based on Western industrialized constructs with over half of the literature identified being published in the United States and the subsequent writings originating in European Journals.

CONCEPTUAL FRAMEWORK
Following the theoretical model outlined by Miles and Snow (1978), this conceptual framework describes the relationship of the organization with its environment, the concept of strategic choice and the influence of the dominant coalition on the form of organization (Child, 1972; Miles, Snow & Pfeffer, 1974; Greenwood, Hinings, & Ranson, 1974; Pfeffer & Salancik, 1974; Cyert & March, 1963).

Furthermore, the conceptual framework relies on Miles, Snow and Pfeffer’s (1974) research that indicates that the organization’s response to its environment would be consistent over time. This results as an organization’s strategy takes the form of substantive rules, which leads the strategic action at lower levels (March, 1981; Nelson & Winter, 1982), and it is this application of rules and direction that connect strategic decisions over time (Freeman & Boeker, 1984). As these strategic decisions join over time, they form the “distinct patterns of organizational-level strategy” (Burgelman, 1991, p. 243). Empirical research on strategy has focused on operationalizing the strategy construct through the development of strategic typologies that are able to describe these organizational-level strategies.

RESEARCH QUESTION
The research question for this study is “how does the Miles and Snow strategic typology explain the differences between the private and public sector?” This study will utilize the Evidence Based Research Synthesis (EBRS) methods and techniques to identify the studies included. A systematic literature review will be conducted to gather and synthesize seminal work and current studies on strategic management in public organizations. A key word search of specific databases will be conducted and articles will be included after a review of the abstract, introduction, and conclusion to initially select articles that focus on Miles and Snow’s (1978) typology in public organizations, strategic stances, strategy, processes, environment, and structure. This study will contribute to the growing body of knowledge on strategic management in the public sector by aiding our understanding of public manager’s decision-making and organizational outcomes.

EVIDENCE BASED RESEARCH SYNTHESIS
This study uses Evidence Based Research Synthesis (EBRS) methods and techniques to explore the data from secondary sources to examine whether the organizational and strategy literature supports the current understanding of public sector organizational outcomes in complex, turbulent environments. This paper reviews existing literature from 1979 – 2008. A systematic literature review is conducted to gather and synthesize seminal work and current studies on strategic management in public organizations. A key word search of specific databases is conducted and articles are included after a review of the abstract, introduction, and conclusion to initially select articles that focus on Miles and Snow (1978) typology in public organizations, strategic stances, strategy, processes, environment, and structure.

In this study, a significant decision was made in determining which journals were analyzed. Although a variety of research could have been reviewed, the *terminus a quo* of this study was the exploration of existing literature that examines how the Miles and Snow (1978) typology has been studied in the management and public administrative literature as it pertains to the public and private sectors.

In the management literature, the following key journals were identified (see table 1): Administrative Science
Quarterly (ASQ), Academy of Management Journal (AMJ), Academy of Management Review (AMR), and Strategic Management Journal (SMJ). In the public administration literature, the following key journals were included: Journal of Public Administration Research and Theory (JPART), American Review of Public Administration (ARPA), and Public Administration Review (PAR). Articles reviewed were limited to peer-reviewed journals, assuming a minimum standard for quality control. Peer-reviewed articles are assumed to have elevated theoretical standards and methodological rigor.

**Table 1: Key Journal Characteristics**

<table>
<thead>
<tr>
<th>Academic Field</th>
<th>Journal</th>
<th>Focus</th>
</tr>
</thead>
<tbody>
<tr>
<td>Management</td>
<td>ASQ</td>
<td>“Organization studies”</td>
</tr>
<tr>
<td></td>
<td>AMJ</td>
<td>“Empirical research that tests, extends, or builds management theory”</td>
</tr>
<tr>
<td></td>
<td>AMR</td>
<td>“New theoretical insights that advance our understanding of management and organizations”</td>
</tr>
<tr>
<td></td>
<td>SMJ</td>
<td>“All aspects of strategic management”</td>
</tr>
<tr>
<td>Public Administration</td>
<td>ARPA</td>
<td>“Public administration and public affairs”</td>
</tr>
<tr>
<td></td>
<td>JPART</td>
<td>“Public administration and public management scholarship”</td>
</tr>
<tr>
<td></td>
<td>PAR</td>
<td>“public sector and public sector management”</td>
</tr>
</tbody>
</table>

Source: Journal Web sites.

**ELEMENTS OF INCLUSION AND EXCLUSION**

The primary method for article selection was based on analysis of abstracts, introductions and conclusions, and alignment with the topic of strategic typologies in the public and private sector. For the seven journals, all of the abstracts for the articles were available through Business Source Complete (EBSCO) and JSTOR. Additional search engine used to retrieve articles include Harzing’s Publish or Perish (See table 2).

**Table 2: Breakdown of 480 Strategy Articles**

<table>
<thead>
<tr>
<th>DATABASE</th>
<th>Journal</th>
<th>Period</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>EBSCO</td>
<td>AMJ</td>
<td>1983 – 2011</td>
<td>5</td>
</tr>
<tr>
<td>JSTOR</td>
<td>AMJ</td>
<td>1963 – 2005</td>
<td>130</td>
</tr>
<tr>
<td>EBSCO</td>
<td>AMR</td>
<td>1978 – 2011</td>
<td>3</td>
</tr>
</tbody>
</table>

The next crucial decision after selection of the relevant journals was the inclusion of article. The primary criterion for selection for further analysis, articles were limited to the topics of Miles and Snow’s typology, public and private sectors. Consequently, in this stage articles that referenced Miles and Snow’s typology in the public and private sectors were taken for further analysis.

Each abstract was read to ensure that all applicable articles were included due to the diverse terminology and concepts associated with the Miles and Snow typology. A secondary check was conducted through the supplementary technique employing a keyword check. However, it is important to note that this keyword check was employed only as a supplemental measure as the list of keywords is not exhaustive, and many articles may have been missed where the Miles and Snow typology is mentioned indirectly. Accordingly, the primary method for inclusion was based on the content of the article and its alignment with the topic of strategic typologies in the public and private.

**EVALUATION PROCESS**

After a careful review of each article, a decision was made about the inclusion or exclusion of the article. The subsequent pool of articles was then evaluated against defined criteria. These research assessment criterions provided a mechanism to determine the final pool of articles. The assessment criteria used in this study contains four categories that are evaluated on a scale of 0 to 3, three being the highest score. The quality assessment criteria include theory robustness, methodology, and data supporting arguments, generalizability, and contribution to the field.

**STRATEGY LITERATURE**

Strategic management literature is both theoretical and empirical in nature. Strategic management theorists have sought to define the construct through managerial decisions and actions that guide the organization to optimal performance. Strategic management theory includes constructs that are both internally focused on the organization and externally focused on the environment. Moreover, strategic management theory has focused on organizational competencies, marked out action domains,
and defined organization goals (Selznick, 1957; Andrews, 1971; McKelvey & Aldrich, 1983).

There are, however, many unresolved questions regarding the basic assumptions of strategy theory. This is emphasized by strategy theory’s lack of a widely accepted operational definition or agreed upon measurements of strategy. Moreover, there is not a comprehensive “classification scheme that can be used to compare and integrate existing as well as new approaches to operationalize corporate level and business level strategy” (Ginsberg, 1984, p. 548). This has resulted in multiple streams of strategy theory research. For instance, Mintzberg (1990) has identified no less than 10 different schools of strategy theory that categorize strategy as either a normative or a descriptive process (Andrews, 1971; Miles & Snow, 1978).

**PROPOSITION OVERVIEW**

Substantial interest in strategy and strategic planning in public organizations can be traced to the 1980s and the budgetary constraints that led public managers to seek answers in the private sector (Berry, 1994). However, many of the subsequent models that were developed lacked empirical testing. In examining strategy in the private sector, scholars have empirically studied the strategy construct employing the typologies of Miles and Snow (1978) and Porter (1980). Porter’s (1980) focus on competitive advantage has limited applicability in the public sector, whereas, the Miles and Snow (1978) typology may be more appropriate to provide explanatory power of causal relationships. Consequently, this leads to a number of propositions. These propositions are ordered in a logical sequence to support the argument that Miles and Snow’s strategic typology may help explain the differences between the private and public sector decision-making and causal relationships in public organizations. Studies are included using the criteria as outlined in the EBRs methodology section and provide the evidence to support the proposition, refute the proposition, or uncover other alternatives.

**Proposition Objective:**

This study provides insight into complex causal relationships in public organizations through the use of four propositions that are derived from management and public administrative studies on strategy and performance of these organizations.

**Proposition 1:** The Miles and Snow typology has been widely employed to organize decision-making outcomes in a coherent fashion in multiple industries;

**Proposition 2:** The Miles and Snow typology may explain decision-making and outcome relationships in public organizations;

**Proposition 3:** The Miles and Snow typology may explain and reveal differences among public and private sector organizations in terms of size, settings, and focus of activities; and

**Proposition 4:** The Miles and Snow typology may reveal decision-making and outcome relationships of structural arrangements and innovation.

**EVALUATING THE PROPOSITIONS**

**Proposition 1:** The Miles and Snow typology has been widely employed to organize decision-making outcomes in a coherent fashion. The evidence-based research synthesis of mainstream and specialized articles supports this proposition and provides a comparative analysis of the sector settings.

In their seminal research, “Organizational Strategy, Structure, and Process,” Miles and Snow (1978) hypothesize organizations in a particular industry display behavioral patterns that can be categorized into four archetypes: 1) Prospector, 2) Defender, 3) Analyzer, and 4) Reactor. Miles and Snow (1978) postulate that an organizations behavioral patterns can be observed by the organization’s product changes, or market entrances and exits (e.g., defenders have a narrow product-market sphere, prospectors continually seek new markets, analyzers are a mixture of both the defender and prospector types, and reactors simply respond to their environments).

The Miles and Snow typology (1978) Prospector archetype describes an organization that is smaller in size that is seeking new products and markets strategy. For the Prospector organization, change is the main challenge. The administrative challenge is mainly focused on how to aid operations. These types of organizations tend to be flexible due to their need to change their organizational structure in response to their environmental fluidity, whereas, their strategy tends to focus on innovation (Parnell, 1997). Their organizational structure tends to be flatter with little division of labor resulting in low organizational complexity.

The Defender organization is generally a larger, more established firm. Their cost leadership strategy seeks stability and to protect its current market share, and this desire for stability is reflected in its complex organizational structure. Defender organizations tend to be highly centralized with formalized processes to control the organization. Moreover, Defender organizations have high administrative complexity as indicated by their multiple hierarchies and significant divisions of labor (Shorthell & Zajac, 1990).

The Prospector and Defender archetypes “reside at opposite ends of a continuum” (Miles & Snow, 1978, p. 68) with the Analyzer organization placed somewhere in-between, specifically in terms of strategy and structure. The Analyzer’s hybrid nature allows it to accommodate both change and stability. Finally, a reactor organization lacks a coherent strategy. These organizations wait for environmental pressure to force a change in approach (Inkpen & Chaudhury, 1995) and may represent a failed
strategy type (Miles & Snow, 1978). Table 3 provides a general description of the archetypes based on the Miles and Snow typology.

Table 3 Ideal Archetypes based on the Miles and Snow Typology

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Prospector</th>
<th>Analyzer</th>
<th>Defender</th>
</tr>
</thead>
<tbody>
<tr>
<td>Structure</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Size</td>
<td>Low</td>
<td>Medium</td>
<td>High</td>
</tr>
<tr>
<td>Formalization</td>
<td>Low</td>
<td>Medium</td>
<td>High</td>
</tr>
<tr>
<td>Centralization</td>
<td>Low</td>
<td>Medium</td>
<td>High</td>
</tr>
<tr>
<td>Complexity</td>
<td>Low</td>
<td>High</td>
<td>High</td>
</tr>
<tr>
<td>Strategy</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Differentiation</td>
<td>High</td>
<td>Medium</td>
<td>Low</td>
</tr>
<tr>
<td>Low Cost</td>
<td>Low</td>
<td>Medium</td>
<td>High</td>
</tr>
</tbody>
</table>

Source: Fiss, 2011

Studies on the Miles and Snow typology are continually growing and their approach to characterizing business-level strategies is one of the best known and most widely embraced in empirical research (Zahra and Pearce, 1990) and has been cited more than 5,200 times since its publication (Harzing, 2010). In fact, the Miles and Snow typology is one of the most widely researched strategy frameworks to have emerged in the last 25 years (Hambrick, 2003). Therefore, it continues to be attractive and relevant to examine how studies have researched Miles and Snow’s typology in various settings and contexts (Desarbo, Di Benedetto, Song, & Sinha, 2005; Olson, Slater, & Hult, 2005; Hult, Ketchen, Cuvusgil, & Calantone, 2006; Kabanoff & Brown, 2008).

Proposition 2: The Miles and Snow typology may explain decision-making and outcome relationships in public organizations. There are a number of studies that help to extend the Miles and Snow (1978) strategic typology to the public sector. Empirical research using Miles and Snow’s (1978) typology has substantiated the construct’s validity in the private sector. Additionally, there are a number of studies included in this study that suggest that the Miles and Snow typology may explain decision-making and outcome relationships in public organizations (Steven and McGowan, 1983; Ring and Perry, 1985; Ring, 1988; Nutt and Backoff, 1993; Boyne and Walker 2004; Andrews, Boyne, & Walker, 2006; 2009; Meier, O’Toole, Boyne, & Walker, 2007).

Snow and Hrebiniak’s (1980) study examines the relationship between strategy and distinctive competencies across industries. The authors explore the relationship of strategy, distinctive competencies, and performance. The author’s findings suggest that strategic choice may vary within and across industries (Snow & Hrebiniak, 1980). Moreover, Snow and Hrebiniak’s (1980) findings support Miles and Snow’s (1978) position that the reactor archetype lacks a consistent pattern. Additionally, the authors argue that the archetypes of the Miles and Snow (1978) typology are applicable regardless of the industry, as long as the strategy implemented is done well.

Greenwood’s (1987) study is one of the earliest attempts to apply the Miles and Snow typology specifically in the public sector. Greenwood (1987) examines the strategic style and organizational structural differences of organizations in the United Kingdom public sector. Greenwood (1987) writes that “the strategy of the local authority will influence the broad shape of the authority’s organization” (p. 296) and that “the underlying theoretical dimension, i.e. orientation towards change, has been significant in the local government sector as well as in the business context” (p. 298).

In Conant, Mokwa, and Varadarajan’s (1990) study, their empirical research of the Miles and Snow’s (1978) typology substantiated the construct’s validity. The authors’ findings suggest that there are statistically significant differences of competencies, and indicate that the strategy types can be ordinally arranged (e.g., prospector > analyzer > defender > reactor) (Conant, Mokwa, & Varadarajan, 1990). Additionally, their development of an 11-item scale used in conjunction with the paragraph approach pioneered by Miles and Snow (1978) the authors provide for a more multi-dimensional view of the strategy phenomena.

The evidence-based research synthesis of the literature supports this proposition and provides a comparative analysis of the sector settings.

Proposition 3: The Miles and Snow typology may explain and reveal differences among public and private sector organizations in terms of size, settings, and focus of activities. The evidence-based research synthesis of the literature supports this proposition and provides a comparative analysis among public and private sector organizations in terms of size, settings, and focus of activities.

In a study of six shipping ports, Boschken’s (1988) findings support Miles and Snow’s proposition that prospector, defenders, and analyzers performance would be higher than reactor organizations. In fact, Boschken’s (1988) study suggests a hierarchical order of performance: prospectors, analyzers, defenders, and then reactor organizations. In a slight variation to this hierarchical ranking of organizational performance, Andrews, Boyne, and Walker (2006; 2008) found that public sector organizations that employ prospector strategies (i.e., seeking new products and markets) are positively related to performance, defender strategies (i.e., seeking stability and to protect its current market share) employed by public organizations have a neutral impact on performance, and the reactor strategy (i.e., lack of a coherent strategy) in public sector organizations has a negative impact on performance.
Enticott and Walker’s (2008) study also supports Miles and Snow’s proposition that the performance of prospectors, defenders, and analyzers is higher than reactor organizations. Their research on sustainable management and organizational strategy found that prospector organizations outperform the other archetypes.

However, as Snow and Hbreniak’s (1980) study noted, reactor organizations outperformed prospectors and defenders in highly regulated industries. This finding was also supported in Boschken’s (1988) study finding that the reactor strategy in protected environments was successful. In a more recent study (Meier, O’Toole, Boyne, & Walker, 2007) found that while a defending organization would most likely have higher levels of organizational performance, the ideal strategy type may depend on the organizational goal being measured. When this is taken into account, their findings suggest that it is possible that there are certain organizational goals that may be positively affected by reactor strategies. These findings may have significant implications for public sector organizations that are highly regulated.

The literature about Miles and Snow’s typology and its ability to explain public sector causal relationships suggest strong support for the proposition that prospectors, defenders, and analyzers performance would be higher than reactor organizations, unless the organization operates in a highly regulated environment.

**Proposition 4:** The Miles and Snow typology may reveal decision-making and causal relationships in public organizations. The evidence-based research synthesis of the literature supports this proposition and provides a comparative analysis among public and private sector organizations in terms of decision-making and causal relationships in public organizations.

Much of the literature included in this study focuses on reframing strategic goals of gaining competitive advantage to public organizational goals focused on stakeholders, customers, or resources. For example, Lane and Wallis, (2009, p. 105) argue that strategy in public organizations is about “maximize[ing] value, given a number of choice constraints.” Whereas Moore (1995) writes that strategy in public organizations is centered on stakeholder management. This view is also supported by Haas (1999).

In the private sector, strategy theorists generally view strategic planning as a vital management activity to position and maintain competitive advantage for the organization. Positioning the organization refers to the decisions that managers make as they attempt to align the organization with its environment or anticipated changes. Competitive advantage is generally described in economic terms related to increasing market share profitability.

As Boschken’s (1988) study noted, a public sector organization, prospector’s strategies would focus on being proactive, innovative, and demonstrate a willingness to take risk. For example, a prospector organization could expand into the ‘policy space of another department (Downs, 1967). Innovation is also key strategy of prospector organizations in the public sector (Boyne and Walker, 2004).

Strategies of defender organizations in the public sector are cautious of new technologies and they adopt a “wait and see approach.” Miles and Snow (1978) posit that these types of organizations “devote primary attention to improving the efficiency of their existing operations” (p. 29). Much of the literature included in this study indicates that public organizations may use defender strategies that focus internally on improving efficiencies, such as: planning systems, quality improvement programs, and benchmarking (Boschken, 1988; Thompson & Ingraham, 1996; Brudney, Herbert, & Wright, 1999).

Analyzer strategies employed by public organizations may have characteristics similar to prospector and defender organizations. Like Defenser organizations, they are cautious of innovation and are likely to adopt new technology once it is in the test phase, and it is apparent that it is likely to work (Miles & Snow, 1978).

**CONCLUDING THE STUDY**

This study examines the strategy literature to determine if it supports the current understanding of public sector organizational outcomes in complex, turbulent environments. Its argument is the Miles and Snow strategic typology may help explain the differences between the private and public sector decision-making and causal relationships in public organizations. This study’s four propositions and the evidence presented may be of significant interest to public managers in the position to exploit business or operational environmental changes of these organizations. The research question is “how does the Miles and Snow strategic typology explain the differences between the private and public sector?” Employing EBRS techniques, this study provides insights from the management, and public administrative literature relating to the public and private sectors, by both the scholar and practitioner. This study contributes to the growing body of knowledge on strategic management in the public sector, assessing the state of the research of the Miles and Snow strategic typology. There is a continued need for additional research on strategy in public organizations. This research could include conceptual development of additional models of strategy in public organizations. Additional research on strategy in public organizations may provide further insight into the differences of the private and public sectors.

**Table 4: Research Study Highlights**

**Title:** Strategic Management in Public Organizations: An Evidence Based Research Study

**Area of Research:** Strategy and Public Organizations
Research Question: How does the Miles and Snow strategic typology explain the differences between the private and public sector?

Key Terms to Use: strategy, strategic stance, strategic types, organizational strategy, private and public sector, regulation, and public organizational performance

Key Seminal Literature to Include: Chandler, 1962; Andrews, 1971; Miles and Snow, 1978; Porter, 1980; Wernerfelt, 1984;

Dissertations to Include: Armfield, 2005; Carlson, 2010; Chi, 2010; Cohen, 2006; Ferguson, 2008; Hinson, 1994; Hultquist, 2007; Marc-Aurele, 2010; Mullen, 2006; Patwardhan, 2009; Zyglidopoulos, 2000.

Key Publications to Include: Science Quarterly (ASQ), Academy of Management Journal (AMJ), Academy of Management Review (AMR), and Strategic Management Journal (SMJ). In the public administration literature, the following key journals were included: Journal of Public Administration Research and Theory (JPART), and American Review of Public Administration (ARPA), Public Administration Review (PAR).

Key Databases to Include: Business Source Complete (EBSCO), JSTOR, and Harzing’s Publish or Perish

Propositions to be Explored: 1) The Miles and Snow typology may reveal decision-making and outcome relationships of structural arrangements and innovation; 2) The Miles and Snow typology may explain decision-making and outcome relationships in public organizations; 3) The Miles and Snow typology may explain and reveal differences among public and private sector organizations in terms of size, settings, and focus of activities; 4) The Miles and Snow typology may reveal decision-making and outcome relationships of structural arrangements and innovation.

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Why Should Pharmaceutical Companies Utilize Economic Analysis When they Decide to Develop New Drugs?

Hengameh M. Hosseini
Master of Healthcare Administration Program
Seton Hall University
520 Jubilee Hall
400 South Orange
South Orange, NJ 07079
(973) 761-9212
hosseihe@shu.edu

ABSTRACT
Health care costs in the United States are on the rise, propelled in part by the high costs of pharmaceuticals used by the aging national population. Attempts to control these spiraling costs have led to increasingly restrictive reimbursement policies, which has clear consequences for pharmaceutical companies’ revenues. Here we discuss existing decision-making models, ideas for improving pharmaceutical company decision-making models, and specifically the benefits of taking into account the changing nature of reimbursements in deciding which medical products and services to develop, produce, and offer. Future research directions are also discussed.

Keywords
Health care costs, economic analysis, pharmaceutical industry, rationing

1 INTRODUCTION
Health care costs in the United States are on the rise to the extent that they are spiraling out of control. While in 2003 the United States spent 15.3% of its GDP on health care, that share rose to 18% in 2010 and will reach 26% of GDP by 2030. In the long run, this rate of growth is patently unsustainable. Consequently, the United States must contain these rising costs, which requires all components of its health care system become efficient and cost effective; pharmaceutical companies are by no means an exception. Since the US population is aging at an unprecedented rate, and older individuals consume far more drugs than younger persons, pharmaceutical companies are particularly vulnerable to efforts to contain costs. Pharmaceutical companies’ pre-market drug testing efforts have historically focused on human safety and drug effectiveness. Changes in reimbursement policies on the part of insurance companies and governmental organizations suggests that this testing paradigm that precedes the release of drugs should evolve to include the utilization of marginal analysis of new drug developments that takes into consideration cost minimizing efforts, while utilizing marginal cost and marginal benefits of drug development, and to take these factors into account at an earlier stage in the decision-making model. While the calculation of marginal cost should take into consideration the additional costs of various resources used in the development of each new drug, benefits of those medications should be calculated in terms of quality-adjusted life-years measurement – essentially a standardized means of determining life-extension and overall health benefit in a combined metric. This type of marginal analysis, typically used by economists, that also considers cost minimization efforts, would rule out new but expensive drugs that cannot provide much value to the users of these new drugs, who, for the most part, will consist of the elderly. Organizations that actually make and implement reimbursement decisions could benefit from a similar decision model (Wirtz et al., 2005).

2 DRUG DECISION-MAKING MODELS
In nations outside of the United States, especially those with nationalized health care systems, a common means of determining whether to reimburse new drugs by means of cost effectiveness analysis. This analysis helps determine whether paying for a new drug is worth additional cost, in terms of life extension and quality-of-life enhancement, as compared with similar drugs on the market, and is expressed in terms of a quality-adjusted life years measurement ranging from 0 (the least healthy) to 1 (the most healthy) scale that enables of the comparison of benefits across different age and disease groups. To illustrate the utilization of this metric, decision-makers reimburse conditions with higher cost per quality-adjusted life years score (for example, treatment of AIDS would have a higher score than treatment for asthma). An accompanying component to economic decision-making for reimbursing organizations is a willingness-to-pay threshold. In other words, below a certain ratio of cost to life years/quality benefit, organizations will deem intervention not worth reimbursing, and recommend alternative courses of treatment (Shiroiwa et al., 2010).

Within the United States, a widespread call to reduce health care spending along with more limited reimbursements by Medicare, Medicaid, and other organizations to be created
by recent healthcare reform legislation places additional demands on pharmaceutical companies to introduce medicines with increased effectiveness and for seriously impairing diseases with few competitor drugs, but also to prepare to receive less reimbursement-based compensations for what they bring to market. Even outside the United States, governments are beginning to require, or introducing more restrictive standards on companies, to show empirical evidence that drugs are not only therapeutically effective, but cost-effective. Many governments utilize an incremental cost effectiveness ratio-driven decision model, based on the ratio of the increased cost of a particular therapy as compared to existing medicinal therapies, to the change in quality adjusted life-years.

3 CHANGING PRODUCTION DECISION MODELS

Across the pharmaceutical industry, companies generally involves obtaining a drug license, at which point phase III trials are completed and drug outcomes can be analyzed effectively, and then analyzing reimbursements. It is proposed that pharmaceutical companies can benefit from instead determining cost-effectiveness during Phases I and II of clinical trials before drug licensing is obtained, by projecting cost and effectiveness using data on effectiveness of similar chemical compounds and similar interventions and studies on the disease (Hall et al, 2010). It is hypothesized that the projected cost-benefit analysis can in fact guide the conducting of Phase III trials, in terms of decisions regarding how to allocate funding as a function of revenue expectations based on projected reimbursements. Of course, this model would have to take into account exceptional cases such as when interventions that would be considered cost-ineffective by normal standards treats a debilitating disease that cannot be treated otherwise, or in the cases of drugs that are perceived as “vanity” treatments, or treat diseases afflicting a non-priority subset of patients, or simply a too-small subset of patients.

Thus, other factors besides simple cost-effectiveness must be incorporated into the ideal decision-making model, including therapeutic value, the size of the population that could potentially benefit from the drug, strong outcomes (above existing averages) in clinical trials, and how burdensome the disease is to society as a whole as well as the individually-stricken patient. Yet another factor is encapsulated by the Pareto principle, which states that a socially optimal therapy is one that does no harm to anyone, and leaves one or more subsets of the population better off.

4 CURRENT AND FUTURE RESEARCH

Given the fevered pitch at which lawmakers and those in the health care industry are clamoring for reform, the development and testing of decision-making models is particularly ripe for empirical research. One particularly attractive direction is a detailed computational analysis of how changing reimbursement practices introduced by Obama’s recently-passed Health Care Reform bill will affect the optimal decision model described above for pharmaceutical companies, as well as the existing decision-making model. Besides the aforementioned complex factors beyond simple cost-effectiveness that should be taken into account in an ideal decision-making model, of particular interest to the author is the effects of age-based health care rationing – i.e., disproportionately weighting interventions that help young people versus treating people above a certain age (even beyond any such weighting that is implicit in the quality-adjusted life years metric), to bolster arguments in ethical debates about health care rationing proposed solutions in the United States and beyond.

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Shiroiwa, T. et al. 2010. International survey on willingness-to-pay (WTP) for one additional QALY gained: what is the threshold of cost effectiveness? Health Economics.

The Use of Incentives in Organizations

Scott A. Jeffrey
Monmouth University
Leon Hess School of Business
400 Cedar Ave.
West Long Branch, NJ, USA, 07764
(732) 263-5519
sjeffrey@monmouth.edu

Alyce M. Dickinson
Western Michigan University
Department of Psychology
1903 W. Michigan Ave.
Kalamazoo, MI, USA, 49008
(269) 387-4473
alyce.dickinson@wmich.edu

Yngvi F. Einarsson
Western Michigan University
Department of Psychology
1903 W. Michigan Ave.
Kalamazoo, MI, USA, 49008
(269) 387-4473
yeinarsson@gmail.com

ABSTRACT
We report the results of a survey of 170 designers and managers of incentive programs in organizations. We use these data to explore the types of incentives used, how they are chosen, as well as the appropriate size of these reward and recognition awards. We also explore the perceived effectiveness of these rewards. We close with a summary of our findings and a call for future research in incentive use in organizations.

Keywords
Incentives, Motivation, Survey

1 INTRODUCTION
There has been limited focus by academics on the use of tangible incentives in organizations, those rewards that have market value but are not cash (e.g., things such as merchandise, travel, and prepaid debit cards). With a few exceptions, the field of academics has not caught up to practitioners in their study of this type of incentive (Jeffrey, Dickinson, & Einarsson, 2011). In this paper, we discuss current practices in the industry and attempt to draw some conclusions on their effectiveness. Specifically, we sought to find answers to the following questions:

1. What is the current usage of these award types?
2. What is the basis of award type selection used by the program manager?
3. What is the targeted value of the award (dollar/award) by award type?
4. How is this value of the award determined?
5. How effective is the award in achieving the program’s objective?
6. How is the program’s effectiveness determined?

We find it important to state at the beginning of this paper that we are studying rewards and recognition plans rather than straight compensation, as we know that a significant portion of certain employees’ pay is incentive compensation (e.g., commissions, stock options, as well as other significant cash payments to senior executives). Therefore our focus is on the use of incentives for recognition and rewards for specific performance specifications (e.g., quarterly quotas, etc.).

2 METHODOLOGY
We sent electronic mail invitations to employees who were identified as responsible for program administration in their firms by incentive industry participants. This invitation was sent out to approximate 2000 people. Of this number, 170 responded by taking our survey. While this may seem like a poor response rate, there are two reasons to believe that this rate does not damage the conclusions we can make from these data. First, while the email lists included approximately 2000 people, it is likely that there were significant redundancies on these lists, reducing the initial contact number. In addition, 170 was the largest response to any survey invitation that has ever been sent to these lists. To be certain, we analyzed the demographics of the respondents, and found little reason to be concerned about sampling bias.

The respondents that agreed to participate in our study were directed to a survey hosted on a Monmouth University server. This survey asked respondents about their use of incentives in their organization in an attempt to shed light on the six questions outlined above. While we were mostly interested in the use of travel, merchandise, and prepaid debit cards, we also asked survey questions about the use of cash (e.g., open loop debit cards) for the sake of completeness. Original questions regarding incentive practices were created by the authors of the paper along with assistance from the Incentive Research Foundation, a non-profit organization which studies the use of incentives in businesses. This first draft was then sent out for comment to a Delphi panel made up of industry experts in the use of incentives in organizations. Their feedback was used to create the final survey.

3 RESULTS
In this section, we highlight information gained from survey respondents designed to answer our six questions listed above. We start with incentive usage, and a discussion of how award types are chosen. We then address target value and how this value is determined. We close this section of the paper with a discussion of perceived effectiveness of incentive programs using each incentive type.
Incentive Usage
We found that in general, incentives are used predominantly for individual contributors (~70%) and rarely for senior management (~35%). We also were told sales employees are the most common target audience of incentive plans (60-70% of programs). Of interest as well is that the support functions (staff functions) such as IT, Marketing, and Human Resources are infrequent targets of incentive plans.

We also found that pre-paid gift cards are quite popular, with 65% of all firms using this type of incentive and 26% using ONLY this type of incentive. This is consistent with anecdotal information we receive from practitioners. Many incentive program managers are selecting pre-paid gift cards as incentives, presumably due to ease of use and the believed preferences of employees. This can be seen in some of the free text responses provided by respondents. For example, one respondent provided the following reason for using cards: “Ease of providing rewards in an efficient manner and flexibility to the award recipient to purchase what they would like,” while another said: “Ease of use. Polled employees and they felt that it was most useful.” It is interesting to note that fewer respondents reported using cash, the other form of fungible incentive. The preference for cards relative to cash also suggests the ease of which cards can be implemented. This was indicated by respondents’ quotes such as “ease of administration” and “ease of use.”

Travel was used by a large portion of firms as well; however this was mostly used for sales personnel. The pattern of responses regarding travel mostly dealt with the desire to provide a unique experience to employees receiving the incentive. Respondents also believed that travel was best at providing support for this speculation, many respondents stated they believed that a cash incentive was preferred by employees, so it is interesting that it is so infrequently used in our data, especially relative to gift cards.

It is possible that cards are being used as a proxy for cash incentives. This is supported by the similarity of comments regarding convenience and employee preference. While we do not have conclusive data on this, these results suggest that firms realize that when they provide gift cards they really are giving cash. A comment from a respondent is supportive of this who said “Actually, we use American Express Gift Cheques which can be used like cash.” One piece of evidence that argues against gift cards as cash is their frequency of use with channel partners. This may however point to some feelings of inappropriateness of cash for channel partners rather than the substitutability of cards for cash. This would be a fruitful avenue for future study, by asking participants what they feel they are receiving and what program managers think they are providing when a card is used.

Incentive Values
We asked respondents to state the “most common value” of each type of incentive they used. The median value of incentive and the median percentage of annual salary is presented in Table 1.

<table>
<thead>
<tr>
<th></th>
<th>Cash</th>
<th>Travel</th>
<th>Merch</th>
<th>Card</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amount</td>
<td>$250</td>
<td>$2,500</td>
<td>$100</td>
<td>$50</td>
</tr>
<tr>
<td>Percentage</td>
<td>3%</td>
<td>4.5%</td>
<td>2%</td>
<td>2%</td>
</tr>
</tbody>
</table>

Table 1: Median value of each incentive type offered

The data in Table 1 suggest that travel incentives are used for more “top performer” type awards such as meeting specific goals or objectives (e.g. sales quotas, production targets, cost reduction, etc.). The average values reported for merchandise and prepaid cards are quite similar to each other. This suggests that merchandise and cards are used for similar purposes, perhaps predominantly spot recognition rather than a program of longer length as discussed above with respect to travel.

We gathered additional data which are indicative of the different uses of travel vs. the other incentive types. We asked respondents to estimate the percentage of their budget allocated to rewards for specific behavioral time periods (e.g. daily, weekly, etc.). For travel incentives, there were no values entered in for weekly or daily rewards, and only 6.5% of respondents placed a positive number under the heading of monthly behaviors. Three of the four respondents who put in a positive number entered 10%, with the final respondent answering with 30%. These data suggest that there is limited use of travel for “spot” recognition. For merchandise and card awards, almost 10% of respondents placed a positive value in daily and weekly behaviors. For merchandise, the median percentage budgeted for providing daily awards was 20%, with 30% being the median for prepaid cards. For weekly awards,
These numbers were 15% and 25% respectively. Taken as a whole, these data strongly suggest that merchandise and cards are more frequently used for spot awards than are travel and cash, with the latter incentives types reward for longer term behaviors (e.g. accomplishment of goals). This would also be a productive vein for future research, wherein respondents could be directly asked about the differences between spot recognition and longer term programs.

Beyond asking respondents their opinion about the right level of incentives (amount and percentage), we asked them to report on how they determined that amount. This information can be seen in Table 2.

Table 2: Basis for incentive award amounts

<table>
<thead>
<tr>
<th></th>
<th>Cash</th>
<th>Travel</th>
<th>Merch</th>
<th>Cards</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intuition</td>
<td>18.9%</td>
<td>16.1%</td>
<td>21.7%</td>
<td>30.9%</td>
</tr>
<tr>
<td>Experience</td>
<td>35.8%</td>
<td>37.1%</td>
<td>41.3%</td>
<td>30.0%</td>
</tr>
<tr>
<td>Observation</td>
<td>17.0%</td>
<td>32.3%</td>
<td>32.6%</td>
<td>20.0%</td>
</tr>
<tr>
<td>Data</td>
<td>18.9%</td>
<td>17.7%</td>
<td>9.8%</td>
<td>8.2%</td>
</tr>
<tr>
<td>Experimentation</td>
<td>13.2%</td>
<td>9.7%</td>
<td>8.7%</td>
<td>7.3%</td>
</tr>
</tbody>
</table>

The interesting observations from these results surround the high levels of intuition and experience reported rather than data or experimentation. For all four incentive types, the percentage responding intuition or experience was over 50%. Considering the importance and the level of expenditures on incentives (somewhere in the 3% to 5% of salary range), we find this a bit disturbing and a productive area for future research. In particular, these experiential responses could easily be affected by a number of well-known judgmental biases.

For example, past research has shown that people tend to seek out confirming evidence when testing hypotheses (Klayman & Ha, 1987). This means that individuals are more likely to search for evidence that their beliefs are correct than for evidence that their beliefs are incorrect. In addition, people interpret ambiguous information (information that could be supportive or unsupportive of their beliefs) as confirming their beliefs. These practices will tend to give people higher than supported levels of confidence in the “appropriate” level of reward and recognition.

**Incentive Effectiveness**

Our final goal was to gain information on the believed effectiveness of incentive programs. These responses can be seen in Table 3. Of interest in that table is the significant portion of respondents who answered that they either don’t know or have no good way to measure it. This is similar to the percentage of respondents who reported choosing the appropriate levels of incentive based on intuition. As with that question, we find that it would be productive to perform research on the effectiveness of different types of awards. The need for future research in this area is particularly important due to two facts. The first is that in difficult economic times, senior management wants to see hard numbers for return on investment. With no good way to measure this, people will be responding based upon their feelings. While we have no data on this, it may also be the case that some people who responded to this question were not basing their responses on hard data either and using some less rigorous measure of effectiveness.

Table 3: Perceived effectiveness of different awards

<table>
<thead>
<tr>
<th></th>
<th>Cash</th>
<th>Travel</th>
<th>Merch</th>
<th>Cards</th>
</tr>
</thead>
<tbody>
<tr>
<td>Don’t Know</td>
<td>5.7%</td>
<td>6.5%</td>
<td>9.0%</td>
<td>14.4%</td>
</tr>
<tr>
<td>No good measure</td>
<td>30.2%</td>
<td>14.5%</td>
<td>23.6%</td>
<td>17.1%</td>
</tr>
<tr>
<td>Significantly Negative</td>
<td>0.0%</td>
<td>0.0%</td>
<td>0.0%</td>
<td>0.0%</td>
</tr>
<tr>
<td>Negative</td>
<td>0.0%</td>
<td>0.0%</td>
<td>0.0%</td>
<td>0.0%</td>
</tr>
<tr>
<td>Somewhat Negative</td>
<td>1.9%</td>
<td>0.0%</td>
<td>1.1%</td>
<td>1.0%</td>
</tr>
<tr>
<td>Almost None</td>
<td>3.8%</td>
<td>6.5%</td>
<td>6.7%</td>
<td>7.2%</td>
</tr>
<tr>
<td>Somewhat Positive</td>
<td>15.1%</td>
<td>17.7%</td>
<td>12.4%</td>
<td>17.2%</td>
</tr>
<tr>
<td>Positive</td>
<td>18.9%</td>
<td>24.2%</td>
<td>23.6%</td>
<td>17.2%</td>
</tr>
<tr>
<td>Significantly Positive</td>
<td>30.2%</td>
<td>19.3%</td>
<td>8.9%</td>
<td>17.2%</td>
</tr>
</tbody>
</table>

Exercising the responses in Table 3, most respondents perceive a positive result when asked “On average, what results are you experiencing with your _____ Rewards and Recognition programs?” While at first glance this appears to be supportive of the use of incentives in organizations, and consistent with other research on incentives (Besser, 1995; Cadsby, Fei, & Tapon, 2007; Condly, Clark, & Stolovich, 2003), it is interesting that almost no respondents replied that their incentive program was having a negative effect. These results may also be impacted by judgmental biases.

These responses, if based on recall may be affected by the availability heuristic (Kahneman & Tversky, 1973). When people are asked to estimate the likelihood of an event, they judge this by the ease in which instances can be recalled. When asked how effective an award is, respondents are like to base their response on how frequently program managers hear about people liking the incentive received. The likelihood is that program managers tend to hear positive stories more frequently than negative stories, meaning that their assessment of success will be biased towards the high end.

Closely related to this is the self-serving bias. People are much more likely to remember times they were right than times they were wrong. This will put a positive skew on self-reported results. In addition to this, there is strong personal motivation to report that programs for which a person is responsible are effective. This may also skew these responses upwards. These two potential biases and the importance of hard data also create the need for more rigorous research in this area.
General Discussion
We began this paper with the intent to determine usage information on incentives in organizations. As with a great deal of research, while we answered some questions, we also created a large number of questions that should be explored. This section highlights some of our key findings and the questions that we think need to be explored in more depth.

We discovered that the many incentive program managers are indeed using pre-paid debit cards for their perceived ease of use and the belief that employees value the freedom of choice provided. It is clear that these rewards do offer employees choice, but we feel that it would be beneficial to examine the perceptions of this award. Specifically, we want to know what companies feel they are providing employees (e.g. material goods or simply cash), and whether employee perceptions are consistent with those beliefs.

We also found that travel remains a popular award for employees, with 36% of respondents stating that they used travel. The usage was particularly high in sales employees (> 70%). We asked a follow up question regarding group vs. individual travel and found that the majority of travel (approximately 70%) is group based but that the mix is changing to more individual travel (e.g. not with members of the firm). This has implications for incentive design as well as destination and program management. Further research here should focus on the types of individual travel that are being used as well as the general program rules for receiving these awards (e.g. spot vs. goal based).

We are concerned that a large number of respondents use intuition or experience when determining the “right amount” of incentive awards. There are many reasons to try to build general knowledge about this based upon solid scientific evidence as intuition can be influenced by multiple judgmental biases. While the percentage seems small (around 3%) this is still a significant amount of funds that should be spent based upon the best knowledge available. We also found that the use of incentives in organizations is viewed as having positive results. This is encouraging, but we are concerned that much of this may also be based upon personal opinion rather than hard data. We would like to see additional research confirming the return on investment and return on objectives of incentive programs.

A final point that we would like to see studied is how different incentives are used in different types of reward and recognition programs. We speculated that travel was mostly used for goal or quota based programs, whereby employees are awarded for achieving a given level of pre-specified performance. In contrast, we concluded based upon our data that merchandise and cards were more likely to be utilized as spot recognition. We believe that future research should confirm this.

Conclusion
We hope that this research will serve as an invitation to other researchers and practitioners to study some of the questions raised in this paper. We strongly feel that there is a shortage of rigorous research on the use of tangible incentives (e.g. non-cash) in organizations. This study confirms that many firms are utilizing this type of incentive but may not be basing this usage on high-quality information.

4 REFERENCES
ABSTRACT
The aim of this paper is to look for determinants of sovereign ratings of emerging countries. The effects of macroeconomic variables on the ratings are analyzed by static panel data analysis. By this empirical research whether sovereign ratings of emerging counties are independent from macroeconomic progress of these countries have been checked. It might be vital to know effects of macroeconomic variables on sovereign rating for politicians, foreign investors, monetary authorities and academicians. So, we need efficient and strong models explaining sovereign rating.

In the empirical model of the study, we use two way fixed effect panel data analysis. The lists of the emerging countries are taken from S&P emerging countries list. We apply first generation unit root tests and second generation unit root tests because of the existence of cross sectional dependency. For the long run relationships between dependent and independent variables, we apply panel autoregressive distributed lag model (ARDL).

Keywords: Sovereign rating, emerging countries, panel data, fixed effect, CADF, ARDL, and Dynamic fixed effect

1 INTRODUCTION
Credit rating agencies (CRAs) were established in 1841 by Lois Tappan to seek fulfillment of the liabilities of merchants. In 1890 John Moody rated the US rail road companies, after she started to rate industrials bonds. Poor’s made her first rating in 1916, Standard Statistic Company made in 1924 and Fitch made her first rating in 1924. In 1941, Standard and Poor’s merged. When financial companies opened up international markets, rating companies started to rate internationally (Cantor and Packer, 1994). Moody’s gave her first sovereign rating to USA in 1949, S&P made her first sovereign rating in 1975 and Fitch in 1994.

Sovereign rating scales the ability of sovereigns to meet their fulfillment as credit rating of companies. When international investors diversify their portfolio among different choices at given risk rate encounter investment decision process. CRAs give important knowledge about possible investment choices. International investors have opportunity to get useful information from countries or companies that they are planning to invest in by looking at sovereign or companies rating. Only looking at sovereign rating provides fruitful information for investors because domestic entities barely get higher rating than the countries that they settle in (Cantor and Packer, 1994; Ferri and others 2001, Mora, 2006).

CRAs rate the countries, municipals and private entities against economical and political changes from time to time. If we check the historical data of the rating, we can see that CRAs are inconsistent about rating among them. For instance, in 2010 S&P, Moody’s and Fitch gave the same rating to the nine emerging countries over thirty fives. Even they are criticized about being inconsistent, it is vital to know effects of macroeconomic variables on sovereign rating. The purpose of this study is to determine the factors that affect sovereign rating. First, we have a literature review and then having inspired from literature we decide the explanatory variables. In the part of empirical framework, we run regressions for the panel data. In the last part, we state the findings of the study.

2 THEORETICAL FRAMEWORK
One of pioneer study in the literature is Cantor and Packer (1996) articles. In their study, they determined the explanatory variables of sovereign rating like GDP per capita, GDP growth rate, inflation rates, current account deficit to GDP, fiscal balance to GDP, external debt to export and debt history. They tried to explain rating for 49 countries and couldn’t find statically significant coefficient for fiscal balance and current account deficit to GDP variables. They also found positive sign coefficient for debt variable that is expected reverse relations. They found theoretically expected sign and significant relation for other variables.

Ferri et al (1999 and 2001) and Mora (2006) took as the basis Cantor and Packer’s explanatory variables and update them. They used linear panel analysis and ordered
probit model in their study distinct from Cantor and Packers study. Both of the articles focused on sovereign rating for 17 countries between 1986 and 1998. As a result of their articles, they found statistically insignificant coefficient for growth rate, inflation and fiscal variable. Even fiscal variable is insignificant in fixed effect panel data analysis; it is significant in random effect panel data analysis. In the Mora’s ordered probit panel data analysis, she found all variables statistically significant and theoretically expected sign except from growth variable.

Other important study is Ul-Haque et al (1996) that focused on sixty developing countries between 1963 and 1980. They tried to explain creditworthiness of the selected countries. Some of the independent variables determined are total reserves to GDP, export growth rate GDP growth rate, term of trade and US interest rate. They found significant positive sign for reserves to import current account balance and export growth. They found statistically insignificant positive sign for term of trade and they found statistically insignificant positive sign for growth for Economist Intelligence Unit Rating. They detected reverse relationship between US interest rate and creditworthiness of developing countries.

Hu et al (2001) studied on 39 countries between 1981 and 1998. They applied panel probit model for their study. The explanatory variables used in the articles were default dummy, dept to GDP, reserves to import, inflation and dummy for non-industrial countries. All of them were found in theoretically with expected signs and also significant.

Gaillard (2006) tried to explain 105 sub-sovereign ratings between 1996 and 2005 with ordered probit analysis. Some of basic variables used in the articles are dept default history dummy, GDP per capita, GDP growth rate and debt to GDP ratio. All of them were found in theoretically with expected signs and also significant.

Ratha et al (2011) tried to estimate sovereign ratings of unrated countries with linear regression model. They used GNI per capita, GDP growth rate, dept to export, total reserves to import, inflation, growth volatility and rule of law as explanatory variables. They found expected and significant sign for growth rate, GNI per capita, dept to export and rule of law. They couldn’t find theoretically expected sign for reserves to import variable and inflation coefficient is not significant.

3 DATA AND EMPIRICAL FRAMEWORK
In our paper, we try to explain sovereign rating given to emerging countries by Standard and Poors, Moodys and Fitch rating agencies between 1995 and 2009.

3.1. Data
The emerging countries lists are obtained from Standard and Poors list. S&P classifies nineteen countries as emerging countries. These are Brazil, Chile, China, Check Republic, Egypt, Hungary, India, Indonesia, Malaysia, Mexico, Morocco, Peru, Philippines, Poland, Russia, South Africa, Taiwan, Thailand and Turkey. We couldn’t reach data for Taiwan from World Bank and other sources so we excluded her. For this paper, we have decided our explanatory variables inspired from Cantor and Packer’s (1996) articles. The explanatory variables in our study are current account deficit to GDP (CATGDP), inflation calculated from deflator (DEF), external debt to GNI (EXDTGNI), Freedom index obtained from Heritage Foundation, (FI), GDP per capita (GDPPC), reel exchange rate (REXR) calculated against US dollars and gross domestic savings to GDP (SAVTGDP). Data for variables have been obtained from World Bank, IMF, Heritage Foundation and CRAs websites. CRAs represent their ratings with special signs. We order these signs from 0 to 21. 21 represent maximum credit rating. We have calculated average long-run foreign currency sovereign rating of three big CRAs as their share of market between 1995 and 2009 for emerging countries. ARAT indicates average rating of the countries.

GDP per capita and savings are expected to have positive effect on sovereign rating; external debt, inflation, real exchange rate and current account deficit are expected to have negative effect (Cantor and Packer, 1996; Ul-Haque et all 1996; Ferri et all, 1999 and 2001; Hu et all, 2002; Mora, 2006; Gaillard 2006; Ratha et all, 2011). In Cantor and Packer and other studies, GDP growth rate and GDP per capita were used together. This event was criticized in 12th Econometrics Statistics and Operation Research Symposium held in Denizli, Turkey about causing autocorrelation between variables so we have excluded growth rate and used freedom house index instead. Freedom Index is much more inclusive variable that composed of ten components. The components of the index are business freedom, trade freedom, fiscal freedom, government spending, monetary freedom, investment freedom, financial freedom, property rights, freedom from corruption and labor freedom. All components are graded from 100 to 0. 100 represent maximum freedom. Freedom index is the average of the ten components (Heritage Foundation). We expect the index to have positive effect on sovereign rating.

3.2. Panel Unit Root Test
For the first step of the empirical research, we have examined stationary properties of the data. To proceed panel ARDL for our model, variables should be stationary or integrated of order one at most. Firstly we have applied first generation unit root tests that they do not take care of cross sectional dependency. The tests are Levin, Lin, Chu and Im, Pesaran, Shin tests (Levin et al, 2002; Im et al, 2003). The test results are illustrated at Table 1. To lessen possible cross section dependency among series, we take average of the dependent and independent variables at each point in time.
time and reduce the average from observation at point t (Erdem et al., 2010).

We have also checked second generation unit root test that take care cross section dependency. For these kinds of tests we have applied Pesaran’s CADF test (Peseran, 2006). The test results are illustrated at Table 2. For the CADF test, the null hypothesis is that there is unit root. We can only reject null hypothesis for SP variables but we cannot strongly accept null hypothesis for ARAT, FTC, GDPPC and REXR.

As a consequence of both first generation unit root tests and second generation unit root test, we have decided that series used in the paper are stationary in mixed order. As they are stationary in mixed ordered, we need to apply panel ARDL.

3.3. Fixed Effect Panel Data Analysis

In this study, we want to check out determinants of sovereign ratings of a specific group of countries. Fixed effect model are appropriate options as we are focusing on a specific group of countries (Baltagi, 2008). The regression between sovereign rating and explanatory variables stated below. N=1,…,18; t=1995,…,2009.

\[ SR_{it} = \alpha_{it} + \beta_{1t} CATGDP_{it} + \beta_{2t} DEF_{it} + \beta_{3t} EXDTGDP_{it} + \beta_{4t} GDPPC_{it} + \beta_{5t} REXR_{it} + \epsilon_{it} \]

Table 2: CADF Unit Root Test

<table>
<thead>
<tr>
<th>Variable</th>
<th>CIPS stat</th>
<th>CD LM1</th>
<th>CD LM2</th>
<th>CD LM3</th>
</tr>
</thead>
<tbody>
<tr>
<td>ARAT</td>
<td>-3.83*</td>
<td>326.9***</td>
<td>8.43***</td>
<td>-3.01***</td>
</tr>
<tr>
<td>SP</td>
<td>-3.527</td>
<td>307.7***</td>
<td>7.39***</td>
<td>-2.98***</td>
</tr>
<tr>
<td>FTC</td>
<td>-3.86*</td>
<td>315.06***</td>
<td>7.79***</td>
<td>-4.02***</td>
</tr>
<tr>
<td>MDY</td>
<td>-4.77**</td>
<td>336.6***</td>
<td>8.95***</td>
<td>-3.32***</td>
</tr>
<tr>
<td>CATGDP</td>
<td>-4.39**</td>
<td>306.7***</td>
<td>7.34***</td>
<td>-3.02***</td>
</tr>
<tr>
<td>DEF</td>
<td>-5.82***</td>
<td>413.4***</td>
<td>13.1***</td>
<td>-1.28*</td>
</tr>
<tr>
<td>EXDTGDP</td>
<td>-4.5**</td>
<td>293.4***</td>
<td>6.61***</td>
<td>-3.83***</td>
</tr>
<tr>
<td>FI</td>
<td>-5.33***</td>
<td>308.6***</td>
<td>7.44***</td>
<td>-3.52***</td>
</tr>
<tr>
<td>GDPPC</td>
<td>-4.11*</td>
<td>253.08***</td>
<td>4.43***</td>
<td>-3.21***</td>
</tr>
<tr>
<td>REXR</td>
<td>-4.005*</td>
<td>128.2</td>
<td>-2.31*</td>
<td>-3.02***</td>
</tr>
<tr>
<td>SAVTGP</td>
<td>-4.87**</td>
<td>201.1*</td>
<td>1.63*</td>
<td>-2.86***</td>
</tr>
</tbody>
</table>

Notes: *, ** and *** indicate rejection of null hypothesis at 10, 5 and 1 percent level of significance. P: lags length selected according to SIC. Critical values obtained from Pesaran (2006) Table c. The critical values at 1, 5 and 10 percent level of significance are -5.46, -4.17 and -3.63. We thank to Bulent Guloglu for sharing Gauss codes for CADF test.

In order to test time fixed effect, we apply joint test to see if dummies for all years are equal to zero, if they are then we don’t need time fixed effect (Reyna). The null hypothesis is that all years’ coefficients are jointly equal to zero. Thus we run two way fixed effects for the static panel data analysis. The results of two way fixed effect panel data analysis for the average rating given by S&P, Moodys and Fitch are illustrated at Table 3. As a consequence of the regression, we conclude that all variable used in the model have expected sings. CATGDP, EXDTGDP, GDPPC, FI and REXR’s coefficients are statistically significant.

3.4. Panel ARDL

Thereby having stationary in mixed order variables and in order to see long run relationships between dependent and independent variables we run panel ARDL model. It is convenient to work with following way as parameterized by Pesaran et al (1999).

Table 3: Results for Fixed Effect Estimation

<table>
<thead>
<tr>
<th>Variable</th>
<th>CIPS stat</th>
<th>CD LM1</th>
<th>CD LM2</th>
<th>CD LM3</th>
</tr>
</thead>
<tbody>
<tr>
<td>ARAT</td>
<td>-4.902***</td>
<td>-7.905***</td>
<td>-4.296***</td>
<td>-2.354***</td>
</tr>
<tr>
<td>SP</td>
<td>-4.47***</td>
<td>-4.168***</td>
<td>-3.428***</td>
<td>-1.425*</td>
</tr>
<tr>
<td>FTC</td>
<td>-5.043***</td>
<td>-8.102***</td>
<td>-2.015**</td>
<td>-1.941**</td>
</tr>
<tr>
<td>MDY</td>
<td>-1.385*</td>
<td>-2.871***</td>
<td>-2.592***</td>
<td>-1.65**</td>
</tr>
<tr>
<td>CATGDP</td>
<td>-7.74***</td>
<td>-7.495***</td>
<td>-6.777***</td>
<td>-4.336***</td>
</tr>
<tr>
<td>DEF</td>
<td>-205.3***</td>
<td>-182.5***</td>
<td>-112.6***</td>
<td>-80.48***</td>
</tr>
<tr>
<td>EXDTGDP</td>
<td>-8.67***</td>
<td>-11.54***</td>
<td>-5.67***</td>
<td>-5.12***</td>
</tr>
<tr>
<td>FI</td>
<td>-8.36***</td>
<td>-6.63***</td>
<td>-5.94***</td>
<td>-3.28***</td>
</tr>
<tr>
<td>GDPPC</td>
<td>1.8</td>
<td>1.66</td>
<td>-1.47*</td>
<td>1.3</td>
</tr>
<tr>
<td>REXR</td>
<td>-10.23***</td>
<td>-10.32***</td>
<td>-7.83***</td>
<td>-5.76***</td>
</tr>
<tr>
<td>SAVTGP</td>
<td>-5.36***</td>
<td>-3.47***</td>
<td>-6.28***</td>
<td>-3.51***</td>
</tr>
</tbody>
</table>

Notes: Δ is first difference operator, *, ** and *** are level of significance at 10, 5 and 1 percent levels of significance. Newey-West bandwidth selection with Bartlett kernel is used both LLS and IPS. To determine optimal lags, Schwarz info criteria are selected.
Dependent variable: Arat

<table>
<thead>
<tr>
<th>Variables</th>
<th>Coefficient</th>
<th>St. error</th>
<th>t statistic</th>
</tr>
</thead>
<tbody>
<tr>
<td>CATGDP</td>
<td>-0.127***</td>
<td>0.02</td>
<td>-6.20</td>
</tr>
<tr>
<td>DEF</td>
<td>-0.01</td>
<td>0.01</td>
<td>-1.102</td>
</tr>
<tr>
<td>EXDTGDP</td>
<td>-0.018**</td>
<td>0.008</td>
<td>-2.241</td>
</tr>
<tr>
<td>GDPPC</td>
<td>0.0018***</td>
<td>0.0002</td>
<td>8.53</td>
</tr>
<tr>
<td>FI</td>
<td>0.10***</td>
<td>0.022</td>
<td>4.8</td>
</tr>
<tr>
<td>REXR</td>
<td>-0.0001**</td>
<td>7.46E-05</td>
<td>-2.06</td>
</tr>
<tr>
<td>SAVTGDP</td>
<td>0.025</td>
<td>0.023</td>
<td>1.03</td>
</tr>
<tr>
<td>Constant</td>
<td>0.022</td>
<td>0.02</td>
<td>0.86</td>
</tr>
</tbody>
</table>

R-squared 0.907
Adj.R-squared 0.891
F-statistic 55.95***
Testparm F stat 0.4***

Notes: *, ** and *** indicate rejection of null hypothesis at 10, 5 and 1 percent level of significance. Cross-section SUR selected for st error and covariance.

The equation form of the ARDL model stated like:

\[ \Delta S R_t = \alpha_0 + \sum_{i=1}^{p} \alpha_{i,t-1} \Delta S R_{t-i} + \sum_{i=1}^{p} \beta_{i,t-1} \Delta CATGDP_{t-i} + \sum_{i=1}^{p} \rho_{i,t-1} \Delta DEF_{t-i} + \sum_{i=1}^{p} \gamma_{i,t-1} \Delta EXDTGNI_{t-i} + \sum_{i=1}^{p} \lambda_{i,t-1} \Delta GDPPC_{t-i} + \sum_{i=1}^{p} \omega_{i,t-1} \Delta FI_{t-i} + \sum_{i=1}^{p} \Phi_{i,t-1} \Delta REXR_{t-i} + \sum_{i=1}^{p} \rho_{i,t-1} \Delta SAVTGDP_{t-i} + \Delta \phi_{t} \Delta S R_{t-1} + \sum_{i=1}^{q} \delta_{i,t} \varepsilon_{t-i} + \sum_{i=1}^{q} \eta_{i,t} \varepsilon_{t-i} + \sum_{i=1}^{q} \kappa_{i,t} \varepsilon_{t-i} + \sum_{i=1}^{q} \theta_{i,t} \varepsilon_{t-i} + \sum_{i=1}^{q} \lambda_{i,t} \varepsilon_{t-i} + \sum_{i=1}^{q} \omega_{i,t} \varepsilon_{t-i} + \sum_{i=1}^{q} \Phi_{i,t} \varepsilon_{t-i} + \sum_{i=1}^{q} \rho_{i,t} \varepsilon_{t-i} + \sum_{i=1}^{q} \chi_{i,t} \varepsilon_{t-i} + \sum_{i=1}^{q} \kappa_{i,t} \varepsilon_{t-i} + \sum_{i=1}^{q} \theta_{i,t} \varepsilon_{t-i} + \sum_{i=1}^{q} \lambda_{i,t} \varepsilon_{t-i} + \sum_{i=1}^{q} \omega_{i,t} \varepsilon_{t-i} + \sum_{i=1}^{q} \Phi_{i,t} \varepsilon_{t-i} + \sum_{i=1}^{q} \rho_{i,t} \varepsilon_{t-i} + \varepsilon_{t} \]

Where

\[ \phi = \sum_{i=1}^{q} \theta_{i,t} \varepsilon_{t-i} \]
\[ \alpha_0 = \sum_{i=1}^{q} \eta_{i,t} \varepsilon_{t-i} \]
\[ \alpha_i = \sum_{i=1}^{q} \kappa_{i,t} \varepsilon_{t-i} \]
\[ \alpha_i = \sum_{i=1}^{q} \chi_{i,t} \varepsilon_{t-i} \]
\[ \alpha_i = \sum_{i=1}^{q} \kappa_{i,t} \varepsilon_{t-i} \]
\[ \alpha_i = \sum_{i=1}^{q} \theta_{i,t} \varepsilon_{t-i} \]
\[ \alpha_i = \sum_{i=1}^{q} \lambda_{i,t} \varepsilon_{t-i} \]
\[ \alpha_i = \sum_{i=1}^{q} \omega_{i,t} \varepsilon_{t-i} \]
\[ \alpha_i = \sum_{i=1}^{q} \Phi_{i,t} \varepsilon_{t-i} \]
N=1,...,18; t=1986,...,2009.

φ represents error correction coefficient and it is expected to have negative sign. \( \delta_i \), \( \theta_i \), \( \gamma_i \), \( \lambda_i \), \( \omega_i \), \( \Phi_i \) and \( \rho_i \) are long run panel ARDL coefficients and \( \phi_i \) is error correction coefficient. \( \phi_i \) and \( \rho_i \) are short run coefficient.

Even mean group (MG) estimates are unweighted mean of the individual regression. Pooled mean group (PMG) estimates are weighted. The dynamic fixed effect estimator (DFE) restricts the coefficient of the co integrating vector to be equal across all panels as in PMG estimator. Also DFE restrict error correction coefficient and short run coefficients to be equal (Blackburne and Frank, 2007).

Lagged dependent variable used in the ARDL model causes equation bias from endogeneity (Blackburne and Frank, 2007). We can measure size of the endogeneity with Hausman test. By the Hausman test, we compared MG and DFE estimations. DFE is preferred for our model by looking at Hausman probability value.

### Table 4: Results for DFE Estimation

<table>
<thead>
<tr>
<th>Dependent Var: ARAT</th>
<th>z stat</th>
</tr>
</thead>
<tbody>
<tr>
<td>CATGDP</td>
<td>-0.083</td>
</tr>
<tr>
<td>DEF</td>
<td>-0.101***</td>
</tr>
<tr>
<td>EXDTGNI</td>
<td>-0.111***</td>
</tr>
<tr>
<td>FI</td>
<td>0.018</td>
</tr>
<tr>
<td>GDPPC</td>
<td>0.0014***</td>
</tr>
<tr>
<td>REXR</td>
<td>-0.0002</td>
</tr>
<tr>
<td>SAVTGDP</td>
<td>0.32***</td>
</tr>
</tbody>
</table>

**Error Correction Model (ECM)**

\[ ECM \text{ coefficient: } \phi = -0.17*** \]
\[ \Delta CATGDP = -0.052*** \]
\[ \Delta DEF = 0.003 \]
\[ \Delta EXDTGNI = -0.016*** \]
\[ \Delta FI = -0.008 \]
\[ \Delta GDPPC = 0.0002 \]
\[ \Delta REXR = 0.00002 \]
\[ \Delta SAVTGDP = -0.041*** \]
\[ \Delta cons = -0.013 \]

Hausman Stat 0.08
Hausman Prob 0.99

Notes: *, ** and *** indicate rejection of null hypothesis at 10, 5 and 1 percent level of significance. **error correction coefficients**

**CONCLUSION**

This paper examines the effect of macroeconomic variables on sovereign rating for emerging countries between 1995 and 2009. For the short run analysis we use two way fixed effect panel data analysis. The short run coefficients are obtained from two-way fixed effect analysis have totally expected sign and many of them are significant. Thus macroeconomic variables effect sovereign rating as in expected in short run.

In order to examine relationships between sovereign ratings and macroeconomic variables in long run, we use panel ARDL model. There is a cointegration relationship among variables as indicated by error correction term. It has significant and negative sign. There is positive effect of GDP per capita, savings and freedom index on their sovereign rating. Also, there is positive effect of current account deficit, inflation, external debt real exchange rate of emerging countries on their sovereign rating.

As a consequence, we can infer from empirical findings that CRAs are not rating emerging countries without thinking about macroeconomic and political environment of them.

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Fitch Rating

Standard and Poor’s

Moody’s

Wikipedia


ABSTRACT
In the past twenty years, as former Soviet-bloc countries have developed economically, business education has risen accordingly. While traditional business courses, e.g. Accounting, Finance and Marketing, are prominent in schools there, Business Ethics, is less prevalent. This paper examines the environmental and cultural conditions of the region to present the challenges business schools in the region have in providing Business Ethics education.

Keywords
Ethics, Education, International Business

1 INTRODUCTION
The fall of the Berlin Wall 1989 and the collapse of the Soviet Union 1991 not only symbolized the end of Communism, they also heralded the advent of market economies in Central and Eastern Europe. In a very short time, countries that existed for decades under highly centralized, government-led economies had to adapt to Capitalism and enter into an increasingly competitive global marketplace.

Such a transition doesn’t come easily, and after two decades the region is still adjusting to Capitalism with varying degrees of success. For capitalism, the fall of Communism was a wonderful boon as it opened new markets of the former Socialist Republics and other countries that had been aligned with the Soviet bloc (e.g. Bulgaria, Poland, Hungary, etc.). Similarly, it created opportunities for new businesses in these countries as well as for foreign companies, mostly from the west, excited to enter these previously unavailable markets. Moreover, the opportunity to legally accumulate wealth through entrepreneurial endeavors was a huge incentive in a region not accustomed to private sector enterprise.

Not surprisingly, the demand for business education quickly developed, resulting in the opening of many new professional business schools. Many of these were private, for-profit and independent of any accreditation (Bollag, 1997). Alternatively, many programs from established western colleges and universities entered the market by partnering with existing schools and bringing their curriculum to the region. In either model, the curriculum of these new programs began looking more and more like the American business school model, which makes sense since the U.S. has been the world leader in business and management education. Emulating American business education was an effective way for foreign schools to quickly develop credibility for their new programs. The imitative process that made business curricula similar across this region was assisted by other factors such as the expansion of the European Union, and more students learning English as their second language. Many foreign schools teach their business curriculum in English and assign American textbooks for their courses.

Therefore, in much of Central and Eastern Europe, business education has become quite similar to what is taught in the United States. For many courses covering the mechanics of running a business, the fundamentals transcend national and cultural boundaries. For example, in Marketing the ‘Four P’s (product, pricing, place, and promotion) are fairly universal. On the other hand, not all business subjects are as transferable as Marketing; chief among them is Business Ethics.

The proposed paper will address the instruction of Business Ethics in the post-Soviet bloc. In so doing, it will question whether addressing ethics from a western perspective is appropriate for a region in which Capitalism is still relatively new. Additionally, the region is diverse enough from a cultural perspective that the expectation of common values is highly questionable. In making this argument, the paper will first discuss the author’s motivation for exploring this topic; after which it will provide brief overviews of the increases in business and business education in the region since 1991. The paper will then explore changes in the ethical environment of former Soviet bloc countries in terms of broad social ethics, business ethics, and ethics in their educational systems. Lastly, the paper will conclude by attempting to reconcile the challenges, and the need, for business ethics education in the region.

2 GENESIS OF THE PAPER
During the academic year of 2007-2008, I participated in a faculty exchange program by teaching (in English) at the University of Debrecen in Hungary. Although Debrecen offers courses in Hungarian covering business issues unique to that country, the School also provides a range of courses in English as an attempt to attract student from other countries. The campus participates in the Erasmus Programme, an initiative by the European Union encouraging European students to study in other parts of the European Union ("European Commission - Education &
Training - Erasmus University Charter,” n.d.). For this reason, there exists a need for courses broad enough to benefit students from all over the continent, delivered in English, the second language of many European college students. The breadth of students studying at Debrecen mandates that the business courses they offer not be too specific to Hungary, and be transferable to other campuses. Thus Debrecen, like many other European colleges, modeled some of its curriculum after western business schools, offering the range of courses found in leading business programs including Accounting, Economics, Finance, Management, Marketing, and, to a lesser extent, Business Ethics. However, Ethics is becoming more common and there is increasing interest in the field. While in Hungary, I presented a public lecture and published a journal article (Keiser, 2008) about American business ethics education, and this paper presents an alternative perspective by presenting the issues and challenges of teaching Business Ethics in post-Soviet countries.

3 RISE IN BUSINESS IN FORMER SOVIET-BLOC

In a region where private business activity was taboo two decades ago, commerce has exploded in terms of revenue and prestige. Based on his study of young adults in three ex-Communist countries (Armenia, Georgia and the Ukraine) Ken Roberts identified careers in business as being, high-status, high-profile and business people as being the high-spending role models in the region (Roberts, 2006). No doubt, the values and orientations of young people in these areas have changed accordingly. In a 2006 study of Russian college students, respondents identified careers in business and management most highly over other fields, and much higher when compared to previous surveys (Mogil’chak, 2006). Not surprisingly, the overwhelming majority of students in that same study identified material prosperity as a reward for their careers to be significantly important. Just as college students seek material prosperity in their careers, successful businessmen have become the beacons for economic success. So much so, they have become the new “rock stars” in their countries, living glamorous and luxurious lifestyles. As evidence, of the rising consumer consumption in the region, Bentley, the high-end British automobile manufacturer didn’t sell any cars in Russia in 2000, but by 2010 they had sold 113 (“Harper’s Index,” 2011) making Russia their largest market in Europe after Germany (“Bentley steps up a gear in Russia — RT,” 2008).

4 RISE IN BUSINESS EDUCATION

As market reforms increased the opportunities for businesses, the market for those skilled in commerce increased accordingly, and business education has grown rapidly in the region. Within ten years after the fall of the Soviet Union, an estimated 1,000 business schools had opened in Central and Eastern Europe. The earliest schools tended to pursue a for-profit model with little oversight from government or educational accrediting bodies (Bollag, 1997).

While the number of business schools was increasing, there was no single form or model for schools to follow. Moreover, the former Soviet-bloc countries were transitioning from their Communist pasts and hadn’t yet established educational bureaus or accrediting agencies to monitor the new schools. Identifying a good business curriculum was a challenge for schools in societies where capitalism was new. Even harder was developing faculty who grew up with Communism to teach business courses competently in a market environment.

One approach to overcoming these obstacles was to partner with established business programs, often from the west, to provide business education to Central and Eastern Europe. Poland’s first MBA programs were established in the 1990s as joint programs between Polish universities and western business schools. Many of these were so faithful to their western models that they were even taught in English (Kowalski, 2008).

Yet, there are risks to partnering with foreign colleges. In Poland, a successful partnership with a Canadian University was dissolved when the Polish Government and the European Union chose not to support it financially because of its affiliation with a non-European institution. Instead the governments preferred to provide funding to homegrown business programs (Paliwoda & Librowicz, 2007).

Over time, governments have increasingly supported business education as a means of improving their economic resources to better compete in the global marketplace. In recent years, Russia has been using some of its oil and gas revenue to support business programs at Moscow State University and St. Petersburg State in an effort to place these schools among the elite in Eastern Europe (MacWilliams, 2007).

Even if a college or university doesn’t have a western partner school, there is a trend for schools in the region to mimic business programs in the west. This is a sound strategy; new programs can quickly legitimate themselves by modeling their curricula to well-established business schools. After all, American business education at the college level has more than a century-long history compared to only twenty years in the Eastern and Central Europe. Because many courses at these schools are taught in English, they have access to the rich abundance of textbooks and other course materials available to American instructors. Moreover, by offering English courses, they can participate in student and faculty exchanges, such as those offered by the Erasmus Programme.

Partnering with, or imitating an established western business school suggests the Soviet region school will offer the full range of courses offered by the western school; Accounting, Finance, Marketing……and Business Ethics. A business program without an ethics component would have difficulty being perceived as credible. The Association to Advance Collegiate Schools of Business
(AACSB) requires ethics in a program’s curricula, as well as expects the schools’ faculty, administration and students to act ethically (“AACSB Business Accreditation Standards,” n.d.). However, when it comes to teaching Business Ethics in former Soviet-bloc countries, there does not appear to be a typical or common approach. From my time there, I discovered some schools taught business ethics on their own; other programs used western schools as their model and taught from English-language textbooks; and some schools didn’t require or offer courses in business ethics at all. Considering the social variation of countries that were once the Soviet-bloc, it’s not surprising ethics is treated differently from other business courses. The following section will highlight some evidence of the ethical variation in Central and Eastern Europe.

5 ETHICAL CHANGES IN THE REGION

Under the Soviet reign, ethics, or how to behave appropriately, was taught to children early in a government-mandated curriculum in schools. The schooling emphasized obedience and conformance, and allegiance to the party and the state (Kowalski, 2008). This Marxist-Leninist ideology was reinforced throughout the students’ educational careers to enforce a consistent homogeneous moral model, which has been changing since the fall of Communism (Kliucharev & Muckle, 2005).

What was once was a tightly controlled, almost regimented, approach to teaching ethics in the former Soviet Union and throughout the region, moral education and ethical influences are becoming more divergent, such that a typical Russian/Soviet citizen no longer is prevalent. Instead, there is a “moral maze” in which people navigate individually to find their own ethical compass. Interestingly, some long for the old ways and wish the state had a greater role in teaching ethics (Kliucharev & Muckle, 2005). In Belarus, the amount of ethics education is so lacking compared to the Soviet era, that the government and the Belarusian Orthodox Church were considering reforming ethics education in that country (Sidorovitch, 2005).

Values are changing. In Soviet Russia, there were traditional shared values of community, collectivism, and respect for a strong central authority. This was far different from the western ethics of individualism, democracy and liberalism. Since the fall of Communism, western values have been replacing old Soviet values. Prior to 1989 wages for most citizens were relatively equal based on egalitarian beliefs. Currently, wages are increasingly based on performance. These changes are not necessarily universally accepted. Critics of the new order claim that the newer corporate culture fosters a “ruthless and demanding attitude to people” (Kliucharev & Muckle, 2005).

As values have changed, so too have the economies in the region, and it’s too simplistic to describe it as a shift from a Communist or Socialist economy to a market economy. More accurately, these countries are experiencing dual economies, the market economy that comes with Capitalism, and also a Gray Market that requires bribes, gifts, and other special considerations to grease the wheels of markets (Kliucharev & Muckle, 2005). In Poland, politicians are highly involved in major business transactions, so granting favor with those in power is helpful for businesses. This was the case as well pre-1989, but the difference now is that politicians are much more promiscuous with their loyalties. This means that their loyalties are much more based on self-interest rather than their political party (McMenamin, 2004).

Not only are markets and ethics changing across the region, they are changing differently across countries within the region. In other words, the ethical norms of one country are changing differently from the norms of another country even though they were both part of the former Soviet bloc. In a study measuring the individualism in Belarus, Lithuania and Russia in 1990 and 2000, researchers found that all three countries were pretty collectivistic in 1990. This should not be surprising since it was only one year after Soviet rule. Ten years later, all three countries had become more individualistic, but norms for individuality were significantly greater in Belarus, and weaker in Russia (Shirokanova, 2011).

Threats to ethical behavior come from all directions, and not just from within the former Soviet bloc. Organizations from around the world might find this region ethically vulnerable and attempt to exploit their position of transitioning morals. In 2001, for example, Philip Morris was forced to make a formal apology to the Czech Republic after it argued that smoking would be beneficial to the young country because early deaths caused by smoking would lessen the country’s long-term medical expenses (Fairclough, 2001).

What determines the rate of change among countries is a complex mixture of influences, social, political and economic. Some countries are developing more quickly than others. Perhaps there is no greater evidence of this than the Corruption Perceptions Index scores, tallied by Transparency International, a German-based organization whose mission is “to create change towards a world free of corruption (“Transparency International,” n.d.). Transparency International publishes an index in which they score the level of cleanliness/corruptness of a country based on “0” (highly corrupt) to “10” (very clean) scale. Of the former Soviet republics, Turkmenistan and Uzbekistan are the most corrupt with scores of 1.6. Estonia is by far the cleanest scoring 6.5. Russia, and all the other republics cluster around the “2” range. By comparison, the United States scores 7.1, Canada is 8.9, and the cleanest country in the world is Denmark (9.3). The most corrupt country in the world, according to the index, is Somalia with a score of 1.1 (“Transparency International - the global coalition against corruption,” n.d.).

Sadly, corruption is a very real problem in the region, so much so that in the 2004 Ukraine elections, Viktor

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Yuschenko got elected on a platform promising to end corruption (Round & Rodgers, 2009). Corruption is not just prevalent in business or government; it’s apparently also evident in education. A Ukrainian survey found the nearly half (47.9%) of residents who had regular interactions with universities claimed to have encountered situations in which they were requested to pay a bribe. Approximately a third of the respondents claimed to have offered bribes in university settings (Round & Rodgers, 2009). In Russia, it is apparently a common practice for college professors to request bribes from students for good grades. This is true for strong and weak students, and it’s reportedly true across academic disciplines (Fedorenko, 2006).

Anyone familiar with academics would be naïve to believe that college students are not immune to unethical behaviors regardless of their geography. Research suggests that high-narcissistic people with low levels of empathy are most inclined to act unethical. Unfortunately, business majors (especially finance majors) fit this profile (Brown, Sautter, Littvay, Sautter, & Bearnes, 2010).

6 RECONCILIATION AND CONCLUSION
Since 1989, Central and Eastern Europe have experienced a seismic shift, politically, socially and economically. In twenty short years, the region has gone from a centralized Soviet political structure to a fragmented nonunion of autonomous countries. Moreover, the economies of these countries have morphed from passive participants of Communist leadership to individual players in the global economy. Such a transition doesn’t come easily. To compete, the region quickly embraced business education as a means of positioning itself in the market. Business schools sprang up, many attempting to emulate leading accredited programs from the United States and other western countries, so the area was brought quickly up-to-speed with current business theory and practices. Through imitative, normative and coercive forces (DiMaggio & Powell, 1983) the new Business schools started to look quite similar offering courses across the traditional business fields. While all these fields have their own idiosyncrasies with respect to geographic and political location, many of the most fundamental premises translate across national or cultural borders. Debits are debits and credits are credits regardless of which country the accountant is practicing.

On the other hand, ethics is a field of business that doesn’t translate as easily to other countries and cultures. Therefore, is it possible to export a business ethics course from one country to another? This is a difficult question, since rules and norms vary across national boundaries. Just because the countries of the former Soviet-bloc all became capitalistic at about the same time, their ability to adapt to capitalism varied. The former Soviet-bloc is a large and diverse region. Countries like Poland and the Czech Republic are more influenced by Germany and other western European countries; Estonia has more Scandinavian ties due to its location on the Gulf of Finland; much of Russia is in Asia and is influenced by other Asian regions. Most of these countries have Christianity as their predominant religion, although a few others such as Azerbaijan are Muslim. It’s not reasonable to expect a western business ethics course to satisfy the needs of these highly varied social and cultural regions.

Ethics should be an important component for these new business programs, especially as their countries are forced to compete in a global marketplace. Considering the abysmal Corruption Perception Index scores of some former Soviet-bloc countries, improving their ethical reputation is especially important. However, mimicking another region’s business ethics curriculum makes little sense when their societies are so different. Business programs in the former Soviet-bloc should create their own business ethics courses that are relevant to their country and to the students taking the courses. It is wise to include components of other countries’ ethics curricula as this enhances the internationality of the course, but ethics – even business ethics in capitalist countries – is not a one-size-fits-all endeavor. Students learning business ethics in a context they understand will retain more and appreciate the importance of ethics in business, which ultimately, is the goal of any business ethics course.

ACKNOWLEDGEMENTS
I would like to acknowledge the Faculty of Economics and Business Administration at the University of Debrecen, especially Maria Ujhelyi, for their hospitality and collegiality during my semester in Hungary.

REFERENCES
Doing Business with the Poor People and Poor Nations: What is Your Business Strategy to Eradicate the World’s Poor

Ki Hee Kim
William Paterson University of New Jersey
1600 Valley Road, Wayne, NJ 07470
(973) 720-2392
kimk@wpunj.edu

ABSTRACT
Poverty is the state for the majority of the world’s people and nations. There will be always be poor people, this is true. The lowest quintile of the income will always be poor (http://answers.yahoo.com/queestions/index?qid"). Poverty feeds into conflict and breeds terrorism. Extreme poverty can lead to mass migrations, epidemics, environmental destruction, political and chaos. These problems endanger millions of people worldwide, including us (http://www.heartsandminds.org/poverty/plan.htm). But deeper and more global causes of poverty are often less discussed (Shah, 2011). Companies around the world are increasing their engagement in emerging markets, yet many remain focused on the high-income population in those countries. In fact, the world’s low-income population represents considerable productive and entrepreneurial potential, as well as untapped demand for products and service (World Economic Forum, 2009). What are we doing about the poorest people around the world? Why is it that with all our technology, managerial know-how, and investment capacity, we cannot make even a minor contribution to the problem of pervasive global poverty and disenfranchisement (Prahalad, 2010). This paper reviews current facts and status of poor people and poor nations and examines business opportunities to develop business strategies to eradicate world’s poor as well as to open new avenues of growth for the company.

Keywords
Bottom of the people (B–P), epidemics, equality, eradication, gender, indigenous people, migrations, poor people and poor nations, poverty, quality of life, sustainability

1 INTRODUCTION

Globalization continues to be a divisive subject among political activists, academic, business leaders, and policymakers. Some look at the rapid economic and political changes taking place around the world and see injustice (Kohut, 2008). Twentieth-and Twenty-First Century globalization has left the world economically polarized between countries that enjoy heretofore unimaginable wealth and countries that are crippled by poverty. In addition to creating a massive gulf between the richest and poorest nations on earth (Dunklin, 2005). Globalization from its concepts and practices is leading to greater interdependence, and poverty is becoming more challenging in most developing countries (NAWAI & BASHIR). We should not forget for a moment …that 43 per cent of the people in least developed countries continue to live in extremely poverty-on less than a dollar a day. If current trends continue, the number of people living in extreme poverty in least developed countries will increase 334 million people in 2000 to 471 million in 2015 (UN News Centre, 2005). C. K. Prahalad argues in his popular book, The Fortune at the Bottom of the Pyramid (B-O-P), that selling to the poor people at the ‘bottom of the pyramid can simultaneously be profitable and help eradicate poverty (Karnani, 2007). How to open more opportunities for the poorest countries? How to ensure that the benefits of global integration are more equally shared? Why now? Broad global trends are creating a favorable environment for companies to start engaging with the poor. There is a collective realization that business can make a
difference to the lives of the four billion. Private sector will have an important role to play in helping achieve these goals (World Business Council, 2002). In this paper, I will investigate general background and status of poor people and poor nations and suggest feasible strategies to engage business with the poor and poor nations.

2 UNDERSTANDING THE POOR PEOPLE AND POOR NATIONS: FACTS AND CHARACTERISTICS

Globalization has spurred inequality (Rena, 2005). Poverty causes great suffering to the people of both developed and developing economics. Poverty is a state of economic, social and psychological deprivation occurring among people or states lacking sufficient ownership, control or access to resources to maintain minimal acceptable standard of living (Nawai & Bashir). Efforts to reduce poverty have improved living conditions for millions of people around the world, but the results are so uneven and gains in some parts of the world have been offset by deteriorating conditions in others, according to the Secretary-General’s report on the implementation of the first United nations for the eradication of poverty, which runs through 2006. Most developing countries and the least developing countries in particular, continue to be left largely untouched by the globalization process and in the last five years (People and Poverty, 2000). Although their needs and diverse and vary by culture, people at the BOP (Bottom-of-Pyramid) share several characteristics that companies need to understand facts and characteristics of the poor people and poor nations to do business with them effectively. Some of the facts and characteristics are:

- Poverty is wide spread in India, with the nation estimated to have a third of the world’s poor. World Bank estimates, 80% of India’s population lives on less than $2 a day. (Wikipedia, Poverty in India).
- In the age of globalization, the gap between high and low income countries is not only persisting, but in many cases it is widening (Barbanti, 2003).
- One survey of the poor in Udaipur in India found that 55% of the adults were anemic, and that 65% of adult men and 40% of adult women were underweight (Karnani, 2007).
- BOP market size is $13 to $15 trillion (Karnani, 2007).
- Women represent the poorest of the poor in many societies and women not only face economic vulnerability but also social status, discrimination in the work place, violence at home and outside.
- Nearly a billion people entered the 21st century unable to read a book or sign their names (Shah, 2011).
- 1 billion children live in poverty and 640 million live without adequate shelter, 400 million have no access to safe water, 270 million have no access to health services. 10.6 million died in 2003 before they reached the age of 5 (or roughly 29,000 children per day (Sha,2011).
- More than 110 million primary-school age children in developing countries do not attend school, and for many who do, the quality of the education is in question.
- 33 developing countries, life expectancy has declined due to the epidemic (People and Poverty, 2001).
- Almost half the world-over 3 billion-live on less than $2.50 a day (Shah, 2011).
- Size of the BOP population was estimated at 3.7 billion in 2002 (World Economic Forum, 2009).
- Almost tow in three people lacking access to clean water survive on less than $2 a day, with one in three on less than $1 a day.
- According to UNICEF, 25,000 children die each day due to poverty (Shah, 2009).
- The people who are revolting against globalization are not poor, they are frustrated (Thurow and Lessard, 2002).

3 UNDERSTANDING THE POOR PEOPLE AND POOR NATIONS FOR BUSINESS OPPORTUNITIES

Globally, 3.67 billion people are largely excluded from formal markets. This group, earning US$ 8 per day or less, comprises the “base of the pyramid” (BOP) in terms of income levels. With an annual income of US$ 2.3 trillion a year that has grown at 8% in recent years, this market represents a substantial growth opportunity (World Economic
Council, and proponents living Moreover, through Forum, meeting disregarding and stove, engaged innovative US$4 companies creating producers capacities. C. K. Prahalad and other proponents of BOP argue that, instead of disregarding low-income consumers as inaccessible and unprofitable, multinational corporations should view them as unexpected business opportunity. Moreover, through this, MNCs can help improve living conditions of the world’s poorest population (Shah, 2011). Globally, 3.7 billion people are largely excluded from formal markets. Within this group are the next billions—a large group of consumers, producers and entrepreneurs who can be profitably engaged or served by business, albeit with new and innovative approaches. However, success in BOP markets often requires collaboration with other companies or stakeholders. Such partners bring key capacities to enable or support BOP business models through complementary action (Ibid.). Global trends are creating a favorable environment for companies to start engaging with the poor (World Business Council, 2002):

- Many companies see a need to break out of mature market sectors.
- Framework conditions in many developing countries are improving.
- Communications are faster and cheaper, making the world a smaller place.
- Public expectations of corporations are changing. New and better partners are available.
- Aid and investment are beginning to reinforce one another.

It’s also incorrect to assume that the poor are too concerned with fulfilling their basic needs to waste only on nonessential goods. In fact, the poor often do buy luxury items. In the Mumbai shantytown of Dharavi, for example, 85 percent of households own a television set, 75 percent own a pressure cooker and a mixer, 56 percent own a gas stove, and 21 percent have telephone (Prahalad and Hammond, 2002).

4 STRATEGIES FOR THE POOR PEOPLE AND POOR NATIONS

The last 20 years of corporate globalization, even measured by the preferred indicators of the IMF and World Bank, have been a disaster for the world’s poor (New Renaissance Magazine, 2010). The inequality between rich and poor nations is now wider that it has ever been before. What so you think are the main causes of this difference and what do you think can be done to reduce the gap (Essay Forum, 2009). It is a difficult task for poor countries to reduce inequality without rich countries’ supports. Inequality is not restricted to personal incomes. Health and education—two important indicators of well-being—real stark disparities among the world’s “haves” and “have-nots.” (Sarin, 2003). How to end poverty? A movement that emphasizes free markets to reduce poverty has grown strong in recent years, and has caught the attention of executives, academics and public officials. The world’s top CEOs have discussed this topic at recent sessions of the World Economic Forum (Karnani, 2007). Business faces growing pressures from society to help ensure that the benefits of this newly globalized world are distributed equitably. Companies can choose to ignore this pressure, or fight back, or see this reality as an opportunity to do better business while demonstrating that they can be a catalyst to invigorate the virtuous cycle of human development.

There is a collective realization that business can make a difference to the lives of the four billion. Everyone is looking at business to engage and succeed in this area. Government and the United Nations have set some ambitious targets for reducing poverty and improving living-standards and are aware that the private sector will have an important role to play in helping achieve these goals. Some companies are already doing business in these markets and more could benefit from this momentum to promote business as a key solution provider (World Business Council, 2002). There are many positive ways for business to make a difference in the lives of the poor—not through philanthropy, though that is also very important.

But through initiatives that, over time, will help to build new markets (Ibid). How does a company become successful and stay successful (Wheelen & Hunger, 2002). As more industries become global, strategic management is becoming an increasing
important way to keep track of international development and position the company for long-term competitive advantage. There are no universally acceptable or perfect strategies to do business with the poor and poor countries. Companies are interested in doing business with poor people and poor nations should consider the following strategies:

- Result-oriented and focused on outcomes that will benefit the poor communities.
- Not-for-profit strategy.
- Strategic formulation based on local environment.
- Partnership-oriented, involving coordinated participation of development partners (government, domestic stakeholders, UN, World Banks, competitors, and external donors).
- Break-even profit strategies.
- Localized marketing mix strategies.
- Incorporate strategies with country’s economic policy (Davis, 2003).
- People before profit strategies.
- Long-term growth and sustainable strategies.
- Micro-level strategies.
- Changing unequal gender relations to increase women’s ownership and control of assets (http://ifad.org/operations/regional/2002/pi/pi.htm).
- Strategies including humanitarian aid.
- Globalization is not an option, it is ethical, moral, and social responsibilities to reduce poverty and promote transnational and world peace.
- Do nothing strategy.

The World Business Council recommended the following consideration to address business questions:

- What are the motivations and how do we shift mindset? Most companies will be guided by a mix of motivations. Some may start from an ‘it’s the right thing to do’ attitude. This has been driving force. Other companies may feel pressured by society’s expectations, while others may be in reality required by government contracts to do business with the poor (World Council, 2002).
- Do we understand the real needs of the market?
- Do we have the right product/service to offer?
- How do we finance the investment?
- How do we ensure that there is demand for our product/service?
- How do we ensure that our customers can afford it?
- How do we reach our customers?
- How do we collect revenues? How can we stimulate related economic activities downstream?
- How do we measure success?

Business strategies to reach new markets, new customers the following strategies are suggested by World Economic Forum:

- Affording access rather than ownership.
- Monetizing hidden assets.
- Create life-enhancing offerings.
- Educate through marketing communication.
- Collaborate in non-traditional partnerships.
- Bridging the gap in public goods through private enterprise.
- Governing through influence rather than authority.
- Develop environmentally sustainable approaches.
- Broaden reach and save costs by leveraging local distribution channels.
- Create incentives that encourage self-governance.
- Share capabilities and knowledge and make partnership work.
- Creating opportunities for steady employment at reasonable wages is the best way to take people out of poverty (Karnani, 2007).

It of course, does not absolve the responsibility of organization and entities in helping the poor of the world. This can be achieved by (Bardhan).
5 CONCLUSION

Globalization has become a lightning rod for many legitimate concerns about modern society including poverty, inequality, unemployment, and environmental degradation. Yet, there is no clear evidence that globalization per se is to blame for rising global or inequality (Bates, 2000). We are often told that “a rising tide lifts all boats”-in other words, increasing totals of global wealth raise everyone out of poverty. Yet while the number of ultra-rich is growing, billions of people remain trapped in dire poverty. Clearly, the human race does have the wealth and resources to tackle the global poverty crisis, along with the looming catastrophe of unchecked greenhouse gas emissions which are creating chaotic climate change. The barrier of real progress is the economic and social system which dominates most of the planet. The message for the private sector is clear: Ignore poor consumers at your peril. Blocs of poor consumers increasingly have the power to reject what a multinational corporation ants to buy or sell; via their governments, they can also empower a nontraditional competitor. It may not be wise for corporations to wait for governments to smooth the path of globalization, or to depend solely on formal trade talks to make developing markets safe for their products. Businesses must learn to serve poor markets by overcoming those markets’ unique constrains as well as their own antiquated business models and misconceptions about the developing world (Hammond & C.K. Prahalad, 2004). Business must learn to serve poor markets by overcoming those market’s unique constraints as well as their own antiquated business models and misconceptions about the developing world. Ending the economic isolation of poor populations and bringing them within the formal global economy will ensure that they also have the opportunity to benefit from globalization. That is the world’s new entrepreneurial frontier.

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ABSTRACT

There are several social security schemes in India which are regulated by the Government of India targeting a diverse group of people. In this paper we have selected one such scheme which is meant to provide monthly financial assistance for widows. We have tried to evaluate the performance of the Widow Pension Scheme on the basis of primary as well as secondary data. The first section of this paper discusses why social security is important. The second section introduces the widow pension scheme and outlines the need of the study. The third section of this paper discusses the methodology part while the last section of the paper discusses the Findings and Suggestions.

Keywords: Social Security, Financial Assistance, Monitoring, Widow Pension, Women Empowerment.

Section-2

WIDOW PENSION SCHEME: A brief overview

This scheme was started in April, 1995 in Uttar Pradesh to provide monthly financial assistance for the well being of destitute widows and education of their children less than 18 years of age. A Woman, in the age group of 40 years and above is eligible for grant of pension if she is a widow or an unmarried woman or a married woman who has been deprived of the financial support from her husband because of his physical/mental incapacity, desertion by husband for any reason and if her close relatives such as parents, sons are not supporting her and her own income from all sources is less than Rs.10, 000/- per year, such a woman is entitled for widow pension of Rs.300/- per month. (Approximately 7 $ per month)

Hypothesis

H0: Widow Pension Scheme (WPS) does not improve the economic condition of widows in Allahabad district.
H0: Widow Pension Scheme (WPS) does not improve the health status of widows in Allahabad district.

Need of the Study

This study is critical in the light of the fact that very few studies have been conducted in the area of social security schemes especially for women. There are various schemes being run in favour of providing social security to women but in many cases the benefits are yet to materialize. Hence it is crucial to consider and analyze the status of social security schemes and whether they are achieving their respective objectives. The study also intends to identify the
factors responsible for improper implementation and the modifications necessary therein to make the schemes useful. Hence the present study is undertaken to evaluate the performance and impact of one such scheme namely Widow Pension Scheme.

Section-3

RESEARCH METHODOLOGY

Allahabad district has been purposively selected for the study. The Allahabad district has twenty blocks and eight tehsils (Sub Divisions). For the proper representation of rural as well as urban area we have selected both blocks and wards of Allahabad district for the study. Out of twenty blocks we have chosen 2 blocks namely Soraon and Chaka (by purposive sampling) which is 10 percent of the total blocks. The urban area of Allahabad district is divided into three parts which are the North region, the South region and the West region. Allahabad city has 84 wards, out of 84 wards we have chosen 4 wards which is 5 percent of the total wards, these four wards have been selected randomly: from the North region Shivkuti and Teliarganj while Kydganj and Meerapur have been chosen from the South region.

Since the urban BPL families were in process of being identified in Allahabad city by district supply office during the survey (February to August 2009 period), it was not possible to determine the universe of urban BPL families in Allahabad. Consequently the rural and urban population data were used. Since the rural population was approximately 37.29 lakhs and the urban population was about 12.07 lakhs in Allahabad district as per the 2001 survey, the ratio of 3:1 between the rural urban populations was used in deciding the sample ratio of BPL families from the rural areas. Accordingly 95 BPL families from the rural area and 35 BPL families from the urban area were selected for our survey. Soraon and Chaka blocks were selected through purposive sampling. Soraon block consists of 105 villages, while Chaka consists of 100 villages, since the number of villages from both blocks was almost same; therefore two villages from each block were selected randomly by lottery method, these being Shringarpur and Gohari from Soraon, Mahewa and Arail from Chaka. In urban area four wards were selected randomly out of 84 wards namely: ward no. 30 (Teliarganj), ward no. 9 (Shivkuti) ward no.19 (Meerapur) and ward no.22 (Kydganj). The list of BPL families for all the four selected villages was obtained from the concerned block, which relates to the year 2006, because the list was not upgraded after that.

Analytical Methods

The analysis of data has primarily been done using a number of statistical tools, mainly the SPSS package. Hypothesis of the study have been tested with the chi square test.

Table 1: Scheme Based Change in Monthly Income of Widows

<table>
<thead>
<tr>
<th>Name of the Scheme</th>
<th>Meaningful Increase</th>
<th>Insignificant Increase</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Widow Pension Scheme</td>
<td>89 (68.5)</td>
<td>41 (31.5)</td>
<td>130</td>
</tr>
</tbody>
</table>

Source: Primary Survey 2008.

Table 1 represents the impact of the Widow Pension Scheme on the family income of the respondents. It is clear that the Widow Pension Scheme was a reasonably successful scheme wherein, out of a total 130 respondents, 68.5 percent reported a meaningful increase in family income. However, the insignificant increase responses of 41 indicate that a large number of the beneficiaries did not experience any meaningful increase in their incomes.

We framed the following hypothesis for income under Widow Pension Scheme;

Ho: Widow Pension Scheme does not improve the economic condition of widows in the Allahabad district.

H1: Widow Pension Scheme improves the economic condition of widows in the Allahabad district.

Here the Chi square value, $X^2_{cal.} = 17.72 > X^2_{tab.} = 5.991$ is statistically insignificant at 5 percent level of significance for 2 degree of freedom which means that the Widow Pension Scheme increases the family income of women in Allahabad district.

Table 2: Scheme Based Monetary Change in Monthly Income of Widows

<table>
<thead>
<tr>
<th>Rs.</th>
<th>WPS</th>
</tr>
</thead>
<tbody>
<tr>
<td>No.</td>
<td>No.</td>
</tr>
<tr>
<td>-----</td>
<td>-----</td>
</tr>
<tr>
<td>50</td>
<td>0</td>
</tr>
<tr>
<td>100</td>
<td>17</td>
</tr>
<tr>
<td>150</td>
<td>0</td>
</tr>
<tr>
<td>200</td>
<td>3</td>
</tr>
<tr>
<td>250</td>
<td>2</td>
</tr>
<tr>
<td>300</td>
<td>0</td>
</tr>
<tr>
<td>350</td>
<td>12</td>
</tr>
<tr>
<td>400</td>
<td>10</td>
</tr>
<tr>
<td>500</td>
<td>3</td>
</tr>
<tr>
<td>Total</td>
<td>47</td>
</tr>
</tbody>
</table>

Source: Primary Survey 2008.
Table 2 shows the specific increase in income under the Widow Pension Scheme. When we analyse the increase in monthly family income under the Widow Pension Scheme there were 15 respondents who saved the entire beneficiaries amount while 13 others reported a saving of Rs. 100/- each. However, there were 6 respondents who reported that they could save Rs. 500/- because they were self-employed and thus could generate income. This shows that the widows do not depend entirely upon their pension, which is far from surprising because the amount of the widow pension, Rs 300 per month, in dollar terms translates to around 7 $ per month which is ridiculously meager to sustain any honorable living. The analysis points out to the fact that all of the beneficiaries under the widow pension scheme (57) are not solely dependent on the social security benefit provided to them.

Table 3: Utilization of Money under the Widow Pension Scheme

<table>
<thead>
<tr>
<th>Name of the Scheme</th>
<th>Medicine</th>
<th>Diet</th>
<th>Infant/child education</th>
<th>Others</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Widow Pension Scheme</td>
<td>63 (48.5)</td>
<td>43 (33.1)</td>
<td>22 (16.9)</td>
<td>2 (1.5)</td>
<td>130 (100)</td>
</tr>
</tbody>
</table>

Source: Primary Survey 2008.
Note: Figures in parenthesis are in percentages.

We now analyse the utilization of cash benefit from WPS for those who reported increase in monthly expenditure (Table 3), i.e. 130 under Widow Pension Scheme. Under the beneficiaries of Widow Pension most of the women spend their pension, on items such as education, health, food and family function. We observed that 48.5% beneficiaries of widow pension scheme spend their major amount on health requirements, 33.1% on food items and only 16.9% beneficiaries spend their pension on education of their children, which is again too less an amount.

Table 4: Scheme Based Change in Health Expenditure

<table>
<thead>
<tr>
<th>Name of the Scheme</th>
<th>Increase</th>
<th>Constant</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Widow Pension Scheme</td>
<td>87 (66.9)</td>
<td>43 (33.1)</td>
<td>130 (100)</td>
</tr>
<tr>
<td>Total</td>
<td>87 (66.9)</td>
<td>43 (33.1)</td>
<td>130 (100)</td>
</tr>
</tbody>
</table>

Source: Primary Survey 2008
Note: Figures in Parenthesis are in percentages.

Table 4 reveals that the Widow Pension Scheme was successful in the context of improved health expenditure with 87 (66.9 percent) respondents reporting health expenditure increases. This may be due to the increase in food consumption available from the monetary benefits under the Widow Pension Scheme.

We made the following hypothesis for health condition for women under the Widow Pension Scheme:

Ho: Widow Pension Scheme does not improve the health status of widows.
H1: Widow Pension Scheme improves the health status of widows.

X² cal. value =14.88 > x² tab. value =3.841, which means the null hypotheses (Ho) is rejected and alternate hypothesis is accepted, meaning thereby that the Widow Pension Scheme improves the women’s health condition.

Section 4
FINDINGS OF WIDOW PENSION SCHEME SURVEY IN ALLAHABAD DISTRICT

The target group under this scheme in Allahabad District is 40-60 age-group women. In the case of WPS we found that total 130 beneficiaries benefited from this scheme. 66.9% respondents were availing the pension under WPS since last 2-5 years and 19.2% were availing the benefits since last 5-8 years. Out of these 130 pensioners of WPS, 47.6% reported that they do not get the pension regularly due to the administrative bottlenecks. 46.9% respondents reported that the bank is 2-3 Km away from their home. Only 9.2% were reported that the distance of bank is within one Kilometer. Hence we can say that there is a need to pay attention that the bank is not so far from the beneficiaries place, because it becomes difficult for them to travel and enhances their dependency on other persons, which does not fulfill the objective of self-dependence of widows belonging to the BPL families.

48.5% beneficiaries of widow pension scheme utilize their pension amount on health requirements, 33.1% on food items, which is not sufficient for them. Only 16.9% beneficiaries spend their pension on education of their children, which is again too less an amount. 68.5% beneficiaries reported that the Widow Pension Scheme has successfully changed the family income. Widow pension Scheme (WPS) was most successful in the context of health expenditure with 66.9% respondents reporting that their health expenditure increased, which may be attributed to the increase in food consumption available from the monetary benefits, especially under Widow Pension.
SUGGESTIONS AND POLICY IMPLICATIONS

- WPS guidelines provide detailed information about monitoring of the scheme at different levels. Issues related to less payment, inordinate delays etc. can be addressed largely through periodic monitoring visits by District Level Programme Managers. It is suggested that appropriate monitoring visits may be chalked out in advance. Check-lists should be developed for use during monitoring visits. One of the important components of these visits should be interactions with the clients receiving the services. Thus we can say that it is critical for the scheme to become successful that the proposed beneficiaries are made aware about the scheme through proper and authorized channels and do not have to depend upon the word of mouth which is not reliable and complete.

- Fresh awareness drives need to be launched. A well designed entitlement and eligibility poster should be available at Block office, Vikas Bhawan and NGOs. Awareness can also be generated in traditional manner like poster, banner, graffiti and sound advertising in the interior areas of the district.

References:


ABSTRACT

The issue of child labour has gained enormous importance during the last one decade in most of the developing countries. ILO (2006) estimated that in 2004 about 218 million children aged to 5 to 14 years old have been engaged in some form of economic activity globally. This article examines evidence from major impact studies on microfinance to answer the questions: can microfinance reach the very large number of abysmally poor and prove successful in income generation among poor and eradication of child labour? Evidence seems sufficient to say that Microfinance, by contributing to an increase in household income and better financial stability, enables poor families to bear the costs of sending children to school.

Keywords
Microfinance, child labour, poverty alleviation, schooling.

1 MICRO FINANCE: A RAY OF HOPE

Micro Finance, of which micro credit is a component, is a sub set of flexible structures and systems by which a wide range of financial and enterprise development activities are offered to the poorest of poor in an affordable and convenient manner. ( Lal, S.K, 2011).

Microfinance can contribute to progressively eliminate child labour in two ways:

Income-generation: The most common approach is to provide microcredit to parents or guardians of child labours to help them to start or expand an income-generating activity to replace the income formerly earned by child labours.

Risk-management: Besides stimulating additional income, microfinance can also play an even more important coping role for vulnerable households. Through appropriate risk-managing financial services, such as savings, emergency loans and possibly insurance, microfinance helps poor families to weather the storms of unpredictable expenses and income droughts without having to resort to child labour. Microfinance is not a panacea. It is just one tool from a menu of interventions that can make an important contribution to eliminating child labour if it is used in an appropriate fashion under appropriate circumstances.

2 WHEN IS MICRO FINANCE APPROPRIATE IN COMBATING CHILD LABOUR?

There are many reasons why parents send their children to work. Some of these reasons include:

- To earn extra income for the household: Whether it is to cope with an economic shock or because of a perpetual state of poverty, for the poorest households, the urgency of putting food on the table may be sufficient justification to send children to work.
- Due to lack of child care (or cost of child care), parents may prefer to take their children with them to the workplace, and since they are there, they may as well contribute to the family’s income through work.
- Some households are unable to afford the costs of schooling, including stationary, uniforms, etc., so going to work is an alternative to incurring an education expense.
- Some households want to maximize their income guided by the desire to “earn that extra bit of income,” which is essentially a survival strategy. A household that wants to maximize income could often do without the income generated by the child, but prefers not to.
- In some cultures or in some contexts, it is considered normal if children work.
- Children themselves may also desire to earn money, for consumption or prestige.

These diverse reasons or motivations for child labour, that in specific situations can be compounded, highlight that elimination strategies also need to be diverse and customised to local conditions. Of these motivations, the need to earn a
sufficient income to ensure the survival of the household can be directly addressed by a microfinance component; financial services can also assist in addressing issues linked to the cost of child care and schooling. However, microfinance is unlikely to make a significant impact if the family wishes to maximize income or if cultural reasons or consumption patterns lead children to work.

3 EVIDENCE AND COUNTEREVIDENCE

There are a number of theoretical arguments as to how credit affects child labor and child schooling. One of the most appealing arguments is offered by Baland and Robinson (2000), in which child labor is considered as a device for transferring income from the future to the present by credit constrained households. This occurs since putting children to work will raise current income while interfering with children development, and potentially lowering the future income. Removal of credit constraints will therefore allow households to borrow against future earnings, reducing the propensity of child work and lowering the chance that children will be pulled out of school. This can be referred to as a risk management effect in that access to credit enables household consumption, smoothing and limiting households' exposure to income shocks.

In a similar framework, Ranjan (2001) also points to a negative linkage between credit and child labor, not due to risk management effect, but due to the welfare effect. In his model, poor families would have chosen to send their children if they had access to credit. So, by having the credit constraint removed, households will enhance their allocation of resources to human capital investment, i.e. schooling their children.

In 2001 Murdoch and Haley (2001), in an extensive research paper entitled “Microfinance and Its effect of Poverty Alleviation,” conclude that, there is ample evidence to support the positive impact of microfinance on poverty reduction and also reveal that many poor children and adolescents do not have the chance to obtain an education because their parents cannot afford to send them to school. Microfinance, by contributing to an increase in household income and better financial stability, enables poor families to bear the costs of sending children to school. MFI are known for encouraging families to keep children in school and in some cases school attendance is mandatory in order to participate in the microfinance program.

Wydick (1999) considers the effect of credit on child labor in the context of home enterprises and suggests two opposing effects of credit. The “family-labor-substitution effect” occurs when working capital constraints are relaxed due to credit, and thus hired labor is substituted for child labor in the household. On the other hand, when credit is used to invest in physical capital or machinery, thereby enhancing labor productivity or the marginal return to child work, the ‘household-enterprise-capitalization effect’ takes place. If the latter effect dominates the former, a positive association between credit and child labor will emerges, that is children are more likely to be put to work. In this event, children will be scathed due to credit. So, while credit, especially microcredit may help improve household welfare through an initiation and/or expansion of self-employment activities, it is detrimental to the well-being of children in the households.

While theory is not conclusive on the link between credit and child labor, empirical evidence has also been mixed. At the country level, Dehejia and Gatti (2002) find evidence of a strong negative cross-country relationship between child labor and credit, which is measured by the ratio of private credit to GDP. At the household level, a growing number of empirical studies have been conducted to explore whether credit has an impact on child labor.

Wydick (1999) examines the effects of microenterprise lending on child labor in Guatemala and finds that increased access to credit improves investment in child schooling as limiting the probability of children to work. However, the negative effect of credit on child labor is shown to be mitigated when hired labor is a poor substitute for child labor, or when credit helps to expand the business, and thereby raising the relative return to child work.

Maldonado and Gonzalez-Vega (2008) investigate the extent to which credit can help children stay long in school in Bolivia. In their study, credit is represented by membership in a microcredit program, and schooling gap is used as a measure for child schooling. The empirical analysis reveals that participation in microfinance programs matters for child schooling in that it narrows the schooling gap of children from households with affiliations to a microfinance institution as compared to that of children from households without microfinance’s benefits.

In contrast to this common finding, a very recent study by Hazarika and Sarangi (2008), builds on the child-labor demand framework by Wydick and reveals evidence of an increase in child work in household enterprises due to credit. Hazarika and Sarangi test the impact of access to credit, measured as a self-assessed credit limit, upon the propensity to work by children in rural Malawi. Considering both economic and domestic work that children may engage, their empirical analysis uncovers that credit raises the likelihood of child domestic work while having little effect on child economic work and on the school attendance of children. Based on this finding, the authors attribute an increase in domestic chores by children to a relief of adults’ domestic burden as the latter takes up more economic work stimulated by an increased access to credit of the household. To some extent, the result of Hazarika and Sarangi seems to challenge the effectiveness of microcredit programs as usually assumed in the literature on microfinance.

From the above findings of different studied quoted, it is clear, that both at national and international level microcredit has realized mixed success to eradicate child labour.
4 SUSTAINABLE MICRO FINANCE FOR THE ELIMINATION OF CHILD LABOUR

Poverty and the lack of income are generally acknowledged as root causes of child labour. The income-generation component can be realized through, for example, the provision of small loans to assist households to start an alternative income-generating activity. In this approach, the loan is used to facilitate the self-employment of parents to replace the income previously earned by the child. As a result, the overall economic condition of the household should not decline when the child leaves an income generating activity, and goes to school. Typically the loan should be conditional—if your child goes to school, then you can have access to a loan. To be effective and sustainable, a stream of subsequent conditional loans should be made available. Box 1 below provides an interesting example from Brazil where ILO has taken an initiative to experiment with rotating fund of goats. In Brazil loans were provided to families on the condition that their children would be sent to school.

**Box-1**

The “Goat-to-School” Project
The Brazilian economy has been subject to a number of bouts of hyperinflation, which in the 1980s and mid-90s created a significant challenge for microfinance activities. To overcome inflation and to avoid other problems associated with lending cash, an IPE project in Brazil experimented with a rotating fund of goats. Families would receive three goats—one male and three female—on condition that their children would be sent to school. Successful reproduction of goats would lead to the return of the female goats, which would be allocated to other families.

Goat-keeping was chosen because it was a forgotten cultural productive activity with a relatively high chance of success in the semi-arid area. No microfinance expertise or other financial possibilities were available in the region, and it was felt that this was an appropriate non-financial, income-generating activity. The administration of the “goat-fund” was done by the Rural Workers Union. The ILO’s role was to provide technical assistance and initial funding for the goats.

The Rural Workers Union was not a microfinance institution. For the union, the rotating goat fund was a tool to give families the chance to improve their lives and at the same time, while resources were scarce, to enable other families to receive goats through the revolving fund. While being inflation resistant, this scheme also corresponded well with the expertise of the implementing partner. By 1994, 30 families had been reached through the programme. By 2002, 250 families were involved. An intensive technical assistance programme secured that goats were repaid, in order for other families to receive the same package (loan in goods, technical assistance).

A limitation of the project was that there was no alternative service other than goats. The design had not foresaw the risks of being tied to one “financial” instrument, with no diversification. Not everyone wants to rear goats. Another risk was the loss of goats due to illness or accident, as well as the use of the goat for other purposes—e.g. slaughter for income. Borrowers had an obligation to use the loan in a defined way, there was no flexibility to decide how to use the loan. Furthermore, the flood of goats on the market could decrease their value.


5 CONCLUSION

Eradication of child labour has become the main objective not only of public policy but also of the operation of some NGOs, policy makers and researchers in different countries; though a number of target specific policies need to be developed to fight with child labour. Due to poverty and lack of financial facility parents are not able to send their children to school and force their children to work for enhancing family income but providing micro-credit to poor for the self employing income generating projects will definitely help to reduce the incidence of child labour by augmenting the meagre family income.

Though there are evidence of the success of micro-credit in eradicating poverty at national and international level, the degree and magnitude of success can be further hastened by the combined and effective working of government sector, formal banking sector, NGOs or MFIs and public in a integrated manner, besides the provision of micro-credit other policy majors of government to alleviate poverty should be carried forward simultaneously. Creating awareness among the people, providing them sufficient information about the scope of developing income generating projects in their area with the help of small provision of finance, information about the MFIs, up scaling the micro-credit in terms of volume and covering large client’s development of local infrastructure, formation of self help group (SHG) managing them, monitoring evaluation and necessary suggestion henceforth, provision of other related services like insurance, marketing are essential to bring further success to micro-credit and provide it more teeth in becoming a potent weapon in tackling the problem of child labour.

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Finding Meaning and Value in Corporate Disclosures

Miranda Lam  
Department of Accounting and Finance  
Salem State University  
Salem, MA 01970  
(978) 542-6308  
mlam@salemstate.edu

Jim Morriss  
Principal  
Black Dog Research  
Exeter, NH 03833  
jmorriss@blackdogresearch.com

ABSTRACT
Advances in textual analysis techniques and computation power have enabled financial researchers to incorporate qualitative data into empirical studies at a scale previously infeasible. Li (2011b) provided an extensive review of existing literature on textual analysis of corporate disclosures. He classified the central research questions into three groups. The first examined the tone/sentiment of corporate disclosures. The second group looked at transparency/readability. The last group (designated as other by Li) included measuring the amount of text and non-textual measures, such as body language and voice affects. These prior studies conducted textual analysis at the level of words and compound words. In contrast, this study uses a language processing system that applies linguistic theories to model how humans process language. This approach allows for deep semantic understanding of the text being analyzed. The goal of this project is to develop a systematic model to analyze and evaluate unstructured text in corporate disclosures.

Keywords  
Textual Analysis, Text Analytics, Corporate Disclosure

1 INTRODUCTION
Prior studies employed one of two general approaches to textual analysis. The first is a dictionary based approach. Often the tone of a document is estimated using a normalized frequency of positive and negative word count. Tetlock (2007) was one of the first study using this approach. Both Tetlock (2007) and Tetlock, saar-Tsechansky and Macskassy (2008) used the General Inquirer, which incorporated the Harvard-IV-4 classification dictionary to distinguish positive versus negative words. Longhnan and McDonald (2010) examined over 50,000 annual reports and created a finance dictionary that mitigated many short-comings in the Harvard-IV-4 dictionary. Rogers, Van Buskirk and Zechman (2010) used a combination of Diction#, the finance dictionary created by Longhnan and McDonald (2010) and the dictionary by Henry (2008). Feldman, Govindaraj, Livnat, Segal (2010) also used the Longhnan and McDonald (2010) finance dictionary but they examined the change in tone from period to period. Documents examined in these studies included 10-K, 10-Q reports, especially the Management Discussion and Analysis (MDA) section, Wall Street Journal columns and news wires, such as earnings announcements. Findings from these studies were not unanimous. For example, Tetlock, et al (2008) found that negative words in news wires predicted lower unexpected future earnings. On the other hand, Longhnan and McDonald (2010) found that negative words in 10-K/10-Q reports predicted positive earnings surprise. Feldman et al (2010) found that change in tone in the MDA was significantly related to stock price changes immediately following the filing dates.

In addition to simply classifying words as positive or negative, several studies expanded the categories of words in the dictionary. Muslu, Radhakrishnan, Subramanyam, Lim (2010) estimated a forward looking intensity measure using a dictionary they constructed. They identified 69 forward-looking words and phrases and specified 11 word-categories such as “operations”, “employees”, “macroeconomy”. Longhnan and McDonald extended their dictionary classification beyond “positive” and “negative”. As of April 2011, (www.nd.edu/~mcdonald/WordLists.html accessed 4/16/2011) they included categories for “uncertainty”, “litigious”, “modal strong” and “modal weak”. Engelberg (2008) created a dictionary with five categories: “positive fundamentals”, “negative fundamentals”, “future outlook”, “environment” and “operations”. Muslu et al (2010) found that stock price changes were larger on filing date for firms with a higher forward looking measure. Engelberg (2008) demonstrated statistically and economically significant abnormal trading profits from a long-short strategy using textual information. Bollen, Mao and Chen (2010) used six different moods inferred from Twitter messages to predict future stock market returns. Results from these studies suggested that more comprehensive textual analysis may yield additional information not incorporated in conventional quantitative factors such as firm size, accruals, etc..

Another approach to textual analysis is statistical based. Li (2011a) and Huang, Zang and Zheng (2010) both used a Naive Bayesian machine learning approach to estimate the tone of a document. Li (2011a) defined four tone levels: “positive”, “negative”, “neutral”, “uncertain” and twelve content categories: “revenue”, “cost”, etc. He concluded that the Naive Bayesian approach performed better than the dictionary-based approach in analyzing 10K and 10Q reports. He found that the tone of the forward looking statement in MDA was positively correlated with future firm
performance and provided additional information controlling for other fundamental variables. Huang et al (2010) examined the sentiments of analyst reports. They compared the Naive Bayesian approach against three dictionary based approaches: Diction, General Inquirer and Linguistic Inquiry and Word Count, and also concluded that the Naive Bayesian approach outperformed the others. They found that cumulative abnormal return (CAR) was significantly related to analyst opinion, controlling for contemporaneous quantitative variables and adjusted R2 increased from 0.52% before including the opinion variables to over 3.01%.

The exception to using a single approach in estimating sentiments was Das and Chen (2007). They used 5 different classifiers: Naive Classifier, Vector Distance Classifier, Discriminant-based Classifier, Adjective-Adverb Phrase Classifier and Bayesian Classifier to analyze the sentiments of discussions on stock message boards. The final sentiment classification was based on majority vote and messages were designated as either “buy”, “sell” or “hold”. If the classifiers did not reach a majority vote, a message was not classified. They concluded that the combined approach, referred as the Voting Classifier, was similar in accuracy as the Bayesian classifier but had fewer false positives.

2 METHODOLOGY
In this study, we utilize a Semantic Relationship (SR) Classifier to evaluate sentiment in publicly available financial documents. Existing studies use text processing systems that analyze texts at a word or phrase level without considering the sentence structure and the roles of the words in the sentence. In contrast, this study uses a language processing system that applies linguistic theories to model how humans process language. The core of the system is an adaptive parsing technology that is an implementation of Meta-S calculus, an adaptive grammar formalism, and the corresponding Adaptive(k) parsing algorithm, referred to as the Meta-S Adaptive Parser (Jackson, 2000a, 2000b). These algorithms utilize X-bar theory (Chomsky, 1995) to identify syntactic features and express basic semantic relations within a sentence as theta-roles (Parsons, 1990). The end result is a Meta-S Language Processing System (MSLPS) that can recognize entities, syntactic structure and semantic meaning. Another feature of MSLPS is that it incorporates multiple ontologies, from general linguistic to domain-specific resources, including user-defined terms. The system will choose the most appropriate resources to use in the analysis. For example, Longhran and McDonald (2011) argued that non-finance ontologies, such as the Harvard-IV-4, misclassify some terms as negative (e.g. liability, cost) because these are accounting terms and do not convey sentiment by themselves. MSLPS will recognize whether the word “cost” in a sentence should be treated as an accounting term, thereby eliminating the ambiguity. However, since “cost” is inversely related to profit, if cost is increasing, then it is a negative event. Therefore, the sentiment of a sentence depends on the relationship between

the words, not just the words themselves. The last and perhaps most powerful feature of MSLPS is its ability to automatically learn and extend ontological resources.

The following examples illustrate how MSLPS processes text using linguistic theories and how it differs from other word-based methodologies. Consider the sentence:

Higher same-store sales growth fueled strong consolidated earnings.

MSLPS will identify "Higher" as an adjective which modifies the noun phrase "same-store sales growth". Semantically “higher” is an increasing term. “Same-store sales growth” is an accounting term reflecting “revenue” and when modified by the increasing term “higher”, the entire phrase describes a positive event. The remaining sentence is processed in a similar manner. Therefore, the overall sentiment of this sentence is strongly positive. Now consider another sentence:

Higher employee health insurance costs undermined consolidated earnings.

"Higher" is an adjective that modifies the noun phrase "employee health insurance costs". Semantically “higher” is an increasing term. But “employee health insurance costs” is an accounting term reflecting “cost” and when modified by the increasing term “higher”, the entire phrase describes a negative event and the overall sentiment of this sentence is negative.

The output of word-based methodologies is highly dependent on the dictionary used. For example, none of the words in the first sample sentence and only one word (undermined) in the second sentence appeared in Longhran and McDonald (2011). So based on their dictionary, the first sentence will be considered neutral and the second sentence will be negative. Engelberg (2008) classified “sales” as a positive fundamental, earnings as a positive fundamental and cost as a negative fundamental. A simple word count ratio will give the first sentence a positive fraction of 2/8 or 0.25. The second sentence will have a positive fraction of ¾ and a negative fraction of ¼. The General Inquirer classifies the words “growth” and “consolidated” as positive words in the first sentence. However, since the word “growth” is part of the noun phrase “same-store sales growth” and the word “consolidated” is part of the noun “consolidated earnings”, they are accounting terms and do not convey sentiment without additional modifiers. For the second sentence, the General Inquirer classifies “health” and “consolidated” as positive words and “undermined” as a negative word. A simple word count would conclude the second sentence as slightly positive when in fact, its overall sentiment is negative. In these examples, none of the existing methods correctly identify the sentiment of both sentences.
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AN INVESTIGATION INTO THE FACTORS AFFECTING STUDENT PERFORMANCE IN AN INTRODUCTORY ACCOUNTING CLASS

Abstract

Sylvia D. Clark
Associate Professor of Marketing
Peter J. Tobin College of Business
St. John’s University
300 Howard Avenue
Staten Island, NY 10301
Tel: 718-390-4552
Fax: 718-390-4291
clark1094@aol.com

Craig A. Latshaw
Associate Professor of Accounting
Peter J. Tobin College of Business
St. John’s University
300 Howard Avenue
Staten Island, NY 10301
Tel: 718-390-4316
Fax: 718-390-4291
Latch1@aol.com

Keywords: Accounting, Student Performance

For many years, a major focus of accounting education research and education research in general has been the factors affecting student performance in accounting and other educational disciplines (Vruwink, et al., 1987; Eskew, et al.; 1988, Lucas, et al., 2004). Besides categorical variables such as SAT score and college GPA, a host of other factors -- including student learning styles, instructor teaching styles and the potential mismatch of the two -- has been associated with overall accounting student performance (Eskew, et al., 1988; Visser, et al., 2006). The matching of learning and teaching styles in order to increase student performance has been widely accepted in the educational community. In addition, business education research has investigated the influence of student effort on business student performance (Rich, 2006; Johnson, et al, 2002).

However, the cumulative results of academic research related to student performance, matching of student learning styles and teaching styles and student effort have been mixed (Coffield, et al, 2004; Dembo & Howard, 2007; Rich, 2006; Johnson, et al, 2002). The research stream examines several variations:

First, student learning styles have been emphasized, with the conclusion being that teachers should adjust their styles to accommodate student learning styles to yield improved student performance (Keri, 2002; Tucker, et al., 2003; Visser, et al., 2006). The potential flaw with this concept is that most teachers teach the way that they themselves learned, tending to believe that this is the best way for their students to learn. (Brown, 2003). Therefore, teachers are reluctant to adjust their teaching styles.

The second widely-held belief is that student learning styles are static (Hein, 1999; Loo, 2002). Therefore, teaching styles need to be adjusted to fit student learning styles. At the same time, some longitudinal studies have supported the notion that student learning styles may be adaptable to teaching styles (Coffield, et al, 2004).

Third, most research on both learning and teaching styles has neglected the concept of student effort. The opposite is true of academic studies related to student performance and effort. These studies have concentrated on measures of student effort without considering the potential that the match or mismatch of learning styles and teaching styles may also have an effect on student performance (Johnson, 2002; Rich, 2006).

Finally, very little academic research has attempted to investigate the salience that learning/teaching style interaction and student effort have on student performance within specific disciplinary settings (Lucas, et al., 2004). The objective of this study is to evaluate key factors related to student performance in an introductory accounting course, including both learning and teaching style interaction and student effort. The research also attempts to determine the relative significance of each of these factors on overall student performance.

Survey data were collected from more than 100 undergraduate business students enrolled in introductory accounting classes at a branch campus of a major urban university. Included were two major learning style instruments as well as a variety of categorical data. Based on the research objective, a regression model has been developed, including various components identified as potential factors in influencing student performance. The most significant factors contributing to student performance are identified and relative factor significance investigated.

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And Then There Were None: 
The Rise and Fall of the Financial Guaranty Industry

Catherine R. Lau 
CUNY Graduate Center 
365 Fifth Avenue 
New York, NY 10016, USA 
1-917-331-5879 
clau@gc.cuny.edu

ABSTRACT
This paper addresses the underpinnings of the financial guaranty industry, the role it played in the U.S municipal bond market, its expansion into structured finance and international markets, the cracks that existed all along in its AAA facade, its quick demise.

Keywords
Guaranty, Municipal Bonds, Securitization, CDOs, CDS

1 INTRODUCTION
None of the four firms that dominated the financial guaranty industry for the past thirty years survived the financial crisis of 2008-2009 in pre-crisis form. Ambac went from AAA ratings by all three agencies and $6 billion of statutory capital to filing for Chapter 11 bankruptcy protection in November 2010. FGIC also lost its AAA ratings and in November of 2009 was ordered by the New York Department of Insurance to cease writing policies and paying claims. FSA was bought by Assured in 2009 for 37.5% of its book value. MBIA is now rated B, not AAA. Assured was last man standing, but lost its AAA rating from S&P on October 25, 2010, when it was downgraded to AA+. (McGee P., Market Loses last Triple-A Insurer as S&P Drops Assured Guaranty, 2010)

This paper addresses the history of the financial guaranty industry, the role it played in the U.S municipal bond market, its expansion into structured finance and international markets, the cracks that existed all along in its AAA façade, and its rapid downfall. The section following the introduction provides background on the industry. The third section shows that financial guaranties did benefit the municipal debt market. The fourth section looks at expansion out of municipal debt; Section 5 addresses its inability to survive the loss of its AAA ratings. Section 6 concludes.

2 BACKGROUND
A financial guaranty is a form of credit insurance: it is an unconditional irrevocable obligation to pay timely interest and ultimate principal on a financial obligation. The fact that the policies written are unconditional and irrevocable immediately distinguishes this form of insurance from the more well known property and casualty type contracts. The guarantor must pay when a claim is presented, even if there were errors of omission, neglect or outright fraud on the part of the issuer. The policy cannot be revoked, even if the guarantor discovers something which would have kept it from providing the guaranty originally. The guarantor can attempt to recover claims and damages from the issuer and/or the arranger of the bonds. Since the guarantor becomes responsible for payments on the bonds insured, the bonds carry the ratings of the guarantor.

Financial guaranty as an industry can be traced to the establishment of the American Municipal Bond Insurance Company (Ambac), by the Mortgage Guaranty Insurance Corporation (MGIC), in 1971. Two years later, the Municipal Bond Insurance Corporation (MBIA), was formed by a consortium of property and casualty companies. In 1983, the Financial Guaranty Company (FGIC) became the third bond insurer, followed by Bond Investors Guaranty (BIG) in 1984. The financial guaranty industry was always oligopolistic: these four companies wrote 96% of the insurance on municipal bonds in the mid 1980s. (Kidwell, Sorensen, & Wachowicz, 1987). BIG was acquired by MBIA in 1989.

Financial Security Assurance, Inc. began operations in September 1985, the first firm to specialize in structured finance; Assured Guaranty began operations three years later, in 1988.

3 INDUSTRY’S ROLE IN THE MUNICIPAL DEBT MARKET

Besides being a profitable niche for the guarantors, guarantees of municipal debt have benefits for the issuers and buyers of the debt. The issuers gain through lower interest costs. Investors are able to buy more liquid, more stable, highly rated bonds.

Yield (Y) on a debt instrument is a function of r, which captures credit and other risks (legal/structural/force majeure). The AAA rating the insurance provides greatly
reduces the credit risk; the unconditional nature of the guaranty reduces regulatory and legal risk. Yield is also a negative function of liquidity (I), which increases with size and wider name recognition, and stability, which the profile of the guarantors improves. Longer maturity of bonds (represented by d for duration) increases the yield required by investors.

For the debt issuer, bond insurance clearly makes sense if the net issuance cost to the issuer is equal to or less than the coupon which would have been paid without insurance minus the premium paid to the insurer and any other fees involved in using insurance (additional legal fees, rating fees, due diligence fees).

\[
\text{Nic} = \text{net issuance cost}; \ uir = \text{uninsured rate}; \ p = \text{premium}; \ c = \text{other costs}
\]

If insurance is being looked at pre-issuance, this equation is impossible to solve with certainty: nic and uir are exogenous variables that are functions of a host of uncertain market conditions. Additionally, the econometric principle of Stable Unit Treatment Value (SUTVA) does not apply. Insurance has a signaling effect: a guaranty on one bond affects the spread of other bonds of similar and the same issuance which are not insured. The policy signals that the insurer has done due diligence on the issuer and will be tracking its performance. Investors in uninsured bonds of a municipality which also has insured bonds outstanding will therefore accept a lower yield based on the reputation of the insurer.

A number of empirical studies have shown that insurance lowers issuance costs. Bland (1987), uses the general obligation bonds issued by New Jersey (1981 – 1984) and Texas (1983-1984), to provide evidence that private insurance reduces interest costs for states. Bland regresses net interest cost on third party credit support, Moody’s rating, average maturity, and a number of other variables which could affect interest rate levels. The estimated coefficients for both states point in almost all cases to private bond insurance lowering the cost of general obligation bonds.

Bland and Yu (1987) regress Moody’s credit ratings on net interest costs and find a negative relationship between ratings and interest costs, with insured bonds trading as if rated between A and Baa1. In a study that controlled for more covariates, Kidwell (1987) finds gross interest savings of .34%, and average insurance premiums of 12 bps, for a net benefit of 22 bps for the issuer. Quigley and Rubinfeld (1991) take this further empirically by examining the same bond trading in the secondary market with and without insurance: insurance lowered the yield by 14 to 28 bps. Smaller issuance benefited more from insurance, since name recognition is less for smaller municipalities and smaller issuance is less liquid.

Other recent evidence that the credit protection provided by bond insurance reduces bond yields came when Assured raised capital and became a stronger credit itself in December, 2009. The day after the capital raise, yields on several Assured wrapped bonds fell by 50 – 60 bps, while the overall AAA market rallied 10 basis points (Seymour 2009).

The larger benefits for smaller issuance are borne out by studies of the market after 2007. As pointed out in the Bond Buyer in February, 2010, many investors need more education and reassurance to understand the municipal bond market. Investors want familiarity and liquidity: general obligation bonds of Texas and New York, large, well-known states, are cited as more desirable (Williamson 2006). Moody’s report of February 2010 shows that the average size of A-rated issues in 2009 was more than double that of 2008, whereas the issuance size for AAA and AA bonds was on average slightly smaller, 2009 versus 2008. Larger single A issuances are finding a warmer reception in the current, less liquid market. (Moody’s Investor Services, February 2010)

Finally, direct evidence of the benefits of bond insurance in the municipal markets is provided through the optional bidding program that became popular for municipal debt. “The optional bidding program allows the underwriter to market the offering with or without insurance. The underwriter then selects the lowest cost bid. Since the underwriter will incorporate insurance premiums and other miscellaneous costs of insurance in any bids on the insured package, the selected bid will be that which minimizes the net present value of costs to the issuer; regardless of whether that bid is on the insured or uninsured package. Since the underwriter will make the net present value calculation, the issuer need not do so.” (Reid 1990)

A study (Green 1993), comparing the yield curves for taxable and nontaxable debt finds an anomaly, with the curve widening more for nontaxable issues:

\[ Y_{nx} (t) > Y_{tx} (t) \text{ for all } t \]

Yield (Y) on both taxable and non-taxable (some municipal) debt is a function of time, but grows more over time for non-taxable (nx subscript) than for taxable (tx subscript) bonds. This gave municipal issuers of longer debt an added incentive to buy insurance. Insurance was also more popular with leveraged investors: those who invest borrowed money do not want to do research on each issue but purchase in bulk, relying on insurance (McGee 2009).

Insurance was also viewed as an arbitrage opportunity by some of the investors in the municipal market. Though technically arbitrage refers to simultaneous buying of a security in one market and selling in another, it has come to mean taking advantage of any imperfections in the market, often related to asymmetric information flows. A survey of commercial banks in 1980 with a 29% response rate found
that two-thirds of the banks had bought insured bonds for their portfolios and/or trust accounts. They were attracted by the “risk” return profile: they could hold the bonds at Aaa in their portfolios, yet the yield was over 7.2%, versus 6.45% for Aa2 municipal bonds of similar duration (Miralia 1980).

Some of the studies of the market also looked at the premiums charged by the guarantors. According to empirical evidence, insurers captured between one-third and one-half the interest saving in the municipal market. As Kidwell points out (1987), if all that bond insurance provided was lower credit risk, and the insurers priced the risk exactly the way the market did, there should have been no savings for the issuers: the premium should have been equal the savings in interest costs. Two factors contribute to this anomaly. Firstly, it is an oligopolistic industry: the guarantors want to limit competition. Secondly, the rating agencies until 2010 applied a different, more stringent scale for municipalities than for corporate credits. The financial guarantors recognized the dichotomy between the rating and risk, and incorporated this difference in their pricing model. Financial guarantors’ early concentration in the market was partly attributable to this arbitrage opportunity between public ratings and actual risk.

Financial guaranty insurance played an increasing role in the municipal market from 2001 until its precipitous decline of 2008. The guarantors insured half or more of municipal bond issuance for several years, than insured less than ten percent in 2009. Insured bonds benefitted from lower credit risk, increased liquidity, and greater market recognition, all of which reduce pricing. The benefits were not limited to the insured bonds, but spilled over to the uninsured bonds of the same issuers, creating market externalities.

4 EXPANSION INTO OTHER SECTORS

Pricing trends were critical in steering the industry to aggressively compete for municipal business and expand into securitization and international business. If we look at premium to par, we see pricing peak in 2003, averaging 113 bps overall. 2003 was the high point for two of the three segments of the par written by Ambac, MBIA, FGIC and FSA: premium to par for municipals peaked at 101 bps, for U.S structured finance it hit 95 bps, while for international business, premium to par reached 179 bps the following year, 2004. In 2005, international structured finance was 13.5% of the business written by the four largest guarantors, but 21.5% of the total adjusted gross premiums (Moody’s 2006). The industry’s downfall followed its expansion into three sectors:

Securitization

In 1986, FSA led the way in providing financial guaranty insurance to the securitization market. Since the complexity of securitization bonds made them difficult for individual investors to analyze and monitor, investors were initially willing to give up some of their return to have the guarantors, with their credit and surveillance teams, take on these responsibilities. Additionally, the rating agencies encouraged and then insisted on the guarantors diversifying away from insuring municipal debt only.

By 2001, 36% of Ambac’s, 62% of MBIA’s, and 51% of FSA’s portfolios of insured bonds were in structured finance (Drake and Neale 2010). If we look at new business, and concentrate on MBIA, we see that structured finance accounted for 8% of par insured in 1995, 34% only five years later, and dominated its new exposure in 2006, representing 75%.

While securitization was new, guarantors could get strong credit terms and rewarding premiums. As securitization became better known and automated monitoring systems became available, more investors were willing to buy bonds without insurance. Guarantors needed to compete on credit terms and price to keep even a declining share of business: guarantor penetration of the structured finance market declined during 2005 (Moody’s 2006).

CDOs

In the 1990’s, the financial guaranty industry expanded into insuring Collateral Debt Obligations (CDOs), ironically the “lone bright spot” for 2006, according to Moody’s (2006). CDOs of ABS, pooled asset-backed bonds, which became popular after 2000, often contained a preponderance of mortgage-backed bonds which proved to be highly correlated. Insuring super senior tranches of these CDOs was accretive to capital for the guarantors: that is, insuring these tranches reduced the guarantors’ need for capital. This made these transactions fatally attractive.

CDS

In 1997 credit default swaps (CDS) were approved as a form of enhancement that guarantors could provide in addition to insurance policies. Insurance policies and CDS are governed by different accounting regulations; CDS need to be marked to market quarterly: an insurer’s financial statements are affected if there is a change in pricing levels as well as a change in credit quality. Buyers of the protection were often trading desks of banks who entered into CDS for capital relief and earnings recognition, not for default protection. If they had a AAA wrap on a AAA bond, the capital charge was reduced (to zero, in most cases), and the expected interest over the life of the bond could be present valued into the current year’s earnings. As such, these desks were not really concerned with creditworthiness of their counterparty (the financial guarantor). By March 2008, the net notional value of CDS for the guarantors was over $565 billion.
Since the capital the rating agencies require each guarantor to hold to preserve its AAA ratings is a function of the ratings of the transactions they insure, as insured CDOs of ABS and mortgage backed bonds began to be downgraded en masse in 2007/2008, the guarantors needed additional capital. Their ratings were put on negative watch, effectively putting their ability to write business on hold. Since return on equity was an important metric for management compensation in most of the companies, they in the main operated with slim capital safety margins, which even a minor shock swallowed. That meant they had to go out and attempt to raise new capital at a time when their franchise values were in jeopardy, a sisyphean task.

One by one, the guarantors lost their AAA status; the bonds they had guaranteed were downgraded and plummeted in value. Investors whose portfolio guidelines required them to hold AAA securities were forced to sell into an illiquid market.

The AAA/Aaa financial guaranty industry was relatively short lived. The first company got its ratings in 1971; in October, 2010, Assured Guaranty, the only guarantor which remained AAA past 2008, lost its AAA rating from S&P. It had wrapped a paltry 7% of 2010 new issuance in the public finance market through September of 2010, but represented 100% of the guarantor market. (McGee P. , Market Loses last Triple-A Insurer as S&P Drops Assured Guaranty, 2010)

The financial guaranty industry ventured far from its roots in municipal finance and in the process seemed to neglect correlation across sectors, ending up with huge exposure to the mortgage market in both its direct MBS book and through CDOs of ABS. Like too many other players in the financial markets, the industry followed the creed of Chuck Prince, Chief Executive Officer of Citigroup, who, when asked about liquidity in July, 2007 by the Financial Times said: “When the music stops, in terms of liquidity, things will get complicated. But as long as the music is playing, you’ve got to get up and dance. We’re still dancing.” (Fed Fails to Calm Money Markets, 2007, July 7). Financial Times.

The financial guarantors partnered with investment banks through CDS and therefore had to take big mark-to-market hits to earnings as soon as the music stopped. These hits made the sector highly unattractive to equity investors when it needed them the most. Yet management’s ability to collect sizable cash compensation continued and their employment contracts, ensuring them comfortable lives even if their companies folded, remained in force. (SEC Filings: AMBAC, MBIA various years). The boards of these companies neglected to give the management proper incentives to be prudent. So while the mortgage/CDO market implosion was the direct cause of the industry’s downfall, it is doubtful that this highly leveraged industry would have survived any substantial negative market shock.

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Jae-Hyung Lee*
School of Liberal Arts,
Woosuk University,
443 Samrye-ro, Samrye-eup, Wanju-gun,
Jeollabuk-do, 565-701, Korea.
Telephone: +82-63-290-1712
Email: jhlee2000@snu.ac.kr.

Abstract

Utilizing the annual time series data from 1986 to 2008 in South Korea (hereafter Korea) the regression results suggest that each of openness and globalization makes a substantial contribution to Korea’s economic growth. In a comparison between two indicators of trade liberalization, openness is more sensitive to growth. A negative and statistically significant error correction term implies that the null hypothesis of no cointegration is rejected when one period lag is used. The existence of cointegration means that openness and globalization policies can be targeted to bring about a desired long-run effect as well as short run effect on growth.

JEL codes : C32, E02, O33

Keywords : Openness, Globalization, Growth, Sensitivity Analysis, Error Correction Model


Introduction

A variety of studies shows that export-oriented policies lead to better growth performance than policies favoring import substitution because export-oriented policies, which provide similar incentives to sales in domestic and in foreign markets, lead to resource allocation according to comparative advantage, allow for greater capacity utilization, permit the exploitation of economies of scale, generate technological improvements in response to competition abroad and, in labor-surplus countries, contribute to increased employment. For example, using the pooled data on 10 export-oriented countries including Korea which have already established an industrial base covering the years 1960-1973, Balassa (1978) found that a 1 percent increase in the rate of growth of exports appears to be associated with a 0.05 of 1 percent increase in the rate of growth of Gross National Product (t-statistics=3.34).

Greenaway and Nam (1988) have pointed out that Korea has been an open and outward-oriented economy. More recently, Ha et al.(2010) argue that as the 1997–1998 financial crisis ensued, domestic demand languished, prompting even greater emphasis on export promotion. Since then, Korea has increasingly relied on external demand to drive growth. For example, statistical data of the Korean economy from 1986 to 2008, provided by the Korean National Statistical Office and Korea Institute for Industrial Economics and Trade, demonstrates that Korea recorded 38.8% in the ratio of exports to the total factor cost of national income, whereas it recorded 35.7% in the ratio of imports to the total factor cost of national income. This implies that Korea has a lower level of imports compared to the level of exports.

On the contrary, Edward (1998) provides the evidence that countries that are more open to the rest of the world have a greater ability to absorb technological advances generated in leading nations. For example, based on the instrumental weighted least squares estimate of the total factor productivity growth, he proposes that after controlling for the log of initial per capita Gross Domestic Product (hereafter GDP) and the initial level of human capital measured as the mean number of years of education, more open countries have tended to have faster productivity growth. The t-statistics is estimated to be 2.95, which is
significant at α=1% on a two-tailed test. For the empirical work, he uses an average import tariff as a measure of the level of openness reported by UNCTAD. This has a negative effect, so that a lower value in the variable is associated with a relatively more trade openness.

More recently, with panel data for 123 countries in 1970-2000 Dreher (2011) also shows the evidence that higher economic globalization is significantly associated with higher growth (t-statistics=2.53), whereas restrictions on trade and capital do not have any influence, reflecting an average of the benefits from liberalization in countries with highly developed financial markets and institutions and the costs associated with a higher frequency of financial crisis in less developed countries. He uses both alternative measures of economic globalization. One index measures actual flows: trade, foreign direct investment and portfolio investment (all in percentage of GDP). Income payments to foreign nationals and capital employed (in percentage of GDP) are included into proxy for the extent a country employs foreign people and capital in its production processes. The second index measures restrictions on trade and capital using hidden import barriers, mean tariff rates, taxes on international trade (as a share of current revenue) and an index of capital controls. A higher revenues from trade taxes is associated with a lower level of globalization.

Imports may be very important to growth since significant export growth is usually associated with rapid import growth. Furthermore, the export-growth analyses that exclude imports may be subject to the classic omitted variable problem. The fundamental causal relationship may actually be between imports and growth (Awokuse, 2008).

Although several studies including Ha et al. (2010) have shown the importance of exports for Korea’s economy, no empirical work has been dedicated specifically to imports for Korea. It is therefore of importance to shed light on this question, especially for Korea which has experienced rapid growth along with a high rates of export growth.

On the basis of this we classify trade liberalization into that by import openness (hereafter openness) and that by the globalization. Given the accessible indicators of trade liberalization the amount of import as a share of the total factor cost of national income stands as a proxy for openness, while the sum of exports and imports to the total factor cost of national income is a proxy for globalization (e.g., Yanikkaya, 2003; Awokuse, 2008). The initial option for openness has been amplified by globalization i.e. Korea’s participation in the new wave of trade liberalization which began in the end of 1990’s.

With unique openness and globalization level annual time series data for the period 1986 to 2008 from Korea, the analysis takes into account the possibility that both openness and globalization affect growth. We then compare the sensitivity of growth to change in each of the two indicators of trade liberalization.

. Analytical Framework

In order to test for the null hypothesis that the difference in each of openness and globalization is causal to the differentials in growth and to compare the sensitivity of growth to change in each of the two indicators of trade liberalization, the following function can be formulated:

\[ gFCY_t = f(gFCY_{t-1}, \text{TRADE}_t, Z_t) \]

where \( g \) denotes the growth in each variable (e.g. \( gFCY_t \) denotes the growth rate of \( FCY_t \)), \( FCY_t \) denotes the total factor cost of national income. \( \text{TRADE}_t=(\text{OPEN}_t, \text{GLOBAL}_t)^\prime \) refers to the row vector of two indicators of trade liberalization. \( \text{OPEN}_t \) and \( \text{GLOBAL}_t \) represent the openness and globalization, respectively. The estimated Pearson correlation coefficient between \( \text{OPEN}_t \) and \( \text{GLOBAL}_t \) is 0.96, suggesting that two indicators of trade liberalization are highly correlated. Therefore, these indicators are included in separate regressions.

Meanwhile, vector \( Z_t \) includes the following control variables: \( PC_t \) (unfair trade practices as a proxy for business corruption), \( GC_t \) (the number of exposures as a result of audit and inspection in the public sector as a proxy for public sector corruption), \( GOVT_t \) (the ratio of the consolidated expenditure to the total factor cost of national income as a proxy for the size of government), \( I_t \) (the ratio of the total investment to the total factor cost of national income), and \( TECH_t \) (the number of patents as a proxy for technological development).

We include a lagged dependent variable (i.e., lagged growth) as an explanatory variable to limit the potential impact of reversed causality (Stel et al., 2005). \( t \) represents year. Equation (1) represents for well-behaved production function exhibiting everywhere diminishing returns to inputs.

An error correction model (ECM) allows us to study the short-run dynamics in the relationship between growth and openness, and between growth and globalization. For example,

\[ \Delta gFCY_t = g(\Delta gFCY_{t-1}, \Delta \text{TRADE}_t, \Delta Z_t, S_{t-1}) \]

where \( S_{t-1} \) denotes the error correction term (see Wooldridge, 2000). The parameters of the equations are estimated using annual time series for the period of 1986-2008. Furthermore, each equation is also estimated by using a maximum likelihood procedure (ML) which assumes first order serial correlation in the disturbance term.
Table 1 provides a description of the variables used in the model. Least squares regression assumes that the dependent variable and (less critically) the independent variables are normally distributed. This assumption is reasonably satisfied by the data used in the study. Table 1 contains the commonly used Kolmogorov and Smirnov tests for normality and shows that the tests fail to reject the hypothesis of normal distribution for both growth and trade liberalization indicators.

Table 1. Definition of variables

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean (SD)</th>
<th>K-S (z value)1</th>
</tr>
</thead>
<tbody>
<tr>
<td>FCY2 = The total factor cost of national income</td>
<td>382,693 (220,086)</td>
<td>Accept H0 (0.450)</td>
</tr>
<tr>
<td>gFCY3 = Growth</td>
<td>11.257 (6.128)</td>
<td>Accept H0 (0.401)</td>
</tr>
<tr>
<td>IMPORT4 = Imports</td>
<td>148,220 (113,430)</td>
<td>Accept H0 (0.677)</td>
</tr>
<tr>
<td>OPEN = IMPORT/FCY5 = Imports to the total factor cost of national income</td>
<td>35.689 (7.046)</td>
<td>Accept H0 (0.841)</td>
</tr>
<tr>
<td>EXIM6 = The sum of exports and imports of goods and services</td>
<td>309,560 (235,264)</td>
<td>Accept H0 (0.670)</td>
</tr>
<tr>
<td>GLOBAL = EXIM/FCY7 = The sum of exports and imports to the total factor cost of national income</td>
<td>74.462 (15.270)</td>
<td>Accept H0 (0.520)</td>
</tr>
<tr>
<td>PC8 = Business Corruption</td>
<td>0.321 (0.144)</td>
<td>Accept H0 (0.731)</td>
</tr>
<tr>
<td>GC9 = Public Sector Corruption</td>
<td>4.958</td>
<td>Accept H0</td>
</tr>
<tr>
<td>FISCAL10 = Consolidated Expenditure</td>
<td>103,818 (68,916)</td>
<td>Accept H0 (0.626)</td>
</tr>
<tr>
<td>GOVT = FISCAL/FCY11 = Consolidated Expenditure to the total factor cost of national income</td>
<td>25.345 (3.884)</td>
<td>Accept H0 (0.909)</td>
</tr>
<tr>
<td>INV12 = The total investment</td>
<td>132,532 (68,961)</td>
<td>Accept H0 (0.425)</td>
</tr>
<tr>
<td>I=INV/FCY13 = The total investment to the total factor cost of national income</td>
<td>36.053 (4.729)</td>
<td>Accept H0 (0.766)</td>
</tr>
<tr>
<td>TECH14</td>
<td>82.589</td>
<td>Accept H0</td>
</tr>
</tbody>
</table>

Notes: 1. Kolmogorov-Smirnov Test. The alternatives are: H0 = the fits of a normal distribution to the sample data is adequate. The α risk controlled at 0.01 on a two-tailed test.

2, 4, 6, 10, 12. In billion Korean Won.

3. The year-over-year growth rate, expressed as a percentage.

8. In thousand. The number of unfair trade

9. In thousand. The number of exposures as a result of audit and inspection in public sector.

5, 7, 11, 13. Unit: %.


9. Annual Audit Reports, The Board of Audit and Inspection of Korea.


Estimated Results

This study has dealt with the functional form issue using the Box-Cox transformation framework in Table 2. The double-natural logarithmic model run by OLS (Ordinary Least Squares) is implied in the estimated regressions for growth.

Table 2. Non-Nested Test of Double Logarithmic versus Linear Models of Growth: OLS estimates

<table>
<thead>
<tr>
<th>Equation1</th>
<th>Box-Cox</th>
<th>Logarithmic model (H0)</th>
<th>Linear model (H1)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>(1) RSS=0.065</td>
<td>RSS=1.458</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(2) RSS=0.077</td>
<td>RSS=1.478</td>
</tr>
</tbody>
</table>

Notes: 1. Equation (1) includes the openness (OPENt), whereas equation (2) includes the globalization (GLOBALt).

Although the equation (1) is estimated by ML as well as
OLS methods, we analyze OLS results over the ML results because the OLS estimation does not suffer from autocorrelation; D.W. = 2.177 and 1.967, respectively. Furthermore, the standard errors of the estimates (SEE) for OLS are smaller than those for ML. The use of SEE is also based on the overall model performance (see Table 3).

In Table 4, the regression results suggest that more openness and globalization are proportionately associated with higher growth. For example, the OLS estimates suggest that 1 percent increase in each of openness and globalization raises growth by 4.269 and 3.671 percent, respectively. Yucel (2009) also conducts a Granger causality tests using monthly time-series data for Turkey over the period 1989 to 2007. His results show that Turkey’s trade globalization measured as the ratio of the sum of the exports and imports to GDP Granger causes growth at the 0.05 level of significance. His finding also supports the theoretical approach in which trade globalization can be positively affecting on economic performance in the developing countries.

In a comparison between openness and globalization, the latter has a minor effect on growth (t-statistics = 3.102 and 2.413, respectively). These results reflect that imported capital goods have a greater impact on growth. The results are consistent with Edward’s study (1998) that more open countries experienced faster productivity growth.

The OLS estimates suggest that each of the estimated coefficients of the business corruption (\(\ln PC_t\)) and public sector corruption (\(\ln GC_t\)) is negative and significant, as expected. This result is consistent with the usual findings of previous studies that the lower the level of corruption of a country is, the higher economically performed will be (see, e.g., Abed and Davoodi, 2000). The regression results also show that business corruption is more sensitive to real per capita growth rate than public sector corruption.

It points out that greater government size (\(\ln GOVT_t\)) is negatively associated with growth. An implication of this is that a big government \textit{per se} may not necessarily raise growth rate. This is primarily due to red tape (Higgs, 2010). Thus, it should be well run with an efficient judiciary.

\(\ln I_t\) is positively and significantly related to growth. This implies that a higher investment is, as predicted by all previous studies, associated with a higher growth. Rogers (2003) also argues that investment and growth are closely linked and that policies that hinder investment may well reduce growth.

In Table 4, the estimated coefficient of \(\ln TECH_t\) maintains a theoretically expected positive sign and is statistically significant at the 0.01 level on a two-tailed test. This result is in line with the Jorgenson and Vu’s results (2005).

Given the above results, this study has estimated the ECM by OLS and ML. The estimated ECM results in Table 5 under the columns (1) and (2) indicate that the error correction coefficient of each of openness and globalization is negative and significant. A negative and statistically significant error correction term implies that the null hypothesis of no cointegration is rejected at the 10% level.
when one period lag is used (Ansari and Ahmed, 2007).

This implies, for example, that growth in the previous period has overshot the equilibrium; growth falls by 0.318%–0.346% on average in the next year (Wooldridge, 2000). The existence of cointegration means that openness and globalization policies can be targeted to bring about a desired long-run effect as well as short run effect on growth.

Table 5. Estimates of the Error Correction Terms

<table>
<thead>
<tr>
<th></th>
<th>(1)</th>
<th>(2)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>S_t-1</td>
<td>D.W. SEE</td>
</tr>
<tr>
<td>OLS</td>
<td>-0.346</td>
<td>2.175</td>
</tr>
<tr>
<td></td>
<td>(0.177)*</td>
<td></td>
</tr>
<tr>
<td>ML</td>
<td>-0.314</td>
<td>-0.590</td>
</tr>
<tr>
<td></td>
<td>(0.154)*</td>
<td>(0.144)*</td>
</tr>
</tbody>
</table>

Notes: 1. See Notes 1 in Table 3. that models are correctly specified.

V. Concluding Remarks

This paper's main objectives are to explore the possibility that two indicators of trade liberalization affect growth and to measure the sensitivity of growth to change in trade liberalization.

For the estimation, this study uses both alternative measures of trade liberalization; imports to the total factor cost of national income for openness and the sum of exports and imports to the total factor cost of national income for globalization. The data for this investigation comes from Korea National Statistical Office and Korea Institute for Industrial Economics and Trade. The model is estimated using the annual time series data from 1986 to 2008 in Korea.

The most important results and analysis of the OLS estimates can be drawn. First, the empirical results are consistent with the hypothesis that after controlling for the level of business and public sector corruptions, government size, investment, and technology, more openness and globalization are proportionately associated with higher growth, a finding that is in the prediction of the new growth theory about the potential long-run effects of trade on growth. To summarize, greater trade liberalization, whether it be to (import) openness or to globalization, is an important influence upon growth.

In a comparison between two indicators of trade liberalization, openness appears to be more sensitive to growth than globalization.

A negative and statistically significant error correction term implies that the null hypothesis of no cointegration is rejected when one period lag is used. The existence of cointegration means that openness and globalization policies can be targeted to bring about a desired long-run effect as well as short run effect on growth.

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ABSTRACT
The purpose of this research is to determine the skills required by graduate students of public administration programs to effectuate change and adaptation in public organizations. We develop and conduct semi-structured telephone interviews to a purposive sample of Public Administrators in the New York metropolitan area. Coupled with a content analysis of NASPAA-accredited U.S. MPA program curricula we develop a typology of best skills and practices for future leaders in the public sector. Preliminary findings suggest that leadership is an integrated process. Therefore public administration best practices and skills are not limited only to training in organizational change but also includes cross-functional strength in effective leadership, industry knowledge, desire/passion, empathy, analytical skills, empathy, EI, proactive/future-oriented, confidence and communication skills. MPA programs give students the knowledge, skills, tools and abilities to navigate and leverage change and crisis for long-term organizational success.

Keywords
organizational change, MPA curriculum, programs, leadership.

INTRODUCTION
New challenges in our global and regional economies abound: lack of employment and housing, technology integration, and challenges in the financial industry to name a few (Chocqueel-Mangan, 2011) beg the question more than ever before: What can leaders and executives do to navigate this “new environment” (Chocqueel-Mangan, 2011, p. 57, 2011)? Kotter (1990, 2002) points out that mastering adaptation and transformation are at the cornerstone of a new kind of leadership: leadership that can and does embrace and support change. The success of any organizational change process rests in the hands of employees. However, employees must be motivated to see change as necessary and have a sense of urgency to achieve it (Knowles, 1998; Kotter, 2002). Leaders of the future will have to be more shepherd-like in their approach, developing and allowing others the opportunity to lead; these leaders must have the ability to “create a context or culture in which other people are willing and able to lead” (HBR, 2008).

This means that the public and private sector workplace will need to usher in a paradigm shift in the traditional leadership approach to become more inclusive and collaborative. Importantly, students of public management must be given the opportunity to be steeped in the knowledge, skill and application of management concepts- including those related to organizational change (HBR, 2008; Cope, 2009). Although much of the literature explains, describes and analyzes how employees and managers perceive organizational change and change management, (e.g. culture change, effect of globalization) there is a considerable rift between the analysis and the practical application. Filling this gap, the purpose of this research is to determine the skills required by graduate students of public administration programs to effectuate change and adaptation in public organizations. We develop and conduct semi-structured telephone interviews to a purposive sample of Public Administrators in the New York metropolitan area. Coupled with a content analysis of NASPAA-accredited U.S. MPA program curricula we develop a typology of best skills and practices for future leaders in the public sector. Here we provide a descriptive analysis of the core curriculum focus in MPA programs across the country.

2 BACKGROUND AND LITERATURE REVIEW

Skills Required To Foster Organizational Success and Organizational Change Success
Integrated approach to leadership in the public sector. Further research indicates that navigating the changing landscape of our world is more about combining “strategic context, management processes and management capability” (Chocqueel-Mangan, 2011, p. 57) and less about providing more training for leaders. Understanding where the change occurs in the industry (context), the practices needed to succeed (management process) and the ability to lead others through the change (management capability) is a necessary integrated approach to successfully managing change. These changes in leadership style and approach are directly connected to how these changes will be implemented in the
workplace. Students will need to have a curiosity-driven approach to their leadership style management where they are always open to new ideas and are proactive (Miller, 2011). Future public sector leaders will need to have skill in assessing changes in the environment, policies and demographics of their service population and this will also require some skill agility.

Change sustainability. An effective way that ensures change sustainability is to get leaders and directors involved in the change process from the beginning; stand-alone training programs are not enough. Leaders will need to be upfront and integrated into the change processes from the onset. The change process must be integrated so it does not begin and end in one department and flow to each department in a staccato silo fashion (Chocqueel-Mangan, 2011; Miller, 2011). It will require that the leader understand the culture, strengths and weaknesses of different departments and be able to forge links with and between these different departments, a “shared purpose” (Miller, 2011, p. 58) must be forged between and among executives, department heads and the rank and file. In order for the change to stick, it must be in the organization DNA (Chocqueel-Mangan, 2011). Leaders must be able to effectively transform business units or teams and infrastructure (systems, policies, etc.) in a way that will sustain change in an organization.

Collaboration. In order to combat resistance to change, the leader must focus on and deal with fear, one of the main causes of resistance to change (Edmonds, 2011). People will only embrace the change and follow the process if they feel empowered, not afraid. This takes deft negotiation and facilitation on the part of the public leader. The leader must be able to engage and communicate with skeptical staff while at the same time developing clarity for people, strengthening the team and communicating vision. All of these things were once only required of executive staff but all public leaders will need to break free and encourage others to break free of the comfort zone and “move forward in a new direction” (Edmonds, 2011, p. 35) where these skills are a part of everyday work life. To build collaboration, the public manager must be able to understand people’s work and work style (Shulman, 2010). As Shulman (2010) points out, in the for-profit world, leaders can demand and mandate changes from the top, but in the public sector where workers often have strong views and opinions and commitment levels, it is important to take the time to understand and respect each others perspective and ideas otherwise change processes can be sabotaged from within. Public managers must have strong skill in persuasion and presenting a “compelling vision” (Shulman, 2010 p. 24) to staff members. Staff will respect that even more than expertise in a certain skill area.

Radical Transformation and Agility. “Radical transformation” (Chocqueel-Mangan, 2011, p. 58) of the business and service model is the norm for today. Mangan (2011) makes the case that today more than ever before; organizations need trained leaders that have the ability to redesign processes, behaviors and relationships that will net a new approach to the market. It is no longer about developing a new “workforce of creative, wacky thinkers” (Chocqueel-Mangan, 2011, p. 58) to revamp products and services and to find new clients. Today it is about developing a “cadre of managers who have a broad enough array of skills to cope with the new world” (Chocqueel-Mangan, 2011, p. 57) and can identify when change is on the horizon.

With the rapid growth of technology, “survival of organizations is dependent on the selection and development of future leaders” (Amagoh, 2009, p. 989) and those leaders must be empowered to be able to engage others in organizational change processes and policies (Melcrum, 2009). It takes trained and developed leaders to be able to successfully implement and manage change processes that could take months or years and can affect the entire business or service model from production, outreach (sales) and evaluation. Agility is a common theme in ensuring long-term performance in challenging times (Miller, 2011; Chocqueel-Mangan, 2011). Agility is having the ability to work in many facets of leadership in an organization, not just in one aspect of work. Staying in one aspect of work can become a change inhibitor so it’s important for a public sector manager to be able to see relationships among and between departments and to be able to facilitate work among them (Miller, 2011).

Creating a Shared Purpose vs. using a balanced scorecard: Training and development of the next generation of public managers.

Shared purpose. Today’s public sector leader must be a purpose builder not only a specialist in their area of expertise. Edmonds (2011) makes the case that there needs to be set ground rules that everyone can agree on before ushering in organizational change. The more people agree and understand in the beginning, the more likely they are to stay engaged in the entire process. The leader must know, understand and embrace the need for the change and what the change is before anyone else will, therefore, Edmonds (2011) recommends that there be some “project management and stakeholder engagement before leading the transition to change” (p. 33), otherwise, the change process will be seen as and then dismissed as a passing fad with no real organizational traction. Preparing people early on to consciously accept and to be ready for change is another responsibility for the leader (Edmonds, 2011).

GPRA & the Scorecard. Since the groundbreaking Government Performance and Results Act (GPRA) of 1992, the use of scorecards is required in government agencies and have been quite useful in driving change in the past but unless the organization uses it in the correct “strategic
context” (Chocqueel-Mangan, 2011, p. 58) in today’s environment, the scorecard and subsequent metrics are meaningless to the team or department leader. Leaders must understand what they are trying to achieve in the long-run and how to facilitate a “robust and honest conversation about what the metrics are telling them” (Chocqueel-Mangan, p. 58), otherwise the change process is interpreted as more busy work that adds no value to the organization in the long run. Today’s public sector leader must be able to align cross-functional needs and to encourage emotional connection to organizational purpose among employees (Miller, 2011).

Colleges and Universities are the incubators for future leaders. The world of business and government has ostensibly changed since the latest global recession; unprecedented levels of unemployment, foreclosure and economic ruin are now common experiences. Crosling, Edwards and Schroder (2008) make the case that because there are “market, political and social” (p. 108) forces at work, business school curricula must change to address these forces otherwise organizations lose their competitive edge. Leaders will need to have the skill to be successful during transformation and the best preparation Mangan (2011) points out is: focus. Keeping everyone focused on the task at hand and to operate as an integrated unit is one of the best ways to keep people engaged in the change process.

3 METHODOLOGY

Content Analysis of MPA Course Descriptions
At the time of this writing, 15 (11%) of the 139 NASPAA-accredited MPA programs were randomly selected for this study. Further research will continue in order to capture and include in this study at least 35 (25%) of the 139 NASPAA-accredited MPA programs. The authors reviewed each MPA program course curriculum and course descriptions to determine two factors: (a) the core focus of the program and (b) if organizational change (OC) was a fundamental element of the curriculum and courses. The authors also detailed whether or not leadership instruction was included in the courses or curriculum. All 15 (100%) of the randomly sampled MPA programs had as a program emphasis or core curriculum the following eleven areas:

Table I: Areas of MPA program emphasis or core

| 1) Public Finance and Budgeting  |
| 2) Economics                    |
| 3) The Policy Process           |
| 4) Organizational Theory and Development |
| 5) Quantitative methods         |
| 6) Policy Analysis              |
| 7) Human Resource Management    |
| 8) Ethics                       |
| 9) Evaluation                   |
| 10) Decision Making             |
| 11) Administrative processes    |

Only 13% (2 programs of 15 selected) included in the core curriculum or as an elective an organizational change course or focus. Some 26% (4 programs of 15 selected) of the MPA programs included courses specifically about leadership and as a part of that leadership curriculum, navigating change or innovation was an element in the description. For the most part MPA program curriculum included instruction in areas related to improving public sector professional practice: policy, human resources, finance etc. Organizational change, as a fairly new concept in the public sector has been coupled with leadership curriculum in MPA programs. All MPA programs offered specialty tracks and of those with a nonprofit management specialization, leadership and/or change was a fundamental element of course curriculum for that specialization.

Table 2: Organizational Change/Agency Instruction

<table>
<thead>
<tr>
<th>Organizational Change/Agency</th>
<th>Percent of Programs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Organizational Change (OC) Course</td>
<td>13%</td>
</tr>
<tr>
<td>Organizational Change in curriculum</td>
<td>13%</td>
</tr>
<tr>
<td>Leadership in curriculum</td>
<td>26%</td>
</tr>
<tr>
<td>Promoted/emphasized professional practice (managerial positions)</td>
<td>93%</td>
</tr>
<tr>
<td>Promoted individual change agency preparation</td>
<td>7%</td>
</tr>
</tbody>
</table>

Of the sampled MPA programs, with the exception of the University of Colorado at Denver, all programs had as a part of their mission statement career advancement or management or professional preparation at its core. The exception is UC at Denver, which had as its tag line: “Lead. Solve. Change.” In its core course offerings, Organizational Management and Change was a required course and as part of this course students learn organizational change theories and practices.

As with MBA programs, MPA programs are structured around developing professional practitioners and improving skill level to prepare individuals for leadership or management roles.

The implications are that organizational change preparation and skill, as a contemporary field in public management, is linked to leadership training in MPA curriculum. Although this study sample size is relatively small, the results can serve as a brief look into the emerging field of student’s preparation as leaders and change agents. Leadership study is multifaceted as Amney (2005) points out, it includes many sides of the human equation, and therefore preparing leaders is a complex task that will include skill and education in a variety of disciplines, not only organizational change. Further study is needed to gain a solid perspective of organizational change preparedness instruction in the public sector. Preliminary research shows that organizational change theory and skill has been included under the
umbrella of leadership instruction.

4 WHAT’S THE FUTURE FOR PUBLIC MANAGERS?

Interviews with Public Administrators
The authors conducted semi-structured interviews with three managerial leaders in the public sector. Each leader had at least a Master’s degree or law degree and ten years or more experience managing people in the public sector. One, retiring next week after 34 years in public service has two Master’s degrees and has worked at the Federal, State, County, Town and Village levels. Another, an attorney by training, ran a Congressman’s office for a decade before returning to the private sector for some years to then be recruited to work at the County level in economic development. Another interviewee is a social worker by training and rose through the ranks in the housing, youth and community development fields. Interviewees were asked about four key areas: 1) qualities public organizations need to be successful today; 2) kinds of skills public managers need to make an impact in today’s public sector; and 3) kinds of skills leaders look for in when hiring public managers when hiring.

The interviewees acknowledge that changing people is very difficult and managing a changing economic, social and political landscape even more so (Jarrett and Ellis, 2010). Each of the three started by stating that in government we need to meet less and accomplish more and that it takes effective leadership, knowledge desire and high EI (emotional intelligence) to get things done. High intellect and analytical skills ranked high on the list because a public manager is expected to juggle many duties and wear many hats since public work is more a marathon not a sprint.

Public leaders must be ready to listen, think, plan and then implement. Leading change and innovation was identified as being “forward thinking” and “proactive”. These skills were described as “necessary”, “critical” and “important”. Since public organizations are mission-driven, people expect them to be stable, secure and value passing on knowledge and values, as a result most public organizations are conservative and are therefore resistant to major shifts in direction or changes in vision (Shulman, 2010). As the public work place changes, managers are needed in place to be ready to help employees adapt their work style to a changing environment (Charbonnier-Voirin, 2011). Motivating, developing and leading by example were cited by our interviewees are critically important for effective public management style.

5 FINDINGS
Respondents were senior-level administrators in State, County and Town government. They are policy experts and manage the day-to-day operations of a division with an average of 5 – 20 employees. All of the organizations are based on Long Island and the average tenure for the respondents was 20 years of service. These respondents were selected because of their years of service, they are senior level employees, and because the authors wanted to include responses from administrators at different levels of government. Organizations in our research had office-wide annual budgets of at least $1M with a minimum of five program offerings.

Interview respondents (n=3) noted that the current economic and cultural climate demands more from public leaders than ever before. As “Mike” (name changed), a public manager nearing retirement noted, “In government for management track [positions] the ability to handle technology is the foundation I look for so much how often do you use a technology but do you have the ability to learn what is needed to do the job”. In other words, using technology or having agency knowledge or expertise is not the most critical factor in navigating the changing public landscape but having the ability to learn new things to get the job done is what counts.

Also, passion, commitment to mission and to being proactive were suggested as skills needed by public managers. One manager stated that public managers need “to be proactive and future oriented or not much gets done” so public managers will need to be even more connected to trends in the public landscape in order to be more effective. Further, the days of marathon meetings as proof of working hard in government or the public sector are also dwindling in importance. One manager noted “my general attitude is stop the meetings – get it done” so a “get it done kind of attitude” is most needed by public administrators. This harkens back to Miller’s (2011) admonishment that public leadership style should include being open to new ideas and being proactive and ready to move forward.

In further discussion about skills one manager brought up the concept of EI – emotional intelligence. They observed that emotional intelligence (EI) is paramount for successful public management. He noted that “you could be a cold fish and be a good writer/talker, but can you sense they can be trusted, sincere, caring, empathy[etic], politeness, sharing” , making the point that being credible and trustworthy are important characteristics for today’s public manager, especially during times of economic and social crisis. Each respondent agreed that leadership in the public sector requires a range of skill and experience and leaders in the public sector will be expected to draw on all of these skills and experiences.

One administrator emphasized that most things can be learned but that “articulation and timing” of the message or the change process was critical, therefore public administrators must be nimble, intellectually agile and have knowledge of “micro/macro economics, understanding a sense of money and how it affects the public and the world”, meaning that public managers must grasp the global effect of
policy, procedures and the economy, which confirms Mangan’s (2011) assertion that navigating the changing landscape of the public sector will require an integrated approach to leadership that includes understanding “strategic context” (p. 57), specifically, addressing contemporary issues by thorough investigation of that particular environment and the specific situation. This is a critical function of organizational change – understanding and being proactive in a particular environment.

All of these responses confirm that leadership is an integrated process (Amey, 2005), and that includes organizational change (Jarrett & Ellis, 2010; Cochran, 2010). Also it corroborates the findings of Mangan (2011) that organizations need “a cadre of managers who have a broad enough array of skills to cope with the new world” (p. 57). Therefore public administration best practices and skills are not limited only to training in organizational change but also include cross-functional strength in effective leadership, industry knowledge, desire/passion, empathy, analytical skills, empathy, EI, proactive/future-oriented, confidence and communication skills.

6 CONCLUSION
A necessary skill for future leaders is the ability to facilitate and implement organizational change. As one of the largest incubators of future leaders, PM (public management) schools particularly MPA programs, give students the knowledge, skills, tools and abilities to navigate and leverage change and crisis for long-term organizational success. MPA programs are at the forefront of change management preparation since MPA programs are where future public leaders incubate, develop and are primed. In the 21st century and beyond, MPA students, as future business leaders will need the knowledge, skill and ability to facilitate, embrace and implement change in the workplace. Change agents are needed in today’s workplace to help organizations identify, facilitate and manage change (Weiner, 2009).

Although there is a universal need for training and development in the area of organizational change, starting with one of the larger population of individuals being trained and developed for high-level public leadership positions across the globe, MPA students, the results of this preliminary study confirm that best practices of public administrators and preparation of future public managers (i.e. students) will need to emphasize an integrated approach to leadership (Chocqueel-Mangan, 2011) that includes skill in a variety of areas such as: collaboration, shared purpose (Edmonds, 2011) and sustainability (Miller, 2011) and these functions build the foundation for skill building in the area of organizational change. The authors will continue to interview public managers and will continue to expand the sample pool of MPA programs.

REFERENCES
On February 15, 2006, the Ministry of Finance of the People’s Republic of China formally announced the issuance of the Accounting Standards for Business Enterprises (ASBE) and required its adoption by all Chinese publicly listed companies effective January 1, 2007. The newly promulgated ASBE cover nearly all of the topics under International Financial Reporting Standards (IFRS) and are considered substantially in line with IFRS. The objective of this research is to examine the effect of ASBE, an IFRS-based standard, on earnings quality of Chinese companies.

IFRS is a set of principles and regulations developed by the International Accounting Standards Board (IASB) with the objective of increasing cross-border standardization of financial reporting. IFRS recommendations are perceived to concentrate best accounting practices, to favor transparency, and to provide a more complete representation of company finances than individual country domestic requirements. A substantial accounting literature has evolved in the last decade examining whether this is indeed the case.

Barth et al. (2008) examined accounting quality of firms in 21 countries before and after the adoption of International Accounting Standards (IAS) and found that accounting quality improved. But the evidence on whether IFRS helps is still mixed. Jeanjean and Stolowy (2008) examined earnings management before and after IFRS adoption in 2005 in three countries (Australia, France, and the U.K.) and found that earnings management did not decline after the transition. As for China, Zhou et al. (2009) investigated whether firms voluntarily adopting IAS had higher earnings quality for the period of 1994-2000. They found that adopting firms were less likely to smooth earnings but that their tolerance for reporting losses was not lower than non-IAS adopters.

Since ASBE made fundamental changes to Chinese accounting standards, we expect to see a positive impact on the quality of earnings. However, China’s lack of effective controls and enforcement mechanisms could also allow managers to engage in earnings manipulation activities even under the new rules. As such, we do not make directional hypotheses in this research.

Our samples are taken from the Chinese Securities Market and Accounting Research database. Since 2007 is the year that ASBE became effective, we chose 2004 through 2006 as our pre-ASBE period and 2007 through 2009 as post-ASBE period. After deleting extreme observations and firms that do not have the financial data, we obtained a total of 3,498 and 3,610 firm-year observations in the pre- and post-ASBE period, respectively.

To measure earnings quality, we adopt two constructs: earnings smoothing and managing earnings toward a positive target, and compare them before and after the implementation of ASBE. We use three measures to proxy for earnings smoothing.

Our first measure is the variability of the change in annual net income (ΔNI). We compute firms’ change in net income from prior year and regress the change on a set of control variables, including asset size, sales growth, equity issuance, debt issuance, leverage, and asset turnover. The variance of residuals from the regression serves as our proxy for earnings smoothing activities. Our second measure is the ratio of the variability of the change in net income, ΔNI, to the variability of the change in operating cash flows, ΔOCF. The variance of the residuals from the regression of ΔOCF on control variables therefore represents the variability of ΔOCF. Our third measure is the Spearman partial correlation between the residuals of accruals and the residuals of operating cash flows. We compute accruals (ACC) as net income minus operating cash flows (scaled by total assets). To measure the likelihood of reporting small positive net income, we define NI (scaled by total assets) as small positive (SPOS) if it falls within the range of 0 and 0.01. We then use a logit model to regress SPOS on an indicator variable POST which equals 1 if the observation is in the post-ASBE period and 0 otherwise.

We find higher variability of net income as well as higher variability of net income relative to cash flows in the post-ASBE period, suggesting that following IFRS-based accounting standards reduces earnings smoothing activities. On the contrary, ASBE does not seem to produce lower tolerance for reporting losses. Instead companies are more likely to manage earnings toward a positive target. Despite some limitations, this is the first study to examine the impact of mandatory adoption of IFRS-based accounting standards in China, an important developing economy. It adds to the ongoing discussion concerning the cost and benefits of IFRS implementation around the globe.


A DEA Based Multidimensional Framework for Analyzing Commercial Banks

Rashmi Malhotra  
Decision and Systems Sciences Department  
Saint Joseph’s University  
5600 City Avenue  
Philadelphia  
PA 19131, USA  
(610) 660-3497  
rmalhotr@sju.edu

D.K. Malhotra  
School of Business Administration  
Philadelphia University  
School House Lane & Henry Avenue  
Philadelphia  
PA 19144, USA  
(215) 951-2813  
MalhotraD@philau.edu

Raymond R. Poteau  
School of Business Administration  
Philadelphia University  
School House Lane & Henry Avenue  
Philadelphia  
PA 19144, USA  
(215) 951-2811  
PoteauR@philau.edu

ABSTRACT
This study develops a multidimensional framework using data envelopment analysis as a benchmarking tool to assess the performance of the commercial banks in India. Using data envelopment analysis approach, this study compares the relative performance of 35 banks against one another with eight variables as the benchmark parameters. This study finds that most of the banks are consistently performing well over a period from 2005 to 2009. The study also shows the areas in which inefficient banks are lagging behind and how they can improve their performance to bring them at par with the efficient commercial banks.

Keywords
Commercial Banks, Data Envelopment Analysis, Efficiency

INTRODUCTION
Data Envelopment Analysis (DEA) is a very popular technique that aids managers in making decisions in a multidimensional framework. Although, there are many methods and techniques to design decision processes that rank-order alternatives, but DEA also illustrates how an alternative can be improved. Thus DEA is an excellent tool for practitioners who can use this mathematical modeling technique to benchmark different decision-making units. This study illustrates the use of Data Envelopment Analysis to study the efficiency of commercial banks in India. For the past three years, the developed world has been experiencing many financial problems such as subprime lending, toxic assets, stricken banks, and over leverage. Usually the global financial turbulence hits the emerging markets harder than the developed market counterparts. However, the recent financial crisis has seen a reversal of roles between the developed markets and emerging markets. The emerging markets rebounded much more quickly, while the United States of America, the world’s biggest economy, along with other developed markets continue to struggle. Therefore, evaluating the performance of the commercial banks in an emerging market like India is an important issue that can offer further insight into the progress made by these nations using Data Envelopment Analysis.

Data Envelopment Analysis is a technique that assesses the productive efficiency of homogenous operating units such as schools, hospitals, banks or utility companies. DEA approach is a powerful technique for performance measurement, because of its objectivity, ability to handle multiple inputs and multiple outputs that can be measured in different units. Also, in contrast to non-parametric techniques such as Stochastic Frontier, DEA approach does not require specification of any functional relationship between inputs and outputs or a priori specification of weights of inputs and outputs. DEA provides gross efficiency scores based on the effect of controllable and uncontrollable factors.

We examine the performance of Indian commercial banks during the period 2005 to 2009. This time period covers before crisis and during crisis time. In particular, the behavior of profitability, cost of intermediation, efficiency, soundness of the banking system, and industry concentration are examined in this paper.

The rest of the paper is organized along the following lines. Section II provides a review of literature that relates to the data envelopment analysis approach. Section III discusses the data envelopment analysis model. Section IV discusses the data and methodology being used in this paper and section V provides an empirical analysis of our results. The paper provides a summary and conclusion of our results in section VI.

LITERATURE REVIEW
Several studies have explored the use of data envelopment analysis models to evaluate the relative efficiency of banks. Kumar and Gulati (2010) evaluate the efficiency, effectiveness, and performance of Indian public sector banks using DEA models. They report that there is not much relationship between efficiency and effectiveness in Indian public sector banks, while performance and efficiency are positively related. Ray and Das (2010) find considerable variation in average levels of profit efficiency across various ownership categories of Indian banks. In general, state owned banks are found to be more efficient than their private counter parts. Staub, Souza, and Tabak (2010)
investigate cost, technical and allocative efficiencies for
Brazilian banks in the recent period (2000-2007). State-
owned banks are significantly more cost efficient than
foreign, private domestic and private with foreign
participation. Tsolas (2010) provides a framework for
evaluating the overall performance of bank branches in
terms of profitability efficiency and effectiveness. The study
highlights the importance of encouraging increased
profitability and efficiency throughout the branch network
of the commercial banks. Zhao, Casu, and Ferrari (2008)
examine the impact of regulatory reform on the performance
of Indian commercial banks. Foreign banks appear to have
acted as technological innovators when competition
increased, which added to the competitive pressure in the
banking market

Shanmugam and Das (2004) measure technical efficiency of
Indian banks in four different ownership structures during
the reform period of 1992-1999. They find that the
efficiencies of raising interest margin are time invariant,
while the efficiencies of raising other outputs -non-interest
income, investments and credits - are time varying. Das and
Ghosh (2006) report that during the period 1992-2002,
medium-sized public sector banks performed reasonably
well and are more likely to operate at higher levels of
technical efficiency. They report a close relationship
between efficiency and soundness as determined by bank's
capital adequacy ratio. Their study also shows technically
more efficient banks have, on an average, less non-
performing loans. Mostafa (2007) uses DEA to evaluate the
relative efficiency of top 50 Gulf Cooperation Council
(GCC) banks. The study reports significant room for
improvement for the top 50 GCC banks.

Rezvanian, Rao, and Mehdian (2008) used a nonparametric
frontier approach to examine the effects of the ownership on
the efficiency, efficiency change, technological progress and
productivity growth of the Indian banking industry over the
period 1998 to 2003. They reported that foreign banks were
significantly more efficient when compared to other banks,
i.e. the Indian privately-owned and publicly-owned-banks.
The findings also provided evidence to indicate that a large
number of banks operated below their optimal scale. Kao
and Liu (2004) compute efficiency scores based on the data
contained in the financial statements of Taiwanese banks.
They use this data to make advanced predictions of the
performances of 24 commercial banks in Taiwan. Pille and
Paradi (2002) analyze the financial performance of Ontario
credit unions. They develop models to detect weaknesses in
Credit Unions in Ontario, Canada. Halkos and Salamouris
(2004) explore the efficiency of Greek banks with the use of
a number of suggested financial efficiency ratios for the time
period 1997–1999. They show that DEA can be used as
either an alternative or complement to ratio analysis for the
evaluation of an organization’s performance. The study finds
that the higher the size of total assets the higher the
efficiency. Neal (2004) investigates X-efficiency and
productivity change in Australian banking between 1995 and
1999 using DEA and Malmquist productivity indexes. It
differs from earlier studies by examining efficiency by bank
type and finds that regional banks are less efficient than
other bank types. The study concludes that diseconomies of
scale set in very early, and hence are not a sufficient basis on
which to allow mergers between large banks to proceed.
Paradi and Schaffnit (2004) evaluate the performance of the
commercial branches of a large Canadian bank using DEA.

Chen et al. (2005) study the efficiency and productivity
growth of commercial banks in Taiwan before and after
financial holding corporations’ establishment. They employ
a DEA approach to generate efficiency indices as well as
Malmquist productivity growth indices for each bank.
Howland and Rowse (2006) assess the efficiency of
branches of a major Canadian bank by benchmarking them
against the DEA model of US bank branch efficiency.
Sufian (2007) uses DEA approach to evaluate trends in the
efficiency of the Singapore banking sector. The paper uses
DEA approach to distinguish between technical, pure
technical and scale efficiencies. Sanjeev (2007) evaluates
the efficiency of the public sector banks operating in India for
a period of five years (1997–2001) using DEA. The study also
investigates if there is any relationship between the
efficiency and size of the banks. The results of the study
suggest that no conclusive relationship can be established
between the efficiency and size

THE DATA ENVELOPMENT ANALYSIS MODEL

The Data Envelopment Analysis (DEA) (Charnes et al.,
1978) is a widely used optimization-based technique that
measures the relative performance of decision making units
that are characterized by a multiple objectives and/or
multiple inputs structure. The DEA methodology measures
the performance efficiency of organization units called
Decision-Making Units (DMUs). This technique aims to
measure how efficiently a DMU uses the resources available
to generate a set of outputs. The performance of DMUs is
assessed in DEA using the concept of efficiency or
productivity defined as a ratio of total outputs to total inputs.
Efficiencies estimated using DEA are relative, that is,
relative to the best performing DMU or DMUs (if multiple
DMUs are the most efficient). The most efficient DMU is
assigned an efficiency score of unity or 100 percent, and the
performance of other DMUs vary between 0 and 100 percent
relative to the best performance.

DATA AND METHODOLOGY

The data for this study was obtained from CNBC’s
moneycontrol.com website. The sample consists of 20 state
owned banks and 15 private banks. Data covers the fiscal
year ending March 31st 2005 to March 31st 2009. We used
eight financial variables to evaluate the efficiency of the
banks in pre- and post-economic crisis period ranging from
2005 to 2009. Given the significance of banking in
economic growth, banks are considered private companies
with a public purpose. They seek to create value for all the
stakeholders and maximize shareholder wealth subject to the various risks and within the constraint of market competition, social constraints, and the legal/regulatory framework. The private nature of banks requires them to make profits to be viable and the public nature of banks emphasizes safety and soundness of the bank’s operations. Profitability is important for the survival of a bank, but safety and security is also critical for the survival of the financial system. Every bank makes trade-offs between the profitability level it is striving to achieve and the risks it is willing to take. When evaluating a bank, an analyst should consider both its profitability and its financial condition. Taken alone, short-term profit trends can be misleading. For example, if a bank achieves loan growth by engaging in excessively risky lending, it may be vulnerable to developments that would hurt its earnings or even threaten its survival over time. Therefore, in order to evaluate banks, we consider the following four broad sets of ratios that capture the private-public nature of banking: Profitability Ratios, Cost of Intermediation, Management Efficiency Ratios, and Safety Ratios. The profitability ratios are used to measure how well a bank is performing in terms of profit. The profitability ratios can also be defined as the financial measurement that evaluates the capacity of a business to produce yield against the expenses and costs of business over a particular time period. Profitability of a bank is assessed through:

**Return on Assets:**
Return on assets is a comprehensive measure of bank profitability and is computed by dividing bank’s net income by its total assets.

**Interest income relative to total funds:**
Interest income relative to total funds also known as yield on earning assets is calculated by dividing interest income on earning assets by the value of these assets during the same period. For the Indian commercial banks, we use interest income relative to total funds as a measure of the yield on earning assets.

**Intermediation costs:**
Intermediation costs reflect the cost of transforming deposits from one set of customers into loans for another set of customers. Cost of intermediation can also be used as an indicator of competitiveness in banking industry and can be measured in several different ways:

**Interest Spread:**
The difference between interest earned and interest expended is one measure of the cost of intermediation. Higher difference will point to a lower cost of intermediation and lower difference will point to a higher cost of intermediation.

**Interest Expense to Interest Earned Ratio:**
Interest expense represents the cost of obtaining deposits and interest earned the revenue on the loans made. Therefore, this ratio is another way of measuring the cost of intermediation.

**Management efficiency ratios**
Management efficiency ratios for banks mainly focus on the costs other than interest. We use the following two ratios to assess management efficiency of Indian banks.

**Asset Utilization Ratio:**
The efficiency with which a bank utilizes its assets.

**Efficiency Ratio:**
This ratio is based on noninterest expenses divided by operating revenue. Noninterest expenses represent all expenses incurred in operations, including such items as personnel and occupancy costs (salaries, technology, building, supplies, and administrative expenses). Operating revenue includes net interest income (interest revenue less interest expense) plus fees income. This ratio is a measure of a bank’s productivity based on costs required to generate each dollar of revenue. This reflects the costs involved in maintaining branches and servicing retail accounts. A lower efficiency ratio translates into lower operational costs, which means greater operational efficiency.

A safe and sound banking system is critical for a healthy financial market. Evaluation of a bank must consider the risks that the bank is taking in order to remain profitable. We use two ratios to evaluate riskiness of banks:

**Debt leverage:**
Banks are usually highly leveraged organizations. Banks borrow money so that they can expand their capacity to earn more money by either expanding their facilities or by making additional loans for which they do not have sufficient deposits. For the commercial banks in India, we use total debt divided by owners’ funds as a measure of debt leverage.

**Capital Adequacy Ratio:**
Capital capital plays a very important role in the safety and soundness of individual banks and the banking system. Capital adequacy norms ensure that capital should be adequate to absorb unexpected losses or risks involved. If there is higher risk, then it would be necessary to provide back up with capital. Capital Adequacy measures the strength of the bank.

In our study, the relationship among these banks is an important consideration as they are all commercial banks. Therefore, we select the envelopment models for our analysis. In addition, inflation is not a very flexible input that cannot be immediately controlled. Therefore, output-based formulation is recommended for our study. Furthermore, the performance of these banks does not depend on the scale of operations, thus variable returns to scale is safe assumption. Also, the structure of the DEA model (in envelopment form) uses an equation and separate calculation for every input and output. Therefore, all the input and output variables can be used simultaneously and measured in their own units.
5. EMPIRICAL ANALYSIS
Each of the banks is a homogenous unit, and we can apply the DEA methodology to assess a comparative performance of these banks. The study evaluates the progress of the commercial banks by tracking the gains (or losses) made by each of the 35 banks. Using the DEA methodology, we can calculate an efficiency score for the 35 banks on a scale of 1 to 100. We analyzed and computed the efficiency of the banks for the period 2005-2009. Table 2 illustrates the efficiency scores and the rankings of the 35 banks from the year 2005-2009. As illustrated in table 2, in the year 2005, 21 banks are 100% efficient as compared to all other banks. The other banks in the order of increasing efficiency in the range of 80%-89% efficiency are: ING Vysya Bank, Development Credit Banks, Dhanalakshmi Bank, Bank of India, and UCO Bank. Dena Bank, Syndicate Bank, Canara Bank, Union Bank of India, Bank of Baroda, State Bank of India, Axis Bank, Vijaya Bank, and Indian Bank are in the range of 90%-99% efficiency. In the year 2006, 20 banks were 100% efficient and on the efficiency frontier. The other banks in the order of increasing efficiency in the range of 80%-89% efficiency are: ING Vysya Bank, UCO Bank, Syndicate Bank, and Dena Bank. Bank of India, Union Bank of India, State Bank of India, Canara Bank, Vijaya Bank, Central Bank of India, Bank of Maharashtra, Punjab National Bank, Jammu and Kashmir Bank, Corporation Bank, and Oriental Bank are in the range of 90%-99% efficiency. In 2007, 9 banks are 100% efficient, and the remaining 27 banks are inefficient in the range of 74% to 96%. In the year 2008, 12 banks are 100% efficient, and the remaining 24 banks were inefficient within the range of 85%-98%. In the year 2009, 11 banks are efficient, and 25 banks are inefficient with efficiency levels in the range of 88%-99%.

Figure 1 illustrates the efficiency factor on the radial axis for the year 2009. The pareto-efficient banks form the efficiency frontier, and the inefficient banks are below the efficiency frontier. We present the score in percentage value varying between 0% and 100%. We find that efficiency of Indian Bank, Kotak Mahindra Bank, Yes Bank, Bank of Rajasthan, Federal Bank, HDFC Bank, Jammu and Kashmir Bank, Development Credit Bank, Karnataka Bank, ICICI Bank, and Karur Vysya Bank is 100%. On the other hand, UCO Bank, IDBI Bank, State Bank of Mysore, Oriental Bank of Commerce, Vijaya Bank, Central Bank of India, Canara Bank, Andhra Bank, ING Vysya Bank, Allahabad Bank, Syndicate Bank, Bank of Baroda, Dhanalakshmi Bank, Bank of Maharashtra, Indian Overseas Bank, Dena Bank, Union Bank of India, Indusland Bank, Punjab National Bank, Axis Bank, Bank of India, and City Union Bank rank from 12 to 35 in the order of decreasing efficiency of 99%, to 88%. This means that the observed levels of current return on assets, interest income relative to total funds, interest spread, Asset Utilization Ratio, and capital adequacy of Allahabad Bank are .91 times the maximum output level that Allahabad Bank can secure with its return on assets, interest income relative to total funds, interest spread, Asset Utilization Ratio, and capital adequacy. The same rationale applies to all the other inefficient banks. Table 2 illustrates the efficiency scores and the corresponding ranking of the thirty five banks in the year 2009.

Figure 2 illustrates the trend in the graphical form for all banks from the year 2005 to 2009. As UCO Bank, IDBI Bank, State Bank of Mysore, Oriental Bank of Commerce, Vijaya Bank, Central Bank of India, Canara bank, Andhra Bank, ING Vysya Bank, Allahabad Bank, Syndicate Bank, Bank of Baroda, Dhanalakshmi Bank, Bank of Maharashtra, Indian Overseas Bank, Dena Bank, Union Bank of India, Indusland Bank, Punjab National Bank, Axis Bank, Bank of India, and City Union Bank are inefficient for the year 2009; the next step is to identify the efficient peer group or banks whose operating practices can serve as a benchmark to improve the performance of these banks.

Table 3 illustrates the peer group for the inefficient banks. As shown in the table, Bank of Rajasthan, ICICI Bank, and Kotak Mahindra serve as peer for Allahabad Bank. In addition, Allahabad Bank is more comparable to Kotak Mahindra (weight 37%) and less comparable to its more distant peer Bank of Rajasthan (32%), and far distant peer ICICI Bank (31%). Thus, Allahabad Bank should scale up its efficiency ratio, interest expense to interest earned ratio, and loan to total funds ratio to make them comparable with Kotak Mahindra. Similarly, Andhra Bank has ICICI Bank (53%) as the closest peer that it should emulate and Kotak Mahindra (43%) as the distant peer bank and Bank of Rajasthan (4%) that can also be investigated. Bank of Baroda has Kotak Mahindra (55%) as its immediate peer, and ICICI Bank (44%) as its next distant peer, and Bank of Baroda (1%) as its far distant peer. Similarly, Bank of India has Indian Bank, Federal Bank, ICICI Bank, and Karur Vysya as its peers. Similarly, we can apply the same rationale to Canara Bank, Central Bank of India, Corporation Bank, Dena Bank, IDBI Bank, Indian Overseas Bank, Oriental Bank of Commerce, Punjab National Bank, State Bank of India, State Bank of Mysore, Syndicate Bank, UCO Bank, Union Bank of India, Vijaya Bank, Axis Bank, Bank of Maharashtra, City Union Bank, Dhanalakshmi Bank, Indusland Bank, and ING Vysya Bank. ICICI Bank and Kotak Mahindra Bank are the most immediate or immediate peer for most of the inefficient banks. On the other hand, Bank of Rajasthan is the distant or far distant peer for twenty inefficient countries. Similarly, Jammu and Kashmir Bank is the far distant peer for four of the inefficient banks and an immediate peer for Indian Overseas Bank. HDFC Bank is the far distant peer for three of the inefficient banks and immediate peer for Axis Bank. Therefore, ICICI Bank and Kotak Mahindra Bank are the most efficient bank among all the banks as not only are 100% efficient, but also serves as the role model for all (except three) banks. Similarly, Bank of Rajasthan is the...
next most efficient bank among the group of given banks. Jammu and Kashmir Bank serves as the next immediate peer bank for Indian Overseas Bank as the characteristics of Indian Overseas resemble Jammu and Kashmir Bank. Similarly, HDFC Bank is the immediate peer for Axis Bank as the two banks share similar characteristics. Thus, Jammu and Kashmir Bank and Axis Bank are the next most efficient banks among the group of banks under consideration. Karur Vysya Bank is the immediate peer for City Union Bank and far distant peer for Bank of India. This is quite expected as the characteristics of inefficient banks match the peer banks. The efficient peer banks have a similar mix of input-output levels to that of the corresponding inefficient bank, but at more absolute levels. The efficient banks generally have higher output levels relative to the bank in question. The features of efficient peer banks make them very useful as role models that inefficient banks can emulate to improve their performance. Furthermore, ICICI Bank and Kotak Mahindra Bank are used as an efficient peer to almost all Pareto-inefficient banks, so their frequency of use as an efficient-peer, expressed as a percentage of the number of pareto-inefficient banks, is 88%. Bank of Rajasthan is an efficient peer to seventeen banks with a frequency rate of 71%. Indian Bank is an efficient peer to six banks with net percentage of 25%. In addition, Development Credit Bank and Karur Vysya Bank have the peer efficiency frequencies of 8% each. Thus, we have enhanced confidence that Development Credit Bank and Karur Vysya Bank are truly well performing banks as they outperform all the other banks. Similarly, Karnataka Bank, Federal Bank, and yes Bank serve as a peer to one of the inefficient banks. Furthermore, these banks are more likely to be a better role model for less efficient banks to emulate because their operating practices and environment match more closely those of the bulk of banks. Table 4 displays the benchmarking factor and the hit percentage of efficient bank. The slack variables for 100% efficient banks as well as less than 100% efficient banks are not zero. Therefore, all the banks used in this study are not Pareto-efficient as the DEA model has been able to identify some feasible production point which can improve on some other input or output level. For example, for Allahabad Bank, besides increasing the output level of interest spread by 5.55 units, there is further scope for increasing interest to total funds by 9.26 (units), asset utilization by .01 (units), capital adequacy by 2.94 (units), and return on assets by 0.09 (units). Allahabad Bank can follow Kotak Mahindra, Rajasthan Bank, and ICICI Bank as its role models and emulate their policies. Similarly, IDBI Bank can reduce its interest expense to interest earned by 4.96 units and increase interest spread by 3.21 units, interest to total funds by 8.84 units, asset utilization by 0.02 units, capital adequacy by 3.51 units, and return on assets by 0.45 (units) while maintaining efficient levels equivalent to that of its peers—ICICI Bank and Bank of Rajasthan. On the same lines, we can find slack values for Indian Bank. Although Indian Bank is 100% efficient, there is still scope for improvement as Indian Bank can improve its output productivity without additional inputs. Therefore, Indian Bank can increase its output factors, interest spread by 3.47 units and interest to total funds by 8.37 units. Similarly, we can find the slack factors for all the other banks. Table 5 illustrates the slack values of the relevant factors for inefficient banks.

6. SUMMARY AND CONCLUSION

Using data envelopment analysis approach, this study compares the relative performance of thirty five Indian commercial banks against one another with eight performance variables as the benchmark parameters from 2005 to 2009. By studying the time period from 2005 to 2009, we also look at the variations in the performance of these banks over a period of time to assess their progress. This study finds that ICICI Bank, Kotak Mahindra Bank, Bank of Rajasthan, HDFC Bank, and Jammu and Kashmir Bank consistently outperform all the other banks with 100% relative efficiency. Indian Bank, Bank of Rajasthan, Development Credit Bank, Federal Bank, HDFC Bank, ICICI Bank, Karur Vysya Bank, and Kotak Mahindra Bank show consistent improvement in industry performance. The study also shows the areas in which inefficient member banks are lagging behind and how they can improve their performance to bring them at par with other participating banks.

The data envelopment analysis is a powerful technique for performance measurement. The major strength of DEA is its objectivity. DEA identifies efficiency ratings based on numeric data as opposed to subjective human judgment and opinion. In addition, DEA can handle multiple input and outputs measured in different units. Also, unlike statistical methods of performance analysis, DEA is non-parametric, and does not assume a functional form relating inputs and outputs. This study finds that there is lack of convergence in the performance of 35 banks and some banks have performed more efficiently in contrast to other banks.

However, as with any other study, this study using DEA has certain limitations (Ramanathan, 2003). The application of DEA involves solving a separate linear program for each DMU. Thus, the use of DEA can be computationally intensive. In addition, as DMU is an extreme point technique, errors in measurement can cause significant problems. DEA efficiencies are very sensitive to even small errors, thus making sensitivity analysis an important component of post-DEA procedure. Also, as DEA is a non-parametric technique, statistical hypothesis tests are difficult to apply. Therefore, further extension of this study would be to perform principal component analysis of the all the DEA model combinations. Furthermore, we can also use logistic regression to test the validity of the results.

REFERENCES

Figures, Tables, & References available upon request from the corresponding author.
Sustaining Traditional Grocery Store Formats in an Increasingly Modern Trade Shopping Environment

R. Mandhachitara, Ph.D
Associate Professor of Business Administration
Pennsylvania State University
3550 Seventh Street Road (Rt.780)
New Kensington, PA15068 USA
Tel: 1 724 334 6769
rum20@psu.edu

Frank Santimauro
Instructor of Business Administration
Pennsylvania State University
550 Seventh Street Road (Rt.780)
New Kensington, PA15068 USA
Tel: 1 724 334 6743
fas11@psu.edu

ABSTRACT

This study examines how the traditional form of grocery retailing in Bangkok, Thailand, the mom & pop outlet, enjoyed its legislative protection from the modern retail formats e.g. the hypermarket and the convenience store, but this was withdrawn by foreign pressure, principally pressure from the United States Trade Representative and the World Trade Organization in 1990. Following the massive introduction of hypermarkets and convenience stores by 2010 more than half of the traditional trade (mom & pop) indeed had closed its doors. Yet almost half of those traditional stores are still in business; an outcome very few people would have predicted.

Sustainability of the traditional grocery retail format has been achieved by what we might refer to as intra-innovation which includes the reactivation of the essence of a classic Chinese cash flow accounting principal referred to as Buy 10, Sell 7, Pay 3, Profit 4. The paper explains its history and its innovation to a sustainable cash flow positive accounting model.

Keywords: Retailing, Sustainability

1. BACKGROUND
From the turn of the twentieth century to the 1950s when Thailand enjoyed its first wave of industrialization, the retailing business structure remained virtually unchanged (Silcock 1967). The mainstay of retailing of all product categories was the single shophouse, or double and triple shophouses in the case of industrial or commercial goods, which were each a standard 10 x 10 meters (33 x 33 feet) with three floors wooden built on the pavement line of busy streets. The first floor was used for selling product, the second floor typically housed inventory and the third floor provided accommodation for the family that owned and staffed the shop. Hence, the term ‘shophouse’ is used to describe this ubiquitous, traditional retail trade format.

Traditional format grocery stores originally provided a limited variety in terms of goods offered, but as the economy in Thailand was very small and overwhelming agricultural (preindustrial) discretionary income was low, such lack of choice was not a particular inconvenience to shoppers. Relationships with ‘mom & pop’ grocery store owners, and their families who worked there, and regular shoppers were usually close and loyal. The inventory carried by a traditional shophouse grocery store combined with the offerings of the nearest local fresh market was sufficient for normal household needs.

In the 1950s, the coverage of each traditional store in Bangkok was 84 persons compared with 74 in Tokyo.
1970). By comparison, provincial Thai retail coverage was 1 store per 340 persons (Dunn 1964). However this paper concentrates on Bangkok, Thailand’s capital. More than 90% of traditional retailers until 1995 were ethnically, first to third generation, Chinese (Skinner 1958).

Anderson (1970) described the inventory of a sample of 10 tradition mom & pop grocery stores in an outlying suburb of Bangkok in Exhibit 1 below.

Exhibit 1 Articles Stocked in Ten Traditional Grocery Stores

<table>
<thead>
<tr>
<th>Flour</th>
<th>Enameled spoon</th>
<th>Mirrors</th>
<th>Canned fruit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biscuits</td>
<td>Landry soap</td>
<td>Quilted blankets</td>
<td>Coffee</td>
</tr>
<tr>
<td>Palm sugar</td>
<td>Dish soap</td>
<td>Undershirts</td>
<td>Cookies</td>
</tr>
<tr>
<td>Condensed milk</td>
<td>Soap</td>
<td>Hats</td>
<td>Envelopes</td>
</tr>
<tr>
<td>Kerosene</td>
<td>Toothpaste</td>
<td>Sewing items</td>
<td>Nails</td>
</tr>
<tr>
<td>Flashlights</td>
<td>Hair cream</td>
<td>Weaving items</td>
<td>Nylons ropes</td>
</tr>
<tr>
<td>Batteries</td>
<td>Combs</td>
<td>Pen/Pencils</td>
<td>Joss sticks</td>
</tr>
<tr>
<td>Matches</td>
<td>Face power</td>
<td>Paper pads</td>
<td>Candles</td>
</tr>
<tr>
<td>Fish sauce</td>
<td>Fabric softener</td>
<td>Lotion</td>
<td>Bathroom cleaner</td>
</tr>
<tr>
<td>Sugar</td>
<td>Tissue</td>
<td>Water</td>
<td>Rice</td>
</tr>
</tbody>
</table>

It was only as late as 1956 when Bangkok acquired its first department store (Feeny, Vongpatanasin and Soonsatham 1996) which by 1968 opened its fourth branch in a four-story structure in the CBD with its own ground floor supermarket. Also in the 1960s Bangkok began to expand from a population of 1.6 million persons to today’s 9 million. Throughout the Indo-China war (1965-1973) the country hosted American military personnel who demanded more supermarkets. Wigglesworth and Brotan (1966) point out that by 1966 there were nearly a dozen supermarkets in Bangkok. They defined supermarkets as being “self-service, complete with basket cart, plastic-packaged meats and vegetables, and a wide assortment of imported food” (p. 45). The presence in Bangkok of more than 100,000 American support and R & R troops, together with emerging foreign investments in import-substitution industrialization, created many more well-paying jobs and gave grocery retailing a big shot in the arm. Still, Feeney et al. (1996) remarked that until the 1990 “department stores made the biggest impact of all on Thai retailing, especially when forming part of shopping complexes” (p.39). By 1996 there were some 50 major department stores in Bangkok but this number has not increased over the past decade.

The economic boom between the late 1980s and 1997 produced a GDP growth rate of 8.9 per cent for nine years during which Thailand was one of the fastest growing economies in the world. The income of the top 10 per cent of the Bangkok workforce tripled during this period (Phongpaichit and Baker 1996).

2. ENTRY OF THE FOREIGN MODERN GROCERY TRADE

Until 1992 the entry into the Thai retail market by foreign companies was prohibited by law. This clearly protectionist legislation was designed to buffer the traditional mom & pop trade which at 1990 stood at 400,000 stores. Thailand had become very close to being another domino of the Vietnam war, with its direct neighbors, Laos and Cambodia succumbing. The Thai government was xenophobic in the 1980s about surrendering any more sovereignty to direct foreign investment. Moreover, the number of foreigners allowed employment in even joint-foreign Thai companies was severely limited by a one year residence and work-permit system. In addition to these bureaucratic barriers to direct foreign investment were the Alien Business and Occupation laws which discriminated in a very major way against foreign participation in retailing. These laws were strongly supported by the local traditional retail trade
lobby which represented constituencies considered important as voting pools for Thai politicians.

In the late 1980s, the United States Trade Representative’s office threatened the Thai government with level two sanctions unless all barriers to foreign participation in retailing were removed. In the face of strong opposition from the traditional trade, these were indeed repealed in the mid-1990s. This reform was strongly supported by the World Trade Organization. Wal-Mart was an early entry into foreign-owned retailing in Thailand but withdrew from the country only after two years in the mid-1990s because of poor operating profits. The Japanese followed with a wave of investments in department stores and very large supermarkets but none of these turned out to be very successful, mainly because they did not understand Thai consumer tastes. The traditional shophouse retailing lobby began to relax a little in the face of the apparent decline in the strength of the threat of jumbo-sized foreign competition.

Meanwhile Bangkok consumers were becoming much more affluent as industrialization forged ahead. The capital’s individual gross domestic product individual income grew from $2,733 in 1985 to $3,935 in 1988, to $7,874 in 1992 and to $9,451 by 1995 (Office of the National Economic and Social Development Board 1988-2001). By 1995 Bangkok’s population had grown to 7.5 million residents. Aspirations for a greater variety of food and grocery shopping options were growing stronger as the Bangkok population started to resemble a lower middle class consumption orientation and variety-seeking behavior became more common. Dana (1998) also pointed out that Bangkok shoppers were issued credit cards by banks on a very large scale beginning in 1995 and that these were not accepted by small retailers. Supermarkets had already introduced value-packs and the opportunity to purchase larger sizes than were available from the traditional small grocery retailer.

The evolution in consumer tastes created a fertile climate for the second and far more successful wave of modern trade shopping formats, mainly the hypermarket which was owned and managed by European companies. The movement of hypermarkets whose offerings were approximately 70 per cent grocery products into Bangkok was coordinated and rapid. In the late 1990s Casino and Carrefour (France), Makro (the Netherlands), and Tesco (United Kingdom) all had multiple store chains built and operating profitably. In 1992 there were over 24 hypermarkets in Bangkok in all of between 100,000 – 150,000 square meter size (Smith and Mandhachitara 2000). The McKinsey Quarterly (2002) reported that the modern trade format accounted for 45 per cent of the value of all Bangkok grocery sales. The devastation that the European-owned hypermarkets brought to the Bangkok traditional shophouse grocery retailers is demonstrated in Table 1 below from Shannon and Mandhachitara (2008).

<table>
<thead>
<tr>
<th>Type of Store</th>
<th>Number of Stores</th>
<th>Share of Market (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hypermarket</td>
<td>24</td>
<td>49.2</td>
</tr>
<tr>
<td>Supermarket</td>
<td>174</td>
<td>10.3</td>
</tr>
</tbody>
</table>

Table 1 Bangkok Grocery Retail Stores and Market Share 1999 and 2006
Convenience Store 1,500 6,310 9.4 12.5
Mom & Pop Store 200,500 125,000 18.1 9.0
Fresh Market 195 210 7.9 8.1
Total 202,262 131,808 100.0 100.0

Source: Adapted from AC Nielsen and Trade Sources

By 2010 the estimated number of hypermarket stores which predominately carried grocery products had reached 200 and mom & pop traditional retail outlets had dropped to slightly above 100,000. Some 4,000 traditional outlets had converted into convenience stores under a management contract and equity injection from three major chains; 7-Eleven, AM/PM and Family Mart. These convenience stores resemble in size and product offerings, those that can be found attached to most American gas stations. They are well decorated, air-conditioned and are staffed by uniformed personnel who are not family members of the owner. Unlike the traditional shophouse format, the convenience store does not include any living premises. The convenience store in Thailand is only rarely located within a gas station and instead very often occupies the space where one or two former bankrupted traditional store were once sited.

3. FIGHT OR FLIGHT OF THE TRADITIONAL GROCERY STORE FORMAT

As we have noted earlier, Bangkok lost more than half of its traditional grocery stores over the period mid-1990s to 2010 dropped to 100,000 (Bangkok Post, 2010). Their limited range of offerings, cramped space, no air-conditioned interior were no match for the ultra modern hypermarkets. Hypermarkets had large car parks, air-conditioned premises which often included children’s playgrounds, inexpensive chain restaurants, a wide range of new products and established brands in many sizes. The use of electronic checkout counters and EDI systems linked to distributors meant that they are never out of stock with items (a perennial problem with mom & pop stores) and they could sell their product on an everyday- low-price policy because of their ability to negotiate large quantity purchase discounts from manufacturers and distributors through central chain buying offices.

Most traditional grocery shophouses simply closed their doors during the mid-1990s and 2005 without putting up much of a fight with the modern grocery trade. Some traditional traders did form a lobby to pressure the government into passing the Retail Act in September 2002 which specifically limited the zoning of new hypermarkets outside of the city, restricted their opening hours, limited the proportion of imported goods sold and required them to pay punitive taxes to increase their operating expenses. Also, the Thai Ministry of Commerce set up an organization, the Allied Retail Trade Company (ART), in 2003 in an attempt to help small businesses compete with the giants of the modern trade by coordinating bulk purchasing rebates. The Government Savings Bank and the Industrial Finance Corporation of Thailand were to extend credit lines to small traditional retailers. Both the lobbying campaign and ART never really saw the light of day because of frequent government changes, three by coup d’ etat, over the past 15 years. Rather the surviving traditional retail outlets fought back with an adaptation of an ancient Chinese cash flow system which is the main contribution of this paper.

4. THE BSPP CASH FLOW ILLUSION

Even before Count Ponzi’s name came by, his now famous pyramid system of selling in
the nineteenth century, some overseas Chinese retail traders were using it from hundreds of years, referred to in the Hokkain dialect of Chinese by the acronym BSPP which spelled out in English is “Buy 10, Sell 7, Pay 3, Profit 4”. The BSPP cash flow is based on the tenants of a fraud and could only be operated for a few months before collapsing. Manufacturers, distributors and wholesalers were constantly vigilant that one was not in play at their expense by having salesmen frequently check stock and sales at traditional grocery trade shop house enterprises and, if warranted, move in and seize all inventory. This drastic action was not of course possible if the retailer has already left the premises with all his stock without having first notified the supplier and creditors.

Table 2 below is a simple example how the BSPP system with a store owner who in the first month buys an item on credit of $10 then immediately sells it for $7. By the time the second month comes around he is obliged to pay for the previous month’s purchase but he does not have the money. He therefore buys another unit again at $10 and also sells it for $7. This last sale brings his cash flow up to $14, and he is able to pay the first month’s bill and still have a net cash flow of $4. By the time the third month arrives he is indebted to the supplier but cannot meet his commitment with only $4, so he buys two more units on credit ($20) and again sells immediately for $14. He then pays the suppliers $10 owing from the second month to realize a net cash flow of $8. By the fourth month he must pay the supplier $20, which he does not have, but because none of his check has bounced during their relationship, the supplier now lets the shop owner buy on credit 4 units at a price of $40 which are immediately sold for $28 to pay the $20 owing and to provide a $16 net cash flow. It is about this time that the BSPP player starts to plan for a quick midnight change of location.

Table 2 The BSPP Cash Flow

<table>
<thead>
<tr>
<th></th>
<th>Month 1</th>
<th>Month 2</th>
<th>Month 3</th>
<th>Month 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Creditor</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Balance</td>
<td>10</td>
<td>10</td>
<td>20</td>
<td></td>
</tr>
<tr>
<td>Purchase</td>
<td>10</td>
<td>10</td>
<td>20</td>
<td>40</td>
</tr>
<tr>
<td>Payment</td>
<td>-</td>
<td>(10)</td>
<td>(10)</td>
<td>(20)</td>
</tr>
<tr>
<td>Balance</td>
<td>10</td>
<td>10</td>
<td>20</td>
<td>40</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Month 1</th>
<th>Month 2</th>
<th>Month 3</th>
<th>Month 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cash Flow</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Balance</td>
<td>-</td>
<td>7</td>
<td>4</td>
<td>8</td>
</tr>
<tr>
<td>Sales</td>
<td>7</td>
<td>7</td>
<td>14</td>
<td>28</td>
</tr>
<tr>
<td>Payment</td>
<td>-</td>
<td>(10)</td>
<td>(10)</td>
<td>(20)</td>
</tr>
<tr>
<td>Net Cash Flow</td>
<td>7</td>
<td>4</td>
<td>8</td>
<td>16</td>
</tr>
</tbody>
</table>

Most scholars and commentators observing the arrival of the modern trade retail format in Bangkok in the mid to late 1990s predicted the traditional shophouse grocery trade would disappear completely and quite quickly, if only because it could not compete with the hypermarkets on price. Yet in the face of the hypermarket competition but also the very attractive alternative to the mom & pop store, the convenience store, which sells its packaged grocery products at the same price as the traditional sector, some 100,000 traditional grocery retailers are still in business in Bangkok. Their secret of survival has been an adaptation of the classic cash flow like Ponzi scheme, Buy 10, Sell 7, Pay 3, Profit 4, described earlier in this paper. Table 3 depicts a variation of the cash flow principles adapted by the traditional grocery trade lead to sustainability in the face of very unforgiving competition. We have termed the adapted...
Table 3 also presents a simple illustration of how this type of operation may generate positive cash flows, in spite of seemingly illogical basis of the BSPP cash flow paradigm. Part A presents the calculations for net cash from operations. Part B of Table 3 presents the schedule of collections from lending.

In Part A we see monthly purchases beginning with 1 unit (purchase price of 10.00) in the first and second month. We have allowed for growth to 2 units in months three and four, 3 units in month five, and 4 units in month six and maintaining 4 units each month thereafter. Sales revenues are calculated assuming that all purchases are sold the same month in which they are purchased. All of the figures are derived from these assumptions.

The first column in Part A demonstrates that in month 1 of an accounting cycle, a unit of a grocery item is bought from a manufacturer or distributor/wholesaler on 60 days credit for $10. This item is then sold in the store at a discount of $8.50 (lower than the price at a hypermarket), a 2.5 per cent display allowance is also paid by suppliers to keep their brands visible. The traditional grocery store has now acquired two business line extensions, both of which are conducted “under the counter” so to speak. The first is as a commission agent for the well-organized informal underground lottery. This commission accounts for approximately 40 per cent of sales revenue of grocery products in the store (The other line extension is discussed below). No payment is made to the supplier in the first month, however if we include 12 per cent of sales as overhead (there are no salaries or rental due to the family nature of the traditional trade), the reader can observe that the first month yields net cash from operations of 11.13.

Noting that purchases are paid for in 60 days, we can continue development of the table. The cash flow is positive throughout and indeed Buy $40, Sell $34, Pay $10, Profit $24 is an accurate description of the state of the accounts.

As stated above, there is another line extension, and this is where things get interesting. The other “line extension” common to these types of retail operations is lending, with land deeds used as collateral. By lending cash surplus at a high rate of interest (20 per cent per month) on the personal money market, they are able to magnify profits tremendously, as illustrated in Part B of Table 3.

Initially the 11.13 profit from month one is available. This generates interest of 2.23, and combined with 11.13 profit from month two, provides 13.36 available to lend. During month three collections are 2.23 from the amount lent during the first month and 2.67 from the amount lent during the second month. In addition to the 12.26 net cash from operations during month three, we now have 17.16 available to lend. This process continues until month seven.

Beginning in month seven and each month thereafter, the retailer assumes collection of the principal from the amount lent during month one in addition to the interest due from the proceeding months. This completes the life of the first loan, and the process continues, potentially generating huge profits for the retailer.

Insert Table 3a and 3b here

5. CONCLUSION
The study has aimed to demonstrate how sustainability of a traditional retail format may be achieved at a reduced level in the face of overwhelming innovation and greater perceived consumer benefits by the modern grocery trade format. The cost of survival by the mom & pop retail format was, of course, also innovation of two life-saving innovations, i.e. acting as commerce agents for the underground lottery and using positive cash flow from delayed payment of goods sold arrangement to operate a personal loans business. Moreover, readers are reminded that this analysis has used only one product from one supplier in one store to demonstrate its argument.

The sustainability of traditional yet economically viable business organizational models in the face of newer, more modern configurations is a dilemma often faced by the market in times of rapid social and technological change. Often the government is induced to intercede at the behest of lobbyist of the traditional business form to pass legislation to protect at least some of the old and established ways. Yet this official forced intervention rarely works in the intermediate future because it is not a reflection of the wants and needs of market forces. To survive, the powerful competitive pressures of modern alternatives, a traditional form of business must, while not necessarily scarifying its innate historical core values, even if only partially, innovate in areas where it is most susceptible to attack.

REFERENCE


Table 3a  A Modernization of the BSPP Cash Flow for a Single Product

<table>
<thead>
<tr>
<th>Purchase Price</th>
<th>month 1</th>
<th>month 2</th>
<th>month 3</th>
<th>month 4</th>
<th>month 5</th>
<th>month 6</th>
<th>month 7</th>
<th>month 8</th>
<th>month 9</th>
<th>month 10</th>
<th>month 11</th>
<th>month 12</th>
</tr>
</thead>
<tbody>
<tr>
<td>CASH IN</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sales Revenue (65% of purchase price)</td>
<td>8.50</td>
<td>8.50</td>
<td>17.00</td>
<td>17.00</td>
<td>25.50</td>
<td>34.00</td>
<td>34.00</td>
<td>34.00</td>
<td>34.00</td>
<td>34.00</td>
<td>34.00</td>
<td>34.00</td>
</tr>
<tr>
<td>Display Allowance (2.5% purchase price)</td>
<td>0.25</td>
<td>0.25</td>
<td>0.50</td>
<td>0.50</td>
<td>0.75</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
</tr>
<tr>
<td>Underground Lottery Commission (40% of sales revenue)</td>
<td>3.40</td>
<td>3.40</td>
<td>6.80</td>
<td>6.80</td>
<td>10.20</td>
<td>13.60</td>
<td>13.60</td>
<td>13.60</td>
<td>13.60</td>
<td>13.60</td>
<td>13.60</td>
<td>13.60</td>
</tr>
<tr>
<td>CASH OUT</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Payment to Supplier</td>
<td>0.00</td>
<td>0.00</td>
<td>10.00</td>
<td>10.00</td>
<td>20.00</td>
<td>30.00</td>
<td>40.00</td>
<td>40.00</td>
<td>40.00</td>
<td>40.00</td>
<td>40.00</td>
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</tr>
<tr>
<td>Overhead (includes living expenses).12% of sales</td>
<td>1.02</td>
<td>1.02</td>
<td>2.04</td>
<td>2.04</td>
<td>3.06</td>
<td>4.08</td>
<td>4.08</td>
<td>4.08</td>
<td>4.08</td>
<td>4.08</td>
<td>4.08</td>
<td>4.08</td>
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</tbody>
</table>

Table 3b  Schedule of Collection from Lending

<table>
<thead>
<tr>
<th>Schedule of Collection from Lending</th>
<th>month 1</th>
<th>month 2</th>
<th>month 3</th>
<th>month 4</th>
<th>month 5</th>
<th>month 6</th>
<th>month 7</th>
<th>month 8</th>
<th>month 9</th>
<th>month 10</th>
<th>month 11</th>
<th>month 12</th>
<th>month 13</th>
<th>month 14</th>
</tr>
</thead>
<tbody>
<tr>
<td>Collect 20% interest of amount lent for six months.</td>
<td>2.23</td>
<td>2.23</td>
<td>2.23</td>
<td>2.23</td>
<td>13.36</td>
<td>2.67</td>
<td>2.67</td>
<td>2.67</td>
<td>16.03</td>
<td>20.59</td>
<td>4.12</td>
<td>4.12</td>
<td>4.12</td>
<td>24.71</td>
</tr>
<tr>
<td>Collect the principal in the sixth month.</td>
<td>2.23</td>
<td>2.23</td>
<td>2.23</td>
<td>2.23</td>
<td>13.36</td>
<td>2.67</td>
<td>2.67</td>
<td>2.67</td>
<td>16.03</td>
<td>20.59</td>
<td>4.12</td>
<td>4.12</td>
<td>4.12</td>
<td>24.71</td>
</tr>
<tr>
<td>Total Collections from Lending + Net Cash from Operations</td>
<td>11.13</td>
<td>13.36</td>
<td>17.16</td>
<td>20.59</td>
<td>26.84</td>
<td>42.13</td>
<td>51.69</td>
<td>52.03</td>
<td>63.96</td>
<td>76.28</td>
<td>92.66</td>
<td>122.32</td>
<td></td>
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</tr>
</tbody>
</table>
KASTEN V. SAINT-GOBAIN PERFORMANCE PLASTICS CORP.: NAVIGATING ANTI-RETIALIATION CLAIMS UNDER THE FAIR LABOR STANDARDS ACT OF 1938

Robert E. McDonald, Jr.
Franciscan University
rmedonald@franciscan.edu

ABSTRACT

This paper examines the 2011 decision of the United States Supreme Court in the case of Kasten v. Saint-Gobain Performance Plastics Corp, as well as the decision’s impact upon the field of human resource management. The suit involved an anti-retaliation lawsuit brought by a discharged employee after the employee made verbal complaints regarding the placement of time-clocks. The Court also addressed the issue employee credit for time spent donning and doffing work-related protective gear. In this decision, the Court interpreted the provisions and meaning of the language of the Fair Labor Standards Act of 1938 (FLSA), as well as the scope of its application within the workplace setting. Further, the case provides a discussion of the meaning and interpretation of the term “filed any complaint.” This decision also provided a review of Equal Employment Opportunity Commission Compliance Rules.

The decision is important to the field of Human Resource Management because it provides judicial interpretation and guidance of statutory language, as well as facts and circumstances, that may have a significant impact upon the human resource decision-making process. The FLSA has historically been nebulous in its meaning and application, so this decision provides a degree of clarity in terms of the practical application of the statutory language. The holding in this case may provide insight and guidance to human resource administrators in logging employee complaints within the FLSA context, or in dealing with issues of subsequent discipline and/or termination that may trigger anti-retaliation liability.

Keywords

Anti-retaliatory provision, Fair Labor Standards Act, filed any complaint

1 FACTS OF THE CASE

Plaintiff, Kasten, was an employee of Saint-Gobain Performance Plastics Corp. In a related suit brought by Kasten, the District Court determined that the defendant violated the Fair Labor Standards Act of 1938 (FLSA) by placing time-clocks in locations that prevented employees from receiving credit for time spent donning and doffing work-related protective gear. The plaintiff repeatedly made oral complaints to managers and company officials that he believed the placement of the time-clocks to be illegal, that he was considering legal action, and that he believed the company would lose. The plaintiff was subsequently terminated from employment. The Court accepted the plaintiff’s version of facts as valid, despite the defendant’s contention of a different version of events. The plaintiff filed an action in the current case based upon his termination, alleging a violation of the anti-retaliatory provision of the FLSA.

2 PROCEDURAL HISTORY

The District Court granted summary judgment to the defendant, determining that the FLSA anti-retaliatory provision did not apply to oral complaints. The Seventh Circuit Court of Appeals affirmed the decision. The plaintiff then appealed to the United States Supreme Court.

3 ISSUE BEFORE THE COURT

Whether an oral complaint of a violation of the FLSA is protected conduct under the FLSA’s anti-retaliatory provision?

4 THE FAIR LABOR STANDARDS ACT

The FLSA provides employment rules that pertain to minimum wages, maximum hours and overtime pay. The FLSA also contains an anti-retaliatory policy that creates a prohibition for employers:

“to discharge or in any other manner discriminate against any employee because such employee has filed any complaint or instituted or caused to be instituted any proceeding under or related to the Act, or has testified or is about to testify in such proceeding, or has served or is about to serve on an industry committee.”
5 ANALYSIS OF THE COURT

The Court was forced to determine whether the specific language “filed any complaint” included oral complaints, along with written complaints. Specifically concerning was whether the term “filed” was limited to something being filed in writing, or whether the term could include an oral statement.

Focusing on the language “any complaint,” the Court deemed that the provision suggested a broad interpretation and great latitude on the part of employee when making a complaint. The Court acknowledged that the specific language of the provision did not provide a great deal insight with respect to Congressional intent. However, the Court reasoned that a narrow interpretation may thwart legislative intent and undermine the FLSA’s anti-retaliation provision objectives. The Court noted that a writing requirement could also create a negative impact on employees that were illiterate, less educated or overworked.

The Court also expressed concern that prohibiting oral complaints may also inhibit or detract from the effectiveness of hotlines, interviews, or other oral methods of receiving employee complaints, which have traditionally been used by employers and employees within the workplace setting.

For further clarification of the legislative intent, the Court looked to the Equal Employment Opportunity Commission Compliance Manual, National Labor Relations Act, and views of the Secretary of Labor, determining that each of the foregoing have previously established policies and decisions that comport with the notion of a broad interpretation that would permit an oral complaint to satisfy the requirements of the FLSA’s anti-retaliaton prohibition that would constitute the “filing (of) any complaint.”

6 HOLDING OF THE COURT

The Court determined that the Seventh Circuit Court of Appeals erred in the determination that an oral complaint made by an employee cannot fall within the scope of the phrase “filed any complaint” in the FLSA’s anti-retaliation provision. The case was remanded for further proceedings consistent with the opinion.

7 THE DISSENT

Justice Scalia filed a dissent in the case. He expressed an interpretation that would provide for a legitimate violation of the FLSA anti-retaliatory provision only in the case of an official grievance being filed with a court or agency, excluding oral or written complaints from an employee to an employer.

8 CONCLUSIONS AND EXTRAPOLATIONS FOR EMPLOYERS

The result of this case expands the potential liability for employers when dealing with employee complaints made orally regarding wages and hours. Employers should be careful to document all complaints, and ensure that any form of disciplinary action is based upon an objective standard providing just cause for the action. The failure of an employee to put any complaint in writing will not limit the employee in pursuing a future FLSA anti-retaliation claim if the employee orally voices an FLSA-related complaint even without written documentation, and subsequently suffers an adverse employment action. Consequently, employers are now faced with greater potential liability, and must create policies and procedures that address employee concerns even if such concerns are not evidenced in writing. The complaints of employees cannot be ignored, and such complaints, even if of an oral nature, should be evaluated and reviewed prior to the undertaking of any employment action that may provide a negative consequence for the employee.

9 REFERENCES

Romance in the Workplace: Ethical and Legal Implications for Employers

Robert E. McDonald, Jr.
Franciscan University
rmcdonald@franciscan.edu

Frank W. Noble, Jr.
West Liberty University
fnoble@westliberty.edu

ABSTRACT
This paper examines the employer’s ethical and legal implications in dealing with the issue of romance in the workplace. The paper initially traces the legal ramifications of a hostile work environment, stemming from the Meritor Savings Bank decision and its progeny, as well as contemporary issues, such as the Morales v. American Apparel case. Further, the paper provides an examination of the employer’s right to control the off-duty activities of employees, including a consensual relationship between co-workers. The paper also provides an overview of the current legal framework guiding employer responsibilities in preventing a hostile work environment, including a discussion of the Morales v. American Apparel case. Finally, the paper addresses the ethical and corporate social responsibility implications that may be triggered for the employer when dealing with romantic relationships in the workplace. This paper is intended to provide guidance to managers and administrators in terms of setting organizational policy, and provides insight into the necessary requirements for legal compliance, as well as the ethical requirements and obligations of protecting employees and promoting a fair and equitable working environment.

Keywords
Corporate Social Responsibility, Ethics, Hostile Work Environment, Sexual Harassment

1 INTRODUCTION
It is clear that managers have a significant responsibility in navigating the myriad of employment laws controlling the employer-employee relationship. Title VII of the Civil Rights Act of 1964 is one of the most prominent federal statutes regulating employment based discrimination, including, but not limited to, causes of action alleging sexual harassment. However, there appears to be a delicate balance with respect to the employer’s right to protect employees from unwanted conduct or behavior and providing a fair and equitable workplace, while also potentially infringing upon the rights of employees by controlling off-duty conduct.

Courts currently recognize two forms of sexual harassment. Quo pro quo harassment claims are derived from conduct involving sexual advances in an explicit or apparent offer of obtaining, retaining, or advancing in a job. A hostile work environment occurs when unwelcome conduct or comments of a sexual nature unreasonably interfere with an employee’s ability to perform his or her job, or when the conduct creates a form of hostile, offensive, or intimidating work environment. These claims are very fact-intensive in determining which specific actions or comments may be a violation of law. It is also important to note that sexual harassment claims are not limited to actions or conduct between the different genders. As the Supreme Court has declared in Oncale, same-sex harassment is also actionable.

Although it is clear that employers have a legal responsibility to create and enforce policies that prohibit, prevent, and address actions related to sexual harassment, a significant complication can arise when the employer attempts to mitigate the propensity for claims by restricting or controlling the conduct of employees while off-duty. It is even more difficult to delineate the appropriate lines of conduct and policy when an employer attempts to regulate a romantic relationship within the workplace setting. Nevertheless, the employer may ultimately be legally responsible for any negative consequences that may result.

2 THE HOSTILE WORK ENVIRONMENT
In Meritor Savings Bank v. Vinson, the Supreme Court declared that a hostile work environment claim exists where conduct is “sufficiently severe or pervasive to alter the conditions of a victim’s employment and creates an abusive working environment.” The case involved a long-term relationship between a bank manager and a subordinate, in which the disparity of power may have contributed to the nature of the hostile work environment when determining whether the relationship was consensual. In Harris v. Forklift Systems, the Supreme Court eliminated the need for a plaintiff to demonstrate psychological injury to pursue a hostile work environment claim. Pursuant to Burlington Industries, Inc. v. Ellerth, an employer may be liable for a claim where the employer knew or should have known of the conduct or behavior. According to the Equal Employment Opportunity Commission, an employer is deemed to have notice of the conduct if: 1) it is openly practiced in the workplace; 2) well-known among employees; 3) or brought to the employer’s attention by the filing of a charge.

In Robinson v. Jacksonville Shipyards, Inc., the employer had a deficient sexual harassment policy, lacking a mechanism for the filing of complaints. Additionally, there was a lack of training among managers to ensure that they
were trained to properly document complaints. The plaintiff alleged that she was the subject of a hostile work environment, which included the posting of thirty pornographic pictures at the worksite, as well as verbal harassment in the form of explicit sexual remarks. Despite the plaintiff’s complaints, management failed to take any action to address her complaints. Two additional female employees also testified that they were subjected to sexual remarks, pinches and sexual teasing. The court ultimately ruled that the posting of pictures of nude and partially nude women is a form of sexual harassment.

Recently, a former Oakland Raider cheerleader turned police officer has filed a federal civil-rights sexual harassment lawsuit after working for the Vacaville Police Department in California. According to the $1.5 million lawsuit, the plaintiff alleges that a sergeant asked officers to show their hands if they wanted to see the plaintiff naked. Further, the complaint alleges that while being addressed in front of fellow-officers, an officer told her she had a “nice rack.” The City denies liability and contends that the claims lack merit for the claim, but will undoubtedly incur the expense and inconvenience of a potentially protracted and embarrassing lawsuit, at a minimum.

The Supreme Court attempted to provide guidance to employers in creating sexual harassment policies in the case of Faragher v. City of Boca Raton. The plaintiff was employed as a part-time life guard by the City of Boca Raton. The plaintiff alleged that the supervisor’s unwanted touching and lewd remarks from supervisors during her employment. One supervisor is alleged to have remarked, “Date me or clean toilets for a year.” In determining that the employer was vicariously liable for the actions of the supervisors, the court provided a two-element defense that remains available to employers when defending a sexual harassment claim. The first element of the defense is to demonstrate that the employer exercised reasonable care to prevent and correct promptly any sexually harassing behavior. The second required showing is that the employee unreasonably failed to take advantage of any preventive or corrective opportunities provided by the employer or to avoid harm otherwise.

In spite of the highly publicized settlements and verdicts, as well as the guidelines promulgated by the EEOC and case law, some employers still fail to develop policies and work environments that comport with contemporary legal requirements. For example, American Apparel is a company in which the CEO has espoused a philosophy of sexual freedom in the workplace, and condones consensual relationships. In fact, the CEO is reported to have expressed the importance of sexual energy to a creative atmosphere on which the fashion industry depends. Although the company denies the allegations, a former employee has filed a $250 million dollar lawsuit claiming sexual harassment. In Morales v. American Apparel, the plaintiff alleges, among other things, that she was forced into sex acts while an employee of the organization. The organization has dealt with multiple claims of a harassment-based nature in the past.

3 OFF DUTY CONDUCT

In light of the propensity for liability and economic ramifications of sexual harassment, some employers have created policies that prohibit even consensual relationships, including those that occur outside of the workplace setting. Some employers that currently permit consensual relationships are requiring employees engaging in the relationship to sign a written acknowledgement that the relationship is consensual, will not impact the business, and that they can end the relationship at any time without repercussions.

Employers must also be careful in the development of such policies as an overly stringent employment policy may infringe upon the employees right to privacy. In State of New York v. Wal-Mart Stores, Inc., two employees were terminated after entering into a dating relationship. One of the employees was married at the time. The organization determined that the employees violated the fraternization policy that was contained in the employee handbook. The claim from the plaintiff was that the termination violated New York Labor Law alleging that the relationship was a recreational activity not appropriate for employer regulation. The court ultimately determined that a romantic relationship did not fall within the legislative intent of New York Labor Law, and further, that dating was not a recreational activity. Consequently, the court upheld the employer’s decision to terminate the employees.

The majority of states have off-the-job privacy protection laws that inhibit an employer’s ability to restrict off-duty conduct unless the employer can demonstrate harm to the organization, or when such conduct impairs his or her ability to perform the job.

Recently, UPS was sued by a black male manager who was an employee of the organization for 21 years. The manager was dating an hourly employee who happened to be a white female. The company contended that the relationship violated the company’s non-fraternization policy. The manager was subsequently advised to terminate the relationship. The couple secretly maintained the relationship, ultimately marrying. The manager was later fired for violation of the policy and dishonesty. He filed suit alleging a Title VII violation, contending that the policy was sporadically enforced, and that he was being punished for being a black male romantically involved with a white female. The lower court and 7th Circuit Court of Appeals ultimately sided with the employer, determining that the plaintiff provided no proof that other couples were treated differently.

Based upon the foregoing, it is evident that employers must carefully craft policies that may impact the off-duty conduct of employees. Further, employers must maintain consistent enforcement of policies, and should develop a system of
documentation to ensure consent and limit the employer’s liability.

4 ETHICAL IMPLICATIONS

There is no doubt that employers have legal obligations to protect employees from sexual harassment in the workplace through the development, implementation and enforcement of proper policies and procedures. In addition to the legal compliance issues that exist when developing programs to combat sexual harassment in the workplace, there are also significant ethical implications. First, is it ethical for employers to restrict the ability of employees to associate in a romantic relationship during off-duty hours? Second, there is an additional level of complexity when the relationship involves a supervisor and subordinate. Third, there are ethical implications with respect to employer obligations to bystanders of the relationship, i.e., co-workers that may be impacted by conflicts of interest, or relationship drama that may eventually result.

Organizations attempting to maintain a high-level of corporate social responsibility are obligated to create programs and policies that exceed the minimum requirements of legal compliance. Ethical evaluation and actions are one of the four tenets of corporate social responsibility (Carroll, 2009). Consequently, employers cannot maintain a policy focusing only on litigation avoidance, but must also be proactive in developing policies that fairly balance the rights and interests of employees with that of the organization.

5 CONCLUSION

It is evident that romantic relationships within the employment setting can trigger potential liability for the employer. This may be especially true when the relationship involves a supervisor and subordinate. Organizations must carefully balance employee rights with the need to insulate the organization from legal liability and workplace disruptions. A failure to properly control the conduct in the workplace, and a reactive attitude with respect to the development and enforcement of policies may have drastic consequences.

The following guidelines should be followed by employers when developing sexual harassment policies: 1) have a clearly articulated policy against sexual harassment; 2) publishing of the policy to all employees of the organization; 3) multiple channels of complaint for those with claims; 4) a clearly articulated procedure for the filing of a complaint; 5) periodic training for all employees regarding appropriate conduct, policies and procedures.

The following guidelines should be followed when developing a non-fraternization policy: 1) consider a dating contract in which the employees acknowledge that the relationship is consensual; 2) enforce policies consistently; 3) consider a prohibition of relationships within departments and/or between supervisors and subordinates; 4) create realistic policies, they may be difficult to enforce; 5) in the event of a challenge to the policy, be prepared to articulate and demonstrate how romance in the workplace will negatively impact the organization.

Employers should go beyond legal compliance requirements when creating policies and programs related to the work environments. Ethical considerations should also be taken into account, including a respect for the rights of employees, as well as bystanders within the workplace setting. A focus on ethical considerations will also make the organization more socially responsible.

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The Design of Reliable Unpaced Production Lines with Single and Double Imbalance Sources

Sabry Shaaban  
Dept. of Economics, Strategy and Organization  
ESC La Rochelle  
102 rue de Coureilles  
La Rochelle, 17024, France  
+33 (0) 622 24 68 53  
Shaaban.s@esc-larochelle.fr

Tom McNamara  
Dept. of Finance & Operations  
ESC Rennes School of Business  
2 rue d’Arbrissel  
Rennes, 35065, France  
+33 (0) 299 54 63 63  
tom.mcnamara@esc-rennes.fr

Ahmed Atil  
Dept. of Finance & Operations  
ESC Rennes School of Business  
2 rue d’Arbrissel  
Rennes, 35065, France  
+33 (0) 299 54 63 63  
ahmed.atil@esc-rennes.fr

ABSTRACT
This paper studies the behaviour and performance of reliable, unpaced serial production lines with either one source of imbalance (namely, unbalanced service time means (MTs), unequal coefficients of variation (CVs), uneven buffer capacities (BC), or with two simultaneous sourced of imbalance (i.e. MT&CV, MT&BC and CV&BC). The lines were simulated with various values of line length, buffer storage size, degree of imbalance, coefficient of variation, along with a number of imbalance configurations. The primary measures of efficiency were idle time (IT) and average buffer level (ABL). Output data from the discrete event simulation of such lines under their steady-state mode of operation were analyzed using a set of statistical methods. The best, second best or good patterns in terms of IT and ABL were identified and compared to balanced line counterparts. Various relationships between the independent and response variables and rankings of the design factors with respect to their impacts on IT and ABL were also obtained.

Keywords
unpaced serial production lines; simulation; imbalance; imbalance

1 INTRODUCTION
In the design of reliable unpaced production lines (with no form of mechanical pacing), there are a number of issues to be considered if performance is to be improved. The operators at each station along the line work at different speeds or mean processing times (MTs) from each other; therefore, where to place these operators along the line is an important consideration.

The time taken by an operator to complete a task may naturally vary quite considerably. People in general cannot perform a task or a series of tasks again and again at exactly the same speed over a length of time, due to natural differences in their work time variation patterns and complexity and specificity differences in the work elements making up each individual task. This variation can commonly be measured in relative terms using the coefficient of variation (CV).

Another influence on the performance is the buffer size and placement. In theory, the best way to allocate buffer space along the line is evenly. However, this is not always possible for technical reasons which can restrict the availability of buffer space in the line, as a result of which a manager may have to distribute buffer capacity (BC) unevenly.

As a balanced line has generally been considered to be an ‘ideal’ line that does not exist in real life operations, it is quite interesting to see the effects on line performance resulting from distributing operators with different speeds or variations in operating times into carefully selected positions and placing buffer capacity with care along the line. This sort of research might lead to results which at worst are an improvement on just randomly placing workers anywhere, and at best will outperform the balanced line. The aim of this paper is to study the operating characteristics and efficiency of unpaced serial production lines with single or double simultaneous sources of imbalance, i.e. unequal mean processing times, variability, and / or buffer capacities, and compare them to those obtainable by a corresponding balanced line.

Figure 1 shows a 5-station serial line with 4 buffers, where the squares depict the stations and the diamonds represent the buffers:

![Figure 1. An unpaced production line](image)

This paper is organized as follows. First, the relevant literature is reviewed. Next the objectives, methodology and experimental design of the study are presented. Subsequent sections give the simulation results, their analysis and compare the performance of balanced and unbalanced lines. The two last sections provide summary of the results, discussion and conclusions.

2 LITERATURE REVIEW
2.1 Unbalanced Operation Time Means
Numerous studies have been reported on the performance and behaviour of unbalanced lines with unequal mean service times (MTs). These investigations can be classified into three broad groups; bowl phenomenon, algorithmic and theory of constraint studies.

The Bowl Phenomenon
Hillier and Boling (1966) analysed lines having up to 4 stations, exponential work time distributions, and equal buffer capacities. They found that the optimal throughput rate (TR) is achieved by assigning more work (higher MT) to the end stations and less work (smaller MT) to the middle stations, resulting in a gain of 0.54% in TR over that of the balanced line. They called this discovery the “bowl phenomenon”. It was found, however, that as the size of the buffers increases, this phenomenon quickly disappears, resulting in an optimal balanced line configuration. Later on, extended their analysis to lines of up to six stations and found that the improvement in TR due to unbalancing rises to 1.37%. Since then several other papers have been published on various aspects of the bowl phenomenon (see for example, Hillier and Boling 1979, Pike and Martin 1994 and Hillier and So 1996).

Algorithmic Approaches
A second line of research focused on the development of algorithmic approximation methods to obtain various performance measures for MT unbalanced lines (see e.g. Liu and Lin 1994, and Tempelemeier and Burger 2001).

Theory of Constraints
A third research area is in line with the Theory of Constraints (TOC). Briefly, TOC is concerned with the identification of the slowest station (the bottleneck or constraint) and adding more resources to it. TOC is based on the drum-buffer-rope (DBR) concept. Another TOC control system is constant work in process (CONWIP), under which a limit is imposed on the line’s total work in process (WIP).

Lambrecht and Segaert (1990) found that the average buffer content is highest in the buffer that immediately precedes the bottleneck. Cook (1994) studied three types of line design: a balanced line, a just-in-time line, and a TOC line. He concluded that the TOC line performed better than the other two designs. Similar findings were obtained by Chakravorty and Atwater (1996), with the bottleneck being located at the last station.

Atwater and Chakravorty (1994) found that a CONWIP line achieves lower cycle times (higher TR) than a balanced line. Kadipasaoglu et al (2000) indicated that both protective capacity and location of the constraint lead to significantly improved output, smaller idle time, and less work in process, but with diminishing returns. Sloan (2001) investigated CONWIP lines. Some generalizations concerning the protective capacity amount and location were obtained.

Gillard (2002) found that a DBR line outperforms a CONWIP line. However, as the difference in capacity between the bottleneck and non-bottleneck stations falls below 2%, CONWIP starts to outperform the DBR. Koh and Bullfin (2004) reported the same finding on the superiority of DBR line as compared to CONWIP.

Mabin and Balderstone (2003) studied over 80 firms that instituted TOC methods and in each case they found significant improvements in operational performance. Wu and Yeh (2006) used a drum development method for manufacturing environments with bottleneck re-entrant flows, in an attempt to implement an effective DBR management system.

2.2 Unbalanced Variability of Service Times
Early studies seemed to point out that placing stations incrementally, with the highest CVs towards the end of the line gave good results in terms of getting lower idle time (IT) than the balanced line, or a slight increase in output rate, or sometimes both (see e.g. Payne et al 1971 and Shimshak 1976).

Carnall and Wild (1976) found that the bowl phenomenon also existed for lines unbalanced in terms of their coefficients of variation (CVs). Their simulation of 4 and 10 station lines showed that a bowl-shaped line (stations with lowest CVs placed in the middle) gave lower IT and higher production rates than an inverted bowl-shaped line. They found that the gains due to unbalancing the CVs were higher than those seen when unbalancing the MTs. El-Rayah (1979) confirmed the results of Carnall and Wild.

De la Wyche and Wild (1978) found that for the shorter 3 and 4 station lines, slight reductions in IT were obtained for the bowl pattern over the balanced line. For the longer 12 station line however, ITs were significantly higher than for the control, suggesting that the bowl pattern only existed for shorter lines. This tendency was also observed by Lau (1992).

Other approaches include the use of heuristic or optimization methods to assess the performance of CV-unbalanced lines (see for instance Harris and Powell 1999, and Chiadamrong and Limpasontipong 2003).

2.3 Uneven Buffer Capacities
There is a significant body of literature on the issue of buffer allocation in production lines and its effects on performance.

Conway et al (1988) indicated that BC should be placed as evenly as possible along the line, but any small additional amount of BC should be allocated to the line’s centre. This has been confirmed by Hillier and So (1991, 1995) and Powell and Pyke (1996). Hillier et al (1993) concluded that there is no single optimal buffer allocation policy for all operating conditions, but that preference should be given to the central locations of the line. Should an optimal buffer configuration be unknown, it is best then to strive for an inverted bowl arrangement. This was referred to as the
‘storage bowl phenomenon’.

Powell (1994) studied a three station line with two buffer locations, namely B1 and B2. He found it best to alternate between the two placed (i.e. assigning the first unit to B1, the second unit to B2, the third unit again to B1 and so on). This policy was termed the ‘Alternation Rule’.


Papadopoulos and Vidalis (2001) stated that if the interest is to maximize throughput, then an inverted bowl or a close approximation is generally the preferred arrangement. On the other hand, if the objective was a reduction in average WIP level, then it is better to allocate more buffers towards the end of the line.

Chan and Ng (2002) found that lines where buffer space was evenly distributed should be avoided when combined with ascending or descending mean-time operation patterns in terms of throughput.

Hillier (2000) stated that optimal solutions in terms of cost showed that the bowl storage pattern performed best for lines with more buffer space, and that more evenly allocated buffers gave the optimal solution when buffer space was limited. These results were confirmed in a later study by Hillier and Hillier (2006).

Grosfeld-Nir and Magazine (2005) looked at buffer allocation in terms of whether and when a push or pull strategy was best at different line lengths. For lines where the buffer was allocated evenly, throughput was maximised, whereas unbalancing the buffer allocation gave better results in terms of WIP, ascending buffer patterns being superior to descending patterns.

2.4 Joint Imbalance of Both Service Time Means and Variability

Rao (1976) examined six different patterns of imbalance in a three-station line, with either one deterministic and two exponential stations, or two deterministic and one exponential station. In all situations, maximum TR was achieved when assigning lower MT to the exponential station(s). He reasoned that when both MTs and CVs are unbalanced, two opposing effects come into play; the bowl phenomenon for MT imbalance and the ‘variability imbalance’ for CV imbalance. Which of these two effects dominates will depend on station CVs and their particular service time distributions. For example, in a 3-station line where a deterministic station is sandwiched between two exponential stations, the optimal pattern of their MTs is an inverted bowl.

Mishra et al (1977) examined the same three–station line as Rao, with the single exception that the middle station was Erlangian. They found the two effects to neutralise each other when the central station’s CV is exactly 1/√2.

A number of researchers (see for example Muth and Alkaff 1987 and Liu and Lin 1994) have developed approximation or optimization methods for computing the performance of various MT&CV unbalanced lines.

Powell (1994) simulated an unbalanced three-station line and observed that when both MTs and SDs differ, the MT imbalance has a stronger impact than SD imbalance, so that the station having high MT is given preference in buffering over that with a high SD, unless there is a severe degree of the imbalances. This finding has since been confirmed for even longer lines by other authors, including Harris and Powell (1999) and Chiadamrong and Limpasontipong (2003).

Sabuncuoglu et al (2006) simulated single and multiple bottleneck lines having 9 and 15 stations. Their results showed that a variance bottleneck station will attract more buffer units than an MT bottleneck station, only when there is an extremely high variance imbalance. Further, if both MT and variance bottlenecks are located at the same position in the line, the bottleneck will have a stronger impact on buffer allocation.

2.5 Combined Imbalance of Both Operation Time Means and Buffer Capacities

Lambrecht and Sagaert (1990) observed that a bottleneck station draws inventory units towards it, with most units accumulating in the slot preceding the bottleneck station and the buffer space succeeding the bottleneck station having an extremely low degree of utilization. As the bottleneck becomes more severe, the amount of buffer space needed to maintain a given throughput is actually reduced. Hillier and So (1995) suggested that it is best to give more work to stations with higher buffer capacities and that slow stations should be placed towards both ends of the line.

Powell and Pyke (1996) found that in lines with a single bottleneck station, the best buffer allocation is to use the middle stations as a starting point and then to move outward in the direction of the end stations, with a balanced buffer arrangement being the best. When two bottleneck stations are symmetrically placed, the optimal buffer pattern is still a balanced arrangement. Also, a large degree of mean operation time imbalance is needed to shift the optimal buffer assignment away from a balanced arrangement.

So (1997) concluded that placing the bottleneck at the first work station results in the best output for the least amount of work in process. The worst results are obtained when locating the bottleneck at the last station. Hillier (2000) indicated that at a low degree of imbalance, an inverted bowl pattern for buffer capacity is not optimal. However, as the mean service time of the bottleneck becomes larger, more buffer space will be drawn to the line centre. At 30% imbalance, buffers start to become ineffective and so their
numbers should be reduced significantly.

Chiadamrong and Limpasontipong (2003) showed that a nearly balanced line benefits the most from large buffers when inventory holding cost is low. As mean operation time imbalance goes up, buffers soon lose their effectiveness. They also stated that whether the buffer units are placed before or after the bottleneck is not a critical issue. Sabuncuoglu et al (2006) found that the higher the severity of the bottleneck, the more buffers are pulled toward it, though the attraction rate diminishes when a certain coefficient of variation threshold is arrived at.

Hillier and Hillier (2006) concluded that when the cost of buffer space / work in process is high, then a balanced buffer allocation in conjunction with a bowl allocation for workload would most likely result in the best overall performance. However, if the cost of buffer space / work in process is low, then a good rule of thumb is to allocate a few percentage points more buffer to the centre of the line.

2.6 Simultaneous Imbalance of Both Variability and Buffer Sizes

Smith and Brumbaugh (1977) simulated a three-station line and considered six CV allocation patterns and three buffer distribution configurations. They found that the lowest mean throughput (highest idle time) occurs when the biggest CV is positioned at the middle station.

They also observed that a balanced buffer allocation (50–50%) is superior in throughput to all other arrangements and that assigning higher BC around stations with larger CV is beneficial in terms of throughput.

De La Wyche and Wild (1977) concluded that placing buffer capacity evenly around variable stations is the best with respect to idle time, followed by the configuration of positioning higher BC around stations with high CVs. Conway et al (1988) found that larger buffers should be allocated to stations with high service time variability for both input and output.

Hillier and So (1991) showed that in lines with higher variability, more BC should support the stations near the centre. Dallery and Gershwin (1992) recommended that buffers should be positioned in the vicinity of the highest variability station, rather than being close to the slowest station.

Powell (1994) concluded that to optimise buffer allocation, the first buffer should be placed closest to the high variance end station, except when the imbalance between the standard deviations is extremely big. Hillier (2000) found that the variability of work times exerts only a small influence on the buffer allocation pattern. Generally speaking, an inverted bowl configuration for buffer assignment is optimal, but with larger total buffer space, a bowl arrangement becomes more definite.

Chiadamrong and Limpasontipong (2003) studied lines in which one bottleneck station has either a mean service time or a variance larger than the other stations. They indicated that if the degree of imbalance is not substantial, more units of buffer are pulled toward a station with high mean processing time than another with severe CV or standard deviation.

3 STUDY OBJECTIVES, METHODOLOGY AND EXPERIMENTAL DESIGN

This research aims at studying the operating behaviour of reliable unpaced lines, with either one or two concurrent sources of imbalance, i.e. unequal mean service times, variability, and / or buffer sizes. The main objectives of the investigation are:

- To assess the merits of various patterns of imbalance and identify the best ones.

- To compare the efficiency of the unbalanced lines investigated to that of a corresponding balanced line and find out if improvement in performance is attainable.

- To gauge the effects of line design factors – line length, buffer capacity / mean buffer capacity and degree of imbalance on the dependent measures of performance; idle time and average buffer level.

- To determine the most significant factors affecting the dependent performance measures.

Computer simulation was viewed as the most suitable tool for this study, since no mathematical method can currently assess the more realistic serial flow lines, typically reported with positively skewed operation times.

3.1 Factorial Design

The most efficient and powerful of the many experimental designs is the complete factorial design. This design has therefore been chosen for the current investigation. In the context of the particular lines being studied, the independent variables are:

- Total number of stations in the line (N).
- Total amount of buffer capacity for the line (TB).
- Buffer capacity, BC / mean buffer capacity (MB), where MB = TB divided by the number of buffers.
- Degree of unbalanced service time means (DI).
- CV value range
- Pattern of mean work time (MT) imbalance.
- Pattern of coefficients of variation (CV) imbalance.
- Pattern of buffer capacity (BC) imbalance.

3.2 Performance Measures and Work Times Distribution

One way to measure how efficiently a line is working is
through the calculation of the average buffer level for the whole line (ABL); obviously, we want to keep the number of unfinished pieces in storage as low as possible. Another approach is to compute the time that the line is not functioning (idle time or IT) as a percentage of total working time. This needs to be kept as low as possible as well in the interests of keeping labour costs down.

A detailed study of published histograms of work times experienced in practice was conducted by Slack (1982). He concluded that the work time distribution is positively skewed and follows a Weibull distribution, with a CV value varying between 0.08 and 0.50 and averaging around 0.274. This probability distribution was applied in this study

### 3.3 Simulation Run Parameters and Model Assumptions

The following parameter values were employed:

- Initial conditions: start the simulation run with all the buffers being nearly half-full.
- Length of the transient period: discard all accumulated statistics produced during the 5,000 time units (TU) start-up period.
- Length of the simulation run and number of observations of performance measures: use a steady-state run length of 30,000 TU, divided into 12 sub-runs (blocks, or batches) of 2,500 TU each, i.e. the mean dependent variable values are recorded every 2,500 TU and then the grand mean, representing the average of these 12 mean values, is computed. This will reduce the autocorrelation to a negligible value.

The basic operating assumptions for the reliable unpaced serial flow line simulated are as follows:

- The first station is never starved and the last station is never blocked.
- No breakdowns occur and no defective parts are produced.
- Only one type of product flows in the system, with no changeovers.
- Time to move the work units in and out of the storage buffers is very small, hence negligible.

### 3.4 Unbalanced Lines Investigated

Two types of unbalanced lines were studied: 1. lines with only one source of imbalance and 2. lines with two sources of imbalance. Their designs are summarized in Table 1.

#### 3.4.1 Unbalanced Lines Investigated – Single Source Imbalance

In the investigations into the effects of imbalance from single sources, the independent variables not directly under study were kept constant, whereas the variable of interest was simulated in different patterns along the line, and the outcome variable computed for each of these configurations.

For all three of the investigations, the line length was specified at two values, a shorter 5-station line (N = 5) and a longer 8-station line (N = 8).

The single source lines were those imbalanced in terms of:

1. **Unequal service time means (MT investigation):** each station in this study has the same CV value of 0.274 and all the buffer capacities are equal. Buffer capacity (BC) was set at 1, 2 and 6 units. Mean time imbalance patterns were simulated with degrees of imbalance at 2%, (very low imbalance), 5% (relatively low imbalance), and 12% (higher imbalance).

2. **Unbalanced coefficients of variation (CV investigation):** each station has identical mean operation time value (MT), held constant at 10 units per workstation for both line lengths, and buffer capacity was 1, 2 and 6 units. The coefficients of variation were defined as steady, S (CV = 0.08), medium, M (CV = 0.27) and variable, V (CV = 0.5).

3. **Uneven buffer sizes (BC investigation):** each station has the same mean processing time and CV values (10 time units and 0.274, respectively), but buffer sizes are unequal. Mean buffer values were 2 and 6 units, allocated unevenly between stations.

#### 3.4.2 Unbalanced Lines Investigated – Two Sources of Imbalance

In order to study the influence of two sources of imbalance concurrently, the two independent variables under study were varied in different combined patterns, and the third variable was kept constant in each of the three investigations. Idle times and average buffer levels were calculated for each of the patterns simulated along with the corresponding transient size. In all three investigations, the simulations were run for line lengths of N = 5 and N = 8.

The lines with two sources of imbalance are as follows:

<table>
<thead>
<tr>
<th>Source of Imbalance</th>
<th>MT</th>
<th>CV</th>
<th>BC / MB</th>
<th>Line Length (N)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1a. Mean Operation Time (MT Investigation)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Degree of Imbalance: 25%, 50% and 125%</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CV = 0.274</td>
<td>1, 2 and 6 units equal for each station</td>
<td>5 and 8 stations</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1b. Variability (CV Investigation)</td>
<td>10 units/station</td>
<td>CV = 0.08; 0.27 and 0.50</td>
<td>1, 2 and 6 units equal for each station</td>
<td>5 and 8 stations</td>
</tr>
<tr>
<td>1c. Buffer Capacity (BC Investigation)</td>
<td>10 units/station</td>
<td>CV = 0.274</td>
<td>MB 2 and 6 allocated unevenly</td>
<td>5 and 8 stations</td>
</tr>
<tr>
<td>2a. MT + CV Investigation</td>
<td>Degree of Imbalance: 25%, 50% and 125%</td>
<td>CV = 0.08; 0.27 and 0.50</td>
<td>1, 2 and 6 units equal for each station</td>
<td>5 and 8 stations</td>
</tr>
<tr>
<td>2b. MT + BC Investigation</td>
<td>Degree of Imbalance: 25%, 50% and 125%</td>
<td>CV = 0.274</td>
<td>MB 2 and 6 allocated unevenly</td>
<td>5 and 8 stations</td>
</tr>
<tr>
<td>2c. CV + BC Investigation</td>
<td>10 units/station</td>
<td>CV = 0.08; 0.27 and 0.50</td>
<td>MB 2 and 6 allocated unevenly</td>
<td>5 and 8 stations</td>
</tr>
</tbody>
</table>

Table 1. Line designs studied (source of variability in bold)
2.a. Joint imbalance of both mean service times and CVs (MT&CV investigation): each station has equal buffer sizes, whereas both the means and CVs vary. Mean Buffer values of 1, 2 and 6 were decided on. The degree of imbalance (DI) of the mean times was 2%, 5% and 12% CV imbalance patterns used values going from steady (CV = 0.08), through medium (CV = 0.274), to variable (CV = 0.50).

2.b. Combined imbalance of both means and buffer sizes (MT&BC investigation): CVs of 0.274 are utilized for each station. However, both the means and the buffer capacities are allowed to be unequal. As in the previous investigations, DI was 2%, 5% or 12%, and mean buffer (MB) was set at 2 and 6 units.

2.c. Simultaneous imbalance of both CVs and buffer capacities (CV&BC investigation): all operation time means are equal to 10 time units, but the buffer sizes and CVs are unbalanced. The mean buffer is set at MB = 2 and 6 allocated unevenly between stations, and CV ranges through the three values (CV = 0.08, 0.274, 0.50), from steady to variable.

3.5 Patterns of Imbalance

In the study where mean operation times are imbalanced (MT Investigation), four patterns of imbalance are considered:

- A monotone increasing order (\(\uparrow\)).
- A monotone decreasing order (\(\downarrow\)).
- A bowl arrangement (\(\text{V}\)).
- An inverted bowl shape (\(\text{V}^{-}\)).

When coefficients of variability were imbalanced (CV Investigation), four CV imbalance policies were simulated; these were as follows:

- Separating the variable stations from one another by steadier stations (patterns P1 - P3 portray this policy).
- Assigning steadier stations to the line centre, i.e. a bowl arrangement (patterns P4 and P5 depict this policy).
- The stations with medium variability are allocated to the middle of the line. This policy represents both a decreasing order (pattern P6) and an increasing sequence (pattern P7) of CVs along the line.
- The most variable stations are assigned to the centre of the line - an inverted bowl shape (pattern P8).

These CV imbalance policies are illustrated in Table 2 below:

<table>
<thead>
<tr>
<th>Pattern (Pi) of Unbalanced CVs</th>
<th>Line Length (N)</th>
</tr>
</thead>
<tbody>
<tr>
<td>P1</td>
<td>M</td>
</tr>
<tr>
<td>P2</td>
<td>V</td>
</tr>
<tr>
<td>P3</td>
<td>S</td>
</tr>
<tr>
<td>P4</td>
<td>M</td>
</tr>
<tr>
<td>P5</td>
<td>MS</td>
</tr>
<tr>
<td>P6</td>
<td>V</td>
</tr>
<tr>
<td>P7</td>
<td>S</td>
</tr>
<tr>
<td>P8</td>
<td>M</td>
</tr>
</tbody>
</table>

Table 2: Unbalanced CV patterns S: (CV = 0.08), M (CV = 0.27), V: (CV = 0.50)

- Concentrating capacity towards the beginning of the line. This policy shows a decreasing order of BC (pattern C).
- No concentration. This policy is broken into three main sub-policies:
  - General (pattern D1).
  - Alternating BC between high and low along the line (pattern D2).
  - Positioning smaller BC towards the centre - a bowl shape (pattern D3).

These policies are displayed below in Table 3 below:

<table>
<thead>
<tr>
<th>Line Length (N)</th>
<th>5</th>
<th>8</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean Buffer Size (MB)</td>
<td>2</td>
<td>6</td>
</tr>
<tr>
<td>P1 A</td>
<td>1,1,1,5</td>
<td>3,3,15</td>
</tr>
<tr>
<td>P2 B</td>
<td>1,1,5,1</td>
<td>3,3,15,3</td>
</tr>
<tr>
<td>P3 C</td>
<td>5,1,1,1</td>
<td>15,3,3,3,3</td>
</tr>
<tr>
<td>P4 D1</td>
<td>2,2,3,1</td>
<td>6,6,9,9</td>
</tr>
<tr>
<td>P4 D2</td>
<td>2,3,2,1</td>
<td>6,9,6,3</td>
</tr>
<tr>
<td>P4 D3</td>
<td>2,1,3,2</td>
<td>6,3,9,6</td>
</tr>
<tr>
<td>Total Buffer Capacity (TB)</td>
<td>8</td>
<td>24</td>
</tr>
</tbody>
</table>

Table 3: Unequal buffer size patterns (Pi = policy of buffer capacity imbalance)

4 RESULTS

Due to space limitations, only IT and ABL results for the best, second best or good patterns and the balanced line will be shown.

4.1 Idle Time Results

4.1.1 IT Data

Tables 4-12 exhibit IT data for a number of unbalanced and balanced line configurations for the MT, CV and BC, MT&CV, MT&BC and CV& BC investigations:
4.1.2 Ranking of Policies and Patterns

From Tables 4-12 above, it is interesting to note the following:

**MT Investigation:**
- The results indicate that the bowl arrangement (V) is the best unbalanced pattern, followed by the inverted bowl pattern (^).

**CV Investigation:**
- It is not possible to discern one overall policy as being the best or the worst with respect to all constituent patterns.
- Pattern P4, a bowl arrangement, is the best overall pattern, followed by P5 (the second bowl pattern)

**BC Investigation:**
- None of the four policies can be regarded as the best or the worst in terms of all its constituent patterns.
- D2 (N = 5) and D1 (N = 8) are the best unbalanced patterns, i.e. the best configuration is one where the available capacity is distributed as uniformly as possible along the line.

### Table 8. MT&CV Investigation: IT data for MT pattern (^) & CV patterns P4, P5, P8, and the balanced line (line length = 5).

<table>
<thead>
<tr>
<th>Buffer Size</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pattern</td>
<td>V</td>
<td>V</td>
<td>V</td>
<td>V</td>
<td>V</td>
<td>V</td>
</tr>
</tbody>
</table>

### Table 9. MT&CV Investigation: IT data for MT pattern (^) & CV patterns P4, P5, P8, and the balanced line (line length = 8).

<table>
<thead>
<tr>
<th>Buffer Size</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pattern</td>
<td>V</td>
<td>V</td>
<td>V</td>
<td>V</td>
<td>V</td>
<td>V</td>
</tr>
</tbody>
</table>

### Table 10. MT&BC investigation: IT data for MT pattern (V) & BC pattern D2 and the balanced line

<table>
<thead>
<tr>
<th>Line Length</th>
<th>Pattern of Unbalanced CVs</th>
<th>P4</th>
<th>P5</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>Pattern Buffer Capacity Imbalance</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Balanced Line</td>
<td>4.905</td>
<td>2.066</td>
</tr>
</tbody>
</table>

### Table 11. CV&BC Investigation: IT data for CV patterns P4, P5, D2 and the balanced line (line length = 5)

<table>
<thead>
<tr>
<th>Line Length</th>
<th>Pattern of Unbalanced CVs</th>
<th>P4</th>
<th>P5</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>Pattern Buffer Capacity Imbalance</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Balanced Line</td>
<td>4.905</td>
<td>2.066</td>
</tr>
</tbody>
</table>

### Table 12. CV&BC Investigation: IT data for CV patterns P4, P5, D2 and the balanced line (line length = 8)

<table>
<thead>
<tr>
<th>Line Length</th>
<th>Pattern of Unbalanced CVs</th>
<th>P4</th>
<th>P5</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>Pattern Buffer Capacity Imbalance</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Balanced Line</td>
<td>4.905</td>
<td>2.066</td>
</tr>
</tbody>
</table>

4.1.2 Ranking of Policies and Patterns

From Tables 4-12 above, it is interesting to note the following:

**MT Investigation:**
- The results indicate that the bowl arrangement (V) is the best unbalanced pattern, followed by the inverted bowl pattern (^).

**CV Investigation:**
- It is not possible to discern one overall policy as being the best or the worst with respect to all constituent patterns.
- Pattern P4, a bowl arrangement, is the best overall pattern, followed by P5 (the second bowl pattern)

**BC Investigation:**
- None of the four policies can be regarded as the best or the worst in terms of all its constituent patterns.
- D2 (N = 5) and D1 (N = 8) are the best unbalanced patterns, i.e. the best configuration is one where the available capacity is distributed as uniformly as possible along the line.
- D1 (N = 5) and D2 (N = 8) can be deemed as good configurations.

**MT & CV Investigation:**
- No single CV policy can be classified as the most or least favourable in terms of all of its patterns, but some specific individual configurations may be viewed as the best or the worst.
- The best unbalanced MT pattern is an inverted bowl arrangement (^), combined with CV pattern P5 (bowl shaped), i.e. the MT bottleneck station is located in the middle of the line and the two CV bottleneck stations are positioned at the beginning and end of the line.
- There seems to be no clear second best configuration. In general, the lines having MT pattern (\) coupled with CV pattern P5 and MT pattern (^) along with CV pattern P4 have relatively low IT levels.

**MT & BC Investigation:**
- While individual patterns may be regarded as either best or worst, the results are not conclusive enough for any particular policy to be classified as such with regard to all of its patterns.
- The best unbalanced MT pattern is (V) & D1, i.e. an MT bowl configuration, coupled with a distribution of buffer capacity as evenly as possible.
- A good pattern is (V) & D2.

**CV&BC Investigation:**
- Broadly speaking, no overall best or worst policy can be identified.
- The most superior pattern can be considered as P4 & C, i.e., the combination of CV pattern P4 (bowl-shaped) and buffer arrangement C (a descending order).
- CV&BC configurations P5 & D3 (line length = 5 stations) and P4 & D2 (line length = 8 stations) can be viewed as the second best patterns.

4.1.3 **ANOVA and Effects of the Independent Variables on IT**

ANOVA results for the six investigations indicate that all of the main effects are highly significant at the 0.01 level and that all of the first order interactions are significant at the 0.05 level or above. The batch effect is insignificant, consolidating the belief that the steady state condition is attained. The variables affecting IT can be ranked as follows:

Table 13 summarizes the ranking of the various factors influencing IT (from the most important to the least influential) for the six investigations.

Further, the simulation results show the following relationships between the design factors and idle time:

<table>
<thead>
<tr>
<th>Investigation</th>
<th>Factor 1</th>
<th>Factor 2</th>
<th>Factor 3</th>
<th>Factor 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>MT</td>
<td>DI</td>
<td>BC</td>
<td>MT pattern</td>
<td></td>
</tr>
<tr>
<td>CV</td>
<td>BC</td>
<td>CV pattern</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BC</td>
<td>MB</td>
<td>BC pattern</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MT&amp;CV</td>
<td>BC</td>
<td>DI</td>
<td>CV pattern</td>
<td>MT pattern</td>
</tr>
<tr>
<td>MT&amp;BC</td>
<td>MB</td>
<td>DI</td>
<td>MT pattern</td>
<td>BC pattern</td>
</tr>
<tr>
<td>CV&amp;BC</td>
<td>MB</td>
<td>CV pattern</td>
<td>BC pattern</td>
<td></td>
</tr>
</tbody>
</table>

Table 13. Ranking of the independent variables in their effects on IT

- All six investigations:
  - IT increases with N, especially the lower BC / MB is in the case of the best pattern.
  - As BC goes up, IT decreases.

**MT, MT & CV and MT&BC investigations:**
- As DI is increased, so does IT.

4.2 **Average Buffer Level Results.**

4.2.1 **ABL Data**

Tables 14-22 exhibit ABL data for various unbalanced and balanced line configurations for the 6 two-imbalance source investigations:

**Table 14. MT investigation: ABL data for patterns \( ^, _8 \) and the balanced line (5 stations)**

<table>
<thead>
<tr>
<th>Buffer Size</th>
<th>1</th>
<th>2</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>% Degree of Mean Imbalance</td>
<td>0.060</td>
<td>0.070</td>
<td>0.102</td>
</tr>
<tr>
<td>Pattern of Unbalanced Line</td>
<td>( _8 )</td>
<td>( ^ )</td>
<td>Balanced Line</td>
</tr>
</tbody>
</table>

**Table 15. MT investigation: ABL data for patterns \( ^, _8 \) and the balanced line (8 stations)**

<table>
<thead>
<tr>
<th>Buffer Size</th>
<th>1</th>
<th>2</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>% Degree of Mean Imbalance</td>
<td>0.060</td>
<td>0.070</td>
<td>0.102</td>
</tr>
<tr>
<td>Pattern of Unbalanced Line</td>
<td>( _8 )</td>
<td>( ^ )</td>
<td>Balanced Line</td>
</tr>
</tbody>
</table>

**Table 16. CV investigation: ABL data for patterns P4, P6 and the balanced line.**

<table>
<thead>
<tr>
<th>Line Length</th>
<th>5</th>
<th>8</th>
</tr>
</thead>
<tbody>
<tr>
<td>Buffer Size</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Pattern of CV</td>
<td>P4</td>
<td>0.397</td>
</tr>
<tr>
<td>Balanced Line</td>
<td>P6</td>
<td>0.505</td>
</tr>
<tr>
<td>Balanced Line</td>
<td>P4</td>
<td>0.522</td>
</tr>
</tbody>
</table>
4.2.2 Ranking of Policies and Patterns

Based on Tables 14-24 above, it is interesting to note the following:

MT Investigation:
- The best pattern turns out to be the descending (\(\downarrow\)) order.
- The second best pattern being an inverted bowl (\(\wedge\)) arrangement.
- The worst pattern is the increasing (\(\uparrow\)) configuration.

CV Investigation:
- Since each policy includes a number of patterns with varying performance, it is impossible to label one specific policy as either the best or the worst. Specific configurations within the policies however, may be regarded as superior or inferior.
- The bowl-shaped pattern P4 is the best for ABL. This is the same pattern that gave the best results for IT.
- The second best pattern is generally P6.

BC Investigation:
- Again, no one policy can be said to be the best or the worst.
- The best pattern is A1 for \(N = 5\), and A2 for \(N = 8\), i.e. the best pattern has its buffer capacity concentrated towards the end of the line (an ascending order).
- When \(N = 5\), A2 is the second best pattern and when \(N = 8\), A3 is the second best configuration.

MT&CV investigation:
- None of the CV policies considered can be described as being the best or worst, as each consists of a number of patterns with different performance. Specific patterns however, may be ranked as the most or least performing.
- The best pattern is MT (\(\downarrow\)) coupled with CV pattern P4, i.e. the MT bottleneck station is positioned at the beginning of the line, while positioning the CV bottleneck stations at both ends.
- There is no clear-cut second best configuration.

MT&BC Investigation:
- Each BC policy is comprised of a number of different patterns with varying performance; therefore none of the
policies can be ranked as the best or worst. However, a specific individual pattern within each policy stands out as the most superior or inferior.
- The best pattern is (∗) & A, i.e. a monotone decreasing MT order, together with an ascending BC allocation.
- The second best configuration is generally (∗) & B (an MT descending arrangement, along with an inverted bowl buffer size pattern).

CV&BC investigation:
- Again, no single policy can be said to be the best or worst, but some individual patterns may be viewed as being so.
- The best CV&BC pattern is P4 & A, i.e., the combination of CV pattern P4 (bowl-shaped) and BC arrangement A (concentrating the buffers towards the end of the line).
- The second best configuration is P4 & B (N = 5) and P6 & A (N = 8).

4.2.3 ANOVA and Effects of the Independent Variables on ABL
The analysis of variance of the simulated ABL data for the six investigations produced the same findings as those found in section 4.1.3 on IT results. The rankings of the independent parameters influencing ABL are exhibited in Table 23 below:

<table>
<thead>
<tr>
<th>Factor 1</th>
<th>Factor 2</th>
<th>Factor 3</th>
<th>Factor 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>MT</td>
<td>BC</td>
<td>MT pattern</td>
<td>----</td>
</tr>
<tr>
<td>CV</td>
<td>BC</td>
<td>CV pattern</td>
<td>----</td>
</tr>
<tr>
<td>BC</td>
<td>MB</td>
<td>BC pattern</td>
<td>----</td>
</tr>
<tr>
<td>MT&amp;CV</td>
<td>MT pattern</td>
<td>DI</td>
<td>CV pattern</td>
</tr>
<tr>
<td>MT&amp;BC</td>
<td>MB</td>
<td>DI</td>
<td>BC pattern</td>
</tr>
</tbody>
</table>

With regards to the influence of the independent variables on average buffer level, the simulation results point out to the following common relationships:
All six investigations:
- ABL tends to rise as BC / MB increases.
MT, MT & CV and MT&BC investigations:
- As DI is increased ABL falls. In the case of the best pattern, this drop in ABL becomes less pronounced as DI continues to go up and as BC declines.

5 BEST UNBALANCED PATTERNS’ SAVINGS OVER THE BALANCED LINE
In the MT investigation, the most favourable unbalanced MT pattern in terms of IT was a bowl configuration (V). On the other hand, the best pattern in ABL is a decreasing MT order (∗). Table 24 shows the percentage differences in this pattern’s IT vis-a-vis the balanced line (the control).

From Table 24, the following can be observed:
For IT:

- The highest improvement in IT for the most favourable configuration over the balanced line is 3.46%
- An increase in DI either reduces or immediately eliminates the advantage in IT, especially for higher BC values.
- As BC increases, this advantage either instantly or gradually disappears.
- When N becomes larger, the advantage goes up in magnitude.

For ABL:
- The highest saving in ABL for the best pattern over the balanced line is 87.56%. So, placing the fastest operators at the end of the line can bring considerable advantages in terms of ABL performance.
- The best pattern outperformed the balanced line for all line lengths, buffer capacities and degrees of imbalance in mean times.
- As DI goes up, the superiority of the best pattern over the control increases.
- Increasing BC has the effect of raising the best pattern’s advantage.

For the CV investigation, the best overall results for reducing both idle times and average buffer levels came from pattern 4, one of the two bowl shaped patterns considered, with the steadier workers in the middle. A summary of the % differences in IT and ABL are shown for the best pattern in Table 25 below:

From Table 25, the following points can be noted:
- The highest IT saving over the balanced line (-43.08%) and the best ABL superiority (-53.75%) represent considerable savings.
- The improvements in IT disappear as the line lengthens, whereas the savings in ABL increase with the number of workstations.
- The unbalanced line is consistently superior to the balanced line for the ABL results across the board.
- There is no consistent trend which appears with the increase in buffer levels.
As regards the **BC investigation**, Table 26 summarises the % differences in IT and ABL for the best unbalanced patterns in comparison with those of the balanced line:

<table>
<thead>
<tr>
<th>Line Length</th>
<th>Mean Buffer Capacity</th>
<th>2</th>
<th>6</th>
<th>2</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>% Difference in IT</td>
<td>12.30</td>
<td>-16.14</td>
<td>19.83</td>
<td>1.75</td>
<td></td>
</tr>
<tr>
<td>% Saving in ABL</td>
<td>-48.80</td>
<td>-56.13</td>
<td>-47.11</td>
<td>-45.52</td>
<td></td>
</tr>
</tbody>
</table>

(-) indicates saving

**Table 26 BC investigation: % savings in the best pattern’s ABL over the control**

As is exhibited in Table 26 above, the following can be concluded:

- Pattern D2 (no concentration of available buffer capacity) shows a reduction in IT of 16.14% as compared to the balanced line, whereas for configuration A1 (buffer capacity is concentrated towards the end of the line), the savings obtained in ABL are considerable (over 56%).
- As N increases, any saving in IT disappears while ABL’s advantage declines.
- The best pattern consistently exhibits significantly lower ABL levels over the balanced line for all factor levels considered.

In the **MT& CV investigation**, the most favourable unbalanced pattern in terms of IT was an arrangement whereby the MT bottleneck station is located in the middle of the line and the two CV bottleneck stations are positioned at the beginning and end of the line. On the other hand, under the best MT&CV pattern with regard to ABL, the MT bottleneck station is positioned at the beginning of the line, while placing the CV bottleneck stations at both ends.

Table 27 exhibits the percentage differences in this pattern’s IT vis-a-vis the balanced line (the control):

<table>
<thead>
<tr>
<th>Buffer Size</th>
<th>Line Length = 5</th>
<th>% Difference in IT</th>
<th>% Saving in ABL</th>
<th>Line Length = 8</th>
<th>% Difference in IT</th>
<th>% Saving in ABL</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>-20.73</td>
<td>-45.06</td>
<td>2</td>
<td>-5.31</td>
<td>-54.12</td>
</tr>
<tr>
<td>1</td>
<td>2</td>
<td>-20.38</td>
<td>-61.22</td>
<td>2</td>
<td>-5.50</td>
<td>-60.04</td>
</tr>
<tr>
<td>1</td>
<td>12</td>
<td>-4.48</td>
<td>-74.72</td>
<td>12</td>
<td>-5.75</td>
<td>-75.85</td>
</tr>
<tr>
<td>2</td>
<td>5</td>
<td>-16.12</td>
<td>-59.25</td>
<td>5</td>
<td>-20.37</td>
<td>-59.95</td>
</tr>
<tr>
<td>2</td>
<td>5</td>
<td>-4.18</td>
<td>-67.76</td>
<td>5</td>
<td>21.02</td>
<td>-48.97</td>
</tr>
<tr>
<td>2</td>
<td>12</td>
<td>-26.84</td>
<td>-78.30</td>
<td>12</td>
<td>-60.55</td>
<td>-77.78</td>
</tr>
<tr>
<td>6</td>
<td>2</td>
<td>-3.58</td>
<td>-71.94</td>
<td>6</td>
<td>-16.52</td>
<td>-66.34</td>
</tr>
<tr>
<td>6</td>
<td>5</td>
<td>20.43</td>
<td>-83.35</td>
<td>5</td>
<td>37.65</td>
<td>-71.16</td>
</tr>
<tr>
<td>6</td>
<td>12</td>
<td>141.68</td>
<td>-90.00</td>
<td>12</td>
<td>135.19</td>
<td>-84.95</td>
</tr>
</tbody>
</table>

(-) indicates saving

**Table 27 MT&CV investigation: % difference in the pattern’s IT and ABL over the balanced line**

For IT:

- The biggest obtained saving in IT for the most favourable configuration over the balanced line is -20.73%.
- As DI increases, any improvement in IT either decreases or is immediately wiped out, especially for higher BC values.
- When BC is increased the savings disappear either immediately or gradually.
- As N rises, such savings become smaller.

For ABL:

- The highest saving in ABL for the best pattern over the balanced line is 90.06%.
- The best pattern outperformed the balanced line for all line length, buffer size and imbalance degree levels.
- When DI goes up, the advantage in ABL of the unbalanced line over the control increases.
- Increasing BC raises the best pattern’s advantage.
- For all the factor levels considered, the best pattern outperformed the balanced line in terms of ABL.

For the **MT&BC investigation**, the best pattern for reducing idle times came from an MT bowl configuration, coupled with a distribution of buffer capacity as evenly as possible. On the other hand, the most advantageous pattern for lowering average buffer levels turned out to be a monotone decreasing MT order, together with an ascending BC allocation. A summary of the % differences in IT and ABL are shown for the best patterns in Table 28 below:

<table>
<thead>
<tr>
<th>Buffer Size</th>
<th>Line Length = 5</th>
<th>% Difference in IT</th>
<th>% Saving in ABL</th>
<th>Line Length = 8</th>
<th>% Difference in IT</th>
<th>% Saving in ABL</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>2</td>
<td>9.03</td>
<td>-24.79</td>
<td>2</td>
<td>5.73</td>
<td>-31.96</td>
</tr>
<tr>
<td>2</td>
<td>3</td>
<td>22.27</td>
<td>-51.83</td>
<td>2</td>
<td>4.22</td>
<td>-50.01</td>
</tr>
<tr>
<td>2</td>
<td>12</td>
<td>40.16</td>
<td>-79.14</td>
<td>12</td>
<td>30.43</td>
<td>-74.04</td>
</tr>
<tr>
<td>2</td>
<td>2</td>
<td>11.45</td>
<td>-51.32</td>
<td>2</td>
<td>7.68</td>
<td>-57.37</td>
</tr>
<tr>
<td>2</td>
<td>5</td>
<td>17.33</td>
<td>-77.34</td>
<td>5</td>
<td>20.16</td>
<td>-65.80</td>
</tr>
<tr>
<td>2</td>
<td>12</td>
<td>155.63</td>
<td>-88.58</td>
<td>12</td>
<td>149.63</td>
<td>-84.58</td>
</tr>
</tbody>
</table>

(-) indicates saving

**Table 28 MT&BC investigation: % difference in the best pattern’s IT and ABL over the balanced line**

From Table 28, the following can be seen:

- Whilst the highest saving in the best unbalanced pattern’s IT over the balanced line is 11.57%, the biggest saving in ABL (89.58%) is over 7.5 times larger.
- As DI goes up, the ABL advantage increases, whereas any saving in IT disappears.
- When N rises, the % saving in ABL falls.
- The best ABL pattern consistently shows improvements over the balanced line for all the N, MB and DI values considered.

As regards to the **CV&BC investigation**, it was found that the most superior pattern with respect to IT was a combination of a bowl-shaped CV pattern and a descending order buffer arrangement. It was also observed that the best configuration in terms of ABL was a combination of a bowl-shaped CV pattern and a BC arrangement stipulating the concentration of the buffers towards the end of the line. Table 29 summarises the % differences in IT and ABL for the best unbalanced patterns in comparison with those of the balanced line:

<table>
<thead>
<tr>
<th>Buffer Size</th>
<th>Line Length = 5</th>
<th>% Difference in IT</th>
<th>% Saving in ABL</th>
<th>Line Length = 8</th>
<th>% Difference in IT</th>
<th>% Saving in ABL</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>2</td>
<td>9.03</td>
<td>-24.79</td>
<td>2</td>
<td>5.73</td>
<td>-31.96</td>
</tr>
<tr>
<td>2</td>
<td>3</td>
<td>22.27</td>
<td>-51.83</td>
<td>2</td>
<td>4.22</td>
<td>-50.01</td>
</tr>
<tr>
<td>2</td>
<td>12</td>
<td>40.16</td>
<td>-79.14</td>
<td>12</td>
<td>30.43</td>
<td>-74.04</td>
</tr>
<tr>
<td>2</td>
<td>2</td>
<td>11.45</td>
<td>-51.32</td>
<td>2</td>
<td>7.68</td>
<td>-57.37</td>
</tr>
<tr>
<td>2</td>
<td>5</td>
<td>17.33</td>
<td>-77.34</td>
<td>5</td>
<td>20.16</td>
<td>-65.80</td>
</tr>
<tr>
<td>2</td>
<td>12</td>
<td>155.63</td>
<td>-88.58</td>
<td>12</td>
<td>149.63</td>
<td>-84.58</td>
</tr>
</tbody>
</table>

(-) indicates saving

**Table 29 CV&BC investigation: % difference in the best pattern’s IT and ABL over the balanced line**

As regards to the CV&BC investigation, it was found that the most superior pattern with respect to IT was a combination of a bowl-shaped CV pattern and a descending order buffer arrangement. It was also observed that the best configuration in terms of ABL was a combination of a bowl-shaped CV pattern and a BC arrangement stipulating the concentration of the buffers towards the end of the line. Table 29 summarises the % differences in IT and ABL for the best unbalanced patterns in comparison with those of the balanced line:
As is exhibited in Table 29, the following can be observed:

- The highest IT and ABL savings for the best patterns over the balanced line are respectively around 31% and 78%.
- As N increases, the saving in IT disappears.
- When MB level becomes higher, the advantage in ABL increases.
- The best pattern consistently shows substantially lower ABL levels over the balanced line for all factor levels considered.

### Table 29. CV & BC investigation: % difference in the best pattern’s IT and ABL over the balanced line

<table>
<thead>
<tr>
<th>Mean Buffer Size</th>
<th>5</th>
<th>6</th>
<th>2</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>% Difference in IT</td>
<td>-31.46</td>
<td>-25.27</td>
<td>9.30</td>
<td>5.75</td>
</tr>
<tr>
<td>% Saving in ABL</td>
<td>-69.31</td>
<td>-77.93</td>
<td>-73.35</td>
<td>-75.76</td>
</tr>
</tbody>
</table>

(-) indicates saving

As is exhibited in Table 29, the following can be observed:

- The highest IT and ABL savings for the best patterns over the balanced line are respectively around 31% and 78%.
- As N increases, the saving in IT disappears.
- When MB level becomes higher, the advantage in ABL increases.
- The best pattern consistently shows substantially lower ABL levels over the balanced line for all factor levels considered.

### 6 SUMMARY

Several unbalancing policies and methods were examined in six single and double imbalance source investigations. None of the policies were noticeably better or worse than any of the others in broad terms, but there were particular patterns within each policy that showed improvements of performance either in idle time or in average buffer level when compared to the balanced line counterpart. Table 30 below summarizes the best performing configurations in terms of IT and ABL for all the investigations:

![Table 30. The influence of single and double source imbalance patterns on idle time and average buffer levels](image)

It should be noted from Table 30 above that for the CV investigation the best pattern in terms of both idle time and average buffer level results is the bowl shaped pattern. This is of great interest to those manufacturers who, within the constraints of lean buffering need to keep down buffer levels and increase output rates at the same time.

In addition, Table 30 shows that the best MT unbalanced pattern in terms of idle time is a bowl pattern. In the case of CV imbalance, a bowl arrangement, as represented by pattern P4, is best.

When the above two individual sources of imbalance are combined (MT & CV joint imbalance), one would intuitively expect that the best imbalance pattern would be a combination of both imbalance configurations. This did not appear to be the case for idle time, as the best pattern turned out to be an inverted bowl (V) for MT with a bowl pattern (P5) for CV. However, the combination of best patterns from single imbalance source studies was among the best for this joint imbalance investigation.

On the other hand, the best pattern with respect to a single source of imbalance in terms of average buffer level is a decreasing order (\(\downarrow\)) for MT imbalance. For the situation where line imbalance is due to unequal CVs, a bowl arrangement (pattern P4), is best.

Unlike the idle time results, those for the average buffer level were far more definitive. In the case of double source imbalance, the best pattern turned out to be MT (\(\downarrow\)), together with a CV bowl arrangement (P4), i.e. the best configuration could be predicted by combining the best patterns from each single source imbalance.

Furthermore, when line imbalance is due to only one source, the best patterns in terms of idle time are:

- For service time means imbalance: a bowl pattern (V).
- For buffer capacity imbalance: as close as possible to balance (D2 or D1).

When more than one source of imbalance is encountered (MT & BC concurrent imbalance), one would naturally assume that the best pattern in terms of idle time would be combinations of the individual patterns from the single source imbalance. This conjecture holds true as the best configuration identified was (V) & D1.

For the average buffer level, the best patterns are:

- For means imbalance: a decreasing means order (\(\downarrow\)).
- For buffer capacity imbalance: concentrating available total capacity at the end of the line (A1 and A2).

The results for average buffer level were also definite, as the best pattern (\(\downarrow\) & A) could reasonably be predicted by combining the best patterns from single source imbalance.

Moreover, when the imbalance is due to only one source, the following can be stated:

- For CV imbalance: a bowl arrangement (P4).
- For BC imbalance: as close as possible to balance (D2 or D1).

For two sources of imbalance (CV and BC simultaneous imbalance), one would expect that the best imbalance pattern would simply be a combination of the individual imbalance patterns. However, this was not the case, as the best pattern turned out to be P4 (a bowl configuration) & \(\downarrow\) & A (a decreasing CV order).

Although not the best, combinations of patterns from single imbalance source were observed to consistently produce good IT results for the double imbalance source investigation.
In terms of ABL, we can identify the best pattern as the following:

- For CV imbalance: a bowl arrangement (P4).
- For BC imbalance: buffer capacity is concentrated at the end of the line (A1 and A2).

The findings for the ABL were more conclusive in that the best pattern (P4 & A) could be predicted by simply combining the optimal pattern from single source imbalance.

It was also observed that as BC increases, IT declines but ABL goes up. In contrast, as DI rises, IT increases and ABL falls. This demonstrates that both BC and DI seem to influence IT and ABL in opposing directions. Also, when either DI or BC is increased, the superiority of the unbalanced line over the control decreases for IT, but becomes more pronounced for ABL. In addition, the best pattern with respect to ABL consistently showed improvements over the balanced line for all the N, BC and DI levels considered.

In addition, it was found that the best configurations result in a significantly smaller ABL levels than those of corresponding balanced lines at all the factor levels considered.

As regards to ANOVA, Tables 13 and 23 above show that BC / MB is the main factor influencing both IT (except for investigation MT) and ABL (with the exception of investigation MT&BC).

Furthermore, based on Tables 24-29, the highest generated % savings in IT and ABL are as shown in Table 31 below:

<table>
<thead>
<tr>
<th>Investigation</th>
<th>% Saving in IT</th>
<th>% Saving in ABL</th>
</tr>
</thead>
<tbody>
<tr>
<td>MT</td>
<td>-3.46</td>
<td>-87.56</td>
</tr>
<tr>
<td>CV</td>
<td>-43.08</td>
<td>-53.75</td>
</tr>
<tr>
<td>BC</td>
<td>-16.14</td>
<td>-56.13</td>
</tr>
<tr>
<td>MT&amp;CV</td>
<td>-20.73</td>
<td>-90.06</td>
</tr>
<tr>
<td>MT&amp;BC</td>
<td>-11.57</td>
<td>-89.58</td>
</tr>
<tr>
<td>CV&amp;BC</td>
<td>-31.46</td>
<td>-77.93</td>
</tr>
</tbody>
</table>

(-) indicates saving

Table 31. Highest obtained % savings in IT and ABL

7 DISCUSSION AND CONCLUSIONS

The main purpose of this study was to assess the effects that one and two sources of imbalance, i.e. unbalancing service mean times, coefficients of variation, or buffer sizes have on the efficiency of a production line. One of the main conclusions of this research is that the decision of how to allocate different sized buffers between workstations, where to place operators with different average working times and variability will depend on the particular conditions of the production facilities.

Whether a line manager considers a low idle time as more beneficial than a reduced average buffer level, will partly depend on the relative costs of inventory (buffer space, work in process and stock holding costs) and lost production.

It may be a priority to keep unfinished goods in storage as low as possible, for example fresh produce where hygiene and safety issues are important. In this case, a manager would opt for reductions in average buffer levels. To do this, one might allocate more buffer capacity to the end of the line. If worker average times are known to differ, it could be advantageous to put the fastest workers towards the end, and when workers vary in their average speeds to a great degree, one might consider placing the steadiest workers in the middle. This is especially the case where just-in-time and lean buffering strategies are in place where operations managers are facing enormous pressure to reduce expensive inventory, and so to decrease production lead times.

In contrast, if we are looking at a sector where labour costs are high, for example the automobile industry, then it could be advantageous to move towards bringing idle time down and either distributing buffer capacity as evenly as possible along the line or again considering placing faster workers towards the middle.

It should be remembered, however, that the patterns considered are specific patterns among numerous possibilities, and that imbalance directed in the wrong way could lead to the opposite effect, i.e. increases in average buffer levels and/or idle times.

Companies spend billions of dollars every year on the design, installation, operation, and maintenance of production lines. Even the slightest improvement in efficiency or reduction in inventory costs can result in substantial savings over the lifespan of a line. Since in practice most lines suffer from a certain degree of imbalance, it would make sense for production managers to examine the benefits of deliberately unbalancing their lines in the right way.

The study showed that significant improvement in the performance of a non-automated flow line can be achieved by unbalancing it in an appropriate manner. Savings as high as 31% in IT (a substantial amount), and 90.06% in ABL (a very significant percentage) over the balanced line were obtained (see Table 31 above). Savings of such magnitudes would appear to justify unbalancing production lines in many cases where operators differ in their mean processing times, variability, or when space and other restrictions require uneven buffer capacity allocation, especially given that these savings can be achieved while allocating workers to the same stations and without any need for extra investment in capital, labour, space, or other resources.

It is hoped that this research has contributed to the body of knowledge of unbalanced lines in furnishing additional insights into how to fine tune imbalanced flow lines with the objective of enhancing performance.
There is still scope for a considerable amount of research based on this study, for example experiments on the effects of the single source imbalance for merging (assembly) lines as well as for unreliable lines, will enrich knowledge in this area and give managers a more accurate picture when designing their production lines.

Ample opportunities for further research into this field of production lines are still available. For example, investigating the effects of having double sources of imbalance on merging (assembly) lines, or unreliable lines will expand knowledge in this field and furnish managers with a more enhanced line design and operation principles.

REFERENCES


REFERENCES


The Allocation of Buffer Capacities in Unreliable Unpaced Production Lines Using Simulation

Tom McNamara  
Dept. of Finance & Operations  
ESC Rennes School of Business  
2 rue d’Arbrissel  
Rennes, 35065, France  
+33 (0) 299 54 63 63  
tom.mcnamara@esc-rennes.fr

Sabry Shaaban  
Dept. of Economics, Strategy and Organization  
ESC La Rochelle  
102 rue de Coureilles  
La Rochelle, 17024, France  
+33 (0) 622 24 68 53  
Shaaban.s@esc-larochelle.fr

Ahmed Atil  
Dept. of Finance & Operations  
ESC Rennes School of Business  
2 rue d’Arbrissel  
Rennes, 35065, France  
+33 (0) 299 54 63 63  
ahmed.atil@esc-rennes.fr

ABSTRACT
The performance of unpaced unreliable production lines that are unbalanced in terms of their buffer storage sizes is investigated in this article. Lines are simulated at different levels of line length, total buffer capacity and mean buffer capacity, and for each of these the configuration of buffer allocation is varied. Output data on throughput, idle time and average buffer level are analysed using a range of statistical tools, and relationships between the independent and dependent variables were determined. The best patterns in terms of generating higher throughput rates (or lower idle times) and lower average buffer levels as compared to a balanced line are those where total available buffer capacity is allocated as evenly as possible between workstations and to concentrate more buffer capacity towards the end of the line, respectively.

Keywords
unpaced serial production lines; simulation; uneven buffer sizes

1 INTRODUCTION
The study of unpaced production line design is a growing area of research because of the complexity of the decisions to be made in several areas. Allocating tasks, operators and storage space for unfinished units along an unpaced production line are just a few of the challenges facing the line engineer. The outcomes of changing any one of these elements can lead to substantial variations in performance, so research which allows us to be able to predict the influence of the different variables of line design on output indicators will be of use both to the researcher and the practitioner.

The role of buffers is particularly important in unpaced lines because we know that the mean time taken to complete a task can vary considerably from one operator to another. The slow operators will therefore delay the work of preceding and succeeding servers, resulting in starving and blocking idle times. One way to deal with temporary imbalance is to allocate storage space or a ‘buffer’ between stations, which can hold the partly completed pieces while the slower operator catches up.

Lines unbalanced with respect to their buffer capacities (BCs) are of great interest as technical considerations often restrict the amount of space available in the line, thereby making it difficult to allocate total buffer capacity evenly amongst individual buffers.

In view of the fact that line imbalance seems to be actually enhancing performance in some unpaced reliable manufacturing lines (see for instance Conway 1988), it is of interest to extend the study of imbalance to the role of buffers in an unreliable line that experiences machine breakdowns. It is the aim of this paper to present the results of the impact of unbalancing buffer capacity, by simulating unreliable lines where buffers of unequal sizes are placed between workstations for a variety of patterns and line lengths.

This paper will first provide a review of the relevant literature followed by a presentation of the objectives of the study. Subsequent sections discuss the methodology and experimental design and provide the simulation results and analyses. The last two parts provide a summary of the results along with a discussion and some conclusions.

2 LITERATURE REVIEW
There is a significant body of literature on the issue of buffer allocation in production lines and its effects on performance. The literature deals with a variety of line types, for example balanced and unbalanced serial production lines, where workload allocation and variability are kept constant or vary along the line, respectively. Conway (1988), in a series of computational experiments looked at this area in detail and proposed general buffer placement principles and design rules for these types of line. More recently, Vergara and Kim (2009) have considered buffer allocation in balanced and unbalanced lines as part of a study investigating both reliable and automated lines. In addition to considerations of balance, research investigating buffer placement in unreliable lines, assembly closed-loop or rework loop lines have also been carried out (see e.g. Helber 2001 and Sabuncuoglu et al 2006).

Below is a review of studies into unreliable lines with a single source of imbalance in the form of uneven buffer allocation:
Ovumorie (1982a) developed a mathematical model for predicting the behavior of serial production systems subject to fixed buffers, in terms of work-in-process (WIP) and degree of unreliability of the individual stations. The operating characteristics of lines with a cold start and lines that have cycled many times were both taken into account. In a follow-up simulation investigation into unreliable lines, Ovumorie (1982b) studied a five station line with equal mean processing times (MTs). Observations were made on average buffer levels vs. allowable buffer capacity. He noted that the amount of spare capacity allocated to a particular buffer does not appear to have a substantial effect on the total output of the line.

Hillier and So (1991b) used exact formulae to develop a simple heuristic for the optimal allocation of buffer capacity (BC) that maximizes throughput (TR) in lines with failure. Four and five station lines were studied and an inverted bowl allocation of BC was found to be optimal in almost all cases. As the failure rate increases, TR decreases and as the coefficient of variation (CV) of the line increases, there will be a corresponding reduction in output. In addition, the results show that substantially more buffers are needed to recoup the loss in production rate, where downtime is high. They further observed that for CV < 1.5, the % increase in output from one additional unit of buffer at each station remained fairly constant, regardless of what the probability of failure or the downtime for each station are. Eventually, the size of the improvement decreases as buffer capacity increases. Moreover, they noted that the maximum amount of possible production declines when CV goes up, irrespective of the probability of failure, or each station’s downtime.

Bulgak et al (1995) studied assembly systems in which the machines were subject to jamming, i.e. a machine stoppage due to a problem while processing a part. Jams are similar to machine breakdowns in that they are independently occurring random events, requiring some time to clear and so have an impact on system production. A genetic algorithm was introduced for the optimal allocation of buffer with regards to output. Systems with 5, 7, 8, 10 and 15 stations, varying jam rates and inter-stage buffer limits of 1 to 15 were analyzed. They concluded that the buffers generally mimic the jam rates of their respective stations, i.e. high jam rates are associated with high BC. For example, for a line length of 5 stations, a descending jam rate has an overall descending BC allocation and an inverted bowl arrangement of jam rates is associated with the positioning of more buffers towards the centre of the line.

Ching (1998) developed an algorithm for determining optimal production policies that can result in a minimal operating buffer. Numerical examples were provided for a two station line. Vouros and Papadopoulos (1998) investigated the buffer allocation problem in terms of TR and presented a method that uses an established list of generic procedures, including simulation. They looked at lines of 3, 4 and 5 stations with balanced MTs and various machine reliability rates across the stations. The probability distributions utilized were exponential and Erlang for MT, exponential for the mean time before failure (MTBF) and exponential or Erlang-m for repair rates. They observed that their solution procedure is fairly accurate for small line lengths, but the accuracy declines for longer lines.

Papadopoulos and Vidalis (1999) considered MT balanced lines subject to failure that are operation dependent and exponentially distributed, deriving an algorithm for the optimization of buffer allocation. Lines having 3, 4, 5, 6 and 7 stations and total buffer capacities ranging from 1 to 20 were looked at. The distributions used to represent average service times were Exponential, Erlang-2, Erlang-4 and Erlang-8. They found that with low availability of machines in the line:

- When the number of unreliable machines is fewer than the total number of stations in the line and even numbered, the optimal allocation of buffers takes on a bowl shape.
- When the number of unreliable machines is fewer than the total number of stations in the line and odd numbered, the optimal allocation of buffers takes on a near (non-symmetric) bowl shape.
- When all the machines in the line are unreliable, the optimal allocation of buffers takes on an inverted bowl shape.

Gershwin and Schor (2000) investigated the buffer allocation problem and came up with two different algorithms. One addresses the problem of determining the minimum amount of BC needed to maintain some predetermined production level- referred to as the ‘Primal’ problem. The other seeks to maximize output, given a total amount of BC - referred to as the ‘Dual’ problem. Lines subject to machine failure and downtime were studied.

Helber (2001) dealt with the optimal allocation of buffers in terms of business decisions, with a profit maximization goal that takes into account the net present value (NPV) of the capital invested. Numerical formulae were developed, which showed that in the case of an eight station MT balanced line, the highest NPV is achieved with an inverted bowl allocation of BC. For more reliable lines, a correspondingly lesser amount of BC is needed to provide similar results.

Kim and Lee (2001) addressed the buffer allocation problem in lines suffering from failure, with the objective of minimizing the average amount of WIP, while maintaining a set throughput, subject to a fixed total buffer capacity. They presented two heuristic algorithms to deal with this problem. One involved a simple search technique that incrementally assigned units of buffer until some minimum output rate is achieved. The other used the ‘neighborhood’ local search.
More recently, Nahas et al (2006) showed a predictive method for determining the MTBF. They are more sensitive to the CV of the MTTR than the CV of the output level were obtained. They observed that buffer levels associated with higher CV values for MTBF / MTTR and that buffers increase as a function of line length, but at a decreasing rate.

Enginarlar et al (2002) studied lines having both equal buffers and buffers allocated in an inverted bowl fashion. They found that higher levels of BC are associated with higher CV values for MTBF / MTTR and that buffers increase as a function of line length, but at a decreasing rate.

Enginarlar et al (2001) put forward an ‘empirical law’ for predicting the minimum amount of buffer capacity needed to achieve a predetermined level of efficiency. The procedure was applied to lines having both equal buffers and buffers allocated in an inverted bowl fashion.

Enginarlar et al (2002) studied lines having MTBF and mean time till repair (MTTR) described by exponential, Erlang and Rayleigh probability distributions. The goal was to develop heuristics in order to determine the smallest amount of BC (referred to as ‘lean buffering’) needed to generate TR levels that are 95, 90, or 85% of a theoretical maximum production rate. Lines having 2, 3, 5 and 10 stations were considered. The study found that higher levels of BC are associated with higher CV values for MTBF / MTTR and that buffers increase as a function of line length, but at a decreasing rate.

Enginarlar et al (2005) analyzed lines subject to downtime with Weibull, Gamma and lognormally distributed MTBF and MTTR rates. The goal was to determine the minimum amount of buffer needed to maintain a desired rate of production (lean buffering). Analytical expressions for quantifying efficient buffer levels in terms of a minimum output level were obtained. They observed that buffer levels are more sensitive to the CV of the MTTR than the CV of the MTBF.

More recently, Nahas et al (2006) showed a predictive method for the efficient allocation of buffers with respect to a predetermined output for serial production lines subject to failure that incorporated a ‘degrading ceiling’ approach. The algorithm continuously searches for a solution, accepting all possible solutions as long as some objective function (e.g. cost) is less than or equal to some predefined limit. This limit, in turn, is methodically reduced as the search process is being carried out and is conditional upon a fixed search time.

3 STUDY OBJECTIVES
This research aims at investigating the operating behaviour of unreliable lines with unequal buffer sizes. The main objectives of the study are:
- Evaluate the merits of various patterns of unequal buffer sizes and identify the one with the most potential in terms of performance.
- Gauge the effects of line design factors – line length and mean buffer capacity on the dependent measures of performance; throughput, idle time and average buffer level and obtain regression expressions for these relationships in order to investigate which of these contribute more strongly to performance.
- Compare the efficiency of the unbalanced lines investigated to that of a corresponding balanced line and find out if improvement in performance is attainable.

4 METHODOLOGY AND EXPERIMENTAL DESIGN
Presently, no mathematical procedure is fully capable of handling the stochastic behaviour of unreliable serial lines. A number of limitations restrict the value of a mathematical queuing theory approach (both analytical and numerical) as it stands today. Firstly, it is known that as system size increases, the appropriate description and identification of its states needed to develop the necessary linear equations become very complex and difficult. The rapid rise of the number of system states with slight increases in line length and buffer size is one of the causes of this complexity. For example a line with three stations and no buffers has 8 system states, whereas a line with 10 stations and zero buffers has 6765 states. The result of this complexity means that the queuing model becomes particularly insoluble. Secondly, in terms of operator work time distribution, this type of approach is restricted to the exponential, uniform and a few other distributions that permit mathematical manipulation. These distributions are not truly representative of observed, right-skewed distributions of unpaced task times (such as the Weibull distribution). Finally, the queuing approach assumes independence of the arrival rate to a station from its service rate - a condition that is not met in practice for a line with a finite buffer size that allows blocking to occur, where the arrival rate depends on the service rate.

In view of the above, computer simulation was utilized as the most suitable technique for this kind of study.

4.1 Factorial Design
Complete factorial design is the most efficient and powerful of the many experimental designs. This has therefore been chosen for the current investigation. In the context of the particular lines being studied, the independent variables were:
- Total number of stations in the line, N.
- Total amount of buffer capacity for the line, TB.
- Mean capacity of each buffer, MB (= TB divided by the number of buffers).
- Pattern of buffer capacity imbalance, Pi.

And the dependent performance measures were:
- Average Buffer Level, ABL
- Idle time (percentage of total working time that the line is idle), IT.
- Throughput rate, TR

4.2 Performance Measures, Statistical Tools and Work Times Distribution
One way to measure how efficiently a line is working is...
through the calculation of the average buffer level for the whole line; obviously, we want to keep the number of unfinished pieces in storage as low as possible. Another approach is to gauge the time that the line is not functioning (idle time (IT)) as a percentage of total working time. This needs to be kept as low as possible as well in the interests of keeping labour costs down. Finally, perhaps of most interest to the people who design, manage and run production lines is the throughput rate (TR), with the aim of maintaining it as high as possible.

The following two statistical techniques were used to analyse the TR, IT and ABL data:
- Analysis of variance (ANOVA).
- Multiple regression analysis.

The work times distribution assumed for this investigation was based on a detailed study of published histograms of work times experienced in practice conducted by Slack (1982). He concluded that the work time distribution is positively skewed and follows a Weibull distribution, with a CV value averaging around 0.274. This was therefore the probability distribution used in the simulations run.

4.3 Simulation Run Parameters
In order to insure that what is being observed is as close to normal operating behaviour as possible, a sufficiently long warm up period is desired. The way to do that as described by Law and Kelton (2000) is to run a preliminary simulation of the system under investigation, choosing and observing one output variable, in this case WIP as they suggest. To ensure that observations are independent, minimum autocorrelation values of between -0.20 and +0.20 should be achieved (Harrell et al 2004). A trial procedure has established that after an initial run of 20,000 minutes, acceptable autocorrelation values of between -0.163 and +0.153 were achieved, leading to the conclusion that adjacent blocks were relatively independent. In the interest of collecting more valid statistical data, this initial warm up period was extended to 30,000 minutes. All collected data during the first 30,000 minute initial period were discarded and a production run of 20,000 minutes, broken down into 50 blocks (subruns) of 400 minutes each was gathered. This resulted in mean TR, IT and ABL values being computed every 400 minutes and the average of these 50 mean values (the grand mean) was computed with the objective of reducing serial correlation to a negligible level.

In addition, in order to generate an identical event sequence for all the designs and highlight the contrast amongst the configurations, the same random number seed was used in all the experiments.

4.4 Failure and Repair Parameters
In unreliable lines the stations are subject to random mechanical failure and repair times. An empirical study by Inman (1999) found that an exponential probability distribution with regard to both the mean time before failure (MTBF) and mean time to repair (MTTR) appeared to be representative of what is found on actual manufacturing systems.

The failure rate used for this investigation was 0.01 breakdowns per minute, with the repair rate being 0.10 repairs per minute, meaning that the mean time between failures was 100 minutes and the mean time until repair was 10 minutes (the same rates used by Altiok and Stidham 1983 and Hopp and Simon 1993). As a result, line efficiency was determined to be 91% (MTBF 100 / (MTBF 100 + MTTR 10)).

In addition, both the failure and repair rates were assumed to be independent, exponentially distributed random variables and as suggested by Law (2007), all downtimes were considered to be usage and not clock based.

4.5 Simulation Model Assumptions
A number of assumptions were made for simulation purposes. The basic operating assumptions for the asynchronous flow line simulated are as follows:
- Breakdown and repair rates are the same for each station
- No defective parts are produced.
- Only one type of product flows in the system, with no changeovers.
- The first station is never starved and the last station is never blocked.
- Time to move the work units in and out of the storage buffers is considered to be small enough to be negligible.

4.6 Specific Design Features
Each work station in the study has a mean service time set at 10 minutes and a CV of 0.274. Other additional factors and their levels are as follows:
- Line length: N values of 5 and 8 were specified in this study.
- Total buffer capacity: TB values of 8, 16 and 24 (for N = 5), and 14, 28 and 42 (for N = 8) were selected, giving rise to MB = 2, 4 and 6 for both N = 5 and 8.
- Five policies (Pi) were investigated for the total allocation of buffer size:
  - P1: Descending order (\(\wedge\)): concentrate the available buffer capacity nearer the beginning of the line – patterns A1 & A2.
  - P2: Ascending order (\(\vee\)): concentrate the available buffer capacity nearer the end of the line – patterns B1 & B2.
  - P3: Inverted bowl shape (A): concentrate the available buffer capacity nearer the middle of the line – patterns C1 & C2.
  - P4: Bowl shape (V): patterns: position smaller amounts of buffer towards the centre – patterns D1 & D2.
  - P5: General: no concentration of TB at one area of the line – patterns E1 & E2.
The configurations for the experimental design are exhibited in Table 1 below, where policies 1 through 5 are represented respectively by patterns A1 – A2, B1 - B, C1 – C2, D1 – D2 and E1 – E2.

| Pi = Policy of buffer capacity imbalance |

Table 1. Unequal buffer size allocation policies (Pi) and patterns Ai-Ei.

In this study a total of 2 line length * 3 mean buffer capacities * 5 policies * 2 patterns each = 60 configurations were simulated.

5 RESULTS
The results of the simulations are presented below. Section 5.1 presents the findings in terms of throughput rate (TR) performance. Sections 5.2 and 5.3 look at the results found for idle time (IT) and average buffer levels (ABL) in the line.

5.1 Throughput (TR) Results
5.1.1 TR Data
The throughput rates calculated for the patterns chosen are exhibited in Table 2.

Table 2. TR data for unreliable 5 and 8 station line, policies 1-5, patterns Ai-Ei and a balanced line

5.1.2 Ranking of Policies and Patterns and Effects of the Design Variables on TR
From Table 2, the following observations can be made:
- Despite the fact that no configurations consistently generated superior TR figures all across the board, pattern E2 (no concentration of available TB at one area of the line) has overall outperformed the rest, followed closely by E1 (again, no concentration of TB). Policy P5, therefore, can be considered as the best with respect to both of its constituent patterns (E1 and E2).
- Generally speaking, the worst pattern is B2, i.e. concentrate the available buffer capacity nearer the end of the line.
- In the case of the two best patterns, TR increases with N.
- As MB increases, TR also increases.

5.1.3 ANOVA and Multiple Regression Analysis
Table 3 below shows ANOVA results for TR:

From Table 3, the following can be noted:
- Both MB and N are significant at the 0.012 and 0.026 levels respectively, while the imbalance policy (P) and all the interactions are insignificant.
- The most influential factor on TR is MB, followed respectively by N, P and first and second order interactions.

Additionally, regression equations can help us to understand the nature of the relationship between the response variables and the independent factors. It was verified that nonlinear equations were representative of TR, IT and ABL data, resulting in high $R^2$ values. The fitted TR regression equation is given by:

$$TR = 0.748 + 0.037MB - 0.006N - 0.002MB^2$$
5.1.4 Best Pattern Savings in TR

The improvements arrived at by the best TR pattern over the control (the balanced line) are listed in Table 4 below:

<table>
<thead>
<tr>
<th>Line Length = 5</th>
<th>Line Length = 8</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean Buffer Size</td>
<td>% Difference in TR</td>
</tr>
<tr>
<td>2</td>
<td>-0.75%</td>
</tr>
<tr>
<td>4</td>
<td>0.36%</td>
</tr>
<tr>
<td>6</td>
<td>0.58%</td>
</tr>
</tbody>
</table>

* Best saving obtained
(-) Indicates a deterioration in TR

Table 4. % differences in the best pattern’s TR over the balanced line.

From Tables 4, we can see that:
- The highest throughput saving (0.58%) was obtained for the case a 5 station line with MB = 6. No advantage in TR was however achieved for a line length of 8.
- Overall, increasing N tends to wipe out any advantage.
- Buffer capacity does not appear to affect the % saving in TR.

5.2 Idle Time (IT) Results

5.2.1 IT Data

Table 5 below shows IT data for unreliable 5 and 8 station lines:

<table>
<thead>
<tr>
<th>Line Length</th>
<th>5</th>
<th>8</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean Buffer Capacity</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>P4</td>
<td>C1</td>
<td>20.584</td>
</tr>
<tr>
<td>P5</td>
<td>D1</td>
<td>20.254</td>
</tr>
</tbody>
</table>

Table 5. IT data for unreliable 5 and 8 station lines, policies 1-5, patterns A1-E1 and a balanced line

5.2.2 Ranking of Patterns and Effects of Design Variables on IT

From Table 5 above, it is interesting to note the following:
- None of the five policies can be labelled as the best or the worst one for both of its constituent patterns.
- Generally speaking, the data indicate that pattern E2 can be viewed as the best pattern, i.e. the best configuration is one where the available capacity is distributed as uniformly as possible along the line.
- Pattern B2 (concentrate the available buffer capacity nearer the end of the line) can be regarded as the worst pattern.
- As N increases, IT tends to increase, indicating that the influence of line length on IT is negative.
- IT declines as MB goes up, signifying that the impact of mean buffer size on IT is positive.

5.2.3 ANOVA and Multiple Regression Analysis

Table 6 below presents the ANOVA findings for IT:

<table>
<thead>
<tr>
<th>R²</th>
<th>Adjusted R²</th>
<th>Source</th>
<th>F</th>
<th>Pr &gt; F</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.000</td>
<td>0.992</td>
<td>MB</td>
<td>3043.189</td>
<td>0.013</td>
</tr>
<tr>
<td></td>
<td></td>
<td>N</td>
<td>1052.405</td>
<td>0.020</td>
</tr>
<tr>
<td></td>
<td></td>
<td>P</td>
<td>91.559</td>
<td>0.081</td>
</tr>
<tr>
<td></td>
<td></td>
<td>MB*N</td>
<td>45.890</td>
<td>0.104</td>
</tr>
<tr>
<td></td>
<td></td>
<td>P*MB</td>
<td>12.708</td>
<td>0.218</td>
</tr>
<tr>
<td></td>
<td></td>
<td>P*N</td>
<td>9.837</td>
<td>0.244</td>
</tr>
<tr>
<td></td>
<td></td>
<td>P<em>MB</em>N</td>
<td>8.471</td>
<td>0.265</td>
</tr>
</tbody>
</table>

*Significant

Table 6. ANOVA data for IT

From Table 6, the following can be seen:
- MB and N are both significant factors (at the 0.020 level or less).
- The most influential factor on IT is MB, followed by N, P and the interactions.

Nonlinear multiple regression equations were found to be representative of the simulated IT. The following regression equation provides a good fit to the data:

$$ IT = 23.543 - 3.583MB + 0.783N + 0.234MB^2 $$

5.2.4 Best Pattern Savings in IT

The % differences achieved by the best IT pattern are presented below in Table 7:

<table>
<thead>
<tr>
<th>Line Length = 5</th>
<th>Line Length = 8</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean Buffer Size</td>
<td>% Difference in IT</td>
</tr>
<tr>
<td>2</td>
<td>3.11%</td>
</tr>
<tr>
<td>4</td>
<td>-2.68%*</td>
</tr>
<tr>
<td>6</td>
<td>-0.42%</td>
</tr>
</tbody>
</table>

* Best saving obtained
(-) Indicates a saving in IT

Table 7. % differences in the best pattern’s IT over the balanced line
The following points can be seen from Table 7:
- The highest IT saving achieved is 2.68%, for N = 5, and MB = 4.
- As N increases, any advantage in IT disappears.
- Seemingly, MB has no observable impact on the superiority in IT.

5.3 Average Buffer Level (ABL) Results

5.3.1 ABL Data
Table 8 below summarizes the ABL data for unreliable 5 and 8 station lines:

<table>
<thead>
<tr>
<th>Line Length</th>
<th>5</th>
<th>8</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean Buffer</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Capacity</td>
<td></td>
<td></td>
</tr>
<tr>
<td>P1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>A1</td>
<td>1.132</td>
<td>2.780</td>
</tr>
<tr>
<td>A2</td>
<td>1.297</td>
<td>2.069</td>
</tr>
<tr>
<td>P2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>B1</td>
<td>0.558</td>
<td>1.210</td>
</tr>
<tr>
<td>B2</td>
<td>0.540</td>
<td>1.258</td>
</tr>
<tr>
<td>P3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>C1</td>
<td>1.046</td>
<td>2.024</td>
</tr>
<tr>
<td>C2</td>
<td>0.996</td>
<td>1.922</td>
</tr>
<tr>
<td>P4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>D1</td>
<td>1.077</td>
<td>2.021</td>
</tr>
<tr>
<td>D2</td>
<td>1.342</td>
<td>2.502</td>
</tr>
<tr>
<td>P5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>E1</td>
<td>1.049</td>
<td>2.348</td>
</tr>
<tr>
<td>E2</td>
<td>1.068</td>
<td>2.363</td>
</tr>
<tr>
<td>Balanced Line</td>
<td>0.970</td>
<td>2.092</td>
</tr>
</tbody>
</table>

Table 8. ABL data for unreliable 5 and 8 station lines, policies 1-5, patterns Ai-Ei and a balanced line

5.3.2 Ranking of Patterns and Effects of the Design Variables on ABL
An examination of the results shown in Table 8 yields the following interesting conclusions:
- The two best patterns turn out to be B1 and B2, i.e. concentrating buffer capacity towards the end of the line (an ascending order). This means that policy P2 is superior to the other ones with respect to ABL.
- Pattern C1 (the inverted bowl shape configuration) can be regarded as a good pattern.
- ABL becomes higher as MB is increased, i.e. average buffer level increases with the availability of space.
- There is no directly observable pattern of change in ABL with N.

5.3.3 ANOVA and Nonlinear Multiple Regression Analysis
The ANOVA results for ABL are presented in Table 9.

From Table 10, it is interesting to note the following:
- MB is the only significant factor, at the 0.014 level.
- The most influential design element on ABL is MB, followed by P, N and then the various interactions.

The fitted ABL regression equation can be expressed as:

\[ \text{ABL} = -0.207 + 0.439MB + 0.052N + 0.012MB^2 \]

The following can be noted from Tables 10 and 11:
- The two best patterns have both successfully generated significant advantages in ABL over a corresponding balanced line (53.61% and 45.17%), for an 8 station line with MB of 6.
- Patterns B1 and B2 consistently exhibit improvements over the balanced line for all the N and MB values considered.
- There is no evidence suggesting that N and MB have any noticeable impact on the superiority in ABL.

6 SUMMARY
A number of buffer size unbalancing policies and configurations were analysed in this study of production lines that are subject to stochastic machine failure. It was found that in general, the most favourable unbalanced BC configuration in terms of both TR and IT is an even distribution of buffers along the line (Policy P5 for TR).

On the other hand, the best pattern with respect to ABL is an ascending BC order (policy P2), under which more buffer capacity is positioned towards the end of the line.

The above conclusions on the best configurations in terms of idle time and average buffer level are in agreement with the findings of Shaaban and McNamara (2009) in their study of buffer allocation for reliable lines. This points out to the existence of some similarities in the behaviour of both reliable and unreliable BC unbalanced lines that needs to be explored further in the future.

Other interesting observations include:
- Both TR (in the case of the best pattern) and IT tend to increase with N.
- As MB goes up, IT declines. This lends support to the contention of Wijngaard (1979) that buffers are most effective at recuperating lost production in lines having unbalanced production rates and equal failure / repair rates.
- The decrease in IT as MB increases coincides with a rise in both TR and ABL. This signifies that MB seems to move in opposite directions in its impact on TR & ABL on one hand and IT on the other.

The two best ABL patterns consistently exhibit improvements over the balanced line for all the N and MB values considered.
- The ranking of the factors influencing TR, IT and ABL is as follows:
  - For both TR and IT: MB first, followed respectively by N, P and the various interactions.
  - For ABL: MB in the lead, followed by P, N and then the interactions.
  - The highest % savings in TR, IT and ABL over the corresponding balanced line are:
    - TR: 0.58% (very small)
    - IT: 2.68% (small)
    - ABL 53.61% (considerable)
- The highest ABL saving above is very close to that reported by Shaaban and McNamara (2009) for a corresponding reliable BC unbalanced line (56.13%).
- Overall, any advantage in TR and IT over the unreliable balanced line is wiped out as N goes up.

7 DISCUSSION AND CONCLUSIONS
The main purpose of this study was to assess the effect that unbalancing service mean times has on the efficiency of an unreliable production line with breakdown and repair times. Companies spend billions of dollars every year on the design, installation, operation, and maintenance of production lines, so even the slightest improvement in efficiency or reduction in inventory costs can result in substantial savings over the life of a line. Since most lines suffer from a certain degree of buffer imbalance, it would make sense for production managers to examine the benefits of deliberately allocating the total available buffer capacity unevenly along the buffers.

There are several conclusions that can be drawn from this research. One of the main conclusions is that the decision of how to allocate different sized buffers between workstations will depend on the particular conditions of the production facility. It may be of importance to keep as few units of partly completed products in storage as possible, for example in a fresh produce situation where hygiene and safety issues are foremost, or where just-in-time and lean buffering strategies are in place. In this case, it might be advantageous to place more buffer capacity towards the end of the line. On the other hand, distributing buffer capacity as evenly as possible along the line will enable a reduction in idle time or a slight enhancement in throughput. In sectors where labour costs are high, for example the automobile industry, this kind of design may be more appropriate.

Designing, setting up and operating a flow line system involves high costs therefore even the slightest of improvement in the system efficiency could mean a substantial reduction in overall cost of working. The study has shown that superior performance to that achieved by a balanced line in terms of throughput, idle time, or average buffer level is generally attainable. Even though the improvements in throughput rates and idle times are small in size (0.58% and 2.68%), they can result in substantial savings over the expected lifetime of the unpaced line. On the other hand the superiority in ABL is very significant (around 53%).

This would appear to justify unbalancing buffer capacities along unreliable production lines in many cases, especially since the improvement in throughput, idle time or average buffer level only requires appropriately assigning line operators to the same stations, which does not entail any further expenditure on capital or other resources.

We should not forget, however, that these patterns are specific patterns among numerous possibilities and that imbalance directed in the wrong way could lead to the opposite effect, i.e. increases in average buffer levels and idle times, and a deterioration in throughput rate. So care must be taken to assess the specificities of each line.
The aim of this research has been to make a small contribution to the total body of knowledge of production lines in giving new insights into how to fine tune unbalanced lines in order to improve performance. There is still scope for a considerable amount of research based on this study, for example experiments on the effects of the buffer capacity imbalance for unreliable merging (assembly) lines and also for unreliable lines with two sources of imbalance, will enhance knowledge in this area, enabling managers to make decisions in line design with more and more accuracy.

REFERENCES


Will Hospital Reputation Matter in the Era of Healthcare Reform?

Author: Sonya B. Merrill, Ph.D., Lecturer, Towson University, Towson, MD

Abstract
The objective of this presentation is to continue to explore the concept of reputation as a key resource contributor to a hospital's competitive advantage. The discussion considers the theoretical constructs that support the concept as a derivative of the resource-based view of the firm and a driver of competitive advantage. (Barney, 1991; Collis and Montgomery, 1995; Hall, 1993; Itami, 1987; Porter, 1985).

Beyond the underpinning theories, the author plans to review her research on the topic of hospital reputation and position the findings within the current era of healthcare reform. Specifically, the research findings identify (and validate) indicators that influence having a positive hospital reputation. (Merrill, 2000). The presentation will posit whether the research findings continue to have relevance in light of healthcare reform. Central to the author's earlier research are data derived from credentialing organizations that publish rankings about the quality of care in hospitals. Consideration will be given to the relevance of rankings in relationship to hospital reputation, competitive advantage, and hospital survival.

Key Words
Reputation; Hospitals; Healthcare Reform; Strategy; Resource-based View of the Firm; Credentialing, Legitimacy

Recap of the initial research on hospital reputation
The exploration of the topic began in the mid-1990s with the challenging undertaking of pursuing a better understanding of the construct, reputation. In particular, the author wanted to contribute to a clarification of the application of the reputation construct to the tumultuous hospital and healthcare environment of the era. Specifically, there was a spreading phenomenon of hospital consolidations and system formations fueled by decreasing reimbursements and excess hospital capacity. The stand-alone acute care hospital was becoming a rarity.

The strategic question that begged answering was how could competitive advantage assure firm survival? To answer that question, the author undertook quantitative and qualitative analyses that followed two directions. One path considered the concept of third party credentialing and how it begets and sustains the reputational label for organizations. A divergent path considered the factors or indicators that positively correlate to reputation, hospital reputation in particular.

Fast forwarding to 2011, the mass consolidation of hospitals to systems has settled. What is on the current horizon is the unfurling impact of Healthcare Reform on the hospital systems that survived. More importantly, will health reform change the findings of the research that occurred more than a decade ago.

The ensuing discussion considers which, if any, portions of the original research have been validated by others, and to consider the impact of recent healthcare reform legislation and how it affects the construct of hospital reputation as it is currently understood.

Theoretical Underpinnings
Within the resource-based theory of the firm, reputation is seen as a critical firm asset (Dollinger, et.al., 1997, p. 128). Numerous strategy theorists have written on the impact of firm resources that create capabilities that create a distinguishing and sustainable competitive advantage for firms. According to authors Russo and Fouts, resource-based theory recognizes the importance of intangible assets or what Conner (1991) calls non-purchasable assets such as know-how, corporate culture, and reputation. From Michael Porter forward, strategy theorists suggest that to remain competitive these assets must be unique and provide value to the customer. As a result these assets or resources contribute to performance differences among organizations because they are firm specific. Resources, like reputation, are firm strengths and can contribute to the sustainability of firms particularly if they, like reputation, are difficult to obtain because they are path dependent (based on unique history and circumstance) are rare, durable, and difficult to imitate of substitute (Barney, 1991). The works of Itami (1987), Barney (18991), Peteraf (1993) support this view. Dollinger et al. (1997), point out that a firm's reputation is a source of rents or profits (p, 128), and, in the case of hospitals, patients, contracts with providers, and physician affiliation.

In addition to considering the traditional strategy research, the initial investigation considered the
reputational effects of third party credentialing. Reputational effects are buoyed by organizations that convey reputational status. At some point the firm generates a reputation based on actual or perceived performance but reputation is reinforced by others who convey reputational status or provide endorsements. In other word, there is an aspect of reputation that is socially constructed. Hayagreeva Rao (1994) looked automobile industry and performance and speed contest rankings for automobiles manufactured between 1895 and 1912 that publication of firm first prize winners in the print media of the day resulted in derived reputational effects and firm longevity. Other researchers explored the reputational effects of accreditation for educational institutions (Wiley and Zald, 1968), credentialing of investment banks (Beatty and Ritter, 1986), and the ability for voluntary organizations to receive a charitable registration (Singh, Tucker, and House, 1986) as ways to signal consumers and society of the legitimization, reliability and credibility, positive reputation of firms in various industries.

The research by Rao and others supported to use of a comparative analysis of two sample sets of American Association of Hospitals (AHA) that in every other way were similar except one set of hospitals were ranked as a 'best' hospital in at least one acute care category, by US News and World Report and the other sample size was comprised of hospitals that did not receive the 'Best Hospitals' ranking. The reputation effects identified by earlier research and used to select the independent variables were: success with insurance contracting (Shortell, 1988), physician affiliations (Bauer, J and Kane, 1994, Okorafor, 1983), physician referrals and patient volume (Hughes, et al. 1988), patient, and market concentration (Shortell, 1988)

Empirical Research on Hospital Reputation

Ambrose and Purdum (1974) theorized that the hospitals goals of community medical service and economically advantageous occupancy levels depended on the attractiveness of the hospital to physicians. Researchers Muller and Bledsoe (1989) combined a literature review and a survey of 1204 physicians, mostly IPA physicians, to identify 21 hospital characteristics, including reputation, important to physicians. They analyzed the survey results using a comparison of means and independent t tests. McDermott and Little (1989) conducted a study specific to the perceptions of hospital administrators in Virginia. The results of their study indicated that four factors are important to patients in selecting a hospital: physician referrals, previous experience, reputation and staff courtesy. Terrence Rynne (1983) describes a hospital marketing model tested on an Illinois community that identified six phrases that are synonymous with quality: good patient care, good medical staff, good nursing staff and medical equipment. Okorafor (1983) also analyzed the mean responses regarding hospital reputation and uncovered 'high prestige of medical staff' to be an important indicator of reputation to physicians.

So, the early empirical research supports the importance of the reputation of physicians for generating patients for the hospital.

Summary of the Author's Research

Several hypotheses were developed to consider the relationship between institutional performance and reputation. The author developed a research operational model to regress a number of independent variables such as the amount of physician affiliation, the number of managed care contracts, and the amount of hospital competition in the MSA (1- HHI or the Herfindahl/Hirschman Index for the competition in the metropolitan area hospital industry) on a performance indicator that represented market share of patients. Two samples were used; one with hospitals with US News 'best hospital' scores and an identical number without the 'best hospital designation. A total of 248 American Hospital Association (AHA) hospitals were considered; 125 best hospitals and 123 hospitals without ratings. With the exception of the best hospital rating, both categories of hospitals in the sample were alike in every other way:

- Bed size ≥ 300
- Membership in the Council of Teaching Hospitals
- Location in a standard metropolitan statistical area (MSA) with population ≥ 100,000
- Location in a MSA with managed care presence

Hospitals in the samples were located in each of the nine American Hospital Association (AHA) regions. A quantitative analysis was performed with SPSS on both samples. Across the both models several observations were made. The most influential variables on hospital performance were managed care penetration, referring physician affiliations, and the index of competition. (Merrill, 2000). Several noteworthy findings emerged. Specifically, an exploratory factor analysis uncovered five factors and two dimensions or principle components central to the construct 'hospital reputation. The two principal
components on which the factors loaded were represented market share equated to the Herfindahl-Hirschman index, and third party endorsements represented by HMO penetration and independent physician affiliation. Through a series of regression models including least squares multivariate regression with hospital volume as the dependent variable and the index of competition and HMOs were significant (.05), but negative for independent variables; while physician affiliation and reputation, represented in the equation as categorical variables were not significant predictors of volume for both split samples. Intuitively, the findings make since, reputation matters when competition is high and hospitals with positive reputations can be selective and not take everyone like general public hospitals with higher volumes must. When there is less competition, then volumes are higher. A second model, a logistic regression, with reputation score as the dependent variable (1=yes; 0=no) was analyzed using the combined samples of hospitals with and without reputational scores. Three independent variables were significant. The analysis determined the odds likelihood of having a reputational score increased with physician affiliation and HMO penetration (third party endorsements) and competition (1-HHI).

In addition, the author included a qualitative component and solicited responses to a questionnaire from six hospital administrators concerning indices of hospital reputation and its relationship to performance as measured by patient volume. Of the hospital administrators interviewed to validate the quantitative results, several were reluctant to tie hospital reputational rankings to patient volume, but they did agree that the ranks were useful in aiding consumers with hospital choice decisions. Several felt that the US News and World Report scores (used in the study) were biased toward large teaching hospitals with without strong scientific basis and that rankings do not significantly contribute to patient volume. In conclusion, administrators felt physician relationships matter to hospital reputation but the relationship between patient volume and reputation could not be substantiated. (Merrill, 2000)

In the end, hospital reputation has multiple interpretations - one for physicians, one for hospital administrators, and one for the public searching for quality care.

Key results of the quantitative and qualitative analyses were:

- Reputation is an outcome of legitimacy (third party endorsements by powerful social organizations/entities - HMOs and physicians) and is socially constructed.
- Reputation is an outcome; not an input (doesn't generate volume) but results from other factors.
- There is some evidence of a relationship between hospital reputation and the prestige of the medical staff.

Validating the Research
In a recently published study, Dr. Ashwini Sehgal attempted to quantify the role of reputation in the top 50 hospitals in 12 specialties ranked by 2009 edition US News and World Report. One of his discoveries was that reputational scoring as undertaken by US News and World Report is somewhat tainted. Because reputation score is determined by asking approximately 250 specialists to identify the 5 best hospitals in their specialty, only nationally recognized hospitals are likely to be named frequently. High rankings also may enhance reputation, which in turn sustains or enhances rankings in subsequent years. (Sehgal, 2010) This statement is reflective of the administrators interviewed in the author's study and Rao's conclusion that reputation begets reputation. Moreover, Dr. Sehgal is credited for making this observation about the US News rankings based on reputation: He speculates that the portion of the U.S. News ranking based on reputation is problematic because reputation does not correlate with established indicators of quality (health care)/(2010). He states:

"The relative standings of the top 50 hospitals largely reflect the subjective reputations of those hospitals. Moreover, little relationship exists between subjective reputation and objective measures of hospital (established indicators of) quality among the top 50 hospitals."

Several years earlier, Hibbard, Stockard and Tusler (2005) connected public reporting or the report card effect, hospital reputation, market share, and quality. These authors further validated the findings of the author's research. They posited three assumptions about the relationship of rankings to public report cards, reputation, and healthcare quality:

"Public reporting is thought to be a key strategy for influencing market forces and, to a lesser extent, professionalism; there are at least three alternative assumptions about how this process works: (1) Public reporting promotes informed consumer choice and subsequent increases in market share.6 (2) Public
reports can affect the public image or reputation of a provider or medical care organization, and concern for protecting or enhancing professional or institutional reputation will motivate quality improvement. (3) The feedback inherent in both public and private reports will be sufficient to stimulate efforts to improve quality, simply because of professional norms around maintaining standards and self-governance.

These three mechanisms are not mutually exclusive. If a hospital’s reputation is affected, it may eventually experience market share declines via consumer choice, purchaser choice, or physician referral. A declining hospital reputation may pose other challenges such as recruiting and retaining qualified physicians and nurses. Similarly, both market share and reputation can affect a hospital’s ability to maintain legitimacy and professional standing. Both the market share and reputation assumptions assign a key role to the consumer in motivating quality improvements, by attending to performance reports, identifying high and low performers, and sharing that information with others. (Hibbard, et. al., 2005)

Admittedly, one of the author's study limitations was not discussing the antithesis of reputation - what accrues to hospitals without a publicly sanctioned reputational rank. Hibbard et.al. speculate outcomes, as follows:

Hibbard and colleagues raise additional concerns about public reporting on hospital performance and reputation. They suggest that:

"Hospitals have other reasons to be concerned about their reputations. Although professional pride is likely a motivating factor, more concrete financial issues could also be influenced by changes in hospital reputation. For example, a downturn in reputation could affect a hospital’s ability to raise funds. Charitable donations are an important source of income for not-for-profit hospitals."

These authors further add that:
"Because of the tight alignment between hospitals and physician groups in this (their study) market, poor performance scores could disrupted or threaten these PHO (physician) arrangements; this could affect market share and ultimately the bottom line."

Thus Hibbard, et al. make another finding consistent with the author's research... there is a relationship between physician affiliations and reputational effects such as public report cards.

**Hospital Reputation and Health Reform**

Fast-forwarding to the present introduces the impact of the Affordable Care Act of 2010 has led to increasing efforts at transparency through the provision of performance statistics.

**The use of report cards**

Starting in 2009, the Centers for Medicare and Medicaid Services (CMS) launched its own report card on its Hospital Compare site. Hospital Compare ranks private hospitals according to performance measures, reimbursement and risk adjusted mortality. How does this trend toward 'report cards' impact hospital reputation? Well, publicizing quality care based scores accrues reputational incentives to hospitals that perform select procedures with fewer incidents resulting in higher patient selection. In other words, similar to the findings in my research the more procedures a hospital does, the better it gets. Of course, what that means is that reputation effects will skew to larger well staffed facilities with the staffing compliment and the equipment to do more procedures well, a validation of the author's study.

Such metrics place small traditional, general hospitals at a disadvantage because often their volume doesn't justify the risk of an incident that could translate into a higher relative error score in relation to fewer procedures than the same absolute number for a hospital conducting a higher volume of the same procedure. Without education about how performance measures are calculated, the average consumer will consistently opt for larger hospitals, leaving the middle ad smaller market share hospitals floundering or failing. Moreover, CMS plans to use the report cards as incentive inducers in its pay for performance skim, further narrowing the market of providers. Lower reports equals lower reimbursements and makes it highly unlikely that facilities with low or negative profit margins will have the revenue to make the process improvements to upgrade their scores. (McLean, 2009).

**Payment for Performance**

Notching the performance expectation higher, the Department of Health and Human Services announced their new Hospital Value-Based Purchasing Program in April 2011. The program was developed as part of the Affordable Care Act (Health Reform Act) and rewards hospitals with incentive payments based on how well they measure up to a number of health care quality measures. This national initiative was created as an incentive for hospitals to improve their overall health care delivery. The better review a hospital receives, the more money they will receive as an incentive payment from Medicare. The Hospital Value-Based Purchasing Program is a way...
to make sure that patients receive the best care, no matter where they located. The program actually captures patient satisfaction information with the care provided. Patients will be asked questions about how well hospital staff communicated with patients during and after a hospitalization, as well as the overall cleanliness of the environment. Medicare is the largest payer for hospital services, so they are in the perfect position to reward hospitals for improving the care an individual receives during an inpatient stay. The program encourages hospitals to set practices that have been shown to improve patient outcomes, but just as important, it will also carefully review feedback from patients about whether they felt as if they were treated with respect and compassion, as well as being involved in decisions about their treatment. Patients interested in finding out how well their local hospital measures up can visit www.HealthCare.gov/compare and click on the Hospital Compare Care Quality tool.

Once the quality scores and the satisfaction scores are tallied, beginning in October 2012, Medicare will reward the best performing hospitals with bonuses - money that has been saved by not reimbursing doctors and hospitals for mistakes they have made, or has been saved through other reductions in reimbursements.

Conclusion
With so much emphasis on transparency regarding hospital performance, the question remains, will reputation matter? The answer is probably yes, but the metrics have changed. Given the arising controversy around rankings, their impact will probably diminish in light of more standardized and consistent measures of hospital performance based on quality indicators infused with patient satisfaction. As quality indicators begin to replace third party credentialing as a determinant of satisfaction, some of the mystical metrics will vanish and consistent measures of performance will lend true credibility to the construct 'hospital reputation'.

Partial References


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The Organizational Costs of Declining Functional Literacy in the United States: Contemplating Remedies

Authors:
Sonya B. Merrill, Ph.D., Lecturer, Towson University, Towson, MD
Clotile S. Galbraith, Ed.D., Associate Professor, Stevenson University, Stevenson, MD

Abstract

The paper proposes to increase the awareness of career development and human resource professionals, academicians, and business leaders about the crisis of functional illiteracy. As a catalyst for discussion, the paper introduces alternative approaches to meeting the challenge of functional illiteracy encountered by jobseekers, employees, and employers. The expected outcomes are to:

- Increase participant awareness of recent topical literature and research on functional illiteracy
- Broaden participants understanding of recent trends in the literacy gap
- Encourage an interactive participant exploration of approaches for closing the functional literacy gap through the sharing of best practices and lessons-learned.

Key Words:
Functional Literacy; Illiteracy, Workplace Literacy, Human Resources, Economic Impacts, Disparity

"Literacy is essential for functioning in an industrial/technological society." Reading and writing skills are key to a lifetime learning process in our society where job requirements change continuously.” (Miller, 1988; National Academy of Science, National Academy of Engineering, and the Institute of Medicine, 1984). According to Baydar, Brooks-Quan and Furstenberg (1993), literacy enables individuals to participate in a society where political and economic transactions are dependent upon written documentation.

Definitions

Comings in his article “Functional Literacy” (May, 2011) states that literacy is comprised of a set of skills (usually listed as phonics, decoding, fluency, vocabulary and comprehension) and a set of practices (employing all of these) skills to accomplish tasks with text. Comings expands upon the definition of “functional literacy” by looking at it in the context of three texts: international discussions, adult literacy and general education.

The term “functional literacy” came into use in the 1960’s when the United Nations Educational, Scientific and Cultural Organization (UNESCO) began to address the lack of literacy skills among a large percentage of the population of adults out of school and children in developing countries. According to the UNESCO, “functional literacy” is defined as the level of skill needed to function fully in international discussions. Collins and O’Brien (2003) provide a similar definition but add that it is the minimum needed to meet personal and social needs in general education. However, in the 21st century, the definition has been expanded to include math, science and technology.

Functional literacy has also been called, work-oriented literacy. Therefore, “workplace literacy” is considered a business and social problem when workers are not able to read or write well enough to function optimally on the job. (Encyclopedia of Business, 2nd ed.).

Historical Implications

Illiteracy in America can be traced back to the early 1980s though some argue that it extends back to the “Right to Read” declarations of 1969. In 1983 the National Commission of Excellence in Education (1983) talked about the decline of the American formal education. By 1987 these concerns had spread from the American school population to the American workforce. Workplace literacy now became the child of international competition and it was born on the factory floors of America. America, however, was losing the economic competition to Japan and Europe. Others talked about a double-tiered society by the year 2000 composed of one group that was willing and able to work, and the other lacking in skills and unemployable at any level. However, little attention was paid to other factors like, bad management practices, the skewed salaries of CEOs and their cabinets, or the 90-day bottom line time frame. The focus was on low productivity and the worker’s lack of capacity. Productivity could not be increased because the worker was not trainable due to the fact that he or she was functionally illiterate. (UNVEVOC, 1995)

A Senate Committee report in 1990 stated that while a fourth-grade education had always been sufficient for most skilled and unskilled jobs since World War II, current working condition now expected a high school or equivalent education as the requirement for the marketplace. Unfortunately, nearly 2 million students graduating from high schools annually at that time were functionally illiterate. This was a frustrating reality to American business and industry who paid high taxes to support a failing educational system.

How could numerous students graduate from high school programs with skills and abilities far below the 12th grade level? One reason posed is that students were automatically promoted to the next grade.
even when they did not meet basic skill levels in reading and writing. More intercity students were found to be functionally illiterate than students from suburban schools. Thus it became apparent that economic disparity and social breakdown became key factors to the illiteracy issue. It was also found that students who did not learn to read and write often came from dysfunctional or impoverished homes. Students from minority groups were far more likely to be semiliterate than whites. Educational studies failed to show however, that retention in grade helped a child to learn to read and write. (Encyclopedia of Business, 2nd ed.).

In 1992 the U.S. Education Department’s National Center of Education Statistics conducted a survey that found at least 20 percent of U.S. adults possessed no better than a fifth grade reading capacity. A year later the Education Department determined that approximately 30 percent of unskilled and semi-skilled industrial workers were below the fourth grade level in reading and writing, making it almost impossible to read the required safety manuals, product labels, and warning signs.

Chart on Historical Implications (Encyclopedia of Business, 2nd ed.)

<table>
<thead>
<tr>
<th>Industrial Age – Prior to 1960s</th>
<th>Technological Age- 1960s and beyond</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) most industrial jobs relied on physical labor</td>
<td>1) more opportunities for higher levels of education offered to the youth</td>
</tr>
<tr>
<td>2) minimal literacy skills were required</td>
<td>a) a split develops between managers and laborers</td>
</tr>
<tr>
<td>3) many immigrants read and wrote poorly in English, but the majority were proficient in their own languages</td>
<td>2) higher expectancy on literary skills</td>
</tr>
<tr>
<td></td>
<td>a) job applications</td>
</tr>
<tr>
<td></td>
<td>b) readability of job manuals</td>
</tr>
<tr>
<td></td>
<td>c) assessments</td>
</tr>
<tr>
<td></td>
<td>3) workers are now required to problem-solve, trouble-shoot and innovate (higher level processing and literary skills are required</td>
</tr>
</tbody>
</table>

More recently, a Literacy at Work Study, published by the Northeast Institute in 2001, reported that business losses attributed to basic skills deficiencies run into billions of dollars a year due to low productivity, errors and accidents attributed to functional literacy. The United States Department of Education (2006) found that the level of functional literacy of an individual is proportionate to his/her income level and the risk of committing a crime. Business magazine [http://nces.ed.gov/naal/kf_demographics.asp](http://nces.ed.gov/naal/kf_demographics.asp) estimated that 1.5 million functional illiterate adults held jobs at the beginning of the 21st century. The American Council of Life Insurers found that 75% of the Fortune 500 companies provide some kind of remedial training for their workers. It was also reported that 30 million adults in the U.S. are unable to perform simple and everyday activities.

The Business Challenge:

A publication of the University of the District of Columbia (UDC) shared these startling statistics: "There is a large group of adults who simply cannot read at a high enough level to handle the information being (meted out) in purchase orders, spec.'s (specifications) on orders, emails about customer service goofs or simple contracts for services performed."

"Simply put, the cost to businesses in time, money and mistakes is estimated to be in the billions of dollars annually." (Strategic Management, UDC, 2010)

The business cost:

Billions of dollars is a staggering cost to business of low literacy in the US. The University of the District of Columbia shares a list of startling statistics for the Nation's capital:

- 62% of DC residents fall into the two lowest levels of reading proficiency.
- More than 130,000 District residents need literacy skills enhancement.
- 30% of DC residents age 16 and older have no high school diploma.
- DC employers report that the greatest barriers to employing local adults are their lack of language, math, and basic computers skills.
- The District of Columbia public school dropout rate is between 32 and 50 percent.

As the statistics suggest, literacy ability is not just about reading and writing, but also about math and computer skills as well as critical thinking skills. These statistics are by no means exclusive to the District of Columbia. They are prevalent throughout the country.

The draft report from the National Literacy Action Project references two sources with these statements:
"The cost of illiteracy to businesses and taxpayers is estimated at $20 billion annually. (Illiteracy: A National Crisis, United Way of America, 1987). Five billion a year in taxes goes to support people receiving public assistance that are unemployable due to illiteracy." (Laubach Literacy Action, http://www.proliteracy.org/)

Twenty years ago on National Literacy Day in 1991, Senator Frank Lautenberg, (D-NJ) made the following statement that unfortunately applies today:

"In the book 'Illiterate America' by Jonathan Kozol, the author describes the growing crisis of illiteracy in America. In this country it is often said that we live in the information age. Yet for many Americans, information is inaccessible. Over 30 million American adults cannot read. An additional 42 million read below the level needed to function successfully. The American Library Association estimates the cost of illiteracy is $225 billion, although, in truth, no value can be put on the devastation of illiteracy."

"The cost includes the lifetime earnings that will not be realized by men and women who cannot get and hold jobs requiring any reading skills. The cost includes child welfare expenditures for the children of adults who lack the skills to get jobs."

"The cost includes prison maintenance for the inmates whose imprisonment can be linked to their illiteracy. The cost includes on-the-job accidents and damage to equipment caused by the inability of workers to read and understand instructions for the operation of machines."

"It is vital to call attention to the problem of illiteracy. Our society must begin to understand the severity of this problem and its detrimental effects. Perhaps even more essential is the need to reach the people who need help in overcoming their illiteracy and to make them aware of the services that are available."

**Literacy and Jobs: Where are the jobs going and why? Literacy and Outsourcing**


Below are the literacy rates of three of the top ten locations where U.S. businesses outsource accounting, IT, services and manufacturing positions:

* Philippines - 94%
* India - 65.38%

Philippines, ranking high at 94%, is home to many bilingual citizens - Filipino and English are widely spoken.

A study released from the University of California at Berkeley in 2003 states the U.S. lost more than 1 million white-collar jobs in the 1990s and "hundreds of thousands more since the turn of the century." The study also shows that outsourcing is accelerating.

"If you simultaneously read Indian newspapers and U.S. newspapers, you're going to get a good correlation between layoffs here and jobs being created there," said Ashok Deo Bardhan, a researcher for the study. He added that as many as 30,000 jobs were lost to India during one month (June) alone, and that 14 million U.S. service jobs are vulnerable. (Hiawatha Bray, The Boston Globe, Nov. 2, 2003)

An example of the literacy gap in math for 15 year olds in the US with 15 year olds in other countries can be seen below. In this case, the US statistic is below the international average statistic of 496.


These statistics beg an answer to the question of the federal government's role in constructing remedies to our slipping national literacy position in the world

**The Short History of Addressing Workplace Literacy in the United States**

In her 2003 paper, Susan Imel gives a good history of federal government intervention to address the issue of workplace illiteracy. Imel starts with efforts by the National Workplace Literacy Program (NWLP), funded through the National Literacy Act of 1991, that created
a national forum for the topic of workplace literacy. From 1988 through 1996, nearly $133 million was appropriated to fund over 300 NWLP demonstration projects ("Archived Information: Adult Education-National Workplace Literacy Program"; Exemplary Products Produced by National Workplace Literacy Program Demonstrations Projects 1995-1998). A number of positive spinoffs resulted from the NWLP, including meetings of NWLP project directors, presentations on NWLP projects and other workplace literacy topics at national conferences, professional development materials and activities for workplace literacy instructors, and a large increase in the number of documents on workplace literacy in the Educational Resources Information Center (ERIC) database (Imel 1995). In short, workplace literacy was the focus of attention during the NWLP era, and a great deal of workplace literacy activity occurred in the field.

Imel's work (2003) also documents the efforts of local unions. Crediting Jurmo's work (2003), Imel documents the New York Transportation Workers Union (TWU) and its efforts to develop, in conjunction with the Consortium for Worker Education (CWE), a list of necessary skills, that resulted in TWU-developed classes to help its members acquire computer, electronics, math, and other skills. Following the attacks on 9/11, the Garment Workers Union also worked with CWE to set up a program for its members who were threatened with unemployment.

What have employers tried...

Literature sources reference a number of notable efforts by employers over the years:

- General Motors devotes more than 15% of the $170 million it spends yearly on job training to remedial education.
- 50% of Fortune 500 companies underwrite remedial training for employees. The cost? $300 million a year.
- In 1987, Xerox Corporation chairman David Kearns foresaw the necessity of hiring unqualified employees for the sake of company expansion. According to Kearns, businesses throughout the U.S. could be forced to hire one million entry-level employees annually who are unable to read or write. Recent government statistics support Kearns' prognosis: between 1995 and 1998, the number of companies suffering shortages of skilled labor surged. (HansonSmith, 2008)

Specifically, national efforts include The National Institute for Literacy's (NIFL) Equipped for the Future (EFF) project, a standards-based reform effort to improve the adult literacy, basic skills, and lifelong learning systems in the United States, is designed around the adult roles of family, community, and work. As a part of the EFF effort, a role map for workers was developed that "defines what adults need to know and be able to do to be successful workers in the 21st century"; the Division of Adult Education and Literacy (DAEL), Office of Vocational and Adult Education, U.S. Department of Education, maintains a section on workplace literacy on its website (http://www.ed.gov/about/offices/list/ovae/pi/AdultEd/workplace.html) to provide information about research and evaluation, activities of note, and links to other sites. and information, tools, and advice on workplace basic skills for employers; Workforce Education Special Collection (http://worklink.coe.utk.edu/) is another national effort that supports workplace literacy by providing information and a forum for discussion. Supported by both NIFL and DAEL, this web-based effort contains information for various stakeholders in workplace literacy, including employers, labor unions, learners, and instructors. (Imel, 2003)

Springfield, MA-based Smith and Wesson Company has been using the University of Massachusetts since the late 1980s as a source for training in remedial skills and English as a Second Language (ESL). In 1996, with production work diversifying, it expanded its
skills training."We needed something more formal and aggressive," said Bob Pion, director of training for Smith and Wesson. "So we turned to a professional organization dedicated to skills issues." Enter Workplace Education Group (South Hadley, MA), called upon to advise Smith and Wesson on its workforce training needs. (HansonSmith, L., 2008)

But implementation costs can be preemptive. Start-up costs for employer programs can range from $2,500 to $100,000. Few companies can afford the $35 million on literacy training that Motorola, Inc. expended by 1993. The training afforded the company the luxury of turning away job applicants whose reading and writing skills fell below the seventh-grade level.

The Remedies

What can managers do in the interim? According to UDC, they can:

1. Test people's reading comprehension. Go to the local community college and ask a teacher to assign some students to test your workforce. Businesses do a lot of training on product knowledge and how to run various software. Helping people to develop their reading comprehension skills should be no different.

2. As an interim measure simplify all written communications. Use visuals when possible. Combine verbal and written instructions.

3. Develop a comprehensive employee literacy-training program for employees that covers a broad range of required skills and make attendance mandatory and a condition of employment. substantial. (http://www.dcadultliteracy.org/literacyfacts.html)

4. Authors' suggestions: Consider employer/union solutions proposed, above!

References


ABSTRACT

This study conducts a comparative analysis of International Tax Reforms in the U.S. and other industrialized nations to determine measures that counter offshore tax evasion schemes commonly employed by U.S. multinationals, and for taxing foreign-source income of businesses and of individuals. As increased globalization and the ease of conducting international business and financial transactions give rise to a plethora of loopholes and tax evasion opportunities, the Obama administration has proposed tax reforms intended to reduce the perennial tax gap aimed at tax evaders. Enactment of these tax reforms is a necessary step to curtailing tax avoidance evident in the relevant groups of taxpayers, while controlling expansion of the tax-gap. While much public attention and discussion are allotted to certain fiscal policy provisions, disproportionately less emphasis has been given to provisions aimed at reducing the U.S. tax gap and the impact such efforts, if successful, would have in the nation’s economic recovery plan. Efforts are underway by the U.S. Department of Treasury to examine root causes of the tax gap and to devise ways to combat it. Evidence of this is seen in the IRS’ published report.

Keywords
Tax gap, tax avoidance, multinationals, territorial tax system, tax havens, tax loopholes

1 INTRODUCTION

With nations worldwide experiencing ramifications of the great recession, governments are seeking new strategies to restore luster to their respective economies (Slemrod, 2009). In the United States, for example, the fiscal year 2011 budget proposals formulated by the Obama administration are reflective of an array of fiscal policies designed to respond to the nation’s economic crisis. Similarly, in their most recent budget proposals, the United Kingdom has proposed radical public service reform, improving transparency and accountability, and giving more power and responsibility to citizens (HM Treasury, 2011). Of particular import to these countries and others, increased globalization, and the ease of conducting international business and financial transactions (Hines & Summers, 2009), have given rise to a plethora of loopholes and tax evasion opportunities. Addressing this concern, President Obama has included tax reforms intended to counter offshore tax evasion schemes commonly employed by U.S. multinationals, as well as revised methods for taxing foreign-source income of these businesses and of individuals. As is true in the case of domestic business, noncompliance issues pertaining to these taxpayers are similarly rooted, to some extent, in opportunities to conceal income, coupled with the absence or circumvention of withholding methods. Other factors aiding noncompliance are strategies used to covertly shift income to low-tax or no-tax foreign jurisdictions.

The purpose of this study is to conduct a comparative analysis of International Tax Reforms in the U.S. and other industrialized nations to determine measures that counter offshore tax evasion schemes commonly employed by U.S. multinationals, and for taxing foreign-source income of businesses and of individuals.

Similar to sole-proprietorships, noncompliance issues pertaining to these taxpayers are similarly rooted, to some extent, in opportunities to conceal income, coupled with the absence or circumvention of withholding methods. Other factors aiding noncompliance are strategies used to covertly shift income to foreign jurisdictions.

Enactment of these tax reforms is a necessary step to curtailing tax avoidance evident in the relevant groups of taxpayers, while controlling expansion of the tax-gap. While much public attention and discussion are allotted to certain fiscal policy provisions, disproportionately less emphasis has been given to provisions aimed at reducing the U.S. “tax gap” and the impact such efforts, if successful, would have in the nation’s economic recovery plan. Efforts are underway by the U.S. Department of Treasury to examine root causes of the tax gap and to devise ways to combat it. Evidence of this is seen in the IRS’ published report.
“Reducing the Federal Tax Gap: A report on Improving Voluntary Compliance” (IRS, 2007). However, despite the body of previous studies, the IRS, through this recent report expressly acknowledges that new research is critically needed for purposes of identifying sources of noncompliance to enable the IRS to more efficiently and precisely direct its resources to problem areas.

2 Comparative Tax Anti-Avoidance Legislation

Table 1, “Tax Anti-Avoidance Legislation: A Global Comparison of Select High-Ranking Industrialized Countries”, presents a global comparison of tax anti-avoidance legislation and other related measures implemented by twelve high-ranking industrialized countries to counter fiscal evasion. According to the 2010 Human Development Index, Norway, Australia, New Zealand, the United States, Ireland, Liechtenstein, Netherlands, Canada, Sweden and Germany are the top ten developed countries. These as numbered one through 10 in Table 1. The HDI study indicates rankings of eleventh for Japan and twenty-sixth for the U.K. In Table 1, these countries round off the total number of countries selected for this study to twelve. Discussions of the international tax systems of Japan and the U.K. will enhance this comparison study in that their recent adoption of a territorial tax system, which according to Smiley (2011) mirrors the actions of nearly all OECD member countries, creates renewed contrast to the worldwide tax system currently applied by the U.S. Being the first phase of a broader study, the discussion that follows is limited to a brief overview of tax systems of the U.S., Canada, Japan and the U.K.

It is generally understood that tax rate differentials between countries influence tax and investment decisions of taxpayers engaged in cross-border transactions and interested in minimizing or escaping U.S. tax. De Silva (2011) offers that tax avoidance is made possible by the existence of three key conditions: (1) a difference between the effective marginal tax rates imposed by taxing jurisdictions on economic income; (2) a taxpayer’s ability to take advantage of the differential in tax rates by causing high-tax activity to be treated for tax purposes as low-tax activity; and (3) the ability of the high-rate taxpayer can be receive income in a low-tax form, thus causing income to fall within low-tax income categories.

Table 1 shows the corporate and individual tax rates applicable for each country represented. Notably, high-tax rates are indicated for a significant number of the countries listed. For some countries, both the upper ranges of corporate or individual tax rates are high. For others, one of the two rates is high. For comparison and analytical purposes, tax rates of select low-tax and/or tax haven jurisdictions will be included in the expanded version of this discussion.

<table>
<thead>
<tr>
<th>Country</th>
<th>Corporate Tax Rate</th>
<th>Individual Tax Rate</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Norway</td>
<td>√</td>
<td>√</td>
<td>Yes</td>
</tr>
<tr>
<td>20% - 29%</td>
<td>20%</td>
<td>24% - 49%</td>
<td>20%</td>
</tr>
<tr>
<td>Australia</td>
<td>√</td>
<td>√</td>
<td>Yes</td>
</tr>
<tr>
<td>30% - 41%</td>
<td>30%</td>
<td>30% - 41%</td>
<td>20%</td>
</tr>
<tr>
<td>New Zealand</td>
<td>√</td>
<td>√</td>
<td>Yes</td>
</tr>
<tr>
<td>0% - 30%</td>
<td>35%</td>
<td>18% - 35%</td>
<td>18% GRT</td>
</tr>
<tr>
<td>United States</td>
<td>√</td>
<td>√</td>
<td>Yes</td>
</tr>
<tr>
<td>15% - 35%</td>
<td>18% - 35%</td>
<td>18% - 35%</td>
<td>18% GRT</td>
</tr>
<tr>
<td>Ireland</td>
<td>√</td>
<td>√</td>
<td>Yes</td>
</tr>
<tr>
<td>12.50% - 20%</td>
<td>20%</td>
<td>12.50% - 20%</td>
<td>21% VAT</td>
</tr>
<tr>
<td>Liechtenstein</td>
<td>√</td>
<td>Not Available</td>
<td></td>
</tr>
<tr>
<td>5% - 10%</td>
<td>10%</td>
<td>Not Available</td>
<td></td>
</tr>
<tr>
<td>Netherlands</td>
<td>√</td>
<td>√</td>
<td>Yes</td>
</tr>
<tr>
<td>15% - 25%</td>
<td>15% - 25%</td>
<td>15% - 25%</td>
<td>10% VAT</td>
</tr>
<tr>
<td>Canada</td>
<td>√</td>
<td>√</td>
<td>Yes</td>
</tr>
<tr>
<td>16.99%</td>
<td>18% - 25%</td>
<td>18% - 25%</td>
<td>5% GRT</td>
</tr>
<tr>
<td>Sweden</td>
<td>√</td>
<td>√</td>
<td>Yes</td>
</tr>
<tr>
<td>2.50% - 30%</td>
<td>30%</td>
<td>26.30% - 30%</td>
<td>25% VAT</td>
</tr>
<tr>
<td>Germany</td>
<td>√</td>
<td>√</td>
<td>Yes</td>
</tr>
<tr>
<td>30% - 35%</td>
<td>30% - 35%</td>
<td>30% - 35%</td>
<td>19% VAT</td>
</tr>
<tr>
<td>Japan (8)</td>
<td>√</td>
<td>√</td>
<td>Yes</td>
</tr>
<tr>
<td>5% - 10%</td>
<td>5% - 10%</td>
<td>5% - 10%</td>
<td>5% VAT</td>
</tr>
<tr>
<td>United Kingdom (8)</td>
<td>√</td>
<td>√</td>
<td>Yes</td>
</tr>
<tr>
<td>20%</td>
<td>20%</td>
<td>20% - 25%</td>
<td>20% VAT</td>
</tr>
</tbody>
</table>

(2) Inclusive of those appearing in this table, forty-two countries in total are named on the “Very High Human Development” list.
(5) Source: http://www.oecd.org
(6) As discussed in this paper.
(7) Source: Tax rates for countries worldwide http://www.worldwide-tax.com
(8) Joining other developed countries, Japan and the U.K. in 2010 adopted a territorial international tax system, leaving behind the U.S., which still applies the worldwide tax system.

United States

Employing the worldwide tax system, the U.S. casts its tax net widely. Section 61 of the U.S. Internal Revenue Code (Code) specifies that worldwide income of U.S. taxpayers is subject to U.S. tax, unless an exception to taxability is provided in the Code. The Code defines the term “income” broadly to include all types of income not specifically excepted. One of the major income exemption rules can be said to have set the stage for U.S. fiscal avoidance and evasion by U.S. taxpayers. Under Sections 11(d) and 882 of the Code, the income of foreign corporations is not subject to tax, irrespective of whether ownership is wholly or primarily held by U.S. taxpayers. Smiley (2011) suggests that this policy is pivotal to tax dodging strategies employed by U.S. corporations, banks and insurance companies excepted, to operate overseas through foreign subsidiaries. Income from such foreign subsidiaries is not subject to U.S. tax until repatriated by way of dividends to U.S. shareholders. With increased globalization, opportunities for these tax strategies have grown notably, as have recognition and concerns by the U.S. and other developed nations of the need to implement legislation and/or other measures to curtail revenue loss attributable to these strategies.
Bush and most recently, President Barack Obama have proposed reforms to the country’s international tax system in response to overseas tax evasive conduct of U.S. taxpayers. While those efforts have led to amendments of the tax code to include numerous provisions aimed at preventing tax abuse involving shifting income to low-taxed foreign subsidiaries, U.S. taxpayers continued to devise new schemes to defer U.S. income tax on their foreign earnings (Smiley, 2011). This taxpayer behavior is reflected in the 2008 Report to the Committee on Finance, which states that the U.S. effective tax rate on the foreign-source income earned by large corporation was approximately 4% on average in 2004. This 4% rate bears a startling contrast to the 35% U.S. statutory corporate income tax rate.

Many U.S. tax-gap reduction measures enacted and proposed seek to battle international tax evasion by: 1) restricting taxpayer’s ability to shift income from high-to-low-tax countries (or tax-evading transfer-pricing manipulations); 2) restricting improper shifting of income outside the United States through the transfer of intangible property; 3) strengthening rules for tax return disclosure of foreign accounts and 4) tightening rules for reporting of transfers to foreign financial institutions (Tax Policy Center).

Examples, international tax reform initiatives introduced or supported by the Obama administration include the Foreign Account Tax Compliance Act (FACTA), Tax Information Agreements (TIEAs), and The Joint International Tax Shelter Information Centre (JITSIC). In March 2010, Congress enacted the HIRE Act, which contained many provisions of the previously introduced FACTA. FACTA provisions hinder efforts by U.S. persons to conceal income and assets. They impose new disclosure requirements on U.S. taxpayers having interests in specified foreign financial assets, as well as new tax withholding requirements.

JITSIC is an anti-tax abuse alliance initiated in 2006 by the U.S. Internal Revenue Service, together with the tax agencies of the U.K., Canada and Australia. A Memorandum of Understanding signed by these agencies reflects their agreement to collaborate and exchange multiple facets of support, as relevant to the mutual goal of “identifying and curbing abusive tax avoidance transaction, arrangements, and schemes”. The Japanese National Tax Agency and the tax agencies of the Republic in Korea and China joined as members in 2007 and 2010, respectively.

The 2010 and 2011 budget of the Obama Administration’s contained proposals intended to further combat tax evasion. These include increasing pressure on foreign financial institutions to become Qualified Intermediaries, which would in turn comply with disclosure rules and withholding requirements, eliminating income deferral (or eliminating the ability to deduct expenses associated with tax-exempt foreign investment income); and curtailing income-shifting loopholes associated with transfer pricing transactions.

The U.S. tax anti-avoidance efforts are enhanced by a large number of Tax Treaties and Tax Information Exchange Agreements (TIEAs) in effect between the U.S. and other countries.

The National Commission on Fiscal Responsibility and Reform in its December 2010 report firmly recommended adoption of a territorial tax system in place of the worldwide tax system. The Commission stated this would bring the U.S. system more in line with tax systems of international trading partners. Consideration is being given to alternative tax regimes, as evidenced by the March 2011 Committee on Ways & Means hearing on “How Other Countries Have Used Tax Reform to Help Their Companies Compete in the Global Market and Create Jobs”. Tax Attorney Gary Thomas provided testimony on Japan’s adoption of a territorial tax system and the government’s expectation that the regime will reduce cross-border income shifting.

Canada
Historically, Canada taxed the worldwide income of its taxpayers. In 1976, the government adopted a combined exemption/credit system for dividends from foreign affiliates and FAPI rules to prevent the use of tax havens to defer Canadian tax on passive income (Slaats & Woolford, 2010). An important advantage of the hybrid tax system is the alleviation of double taxation on foreign income. The exemption of dividends would stand, but only for dividends distributed from active business income earned in countries having treaty agreements with Canada; other dividends would be eligible for credits for withholding tax and foreign tax paid on the underlying earnings. The passive income of controlled foreign corporations would be taxed to Canadian shareholders on a current basis, mirroring U. S. rules. Slaats and Woolford (2010) stated many are in agreement that Canada’s international tax laws are considered one of the better tax regimes in place, causing other countries to consider integrating certain aspects of Canada’s tax rules into their own international tax systems. Despite this positive view of its tax system, Canada recognizes the need for ongoing improvements and is contemplating future revisions.

Income tax treaties between Canada and the U.S., as well as with other countries are in effect. As indicated in Table 1, Canada is an OECD Member and has signed TIEAs with several countries, some of which are Dominica, Cayman Islands, St. Lucia, The Bahamas, and Bermuda.
Japan
For approximately the last 50 years, Japan’s international tax system has paralleled that of the U.S., primarily because it had been modeled after the U.S. tax system. Accordingly, Japan imposed corporate tax on a worldwide income, including dividends received from foreign subsidiaries, with the availability of a foreign tax credit to avoid double taxation. In April 2009, Japan adopted a territorial tax regime with the inclusion of a dividend exemption systems and the simultaneous repeal of the indirect foreign tax credit system.

Thomas (2011), testifying before U.S. House Committee on Ways and Means, stated the Japanese government believed converting to the territorial system was important for purposes of stimulating repatriation of profits from foreign subsidiaries. It is believed repatriation of these profits would fuel much need revitalization of the Japanese economy.

While convinced the dividend exemption system would not pose a detriment to the Japanese economy, the government nevertheless implemented new international tax measures and strengthened existing ones, attempting to curtail cross-border shifting of profits, assets and jobs. In 2010, rigorous transfer pricing documentation requirements were enacted. Transfer pricing rules were further amended in 2011 to introduce a new provision which eases the government’s ability to enforce transfer pricing assessments.

In 2011, a proposal to reduce the corporate tax rate from 40.7% to 35.6%, to achieve better alignment with the pattern common among other OECD members was under consideration. The government theorized that a lower corporate tax rate would dampen motivation that typically drives income-shifting behavior.

Japan’s other tax anti-avoidance efforts include, but are not limited to, continued to expansion its tax treaty network and several signed TIEAs.

United Kingdom
Similar to other developed countries, the U.K. has made legislative efforts to tackle tax diversion schemes. For instance, the government’s Disclosure of Tax Avoidance Schemes (DPTAS) regime, which became effective January 2011, targets schemes that incorporate offshore transactions to avoid corporation tax. The Finance Act 2010 unveiled a new penalty regime designed to reduce tax diversion risk linked to offshore transactions and entity structures. To avert loss of tax through overseas account and assets, the U.K. launched multiple initiatives. The Act also introduced significantly higher penalty rates applicable to negligent and intentional inaccuracies pertaining to offshore income or capital gains in foreign territories, the intent being to increase the deterrence factor. In August 2011, HM Revenue & Customs has proposed a tax legislation that would deny taxpayers of relief from UK tax under a tax treaty where the taxpayer had engaged in a “tax avoidance scheme”. This proposal met with opposition and was ultimately withdrawn.

The U.K.’s tax anti-avoidance efforts are enhanced by a large number of Tax Treaties and Tax Information Exchange Agreements (TIEAs) in effect between the U.K. and other countries.

The following Table 2 is from the Congressional Research Service Report for Congress – Tax Havens: International Tax Avoidance and Evasion, September 3, 2010. The table presents a geographically categorized list of 50 countries that appear on various tax haven lists. For comparison and analytical purposes, the expanded version of this paper will include tax rates of tax haven countries.

<table>
<thead>
<tr>
<th>Table 2: Countries Listed on Various Tax Haven Lists</th>
</tr>
</thead>
<tbody>
<tr>
<td>Caribbean/West Indies</td>
</tr>
<tr>
<td>Central America</td>
</tr>
<tr>
<td>Coast of East Asia</td>
</tr>
<tr>
<td>Europe/Mediterranean</td>
</tr>
<tr>
<td>Indian Ocean</td>
</tr>
<tr>
<td>Middle East</td>
</tr>
<tr>
<td>North Atlantic</td>
</tr>
<tr>
<td>Pacific, South Pacific</td>
</tr>
<tr>
<td>West Africa</td>
</tr>
</tbody>
</table>

FinanceCenters: http://www.taxjustice.net/cms/upload/pdf/Identifying_Tax_Havens_Jul_07.pdf. The OECD’s “gray” list is posted at http://www.oecd.org/dataoecd/38/14/42497950.pdf. The countries in Table 1 are the same as the countries, with the exception of Tonga, in a recent GAO Report, International Taxation: Large U.S.Corporations and Federal Contractors with Subsidiaries in Jurisdictions Listed as Tax Havens or Financial PrivacyJurisdictions, GAO-09-157, December 2008.

Notes: The Dharmapala and HInes paper cited above reproduces the Hines and Rice list. That list was more oriented to business issues; four countries—Ireland, Jordan, Luxembourg, and Switzerland—appear only on that list. The Hines and Rice list is older and is itself based on earlier lists; some countries on those earlier lists were eliminated because they had higher tax rates. St. Kitts may also be referred to as St. Christopher. The Channel Islands are sometimes listed as a group and sometimes Jersey and Guernsey are listed separately. S. 506 and H.R. 1245 specifically mention Jersey, and also refer to Guernsey/Sark/Alderney, the latter two are islands associated with Guernsey.

a. Not included in S. 506, H.R. 1245.
b. Not included in original OECD tax haven list.
c. Not included in Hines and Rice (1994).
d. Removed from OECD’s List; Subsequently determined they should not be included.
e. Not included in OECD’s “gray” list as of August 17, 2009; currently on the OECD “white” list. Note that the “gray” list is divided into countries that are tax havens and countries that are other financial centers. The latter classification includes three countries listed in Table 1 (Luxembourg, Singapore, and Switzerland) and five that are not (Austria, Belgium, Brunei, Chile, and Guatemala). Of the four countries moved from the “black” to the “gray” list, one, Costa Rica, is in Table 2 and three, Malaysia, Uruguay and the Philippines

CONCLUSION

The perennial tax-gap issue is one with which government officials, lawmakers, policymakers and scholars have grappled over the course of several presidential administrations. In a time of economic slump, such as that being experienced by the U.S. and its international counterparts, access to billions of dollars diverted from governmental treasury accounts could significantly enhance the budgets with which they must work to implement the agendas set for economic recovery. Of significant import, therefore, is the need to examine various tax reform measures that could help narrow the tax gap.

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Political Reservations, Access to Water and Women Empowerment: Evidence from Indian Villages

Klaus Deininger  
Lead Economist, World Bank  
Washington DC  
Email:kdeininger@worldbank.org

Sharmistha Nag  
NCAER-IDRC Post Doctoral Fellow  
NCAER, New Delhi, India  
email: sharmistha.nag@gmail.com

H.K Nagarajan  
Senior Fellow  
NCAER, New Delhi  
email:hknagarajan@ncaer.org

ABSTRACT
In India, high levels of social stratification and gender disparity, some of which seem to widen rather than narrow over time, provide the basis for policies mandating reservation of a certain share of political positions to females. In 1992, the 73rd Constitutional Amendment mandates that one-third of all seats in all Panchayat councils and one-third of village-chief (pradhan) positions must be reserved for women. On account of a short horizon of analyses, evidence of the impact of reservations remain ambiguous. Nationally-representative current (2006) round of REDS village and household level data with information on the last two panchayat periods allow us to explore the dynamic effects of women reservations on quality of public service (drinking water) delivery, participation in the local political process, willingness to contribute to public goods and female labor market participation. We find a clear evidence of reservation leading to effective political participation, improved access to drinking water facilities, and greater willingness to contribute to public goods. The persistence of effects during reservations and thereafter suggests that policy implementation in such a framework offers a worthwhile avenue for analysis.

Keywords
Reservations, public service delivery, political participation, empowerment

1 INTRODUCTION
The time spent in accessing public goods by rural households in developing countries is a significant factor in determining household welfare. There is evidence to suggest that the time spent by members of rural households in accessing public goods such as water is increasing over time due to inadequate service provision. Intra household allocations of time have significant consequences for welfare of individual members. This is particularly so for women given their dual role within households as child caregivers, and fulfilling family responsibilities (Leslie and Paolisso 1989; Glick and Sahn 1998; Glick 2002). Evidence also suggests that intra-village provision of public goods is influenced by parochial considerations. Munshi and Rosenzweig (2008), for example, have shown that rural households in India that are located in streets where the elected representatives reside have better access to public goods such as water.

A significant proportion of time spent by women relates to common property activities. These include fetching water, harvesting fodder, and collecting firewood. Governance can have a significant impact on the time spent in fetching water. Private availability of water is still marginal in countries such as India. A 2004-05 NSSO report (60th round) suggests that tube-wells/handpump is the most prevalent source of drinking water in rural areas. Proportions of rural households reporting drinking water use from tube wells is 56, and that of from ‘pucca wells’ is 13. According to a UNDP report, 70-80% rural women in India, on average, spend 47 minutes per day for water collection. In developing nations such as India, Nigeria, and other African countries, girl children too, in households have the responsibility of accessing water. A South African survey (2000) show that girls on average spend two hours each day on fetching fuel and water while boys spend about 68 minutes for these tasks. Such household work undertaken by children is common in rural areas of developing societies where basic household infrastructure and services are inadequately provided (Mitik and Decaluwe 2009). Anecdotal evidence suggests that in villages of Haryana, on average, a woman spends 138 minutes per day to fetch water. In rural Andhra Pradesh, the average time spent by female household members each day for fetching water ranges from 0.84 to 1.31 hours (Reddy 1999).

In India, high levels of social stratification and gender disparity, some of which seem to widen rather than narrow over time, provide the basis for policies mandating reservation of a certain share of political positions to females. In 1992, the 73rd Amendment mandates that one-third of all seats in all Panchayat councils and one-third of village-chief (pradhan) positions must be reserved for women. The seats to be reserved are selected randomly in each election round.

The devolution of power to local authorities, following 73rd and 74th Amendments, allowed elected political bodies to function as units of self-government, with gram panchayats being the lowest tier of local government at the village-level. The President of gram panchayat (pradhan) is responsible for the provision of key services such as drinking water, health, roads, education, and other administrative activities.

Studies examining the implications of reservations have found contradictory evidence. One strand of literature finds that reservations are largely ineffective because the elected women are poorly educated and hence easily
participation in gram sabha meetings (Besley 2000). Reservations also tend to increase women’s particular access to pre-natal care (Knack and Sanyal). Women’s political participation raises educational and health investments, relevant to women such as drinking water supply (Chattopadhay and Duflo 2004). Reservations also tend to increase women’s participation in gram sabha meetings (Besley et al 2005). Nevertheless, even if female reservation targets policy implementation in favor of women, the impact of such policies could be outweighed by redirecting resources away from those sectors during the next (unreserved) term (Deininger et al 2010).

It has been established in the literature (Chattopadhay and Duflo 2004; Deininger et al 2010) that a significant outcome of political reservations is the improved provision and access to water. Following Deininger et al (2010), in order to understand the implications of political reservations, it is important to focus on the welfare impacts of political reservations and in particular, the dynamics of reservations. In this paper we attempt to explore not only whether reservation improves access to public goods – drinking water – but also whether it enables women to participate in the political process through increased involvement in gram sabha meetings and contributing to household welfare such as female labor market participation. A significant contribution of the paper is looking at the persistent effects of reservations.

The paper is structured as follows: Section 2 describes the data and background, including the rationale for gender quotas in the context of developing countries, section 3 builds on this by describing the econometric methodology, section 4 discusses the regression results, and finally section 5 concludes.

2 DATA AND BACKGROUND
The National Water Policy was implemented in April 2002. Some of its key features include prioritizing provision of drinking water, regulating ground water extraction, and monitoring water quality. In order to make the planning and management of water resources effective, it is imperative that the institutions under the water resources sector be better organized. The scheme considers provision of drinking water a primary component of project planning. The Accelerated Rural Water Program (ARWP) launched in 1972-73, by supplementing the efforts of state governments aims to mitigate drinking water problem in rural areas. Sustainability of rural drinking water schemes was based upon increasing government’s role in empowering gram panchayats for management and sustainability of drinking water resources. The National Drinking Water Mission (NDWM), an extension of the ARWP, was launched in 1986 to ensure adequate water supply through the inflow of scientific and technical inputs into the rural water supply sector. The NDWM was renamed Rajiv Gandhi National Drinking Water Mission in 1991. Later in 1999 Government of India formed the Department of Drinking water to emphasize water supply in rural areas. The National Rural Drinking Water Quality Monitoring and Surveillance Program (NRDWQMSP) was launched in February 2006 for monitoring all drinking water resources in the country, decentralizing water quality monitoring, and making village institutions capable of maintaining drinking water resources.

Following the 73rd Amendment to the Indian Constitution (1993) the Government of India is formally committed to decentralize service delivery in rural areas. The 73rd Amendment transforms local governments into independent entities, the rights and obligations of which are now more clearly defined. Decentralization of rural governance in India has led to constitution of democratically elected local bodies at the district, intermediate and village level called “Zilla” (District), “Block” and “Gram” (Village) Panchayats, respectively. The fact that, in most states, one third of panchayats were randomly subject to reservations (quotas) for either women or lower castes, provides the basis for a number of empirical studies. Such studies assess the impact of such reservations on the type of public goods chosen by local decision-makers and, on political participation by previously disadvantaged groups (Chattopadhay and Duflo 2004).

Decentralization aims at reducing the demand-supply gap in the provision of local public goods, both in volume and in terms of consumer preferences, leading to better project selection and asset maintenance. Decentralization tends to increase the number of levels and locales where decision making actually occurs. It aims to institutionalize community-based participatory approach in the provision of key public goods such as drinking water by integrating previously disadvantaged groups into policymaking. Supply of clean drinking water and assisting local communities to maintain drinking water sources in safe conditions have been priorities of the government. For ensuring sustainability, the government incorporated three basic principles in the implementation of rural drinking water supply scheme: first, empowering villagers for their full participation in a project through decision making roles in the choice of schemes and management; second, empowering gram panchayats for sustainable management of drinking water resources – planning, implementation, operation and maintenance of drinking water assets by Panchayati Raj Institutions; third, partial capital cost sharing by communities in the form of cash, kind, or labor or all three combined.
The 73rd Amendment to the Constitution that came into effect on April 20 1993, noting the low participation of women in politics, proposes not less than one-third of the total number of seats to be filled by direct election in every panchayats, shall be reserved for women and such seats may be allotted by rotation to different constituencies in a panchayat (The Constitution Act 1992). It was a landmark step towards empowering rural women. The proponents of the policy of women reservation in panchayats suggest that such affirmative action, through integrating women’s issues in the mainstream decision making process, could bring about social, political, and economic upliftment of women and also provide them with a constitutional platform to seek redressal of gender-specific problems (Lal 1998). In a decentralized political set up, it is important for women to participate in the local decision making at the panchayat level in order to achieve significant gains for themselves. A 2008 study by the Panchayati Raj Ministry reveals that a significant proportion of women perceive empowerment through legislation that ensures their participation in the Panchayati Raj Institutions. It is hoped that through collective voicing of opinion and participation in the local development process, reservation should go a long way in the real empowerment of women.

We use NCAER-ARIS/REDS data for the present study. NCAER has been conducting panel survey of rural households in India. The first three waves (1969, 1970, 1971) were called Additional Rural Income Surveys (ARIS) and the fourth (1981), fifth (1999), and sixth (2006) were called Rural Economic and Demographic Surveys (REDS). To analyse the problems raised here we use the four rounds of the NCAER ARIS and REDS surveys that form a village and household data base providing consistent information on 242 villages spread across 16 states in India. The first round of the survey is the 1971 round of the additional Rural Incomes Survey which includes 4527 households in 259 villages of India in 17 major states. In 1982, 250 of the original 259 villages were revisited and 4979 surveyed. In 1999, all of the 1971 villages were surveyed, but excluding the 8 sample villages from Jammu and Kashmir. The number of households in the 1999 round increased to 7474. The current round of 2006 (agricultural season 2005-2006) has a sample size of 9500 and it includes all of the households surveyed in 1999 and the split-off households residing within these villages. Each village has approximately 8 new randomly selected households. In addition to this, the panel nature of this data set will enable us to understand both the evolution of policy as well as trace the impact of different policy regimes on household.

Our data from a nationally-representative panel survey of 242 villages in rural India contains information on: current panchayat for which elections were held in 2006 and the previous panchayat period which in most states were elected in 1999; individual and household characteristics (age, education, caste, marital status, household size); reservations; member level information on participation in local decision making through gram sabha meetings; members’ willingness to contribute to local public goods, drinking water, in particular; access to drinking water measured by the time spent in collecting water; and female labor market participation measured by the average number of labor days worked.

The broad characteristics of villages and households as of 2006 (current panchayat) are shown in table 1. Since the passing of the 73rd Amendment, most villages of India have conducted three panchayat elections. The 2006 survey round of ARIS/REDS corresponds to the third of these panchayat elections. Women reserved villages increase from 26% to 31% between the last two panchayat periods. The survey asked each voting member in the household a response conditioned on the following statement: Government decides to provide an additional 1 lakh to solve local problem – but only if the majority of village households contribute Rs 100 each. Imagine that almost enough people are willing to contribute, and your decision to contribute or not, will decide the outcome. We find that most women respondents are willing to cast their tie-breaking vote in favor of water vis-a-vis other public goods (health, education, roads, electricity).

As noted earlier the Indian Parliament after the 73rd Amendment to the Constitution has randomly allocated a set of villages in each state to be headed by a female pradhan who is duly elected. The idea behind such legislation is that women and other weaker sections of the villages would be increasingly empowered. Evidence of such empowerment is articulated in table 2. We find for example that the quality of female participation in gram sabha meetings significantly improves over time in panchayats that are reserved. The proportion of meetings attended by women also increases in the reserved period (table 2 here).

There is evidence to suggest that supply-demand dichotomies exist across villages. We can assess the demand for a particular service by examining the preference structure of the households and household members. For example, households in reserved panchayats expect an average of 34% of all expenditures to be on improving availability of water. However, the actual expenditures are only 22% of the total. Oddly enough, the data suggests that such dichotomies are wider in reserved panchayats compared to unreserved panchayats. For example, it can be seen from table 2 that even though the level of expenditure in water is greater in reserved panchayats compared to that in unreserved panchayats, the dichotomy between supply and demand actually widens in reserved panchayats (table 3 here).1

1 Interestingly across panchayats the policy response to adverse water shocks at the village level has consistently been positive. The degree of such policy responsiveness has improved over time. The average expenditure share in response to adverse water shocks during the previous panchayat period was 28%. This figure goes up to 44% in panchayat periods corresponding too survey year 2006 (i.e. the current panchayat).
3 METHODOLOGY

Our data allows us to test the hypothesis for the following outcomes of political reservations for women: (i) access to drinking water, (ii) participation in village meetings and household welfare outcomes measured by female labor market participation are used as the dependent variables. We use village-fixed effects in our regressions to control for the diverse institutional structures across states affecting the relative power of the elected woman pradhan. We estimate the following model using OLS,

$$ Y_{ivt} = \beta_0 + \beta_1 R_{vt} + \beta_2 R_{vt-1} + \beta_3 R_{vt}^* Z_{vt} + \beta_4 R_{vt-1}^* Z_{vt-1} + \beta_5 X_{ivt} + \beta_6 D_t + \epsilon_{ivt}, $$

where subscripts $i$, $v$, $t$ denote individuals, villages, and time periods respectively. $Y_{ivt}$ is the outcome variable of interest (which could be either discrete or continuous based upon the question we wish to address), $\beta$ denote village fixed effects, $R_{vt}$ is a dummy that takes the value 1 if a village $v$ is reserved for women in time $t$, and 0 otherwise, $R_{vt-1}$ indicate lagged reservation dummies, i.e. we measure whether access to public goods, participation in village meetings, and welfare outcomes are affected after reservation lapses. $Z_{vt}$ indicates female household members (1-0 dummy) in village $v$ reserved in time $t$. $D_t$ is the vector of dummies indicating the different panchayat terms, $X_{ivt}$ represents the various household characteristics we control for.

We estimate model (1) at individual level to isolate the dynamic impact of reservations on different groups of the population, as defined by gender, caste, and landownership. We interact reservations with female dummies to examine whether women holding political positions could empower the deprived sections of the society so that they can place themselves in the local decision-making process.

Reservations could empower women in a manner that mobilization along gender can lead to the provision of public goods that mimic their preferences, i.e. in case of necessity women are more likely to cast a tie breaking vote on an issue such that all of the development expenditure is allocated in resolving that issue. This addresses the link between social capital and household’s (or member’s) willingness to contribute to public goods, the empirical discussion of which has been limited in the Indian context (Chandrasekhar 2008). It will be worthwhile to explore whether women’s participation in the political process is critical in increasing the probability of exercising their tie-breaking vote for allocation of public expenditure for the provision of basic services (such as drinking water).

4 RESULTS

Empirical analysis of the impact of political reservation amplies upon the descriptive statistics reported in tables 1 and 2. Our results will focus on the impact of political reservations on the access to public goods as measured by the time spent in collecting water, impact on the quality of participation by women in village meetings, willingness to contribute to public goods and labor market participation. The results are reported in tables 4-7.

Access to water, Quality of participation and women empowerment

Our results (table 4) clearly indicate that with reservations the time spent in fetching water declines significantly over time. Time spent in collecting water by women in reserved panchayats also decline. Our findings are consistent with Chattopadhay and Duflo (2004) who have shown that of all public goods delivered through reserved panchayats, it is water that is most efficiently delivered. The three columns of tables 5 and 6, respectively, examine the impact of political reservation on the nature of participation by women in gram sabha meetings, in general (table 5), and in particular on drinking water issues (table 6). Our results suggest that the number of such meetings attended by women would significantly increase over time. We also find that the likelihood that an average participant would be unaware of the contents of the meeting would be declining over the same time period. We would want political reservation to empower women in such a way that the quality of their participation in gram sabha meetings would improve. Column 3 of tables 5 and 6 provides a robust evidence of the fact that women are able to raise issues, and in particular, water related issues in such gram sabha meetings.

Another artifact of such empowerment, besides increased participation in village meetings, is the ability of the women to participate in the labor market. The results (table 7) show that female labor market participation increases in reserved villages and the effects are more prominent in the longer run. Table 7 results also indicate women are more likely to cast their tie-breaking vote in a manner that is consistent with the median voter problem. The survey, for instance, asked the respondents the following: Government decides to provide an additional 1 lakh to solve local problem – but only if the majority of village households contribute Rs 100 each. Imagine that almost enough people are willing to contribute, and your decision to contribute or not, will decide the outcome. The likelihood
that they would exercise their tie-breaking vote for water is significantly greater than other public goods. For example, there is a 98% probability that they would exercise this tie-breaking vote for water. The effect persists even after reservation lapses. Although we do not find any clear evidence from backward caste households, landless households are also likely to exercise their tie-breaking vote similarly.

5 CONCLUSIONS
By using a nation-wide survey to examine the impact of political reservation beyond the period in which it had been effective, i.e. examining persistent effects, this paper contributes to the literature in a number of respects. First, access to drinking water, measured by the time spent in fetching water, improves with reservations. In other words, the quality of service delivery improves as the time spent in collecting water declines. Second we find that political reservation leads to improved quality of participation by women in the process of political decision making; such as women's awareness of the content of gram sabha meetings and their participation through voicing opinion, in particular, on water related issues, rise. Finally, there is clear evidence of female reservations increasing individuals’ willingness to contribute to drinking water as well as to the provision of other public goods not only during the 'reserved' period but also thereafter. While differences across states could be an interesting angle of research, our findings suggest that longer-term impacts of reservations, by affecting the dynamics of local political process, public service delivery, women empowerment and household welfare outcomes.

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“National Water Policy” Government of India, Ministry of Water Resources, New Delhi, April 2002


"Corresponding author
### Table 1: Village and Household characteristics

<table>
<thead>
<tr>
<th>Variables</th>
<th>Mean</th>
<th>Std. Dev</th>
</tr>
</thead>
<tbody>
<tr>
<td>Women Reservation: current panchayat</td>
<td>0.31</td>
<td>0.46</td>
</tr>
<tr>
<td>Women Reservation: previous panchayat</td>
<td>0.27</td>
<td>0.44</td>
</tr>
<tr>
<td>Landless</td>
<td>0.33</td>
<td>0.47</td>
</tr>
<tr>
<td>Female</td>
<td>0.48</td>
<td>0.50</td>
</tr>
<tr>
<td>Years of Schooling</td>
<td>4.00</td>
<td>2.59</td>
</tr>
<tr>
<td>Age</td>
<td>29.66</td>
<td>20.21</td>
</tr>
<tr>
<td>Marital Status</td>
<td>0.49</td>
<td>0.50</td>
</tr>
<tr>
<td>SC/ST</td>
<td>0.32</td>
<td>0.60</td>
</tr>
<tr>
<td>Household Size</td>
<td>6.43</td>
<td>1.47</td>
</tr>
<tr>
<td>Time taken to collect water (minutes)</td>
<td>70.98</td>
<td>33.67</td>
</tr>
<tr>
<td>Annual No of Days worked</td>
<td>160.98</td>
<td>28.52</td>
</tr>
<tr>
<td>Annual No of Days worked by female</td>
<td>62</td>
<td>18.42</td>
</tr>
</tbody>
</table>

### Table 2: Political Participation and Willingness to Contribute

<table>
<thead>
<tr>
<th>Gram Sabha meetings</th>
<th>Reserved(Women)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Male Respondents</td>
</tr>
<tr>
<td></td>
<td>Res Unres</td>
</tr>
<tr>
<td>No of meetings attended</td>
<td>5.52 6.25</td>
</tr>
<tr>
<td>Nature of participation</td>
<td></td>
</tr>
<tr>
<td>Presented issues</td>
<td>0.18 0.22</td>
</tr>
<tr>
<td>Raised questions</td>
<td>0.14 0.16</td>
</tr>
<tr>
<td>Discussed</td>
<td>0.12 0.18</td>
</tr>
<tr>
<td>Protested</td>
<td>0.18 0.23</td>
</tr>
<tr>
<td>Observed only</td>
<td>0.36 0.21</td>
</tr>
<tr>
<td>willingness to contribute for:</td>
<td></td>
</tr>
<tr>
<td>Health</td>
<td>0.14 0.19</td>
</tr>
<tr>
<td>Education</td>
<td>0.15 0.19</td>
</tr>
<tr>
<td>Roads &amp; Transport</td>
<td>0.18 0.20</td>
</tr>
<tr>
<td>Drinking water</td>
<td>0.29 0.27</td>
</tr>
<tr>
<td>Electrification</td>
<td>0.21 0.20</td>
</tr>
</tbody>
</table>

### Table 3: Demand-Supply Dichotomy

<table>
<thead>
<tr>
<th>Households' expected expenditure shares</th>
<th>Actual Expenditure shares</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
</tr>
<tr>
<td>Ever Reserved</td>
<td>0.34</td>
</tr>
<tr>
<td>Reserved in the current period</td>
<td>0.32</td>
</tr>
<tr>
<td>Never Reserved</td>
<td>0.25</td>
</tr>
</tbody>
</table>
Table 4: Access to water facilities

<table>
<thead>
<tr>
<th></th>
<th>Time (in minutes)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reserved (γ)</td>
<td>-8.47***</td>
</tr>
<tr>
<td>Reserved*female (λ)</td>
<td>4.79</td>
</tr>
<tr>
<td>Reserved lag1 (γ₁)</td>
<td>-13.53***</td>
</tr>
<tr>
<td>Reserved lag1*female (λ₁)</td>
<td>16.98**</td>
</tr>
<tr>
<td>Test for γ + λ = 0</td>
<td>21.15***</td>
</tr>
<tr>
<td>γ₁ + λ₁ = 0</td>
<td>0.51</td>
</tr>
</tbody>
</table>

Note: **, *** denote significances at 5%, and 1% levels respectively. Village fixed effects, household and individual characteristics (age, education, marital status, caste, sex, and household size) included in the regressions.

Table 5: Characteristics of village meetings

<table>
<thead>
<tr>
<th>Model</th>
<th>No. of meetings attended</th>
<th>Never know content</th>
<th>Voiced concern</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reserved (γ)</td>
<td>1.469***</td>
<td>-0.075***</td>
<td>-0.011</td>
</tr>
<tr>
<td>Reserved*female (λ)</td>
<td>0.707*</td>
<td>0.045</td>
<td>0.047*</td>
</tr>
<tr>
<td>Reserved earlier (γ₁)</td>
<td>-0.648</td>
<td>-0.071***</td>
<td>0.034*</td>
</tr>
<tr>
<td>Reserved earlier*female (λ₁)</td>
<td>0.156</td>
<td>0.018</td>
<td>-0.005</td>
</tr>
<tr>
<td>Test for γ + λ = 0</td>
<td>62.16***</td>
<td>0.97</td>
<td>2.02</td>
</tr>
<tr>
<td>γ₁ + λ₁ = 0</td>
<td>4.90*</td>
<td>3.80*</td>
<td>1.22</td>
</tr>
<tr>
<td>R square</td>
<td>0.53</td>
<td>0.31</td>
<td>0.41</td>
</tr>
</tbody>
</table>

Table 6: Characteristics of village meetings for drinking water

<table>
<thead>
<tr>
<th>Model 1</th>
<th>No. of meetings attended</th>
<th>Never know content</th>
<th>Voiced concern</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reserved (γ)</td>
<td>0.030***</td>
<td>-0.028</td>
<td>0.008***</td>
</tr>
<tr>
<td>Reserved*female (λ)</td>
<td>0.038*</td>
<td>0.021</td>
<td>0.023***</td>
</tr>
<tr>
<td>Reserved earlier (γ₁)</td>
<td>0.165***</td>
<td>-0.090***</td>
<td>0.033***</td>
</tr>
<tr>
<td>Reserved earlier*female (λ₁)</td>
<td>0.010</td>
<td>-0.011***</td>
<td>-0.007</td>
</tr>
<tr>
<td>Test for γ + λ = 0</td>
<td>21.54***</td>
<td>0.14</td>
<td>29.70***</td>
</tr>
<tr>
<td>γ₁ + λ₁ = 0</td>
<td>8.50**</td>
<td>55.26***</td>
<td>14.74***</td>
</tr>
<tr>
<td>R square</td>
<td>0.53</td>
<td>0.18</td>
<td>0.30</td>
</tr>
</tbody>
</table>

Table 7: Women Empowerment and willingness to contribute

<table>
<thead>
<tr>
<th>Model</th>
<th>Labor mkt participation</th>
<th>Drinking water schemes†</th>
<th>Other pub goods†</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reserved (γ)</td>
<td>3.792***</td>
<td>0.063***</td>
<td>0.051***</td>
</tr>
<tr>
<td>Reserved*female (λ)</td>
<td>0.897*</td>
<td>-0.014</td>
<td>-0.035</td>
</tr>
<tr>
<td>Reserved earlier (γ₁)</td>
<td>21.80***</td>
<td>0.012**</td>
<td>-0.066</td>
</tr>
<tr>
<td>Reserved earlier*female (λ₁)</td>
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<td>0.058***</td>
<td>0.048**</td>
</tr>
<tr>
<td>Test for γ + λ = 0</td>
<td>59.50***</td>
<td>9.70**</td>
<td>0.95</td>
</tr>
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<td>187.30***</td>
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<tr>
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<td>0.33</td>
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† willingness to contribute
Is free really cost-effective? A case study of open access e-textbook usage in several undergraduate business courses.

Arlene J. Nicholas  
Salve Regina University  
100 Ochre Point Ave.  
Newport, RI, USA  
(401) 341-3280  
nicholaa@salve.edu

John K. Lewis  
University of Maryland  
University College  
Adelphi, MD, USA  
(401) 341-2687  
lewisj@salve.edu

ABSTRACT
This paper reviews the current trends and costs of e-textbooks and reports on the usage and satisfaction of students using freely available open access e-textbooks in six sections of different business courses. It also examines how students utilize their textbooks, and if the problems associated with using an e-textbook outweigh the main benefit of a free e-textbook.

Keywords  
e-textbook, open access, free courseware, students’ usage

1 INTRODUCTION
One of the main complaints of college students is the high cost of textbooks. According to a college blog, Finding College Cards, the second of the top ten complaints of college students (between 1. Parking, and 3. Having to take electives) is the high cost of textbooks, especially if the professor rarely refers to them (Top 10, 2009). While the views of college students certainly have a distinct perspective, there is considerable agreement that the costs of college texts are exorbitant (Allen, 2010; Real costs, 2010; Rumsey, 2005).

2 TEXTBOOK COSTS CONSIDERED
Faculty are regularly bombarded with sales pitches for textbooks. Some publishers offer composing editions with select chapters, contributing as an author, selecting online versions and/or hard copies, accessing special study tools and more. The quality of the text is vital but cost to the student is also becoming a consideration of many faculty. More than a few faculty have heard, “I haven’t got the text yet.” or, “It’s on order.” or even, “I didn’t have the money to get it.”

In as survey by the State Council of Higher Education for Virginia, over 40% of the students reported that they sometimes go without the expensive text (Kinzie, 2006). According to the Advisory Committee on Student Financial Assistance (ACSFIA), five years ago, the average student spent between $700 and $1,000 per year on textbooks (Koch, 2006). The Government Accounting Office (GAO) reported in 2005 that textbook prices in the last two decades had increased more than twice the rate of inflation (GAO, 2005).

Even the savings possibilities of e-textbooks were shown to be inadequate. New e-textbooks surveyed by the Student Public Interest Research Group (PIRG) cost, on average, the same as a new hard copy and twice the cost of a used hard copy (Allen, 2008).

Considering this critical issue, there have been attempts in Congress to pass the Open College Textbook Act (2009 and 2010) http://www.govtrack.us/congress/bill.xpd?bill=h111-4575 to authorize grants for creating and adopting free e-textbooks. Some universities, such as Wisconsin Oshkosh with a grant from the U.S. Department of Education’s Fund for the Improvement of Postsecondary Education (FIPSE) and California State with a pilot program, are using e-textbooks to reduce costs for students and to support sustainable practices (Hanley, 2010; Williams, 2009).

Addressing these cost and green issues are commercial open-access college textbooks companies. Flatworldknowledge (FWK), which started in 2007, is the leader in this field. This business model has expanded rapidly as participating colleges doubled from 400 in 2009 to 800 in 2010 (Dilworth, 2010; Weir, 2009).

A lesser known site, Bookboon.com from Danish publishing company Ventus, was launched in 2009 with free e-textbooks that have advertising every few pages. Written by professors and lecturers, the subjects are business and engineering and intended as supplements to course material. California State, Dartmouth, Northeastern, and Utah State are among the U.S. universities using Bookboon (Esmerk, 2010). The advertising in these books are limited to student recruiting in similar fields of study and linked to their sources (K-State, 2009).

Both these sites offer printing the text or chapters for a fee. Some bookstores, such as Varney’s Book Store in Manhattan, have on-demand printing facilities for e-textbook and e-books (K-State, 2009).

3 RECENT STUDIES
According to the Book Industry Study Group (BISG) in a January 2011 study, 75% of students said they preferred a printed text. The look, feel, permanence and re-sale
possibility were top reasons given for print book partiality (College students, 2011).

Consumer purchases of e-books have also risen according to BISG’s (2011) consumer survey. The BISG conducts semi-annual surveys, Student Attitudes Toward Content in Higher Education, from a national sample of students.

A more recent, June 2011, BISG study reported that usage of e-textbooks had increased by 70% since a fall 2010 survey, particularly among freshmen and sophomores. However, almost one-fourth of the students who used an online textbook (still only a 20% representation) were not satisfied with the experience. But the hunt for less expensive texts continued with more international editions purchased and double (20% to 40%) the amount of illegal photocopying (Photocopying material, 2011).

Some other studies (Gregory, 2008; Hage, 2006; Kissinger, 2011; Nelson, 2008; Porter, 2010) have explored e-textbooks and undergraduates concerning attitudes, e-book readers and embedded activity learning and self-efficacy.

4 STUDY

The opportunity to use a free open access online textbook that was also available in print at a reasonable cost was the inspiration for a case study of its effectiveness in several business courses at a small, Catholic university in the Northeast. Two classes in Business Communications and two classes in Management and Organizational Behavior in Fall ‘10 and two Business Communications classes in Spring ‘11 allowed students to access a free online textbook through Flatworldknowledge or to purchase a very low cost version in print. At the time of this study, for example, the Principles of Management book was available in print for $49.95 and a print-it-yourself version for $24.95 (see Figure 1). In August 2011, the black and white print version could still be bought for $49.95 but the print-it-yourself version was $34.95. The newer edition is still available online for free.

Of those who used the free e-textbook, 78.2% used laptops, 8.9% used a library computer, .03% used a desktop. Some students (.06%) used multiple methods of access including three users of i-pads and one of an i-phone. None of the students used an e-reader. It should be noted that a number of the students owned laptops from a mandatory laptop enrollment program that ended two years before this study.

The majority of respondents (60%) were male, 40% were female. Sophomores predominated at 35%, followed closely by freshmen at 33%, juniors at 25%, and seniors were only 5% of the respondents.

Some results of the case study were hardly surprising; the biggest feature the students liked about the e-textbook was that it was free. Of the e-text user survey respondents, 92.4% liked the fact that the textbook was free to low cost.
Students also reported on their study methods. Many students (38.7%) like to highlight material; also popular is writing separate notes as 32.6% reported doing this. Only a few (15.3%) of the students write margin notes. Most students (37.7%) skim and quickly scan through the material, while 29.5% read all the material word for word. Despite their poor study habits, the students had a high opinion of their text reading skills with 11.2% rating themselves as exceptional, 26.5% as above average, 46.9% as average, and 9.1% as below average. None of the students believed their text reading skills were poor.

One of the biggest problems with utilizing the e-textbook was the distraction factor. Although students of the Millennial generation are touted as having an amazing ability to multi-task (Alch, 2000), it turns out this is a problem when they are trying to study. There was no specific question on the survey related to this aptitude, but a follow up online discussion assignment for two Business Communications classes yielded illuminating responses of e-textbook users including the inability to concentrate on the task of studying due to Internet diversions. An example of a typical comment was “I know that if I got a Facebook notification I would have to check my Facebook right away and would get distracted from reading the material.” Another student could not resist the temptation to get on the Internet, “I sometimes found myself distracted using the computer though being that it was so easy to surf the web while reading the text.”

The other downside to the e-textbook was highlighting capabilities. Many students preferred the print textbook because of the ease of highlighting. The e-textbook had highlighting capabilities, but only 40.2% used it as others either didn’t like the feature or never utilized it. One student commented, “When using an online textbook, I did feel like it was a little annoying solely because I couldn't just write and highlight in the book. This could be a form of laziness because I could easily just write things in my notebook, but that's just what I've been used to for years.” Although print textbook users like to highlight, over half of the e-textbook users never utilized the feature. It is unclear if this was because they found it cumbersome, unnecessary, or if they simply did not know the feature existed.

Another unexpected problem was ease of access. Because the textbook was online rather than downloadable, students were at the mercy of their Internet connection. One student liked the e-textbook but remarked, “For our book, I liked having it online most of the time since I would not have to carry or pay for it. However, because it was online, there were nights where it was difficult to read because of how slow the internet can be on campus.” Internet access speed can be a problem especially in the dormitories during times of peak use. This is a factor faculty should take into consideration before relying on an online textbook exclusively.
Students did like the keyword searching capability provided by the e-textbook. Several commented on the ease with which they were able to find the desired information using this feature. One student comment was typical, “I also liked the search feature of the e-textbook because it easily transports you to what you’re looking for. Although it was difficult not being able to just simply read and highlight in the book, I believe the other benefits of the e-textbook far outweigh that.” The accessibility of the e-textbook was another plus. One student preferred the print textbook but stated, “I do like the online copy in case I was at the library and forgot my book it would be helpful to have.” Another said, “I like to have a copy of the textbook online because I can look at it whenever I would like. The online version made it accessible whenever I need it.”

6 CONCLUSIONS
It may be that the real advantage of using an open access e-textbook is the flexibility it provides. Students who prefer a traditional print textbook can purchase one from the publisher for a very affordable price. Those students who need to save money or enjoy using an e-textbook can access one for free. Some students will choose to use both versions. Students often found the e-textbook useful when studying in the university library or just for looking up a quick factoid. They preferred the print version so they could highlight important points when studying for a test. Like most areas of 21st century life, it turns out that an abundance of choices is what the consumer really appreciates.

It would appear that many students are not quite ready to embrace e-textbooks. An overriding theme of the survey comments was that they preferred a print textbook because it better fit their learning style. Most of the students highlight what they consider to be important information in their print textbook and then use that highlighted information as the basis for their exam study sessions. Although the e-textbook provided the ability to highlight information many students did not use this function. Most of the students are still studying in a similar manner to students of a previous generation. It appears that these Millennials have not adopted digital learning as of yet. It remains to be seen if future students brought up with using computers in the classroom will have more success in using e-textbooks.

Unsurprisingly, cost is an important motivating factor for students. Although many preferred a print textbook, they were willingly to use the e-textbook to save money. In this case, the savings was only $50 but, in many cases, that was enough to decide on the online version. It seems clear that a larger price differential would cause an even greater percentage of the students to choose the e-textbook. If cost is such a highly motivating factor among students who are mostly of middle to upper class background, it is reasonable to speculate that it would be a still greater motivating factor at universities which had a higher percentage of students who suffered from financial hardship.

7 LIMITATIONS & FUTURE RESEARCH
Although the number of students surveyed was significant, the population was limited to only business, management and marketing majors. It is certainly possible that research with other majors, such as liberal arts students, could have completely dissimilar results. The sample was also limited to an exclusive liberal arts centric university in the Northeast United States. Future research at larger universities, state schools, etc. may yield differing perspective of e-textbook preferences and experiences.

While this case study did not find any major differences by gender, this could be an area worthy of further research. Is there any difference among male and female students in their preference for a print or e-textbook? Perhaps some other factor, such as personality type, is the key variable rather than gender. The sample size in the present study was too small to make such a determination. Also of importance is whether there is an improvement in student learning, engagement, study habits, or grades? The answers are likely to come from additional studies as e-texts become more widespread with both students and professors.

It would also be interesting to look at the grades achieved by those using the e-textbook in comparison with those using the print text, as well as those who used both. Is there any difference in the learning experience based on the medium? Does utilizing both the print and online version of a textbook optimize the student’s learning? The answers to these and other questions are likely to come from further studies as e-texts become more widely adopted by faculty, and more heavily used by students. E-textbooks’ efficacy will undoubtedly be a major area of research in the next decade.

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Fast fashion's knock-off savvy: Proposing a new competency in a sustainability index for the fast fashion industry

Stephanie Brodish
Ursinus College
601 East Main Street
Collegeville, PA 19426-1000
1-717-580-1089
stbrodish@ursinus.edu

Natalie W. Nixon, PhD
Philadelphia University
4201 Henry Avenue
Philadelphia, PA 19144
1-215-951-2787
nixonn@philau.edu

Carol Cirka, PhD
Ursinus College
601 East Main Street
Collegeville, PA 19426-1000
1-717-580-1089
ccirka@ursinus.edu

ABSTRACT
This paper examines the long term viability of two fast fashion retailers in terms of the traditional three pillars of fiscal, environmental and social sustainability and proposes a new fourth pillar to measure sustainability in the fast fashion industry: competitive sustainability. We posit that overall economic sustainability in the fast fashion industry consists of these four pillars. The competitive pillar helps to incorporate concerns from stakeholders about a firm’s sustainability in terms of its organizational slack (Bansal, 2005), creative capacity (Zahra and George, 2002), and its reliance on competitor firms’ research, product development and promotional spending. One of the most frequently cited unethical practices within the fashion industry is copyist activity. Data for the index was collected by surveying the annual reports and any other publicly available reporting materials recognizing the firm’s social, environmental and fiscal activity, and any news media reports of copyist activity.

Keywords
Fast fashion, sustainability, index, knock-offs

1 INTRODUCTION
Our research examines the long term viability of two fast fashion retailers (Mango and Zara) using four pillars which constitute economic sustainability in the fast fashion industry. Those pillars include the three traditionally-held pillars (fiscal, environmental and social sustainability) as well as our proposed new fourth pillar, competitive sustainability, in order to comprehensively measure sustainability in the fast fashion industry. The competitive sustainability pillar helps firms to incorporate concerns from stakeholders about the firm’s sustainability in terms of three factors: 1) its organizational slack (Bansal, 2005), 2) its creative capacity (Zahra and George, 2002), and 3) its reliance on competitor firms’ research, product development and promotional spending.

The key players of the international fast fashion industry are famous for popularizing fashion by producing interpretations of the current trends and distributing them to stores in a matter of weeks. However, there are few legal barriers keeping fast fashion retailers such as Zara, Topshop, and Forever 21 from crossing the line between interpreting trends and replicating exact designs. Although fast fashion companies have become notorious for infringing on designers’ intellectual property rights, they have little incentive to discontinue such activity in the short term. Fast fashion sales continue to increase every year at the expense of high fashion brands that create, produce, and promote new trends every season (Blakley, 2010).

One of the most frequently cited unethical practices within the fashion industry is the replication of couture fashion designs, known as copyist activity in most creative industries, or “knock offs” in the fashion industry. This practice deserves attention because it has resonance in fast fashion’s product development feedback loops. Including copyist activity in the competitive sustainability analysis is imperative because the traditional three pillar foundation does not take this reality into account. Haugh and Talwar (2010) recommend creating customized sustainability solutions that are likely to yield maximum benefits for stakeholders and shareholders, since each industry has its own concerns and stakeholders. If the creation of a sustainability index for the fast fashion industry is the first step toward revealing the issues overlooked by more generic indices, then the addition of this fourth “industry” pillar pertaining to competitive concerns is another step toward examining industry-specific issues and creating a customized sustainability solution for the fast fashion industry.

2 FAST FASHION
Fast fashion has developed over the past twenty years and is characterized by a “here today, gone tomorrow” directive and ethos; apparel designs borrow heavily from the popular styles seen on the latest spring and fall fashion shows. Fast fashion is driven by customer expectations and is mass produced; its sourcing strategy is based on low production costs, low retail prices, Just In Time product life cycle management and Enterprise Resource Planning technologies. Targeted customers fit within the younger demographic range and stores serve as prototyping labs. The most successful fast fashion retailers such as Inditex’s Zara are vertically integrated operations, holding very low
inventory levels, and reading the market with nimble IT tools that facilitate quick response at the retail level and connect back to product lifecycle management software systems. For example, store managers at Inditex’s retail locations provide daily information on sales and inventory, request replenishment of popular items, suggest reassortments and variations (such as production of certain garments in additional sizes or styles) and even report emerging trends to be produced as completely new designs (McAfee, 2007; Ton, 2010).

While the market for fast fashion is expanding, economic threats and direct opposition are also on the rise. The central opportunities for the fast fashion industry are the strong consumer demand for fast fashion in Western markets, decreasing brand loyalty among couture and high street fashion consumers, and a growth in demand for fast fashion in the Middle East and Asia. Significant threats include economic recessions affecting consumer markets around the world, the resulting deceleration of domestic fashion industry participation, and growth in “slow fashion” which opposes the socially, environmentally, and competitively unsustainable nature of fast fashion.

3 SUSTAINABILITY
There are multiple definitions for sustainability, but for the purposes of this discussion we will use the Brundtland Commission's definition which is that sustainable development is "development which meets the needs of current generations without compromising the ability of future generations to meet their own needs" (1987). The most common approach to establishing sustainability is an evaluation of three pillars: people, planet, and profit (Fisk, 2010; Haugh, 2010). There are misconceptions about how sustainability merges with the concerns of the business world (Huniccutt, 2009). One such misconception is that sustainability is another word for “philanthropy,” but a firm’s charitable giving cannot simply be equated with its level of sustainability, albeit a contributor to social sustainability (Haugh, 2010; Fisk, 2010; Huniccutt, 2009). Another misconception is that capitalism is a victim of the sustainability movement because the principles of sustainability imply that businesses should not make profits, or make too much profit (2009). In reality, sustainability encourages quite the opposite. The three-pronged approach acknowledges that without fiscal sustainability, a firm cannot stay in business for the long term (Haugh, 2010). While the objective of sustainability is for firms to hold themselves accountable for their social and environmental impact, social and environmental efforts are not replacements for the customary measures of revenue and profit, but instead they enhance firm assessment by reducing the negative impact of a firm (Huniccutt, 2009). Furthermore, firms cannot undertake the requests of stakeholders without the financial resources and stability required to do so. This is something that the lauded sustainability focused apparel industry firms such as Nau and Patagonia have long realized.

4 COMPETITIVE SUSTAINABILITY
The traditional three pillar approach to sustainability is attractive for its simplicity, but is not the most comprehensive approach when it comes to fast fashion. We propose a fourth pillar, that of competitive sustainability, which takes in to account organizational slack, the firm’s own creative capacity and its reliance on competitors firms output. Firms are better able to contribute to social, environmental, or competitive causes when they have the resources to do so. Bansal (2005) refers to this capacity as “organizational slack” and found it to be positively associated with a firm’s overall sustainability. Bansal theorized that organizational slack allows firms to devote resources toward adjusting to the ever-changing external environment, which supports our claim that one of the sustainability pillars can prompt other forms of sustainability. Fast fashion firms’ creative capacity is linked to its absorptive capacity (Zahra and George, 2002) and is an example of such organizational slack.

We characterize the fast fashion firms’ creative capacity as a firm’s ability to hire designers to generate original designs. One of the firms we focus on, Mango, is an example of a fast fashion firm with relatively high creative capacity, due to the employment of its own design team and celebrity designers, a factor that has kept Mango from being labeled as a copyist in feedback loops. Additionally, Mango makes philanthropic contributions to the fashion industry. Mango manages a blog devoted to fashion trends, and it organizes an annual design competition. As part of this competition, Mango collaborates with high-street fashion designers to promote and fund new, talented designers. Although the competitive pillar is a newly-recognized component of fast fashion sustainability, Mango’s proficiency in helping to sustain the health of the fashion industry indicates that stakeholders, such as consumers, may have already pressured Mango to take action in this area.

5. THE CREATION OF THE INDEX
The fast fashion sustainability index proposed here was developed on the basis of established sustainability theory and the principles of people, planet and profit (Zwetsloot, 2003). Our proposed index accounts for multiple stakeholder perspectives, a characteristic that is shared by all surveyed sustainability indices (Savitz, 2006). Consistent with the approach used in other indices, indicators within each pillar are categorized according to the dimensions that represent the abstract constructs that align with the conceptual definition of the pillar. At the most basic level of the index, indicators evaluate a firm’s performance along each dimension. Dimensions representing the environmental, social, and fiscal pillars include ones that frequently appear in other indices. Precedents for the competitive pillar’s
dimensions did not exist; therefore, the competitive dimensions were developed to categorize abstract constructs pertaining to the competitive pillar.

Academic arguments for sustainability reiterate that the fundamentals of any type of sustainability are 1) establishing standards that promote sustainability and 2) reporting performance along those standards. These dimensions show that a firm is setting goals and monitoring performance, which collectively help a firm to identify areas of success or improvement. Even though the four pillars cover various aspects of sustainability, each pillar contains two dimensions to quantify Standards and Reporting, which create a baseline of sustainability across the four pillars.

The following is an outline of the four pillars and their dimensions:

<table>
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<tr>
<th>Social Pillar</th>
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<tr>
<td>Establishing company standards</td>
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<td>Reporting company impact</td>
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<tr>
<td>Accident risk &amp; Safety</td>
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<td>Health</td>
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<td>Human rights</td>
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<td>Social investment</td>
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<td>Education &amp; Career advancement</td>
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<tr>
<td>Compensation &amp; Benefits</td>
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<tr>
<td>Job stability</td>
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<tr>
<td>Vested interest</td>
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<th>Environmental Pillar</th>
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<tr>
<td>Water use and quality</td>
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<tr>
<td>Toxic substances</td>
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<tr>
<td>Waste &amp; Recycling</td>
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<tr>
<td>Energy use</td>
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<tr>
<td>Land use</td>
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<td>Vested interest (1/2 weight)</td>
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<tr>
<td>Reporting company impact</td>
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<tr>
<td>Code of ethics</td>
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<tr>
<td>Industry-level performance</td>
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<tr>
<td>Managing risks</td>
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<tr>
<td>Fiscal efficiency, stability, and growth</td>
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<tr>
<th>Competitive Pillar</th>
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<tbody>
<tr>
<td>Establishing company standards</td>
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<td>Reporting company impact</td>
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5 METHODOLOGY

Since each pillar consists of multiple dimensions and indicators, another consideration was how those dimensions would be weighted in determining the pillar’s total score. While some indices weight dimensions based on importance, such scoring systems are subjective (it depends on who is reading the results). To avoid introducing such biases, an impartial score system was developed. First, each pillar score has the highest potential score of 100%. Within every pillar, the fundamental Standards and Reporting dimensions account for 20%, and the remaining 80% is equally divided among dimensions. Within every dimension, each question carries equal weight. The result is an objectively weighted index in which various constructs and metrics of sustainability are given equal consideration.

Data for the index was collected by surveying the annual reports and any other publicly available reporting materials recognizing the firm’s social, environmental and fiscal activity and any news media reports of copyist activity. This data led to indicator scores (most often, by prompting “yes” or “no” answers to survey questions.) The sum of all indicator scores produced a dimension score. Then, the sum of dimension scores produced a pillar’s total numeric score. A simple average of the four pillar scores represents a firm’s overall sustainability.

6 DATA ANALYSIS

The assimilation of firm-specific data into a numeric pillar score allows for comparison between types of sustainability, aggregation of the pillar scores into a representation of overall firm-level sustainability, and (from a macro perspective) comparison among firms’ scores. We might find the index to show, for example, that while a firm exhibits great ability to implement sustainable social, environmental, and competitive innovations, its inability to capture that value through fiscal performance reduces its relative sustainability in the fast fashion industry. A relatively low pillar score could place a firm’s overall sustainability behind that of a competitor. Thus, there can be varying levels of sustainability within a firm, and among firms. Quantifying sustainability creates large opportunities to compare and contrast sustainability performance.
The results of the first sustainability index geared toward fast fashion showed a result similar to the example (as illustrated in the chart above). While Inditex’s social, environmental, and fiscal sustainability scores were strong, Inditex’s relatively low competitive performance decreased its overall sustainability score. Both firms demonstrated promising social and environmental sustainability. In the area of fiscal sustainability, Inditex was the clear leader. From a competitive sustainability perspective, Mango was relatively more successful, but neither firm earned scores over 60%. The firms’ indicator, dimension, and pillar scores reveal drastically different approaches to sustainability, yet the two Spanish firms earned nearly identical overall scores. Perhaps most notable: without the inclusion of competitive stability, the Inditex’s overall sustainability would appear to be better than Mango’s, but the customized index reveals that Inditex’s overall sustainability is similar to Mango’s.

7 CONCLUSION
A firm’s awareness of long-term impacts on stakeholders is the first step towards improving overall corporate sustainability. In the fast fashion industry there are unique competitive concerns that relate to a firm’s creative capacity and respect for intellectual property rights, but there are also more general concerns that exist in any industry such as industry development and participation. This proposed methodology may possibly serve as a model for other industries in developing customized sustainability indices.

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Oil Price Shocks and Macroeconomic Activities: Evidence from an Oil Dependent Exporting Economy

Olajide Oladipo, PhD
Department of Business and Economics
School of Business and Information Systems
York College/ CUNY
94-20 Guy R. Brewer Blvd
Jamaica, NY 11451
ooladipo@york.cuny.edu

ABSTRACT

In the past few years, the world has witnessed increasing crude oil price volatility. For instance, the West Texas Index (WTI, a reference price used globally) increased from an average of US$16.74 per barrel in 1993 to US$27.69 in 2003. In 2004 was an average of US$37.41, reached US$50.04 per barrel in 2005, increased to an average of US$91.48 per barrel in 2006 and oscillated between US$70.04 and US$91.38 in 2010.

Nigeria is currently the seventh largest producer of crude oil in the World and the oil sector has been the mainstay of the economy since the late 1970s. Nigeria’s oil statistics show that the country has an estimated 36.2 billion barrels of oil reserves which makes the country the second largest in terms of oil reserves in the entire African continent. The sector accounts for 95 percent of export earnings and about 85 percent of government revenues. Its contribution to the gross domestic product (GDP) stood at 17.5 and 19.4 percent in 2009 and 2010 respectively. The U.S energy information administration (EIA) 2009 report estimates Nigeria’s effective oil production capacity to be around 2.7 million barrels per day (bbl/d).

A serious drop in oil production levels, which in turn affects exports, and the plummeting of world oil prices in late 2008 have resulted in huge revenue gaps for the country. Further, Nigeria is exposed to oil price shocks through the massive importation of refined petroleum products since the collapse of its local refineries in the late 1980’s. Currently, the country imports almost 85 percent of refined products for its local consumption. The near collapse of the power generation and distribution industry in the country further accentuates the acute shortage of energy. The growth path of the country has been very unstable over the years and the persistent oil price swings will continue to have severe macroeconomic implications, thus inducing policy challenges (fiscal and monetary) not only for oil importing countries but also for oil exporting countries like Nigeria.

The empirical studies in this area of research have concentrated on the developed economies such as

\[\text{\footnotesize{\textsuperscript{1} It is also the third largest economy after South Africa and Egypt.}}\]

\[\text{\footnotesize{\textsuperscript{2} The incessant crisis in the oil producing region of Nigeria has created a huge gap between actual output and the OPEC allocated quota, especially since 2007.}}\]
the United States, Japan, and the Organization for Economic Co-operation and Development (OECD) countries which represent developing or established markets. Thus, little attention has been devoted to less developed economies. Empirical research of the impact of oil price movements in developing countries, particularly in Nigeria would not only redress the imbalance in country studies but would also serve the needs of Nigeria policy makers.

Also, most of the previous studies focused on oil importing economies. A few studies that have examined the effects of crude oil price shocks on macroeconomic activity in oil producing developing countries have reported mixed results; see Nnnanna and Masha (2003) for Nigeria, Chang and Wong (2003) for Singapore, Anashasy (2005) for Venezuela, Raguindin and Reyes (2005) for Philippines, and Berument and Ceylan (2005) for a group of Middle East and North African countries, Wakeford (2006) for South Africa, Farzanegan and Markwardt (2009) for Iran. Also, findings from these few studies cannot be generalized; there is need for more country specific study on the subject matter to shed more light on the debate. The current effort differs from Nnnanna and Masha (2003) methodology and also by introducing omitted and relevant variables such as government expenditure into the Vector Autoregressive (VAR) model.

The Nigerian economy has experienced series of oil shocks over the years. In order to capture the effect of these shocks, the study employs large sample size, quarterly time series data between 1970:1 and 2009:4. The variables that was used to examine the impact of oil price shocks on gross domestic product in Nigeria include the real gross domestic product (GDP), represented by the industrial production index (y); the domestic price level, measured by the consumer price index (p), the real exchange rate (rer) defined as the product of the domestic currency value of the dollar and the ratio of the US and the domestic wholesale price index (MPI) and the real oil price (poil) measured by the domestic price of crude oil deflated by the CPI, government expenditure and real import. The real GDP measures the aggregate economic activities while other variables are indirect channels through which oil price increases or decreases affect the macro economy. Data for the study will be obtained from Statistical Bulletin and Economic and Financial Review, publications of the Central Bank of Nigeria (CBN).

Our results show that oil price shocks do not have substantial impact on output, and inflation in Nigeria. A cursory observation revealed that inflation rate depends on shocks to output and the real exchange rates. On the other hand, we find out that fluctuations in oil prices do substantially affect the real exchange rates. Finally, we infer that oil price shock is germane in determining real exchange rates and long run money supply while money supply has appreciable and substantial influence on output growth.

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Dougclason G. Omotor  
Department of Economics,  
Delta State University,  
Abraka, Nigeria  
+234(0) 8034083112  
yomotor@yahoo.com

Nyoreh Akpobi  
Vice-Chancellor’s Office  
Delta State University  
Abraka, Nigeria  
+2348033775214

Harvest Igben  
Department of Economics  
Delta State University,  
Abraka, Nigeria  
+2348033932444  
igbenhave2@yahoo.com

Abstract

The paper tested the Purchasing Power Parity (PPP) hypothesis for Nigeria-U.S. exchange rate and prices using monthly data for the period 1970 to 2008. The preliminary results from cointegration tests suggest the absence of a long-run cointegration relationship between Nigerian exchange rates and domestic cum foreign price level. The observed relationship thus look far from the expected law of one price. Some reasons adduced to this are related to the fact that many of the inputs into the domestic CPI cannot be traded internationally or not easily at least; the presence of transactions costs—perhaps arising from transport costs, taxes, tariffs and duties and nontariff barriers, that is the so-called “border effect”. In addition, not all goods are traded between all countries, and the weight attached to similar goods in aggregate price indices will differ across countries. On shortcomings of the methodology, the empirical results may have behaved this way as a result of the fact that exchange rate gyrations (structural breaks) in Nigeria during the period of analysis were not adequately captured.

1 INTRODUCTION

The growing efforts to empirically examine the theory of purchasing power parity (PPP) in the explanation of long run exchange rates have aroused enormous debate in the literature on applied economics in developed market economies as well as developing countries. To amplifying the preponderance of studies in this subject, Liu and Su (2011:17) argue that “purchasing power parity (PPP) provides an important basis for financial stabilization and structural adjustment policies. It plays a role in the choice between money, inflation, or exchange rate targeting in the formulation of monetary policy”. A crucial assumption of the empirical terms of the relationship between exchange rate, domestic prices, and foreign prices and hence the PPP requires that the real exchange rates must be stationary. The idea of long-run relationship among these variably as implied in the theory in that the process of arbitrage ensures that goods sell for the same price in different countries. As such, the PPP does well at explaining how inflation affects exchange rates.

The validity of PPP has various implications to policy makers of central banks, multinational firms, and many other exchange rate market participants (Liew, Lee and Lim, 2005). If the PPP holds, it can be used to evaluate and predict exchange rate to determine whether a currency is over or undervalued based on the equilibrium value as suggested by PPP itself. Second, the PPP can be used as the foundation on which many theories of exchange rate determinants are built. Third, the PPP in its variants can be adopted as reliable predicting tools for future exchange rate movements (Liew, et al, 2005) fourth; PPP reflects the degree of trade integration and liberalization among countries.

Although several attempts have been made in the empirical literature to investigate the validity of PPP in developing countries (Bahmani – Oskooee, 1995; Intal, 1992; Breuer et al.; 2001, Liu and Su, 2011), empirical support has been rather mixed. Further, many of these studies on African countries used relatively short time
periods to study this long-run relationship and its attendant short-run dynamics. These studies as such may not have adequately explored the long-run relationship which exist between and among the exchange rate domestic prices and foreign prices as explained the PPP theory. In addition, issues of causality and short-run dynamics within the framework of long-run hypothesis were not duly considered.

This paper represents another contribution towards this literature. It seeks to examine the causal relationship between and among the variables which appear in the PPP relationship (exchange rate, domestic price level and foreign price level). Following Islam and Ahmed (1999), Granger test without corrections for short-run dynamic as well as Granger test which uses the Error-correction mechanism (ECM) will be conducted. The causality tests are expected to establish the various possible causal linkages between the variables.

The contribution of this paper lies, in the use of a long monetary time series which is not the case in most other studies using Nigerian data. Nigeria for almost two decades and half implemented structural and macroeconomic adjustment programmes designed to improve its external competitiveness in order to chart a pathway of a sustainable economic growth by rate liberalizing the economic system. Exchange rate policy reforms were among the adjustment programmes packages for this vision.

The rest of the paper is arranged as follows. Section 2 undertakes the presentation of a brief theoretical framework in the modeling process of exchange rate and the theory of PPP. Section 3 summarizes the empirical framework of causation. Section 4 discusses the time series properties of the data used in the analysis. This section also presents the empirical findings. The paper concludes in section 5.

1. Theoretical Foundation.

The foundation of the purchasing power parity (PPP) theory which relates exchange rates and price levels is laid on the proposition of the Law of One Price. According to this law, identical goods should (under certain conditions of absence of transportation, tariffs and other barriers to trade) sell for the same price in two different countries at the same time.

Although the term purchasing power parity was apparently first used by Cassel (1918), the ideas underlying PPP have a history dating back at least to scholars at the University of Salamanca in the fifteenth and sixteenth centuries; according to Marr (2006:427) in reference to Officer (1982).

There are, actually, different versions of the Law of One Price. There is a strong absolute version and a weaker relative version. Both can be applied to individual products and to price indices. The absolute PPP hypothesis states that the exchange rate between the currencies of two countries should equal the ratio of the price levels of the two countries. The relative PPP hypothesis, on the other hand, states that the exchange rate should be proportionate to the ratio of the price levels. In logarithmic forms, the absolute and relative PPP versions can be written respectively as:

\[ \text{Absolute version} \]

\[ \text{Relative version} \]

where \( ex \) the nominal exchange rate measured in units of domestic currency per unit of foreign currency, \( p \) is the domestic price level and \( p^* \) is the foreign price level. The variable \( w \) is a constant parameter that further reflects the influence of omitted variables; and \( t \) is the time subscript. \( R_t \) represents the relative price of domestic vis-à-vis foreign prices.
It has been argued according to Ugbebor and Olubusoye (2003: 11) that information on national price levels normally is only available in the form of price indices rather than absolute price levels, consequently, the absolute PPP may be difficult to test empirically; as such, the relative PPP is more popular for use as equally evidenced by earlier empirical studies.

According to Marr (2006), the relative version of PPP (Equation 2) can be derived either from the absolute version of PPP (Equation 1) or from the relative version of the Law of One Price. And that the PPP relationship is actually a long-run relationship, with substantial deviations from PPP ‘equilibrium’ in the short run due to various shocks and disturbances. To incorporate these factors, an augmented form of Equation 2 can be stated in an empirically tested form as:

\[ e_{x_t} = w + \rho R_t + \mu_t \]  

where the coefficient of \( R_t \) assumes the value of one if PPP holds perfectly. This allusion is an indication that any change in the exchange rate would reflect changes in the relative price levels of domestic vis-à-vis foreign goods (Islam and Ahmed, 1999:97). Satisfying this condition is necessary for establishing exchange rate and the relative prices to form a cointegrated system. In the strict form, PPP would hold under the joint hypothesis of \( w = 0 \) and \( \rho = 1 \). While in the less strict form, \( \rho = 1 \) under the same hypothesis.

The exchange rate may respond to a change in the ratio of the national price levels, while rate depreciation might feed inflation. The PPP hypothesis is not unambiguous about the direction of causality between the variables. It only states the relationship. Causality between prices and the exchange rate might well run in both directions (bidirectional causality) or in either direction (unidirectional causality). No causal relationship (independence) if neither \( e_{x} \) nor \( R_t \) causes the other. Economic theory is however mute on the direction of causality which has made it an important issue of empirics as existing studies are mixed. One method of causality that is widely used in the empirical literature is the Granger causality technique. This approach is briefly discussed in the next section.

The validity of the PPP has been tested in a large number of studies with robust evidence strongly confirming that the PPP is not an efficient hypothesis about the relationship between nominal exchange rates and national price levels in the short-run. Nevertheless, in the long-run \( ante \), PPP has received considerable empirical support (Ugbebor and Olubusoye, 2002; Marr, 2006; Liu and Su, 2011 among others).

To find supporting evidence of relative PPP, we attempt to analyze relatively long enough time period using Nigerian and United States of American (USA) monthly data to ensure that the deviations between developments in price indices in the two countries are big enough, and the associated economic arbitrage forces strong enough, to allow for these differences to have an impact on the exchange rate. The paper ignores details of foreign exchange developments in Nigeria over time.

\[ 2 \text{ EMPIRICAL FRAMEWORK} \]

The methodology of ‘Granger-causality’ as applied in this study implies causality in the prediction (forecast) sense and not in a structural sense. It begins with the premise that ‘the future cannot predict the past’, thus if event B occurs after event A, then event B cannot cause A (Granger, 1969). This concept is applied along the illustration in Chontannawat, et. al. (2006) in the context of a bivariate model consisting of two equations as follows:

\[ y_t = \alpha_t + \sum_{i=1}^{L} \beta_y \Delta y_{t-i} + \sum_{i=1}^{M} \gamma_x \Delta x_{t-i} + \epsilon_t \]  

and
where: \( G_t = \ln(G_t); Y_t = \ln(Y_t) \)

\( G_t = \text{energy (oil or gas as the case may be) per capita; } \)
\( \text{and } Y_t = \text{real GDP per capita.} \)

In Equation (4), \( g \) causes \( y \) if the current value of \( y \) is forecasted by including the past values of \( g \) than by not doing so. Thus, if \( g \) causes \( y \), then \( g \) helps to predict \( y \).

In Equation (5), \( y \) causes \( g \) if the current value of \( g \) is forecasted by including the past values of \( y \) than by not doing so. Consequently, if \( y \) causes \( g \), the \( y \) helps to predict \( g \).

To conduct the Granger causality test, series that belong to the variables as relative recent developments in time series analysis have shown, need to be stationary. Equations (4) and (5) as initially formulated by Granger used levels of variables which may not be stationary. In order to ensure the series used in the analyses are stationary, with the development of the unit root testing and cointegration, Equations (4) and (5) are recast to reflect these developments; in case after checking for unit roots of the series, they are non-stationary at levels but integrated of order one or \( I(1) \) as:

\[
\Delta Y_t = \alpha_2 + \Sigma_{j=1}^{p} \phi_j \Delta Y_{t-j} + \Sigma_{j=1}^{q} \theta_j \Delta g_{t-j} + \varepsilon_t \tag{6}
\]

and

\[
\Delta g_t = \alpha_2 + \Sigma_{j=1}^{p} \phi_j \Delta g_{t-j} + \Sigma_{j=1}^{q} \theta_j \Delta y_{t-j} + \varepsilon_t \tag{7}
\]

where \( \Delta \) is the first differenced operator, so that the variables series are introduced in differences to ensure they are \( I(0) \) stationary. In this version, causality is formulated in terms of changes in the variables and Granger-causality is evaluated on the basis of the significance of the \( \Delta g_{t-j} \) terms and \( \Delta y_{t-j} \) terms as presented respectively in Equations (6) and (7).

According to Engle and Granger (1987), a linear combination of two or more non-stationary series (with the same order of integration) may be stationary. If found that such two or more integrated variables co-integrate, then the series are considered cointegrated and long-run equilibrium relationships exist. As such, Equations (6) and (7) can be augmented as follows:

\[
\Delta Y_t = \alpha_2 + \phi_2 \Delta g_{t-1} + \Sigma_{j=1}^{p} \phi_j \Delta Y_{t-j} + \Sigma_{j=1}^{q} \theta_j \Delta g_{t-j} + \varepsilon_t \tag{8}
\]

and

\[
\Delta g_t = \alpha_2 + \phi_2 \Delta g_{t-1} + \Sigma_{j=1}^{p} \phi_j \Delta g_{t-j} + \Sigma_{j=1}^{q} \theta_j \Delta y_{t-j} + \varepsilon_t \tag{9}
\]

where \( EC \) is the error correction term from a cointegrating equation of the form \( \chi_t = \beta g_t + \frac{\Delta g_t}{EC_t} \) and consequently is \( I(0) \). What this implies is that, if a pair of \( I(1) \) are co-integrated, there must be Granger-causality in at least one direction, thus to avoid miss-specifying the model, it is pertinent to include the \( EC \) term to Equations (6) and (7). In this form, as Chontanawat et. al. (2006) further explained, there are two possible sources of Granger-causality for the \( \Delta Y_t \) equation; causality arises either through the lagged \( \Delta g \) terms if \( \beta_1 = 0 \) or through the \( EC_{t-1} \) term, if \( \beta_2 = 0 \) (implying a long run relationship); and for \( \Delta g_t \) equation, Granger-causality arises either through the lagged \( \Delta y \) terms if \( \beta_1 = 0 \) or through \( EC_{t-1} \) term, if \( \beta_2 = 0 \).

We investigated whether the various bivariate series were cointegrated, that is, whether a linear combination of any two series of the exchange rates and relative prices was stationary. This was preceded by first conducting the unit roots test using the Augmented Dickey-Fuller (ADF, 1979) and Phillips-Perron (PP, 1988) tests.

The most commonly used test for cointegration is the multivariate test based on the autoregressive representation of Johansen (1988) and Johansen and Juselius (1990). We apply the Johansen maximum
likelihood approach which provides two different likelihood ratio tests (trace statistic and maximum eigenvalue) to determine cointegration and the number of cointegrating equations. Cointegration implies that causality exists between the variables but does not indicate the direction of causal relationship (Erdal, et.al., 2008).

4. Data and Variables
The time series data span runs 1970(1) to 2008(12) with a total of 468 observations using the USA as benchmark or foreign country, with Nigeria as the home country. All variables as noted earlier are expressed in logarithm values and measured as:

\[ e_{x_t} \] = index of Nigeria/U.S. monthly exchange rate.

\[ R_t \] = index of the monthly ratio of Nigeria and US consumer price index (CPI).

The data on Nigeria were obtained from the various issues of the Statistical Bulletin of the Central Bank of Nigeria. The U.S. consumer price index data were sourced from the U.S. Department of Labour website.

5. PRELIMINARY RESULTS
5.1 Unit Root Tests
The Augmented Dickey-Fuller (ADF) test is used in testing the null hypothesis that there is a unit root in particular time series of interest. This is not the only test available, however its uses is very popular in the empirical literature. The unit root tests are reported in Table 1. The lag length is based Schwarz Information Criterion (SIC), starting with a lag length of 17 chosen by default. A pre-test view of the variables at levels as shown in Figure 1 suggests that the variables contain constant and trend.

The unit root tests indicate that exchange rate \((e_{x_t})\) and relative price \((R_t)\) are non stationary series in levels but stationary at first difference. Next, we consider if there is a linear combination of the variables with unit root that is stationary.

Table 1. Unit Root Tests

<table>
<thead>
<tr>
<th>Variables</th>
<th>ADF (Level)</th>
<th>ADF (1st Difference)</th>
</tr>
</thead>
<tbody>
<tr>
<td>(e_{x_t})</td>
<td>0.21</td>
<td>-2.32</td>
</tr>
<tr>
<td>(R_t)</td>
<td>-21.09</td>
<td>-21.11</td>
</tr>
</tbody>
</table>

5.2 Cointegration Analysis
The Johansen approach is used in testing for the existence of at least, a stationary linear combination of the series. The series which are I(0) by the unit roots tests are included in the Vector Autoregression (VAR) model for cointegration test. First we estimate a level-based VAR to determine the relevant lag-length or the lag order. Starting with a maximum lag of 8, the sequential modified LR statistic (LR), Akaike Information Criterion (AIC) and the Final Prediction Error (FPE) indicate that the fifth lag length (in the levels of the variables) is optimal. Table 2 which reports
the VAR lag order selection (variables in level), equally report optimal length of three and four using Schwarz Information Criterion (SIC) and Hannan-Quinn Information Criterion (HQ) respectively. An error correction representation of the VAR (Vector Error Correction Model, VECM) would imply that the VAR, in first difference of the variables, will have a lag order of at most 3 if cointegration exists.

Table 2. Lag Order Selection (Variables in level).

<table>
<thead>
<tr>
<th>Lag</th>
<th>LogL</th>
<th>LR</th>
<th>FPE</th>
<th>AIC</th>
<th>SC</th>
<th>HQ</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>-543.2</td>
<td>NA</td>
<td>0.0</td>
<td>2.5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>1070.9</td>
<td>3205.9</td>
<td>2.59e-05</td>
<td>-4.9</td>
<td>-8.6866</td>
<td>-8.6525</td>
</tr>
<tr>
<td>2</td>
<td>1120.2</td>
<td>97.5</td>
<td>2.11e-05</td>
<td>-5.1</td>
<td>-8.6593</td>
<td>-8.7073</td>
</tr>
<tr>
<td>3</td>
<td>1140.8</td>
<td>40.5</td>
<td>1.95e-05</td>
<td>-5.2</td>
<td>-8.6992</td>
<td>-8.7558</td>
</tr>
<tr>
<td>4</td>
<td>1151.7</td>
<td>21.3</td>
<td>1.89e-05</td>
<td>-5.2</td>
<td>-8.7039*</td>
<td>-8.7616</td>
</tr>
<tr>
<td>5</td>
<td>1158.2</td>
<td>12.6*</td>
<td>1.87e-05*</td>
<td>-5.2*</td>
<td>-8.7099*</td>
<td>-8.7700</td>
</tr>
<tr>
<td>6</td>
<td>1161.9</td>
<td>7.3</td>
<td>1.87e-05</td>
<td>-5.2</td>
<td>-8.7148</td>
<td>-8.7807</td>
</tr>
<tr>
<td>7</td>
<td>1164.2</td>
<td>4.4</td>
<td>1.89e-05</td>
<td>-5.2</td>
<td>-8.7248</td>
<td>-8.7907</td>
</tr>
<tr>
<td>8</td>
<td>1165.2</td>
<td>1.8</td>
<td>1.91e-05</td>
<td>-5.2</td>
<td>-8.7337</td>
<td>-8.8007</td>
</tr>
</tbody>
</table>

* indicates lag order selected by the criterion LR: sequential modified LR test statistic (each test at 5% level) FPE: Final Prediction Error AIC: Akaike Information Criterion SC: Schwarz Information Criterion HQ: hannan-Quinn Information Criterion

In order to determine the number of cointegrating equations, the trace and maximum Eigenvalue tests statistics of Johansen and Juselius (1990; 1992) were applied. Preceding this is the summary statistics of cointegration test (See Table 3). The summary statistics of the cointegration test under alternative trend assumption of the data report that the null hypothesis of at most zero (0) cointegrating equation cannot be rejected in all the linear and quadratic cases at 0.05 level based on MacKinnon-Haug-Michelis (1999) critical values. The first two hypothesis of the number cointegrating equations are presented in Table 4. The results from both the Trace and the maximum Eigenvalue tests indicate no cointegrating equations in the system. The implication of the cointegration tests is that no long run relationships is identified and hence there may be no need to further estimate the short run dynamics as causality may also be absent. In addition, the absence of cointegration also suggests that the PPP hypothesis is not efficient using Nigerian data.

Some good reasons why the PPP hypothesis is not supported by the evidence as the Nigerian case reveals may be related to the fact that many of the inputs into the domestic CPI cannot be traded internationally or not easily at least: (for example; a high service component—the wages and a high property rental component). As Taylor and Taylor (2004, 136) further observed, "...both the service-sector labor nor the property is easily arbitraged internationally, and advocates of PPP have generally based their view largely on the relative price arbitrage. This, while these indices may give a lighthearted and suggestive idea of the relative value of currencies, "they should be treated with caution". Other reasons that may induce the violation of the Law of One Price as the PPP hypothesis is also referred to are; the presence of transactions costs—perhaps arising from transport costs, taxes, tariffs and duties and nontariff barriers. Engel and Rogers (1996) found support for this hypothesis in the so-called “border effect” with the view that volatility of the price differential tended to be larger the greater the distance between the cities concerned, and it increased substantially when prices in cities in different countries were compared. In addition, since PPP is based on traded goods, it might be more usefully tested with producer price indices that tend to contain the prices of more manufactured tradables, rather than consumer price indices, which trend to capture the prices of relatively more nontradables, such as many services. Moreover, not all goods are traded between all countries, and the weight attached to similar goods in aggregate price indices will differ across countries. On shortcomings of the methodology, the empirical results may have behaved this way as a result of the fact that exchange rate gyrations (structural breaks) in Nigeria
during the period of analysis were not adequately captured.

Table 3. Summary Statistics of Cointegration Test

<table>
<thead>
<tr>
<th>Selected (0.05 level) Number of Cointegrating Relations by Model</th>
<th>DT</th>
<th>None</th>
<th>None</th>
<th>Linear</th>
<th>Linear</th>
<th>Quadratic</th>
</tr>
</thead>
<tbody>
<tr>
<td>TT</td>
<td>NINT*</td>
<td>INT+</td>
<td>INT+</td>
<td>IT#</td>
<td>IT#</td>
<td></td>
</tr>
<tr>
<td>Trace</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>M-E</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
</tbody>
</table>

*No Intercept No Trend, +Intercept No Trend, #Intercept Trend
DT= Dataa Trend; TT = Test Type; Max-Eig.

Table 4. Testing for Cointegration

<table>
<thead>
<tr>
<th>Hypothesized No. of CE(s) (Null)</th>
<th>Eigenvalue</th>
<th>Trace Statistic</th>
<th>Max-Eig Statistic</th>
<th>Remark</th>
</tr>
</thead>
<tbody>
<tr>
<td>r = 0</td>
<td>0.0163</td>
<td>7.2817 (15.49)</td>
<td>7.2028 (14.26)</td>
<td>Accept</td>
</tr>
<tr>
<td>r &lt;= 1</td>
<td>0.0002</td>
<td>0.0789 (3.84)</td>
<td>0.0789 (3.84)</td>
<td>Accept</td>
</tr>
</tbody>
</table>

Both tests indicate no cointegration at the 0.05 level using MacKinnon-Haug-Michelis (1999) p-values

6. Concluding Remarks

This study aims to shed light on the Purchasing Power Parity hypothesis using Nigerian data. To this end the relative PPP approach is adopted in our analysis that is equally based on cointegration of the variables (exchange rate and relative prices) for the period 1970(1) to 2008(12). The results from both the Trace and the maximum Eigenvalue tests indicate no cointegrating equations in the system. The implication is that no long run relationships is identified and since the study is still a preliminary there was no need to further estimate the short run dynamics as causality may also be absent. In addition, the absence of cointegration also suggests that the PPP hypothesis is not efficient using Nigerian data. However, there still exists room for further analysis.

Endnotes

1. Both of these can, in turn, be derived from the absolute version of the Law of One Price. Figure 20.2 schematically summarizes the strongness of these ‘laws’ and their relationships
2. See Ugbebor and Olubusoye (2002) for such details.

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U.S. Department of Labour website
The Vital Importance of Tourism Receipts On The Large Current Account Deficits of Turkey

Prof. Dr. Serdar Ongan
Istanbul University
Department of Economics- Beyazit

Istanbul-Turkey-Tel: + (90)2124400000, serdar.ongan@gmail.com, ongans@istanbul.edu.tr

Abstract: The current account deficits are the foremost economic problem of Turkey for a very long time. Although the country has high economic growth rates, considerably and comparatively strong budget-government debt balances unlike many European and US economies, the large and chronic current account deficits threaten world’s 16th largest Turkish economy which exceedingly depends on the imports. This high import dependency impedes to reduce the current account deficits with even the recorded increases in exports. On the other hand, with its rapid development within the same period, the tourism sector has made important contribution to the current accounts balances in Turkey as a tourist destination country. This paper attempts to attract attention and show strikingly the vital importance of tourism receipts on the current account deficits and in Turkish economy from 1984-2010. The results indicate that the only way to reduce the current account deficits in Turkey at least in short run is to increase tourism receipts as long as its high import dependency continues.

Keywords: Current Account Deficits, Tourism Receipts, Turkey

1. INTRODUCTION

The current account balance is one of the major indicators of the health of a nation’s economy and also a focal point for measuring the economic performance of an open economy (Roubini and Watchel, 1997). Fluctuations in this balance cause important and radical changes in the macroeconomic policies and time after time financial crises in the countries (Knight and Scacciavillani 1998).

Although it is not possible to say that the large current account deficits definitely will cause the financial crises (Kaminsky et al. 1998; Milesi-Ferretti and Razin 1996), the large current account deficits have triggered the financial-economic crises in many countries such as in Chile Mexico, UK, the Nordic countries and Argentina as well as in the East Asian countries (Fountas et al. 2002), and in Turkey (early 1994 and late 2000) (Yeldan et al. 2002).

Moreover, Blanchard O and GM Milesi-Ferretti (2011) define the terms of “good” and “bad” current account deficits. They describe the difference between “good” and “bad” current account deficits. Bad current account deficits are those which result from domestic distortions or excessive fiscal positions. Good ones are those which do not have such causes (Blanchard and Milesi-Ferretti, 2011).

Since many countries have large current account deficits, one of the arguments and study areas on this issue is the sustainability and un-sustainability of these deficits in the long run (Mann, 2002; Tanner and Liu, 1994 Husted, 1992; Hakkio and Rush, 1991). According to Reisen (1998), policy makers should concentrate these terms at least in the short run.

Current accounts deficits/GDP is a simple and mostly used method which provides an opinion on the sustainability of current accounts deficits. This ratio may imply the sustainability of a country’s external position in that the ratio measures the excess of domestic expenditures over domestic production as a fraction of GDP (Holman, 2001; Edwards, 2001; Sachs, 1981).

Current Account Balance = Domestic Saving – Domestic Investment
However, an evaluation based on this ratio may not always provide sufficient information on the sustainability of the current accounts deficits of a country. This general evaluation sometimes remains as an approach that ignores fundamental country characteristics such as the availability of investment opportunities and capacity of savings. For example, for the years 1991-1997 this ratio can be interpreted as unsustainable for Indonesia, where this ratio was 2.6%; and as sustainable in Peru, where this ratio was 5.2% (Calderón et al. 1999). On the other hand, conventional wisdom suggests that a current account deficit-to-GDP ratio of 3%-6% or higher implies that the current account is unsustainable (Edwards, 2006; Freund, 2003; Milesi-Ferretti and Razin (1996).

A number of indicators are used in the assessment of the sustainability of current accounts deficits. Currency exchange rate policies, trade openness, the health of the financial system, the levels of savings and investments, the openness of capital-account (Milesi-Ferretti and Razin 1996; Sachs 1981), large fiscal imbalances, low foreign reserves, increasing foreign dept, foreign dept-burden ratios, short-term portfolio investments (so-called “hot money”), political instabilities (Roubini and Ito, 2008) and tax cuts (Boileau ve Normandin, 2008) are some of the indicators which are used.

2. CURRENT ACCOUNT BALANCES OF TURKEY

Export as an engine of economic growth of Turkey which is world's 16th largest economy has increased considerably for the last years. But, at the same time, because of the high import dependency, import has also increased exceedingly the exports. This structural problem of Turkish foreign trade balance caused foreign trade deficits, in spite of considerably increasing exports of the country. In below graph, it is shown the high import dependency of Turkey from 1984-2010. The increases of the imports continuously have exceeded the increases of the exports as it is seen in their slopes.

When it is looked at the continuously widening slopes of the exports (2) and imports (1) during the years, it can be seen easily seen and evaluated that the foreign trade deficits in Turkey are *unsustainable*. Large and chronic current accounts deficits have created and still have been creating serious problems for the Turkish economy, particularly for three decades. Current accounts deficits, or to be more specific, foreign trade deficits, which are the main causes of current accounts deficits, have been very effective in the emergence of several financial-economic crises Turkey has encountered (1994 and 2000). Within this period we are in, the concern that the gradually increasing current accounts deficits may lead to similar crises is often discussed. The following graph shows the parallel relation between foreign trade deficits and current accounts deficits in Turkey between 1984 and 2010.

![Graph: The Shares of Trade and Current Account Deficits in GDP](source)

The graph above shows that current accounts deficits have reached to 47 billion dollars as of 2010, the share within the GDP of which is equal to 6.1%. Similarly, foreign trade deficits were at a level of 55.8 billion US Dollars, which was 7.5% of the GDP. However, at the end of 2011, the share of current account deficits within the GDP is expected to reach almost 8% with 70 billion dollars. Again, when the above figure is carefully examined, it can be seen that the current accounts deficits-foreign trade deficits had reached significant levels immediately before the financial-economic crises suffered in the years 1994 and 2000. These crises were followed by devaluations and currency adjustments in efforts to eliminate the deficits in question. Therefore, foreign trade deficits have become the most important reason and determinant of current account deficits.

Another important determinant within the current account balances of Turkey is tourism, which has had a very rapid uptrend particularly recently. The share of tourism receipts in GDP has reached to 2.8% in 2010 from only 0.5% in 1980 with the increase more than five times. In the same period, while the number of international tourist arrivals to Turkey reached to almost 28 million from only 1.2 million with the increase more than twenty times, tourism receipts also
reached to 15.5 billion dollar from only 300 million dollar with the increase more than fifty times (TUIK, 2011). The below graph shows foreign trade balances consisting of exports receipts and import expenditures as well as the tourism balances consisting of tourism receipts and expenditures from 1984 and 2010.

![Graph showing foreign trade and tourism balances]

Source: State Planning Agency (DPT) Indicators.

As can be seen in the graph above, within the period in question, imports were continuously higher than exports, and therefore foreign trade balances yielded deficits. In addition, within the same period, tourism receipts remained much higher than tourism expenditures, and therefore tourism balances yielded surpluses. In other words, tourism has contributed to the current accounts balances at considerable levels. The increased current account deficits when net tourism receipts are not taken into consideration within the current accounts balances between the years 1984 and 2010 are strikingly shown in the figure below which is similar and comparative to Graph 2.

![Graph showing the effect of tourism on current account balance]

Source: State Planning Agency (DPT) Indicators.

The contribution of tourism to current accounts balances is clearly seen in the graph above. The area between line number (1), which shows the shares of current accounts deficits within the GDP and line number (2), which shows the shares of current accounts deficits within the GDP when net tourism receipts are not taken into consideration reflects the contributions of tourism to current accounts balances. In other words, in case the net and significant contribution of tourism were not there, current accounts deficits were going to be much higher as indicated by line number (2).

3. CONCLUSION

The large and chronic current account deficits threaten Turkish economy for many years. According to many economists, one of the main reasons of the crises in 1994 and 2000 was seen this large and chronic current account deficits. This also increases the fragility of Turkish economy, in spite of very considerable amounts of exports and therefore economic growth rates. Because, the leakage rate of exports is very high. In other words, almost 75% of every dollar earned by exports is spent on imported goods such as mostly oil and capital goods. If Turkey wants to increase its exports, unfortunately, it must import paradoxically. Therefore, the only way to reduce the current account deficits in Turkey is to increase tourism receipts. At the same time, tourism as labor intensive sector will also help to reduce the unemployment rates of the country. Consequently, tourism sector and investments in this sector have a vital importance role for the Turkish economy. Therefore, Turkish policy makers have to seek the ways to increase tourism receipts.

REFERENCES

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DPT. State Planning Agency Indicators.


TUIK (State Statistics Institute of Turkey), The Economic Indicators.

Nonparametric Volatility based on Support Vector Machines

Phichhang Ou
School of Business
University of Shanghai for Science and Technology
Rm 101, International Exchange Center,
No. 516, Jun Gong Road, Shanghai 200093, China
Tel: +86 -13 661751547
E-mail: phichhang@gmail.com

ABSTRACT
In this work, a new nonparametric model of financial volatility is proposed using Support Vector Machine (SVM) algorithm twice to fit conditional mean and then conditional variance of stock market returns. Simulated data of GARCH, EGARCH and GJR with two innovations: Gaussian and Student’s t are generated and used to test the proposed model’s forecasting performance. Real data of NASDAQ composite index is also applied to check further the predicting accuracy of the double SVMs model. The experimental results suggest that the proposed model yields improved prediction accuracy.

Keywords
Nonparametric, SVM, Volatility

1 INTRODUCTION
Researches on modeling and forecasting financial volatility has been increasingly focused and extended into many directions since the introduction of ARCH (Autoregressive Conditional Heteroskedasticity) model by Engle in 1982. For instance, the simple and standard models include GARCH of Bollerslev (1986), Exponential GARCH (Nelson, 1991) and Threshold GARCH, or GJR-GARCH, (Glosten, Jagannathan, and Runkle, 1993), and others. Each of all these models requires specified distributions of the disturbance process, such as Gaussian, for parameter estimation. Pagan and Schwert (1990) began to work on nonparametric ARCH model

where \( g(l) \) is smooth but unknown function. Hardle and Tsybakov(1997) fitted this model by local linear approach; Masry and Tjostheim (1995) used the Nadarya-Watson kernel to estimate the nonparametric ARCH model. Audrin and Buhmann (2001) proposed Tree-structured volatility in the form of

where \( \phi(l) \) is a terminal node parameter. Buhmann and McNeil (2002) developed another algorithm for nonparametric GARCH modeling as

by kernel smoothing techniques. But this algorithm requires to estimate conditional mean and conditional variance based on standard GARCH(1,1) where the parameters are obtained by maximum likelihood estimation. The SVM (support vector machine), developed by Vapnik and coworkers (Vapnik, 1995), is a novel neural network algorithm which guarantees to obtain globally optimal and unique solution. Financial volatility has also been successfully predicted by the SVM algorithm (Perez-Cruz et al., 2003; Gavrishchaka and Ganguli, 2003; Tang et al., 2009; Chen et al., 2010). In this work, I propose a new nonparametric volatility model using double SVM algorithms to fit first conditional mean and then approximate conditional variance based on the first fitted SVM result. From my knowledge, this model is proposed as a new topic to be investigated and it is different from the previous models in literature. I call the proposed model as double SVMs for short. The paper is organized as follow. Section 2 presents a methodology of the proposed model. In section 3, some empirical results based on simulated and real data are discussed. Section 4 is reserved for conclusion.

2 METHODOLOGY
2.1 Volatility Modeling based on Double SVMs.
Modifying the volatility model of Audrin and Buhmann (2001), and Buhmann and McNeil (2002), I propose a new nonparametric volatility model based on SVM, support vector machine.

Formally, consider the new model,

where

and

In this work, a new volatility model is obtained by using SVM to approximate these two functions \( f \) and \( g \) in (2) and (3). The procedure is as follow.

First, I regress \( \chi_t \) against its one lagged variable \( \chi_\text{t-1} \) using SVM algorithm to obtain an estimate \( \hat{\chi}_\text{t-1} \) of \( \chi_\text{t-1} \). Then calculate \( \mu_0 \) such that

Second, I fit again the SVM to \( \chi_\text{t-1} \) based on \( \chi_\text{t-1} \) and \( \hat{\chi}_\text{t-1} \) to achieve an estimate \( \hat{\chi}_\text{t-1} \) of \( \chi_\text{t-1} \), as suggested in Perez-Cruz

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et al. (2003). Then calculate $\tilde{\sigma}_t^2$ such that

$$\tilde{\sigma}_t^2 = \tilde{f}_{\text{svm}}(y_{t-1}, x_{t-1}, x_t).$$

(5)

The achieved model is called nonparametric volatility based on double SVMs. Its one step ahead forecast is

$$\tilde{\sigma}_{t+1}^2 = \tilde{f}_{\text{svm}}(x_t, y_{t-1}, y_t).$$

(6)

In this model, there is a relation between the conditional mean and conditional variance.

2.2 Support Vector Machines

The SVM is nonlinear kernel based approach, formulated as follow. For a given data $D = \{(x_1, y_1), \ldots, (x_n, y_n)\}$ where $x_i$ is input vector, $y_i$ is output, and $n$ is total number of data. The SVM approximates a nonlinear function of the form

$$f(x) = w \cdot \phi(x) + b$$

where $w$ is weight, $b$ is a constant, $\phi(x)$ denotes a mapping function in the feature space and $(w \cdot \phi(x))$ describes the dot product in the feature space $F$.

The weight vector $w$ and constant $b$ can be estimated by minimizing the following regularized risk function

$$\text{Risk} = \frac{1}{2} \sum_{i=1}^{n} L_\epsilon(f(x_i), y_i) + \frac{1}{2}||w||^2$$

(7)

where

$$L_\epsilon(f(x_i), y_i) = \begin{cases} |f(x_i) - y_i| - \epsilon & \text{if } |f(x_i) - y_i| \geq \epsilon \\ 0 & \text{otherwise} \end{cases}$$

is $\epsilon$-insensitive loss function and $\frac{1}{2}||w||^2$ is the regularized term which controls the trade-off between the complexity and the approximation accuracy of the regression model to ensure that the model posses an improved generalized performance; $C$ is the regularization constant used to specify the trade-off between the empirical risk and regularization term.

Introducing two slack variables $\xi_t$ and $\xi_t^*$, $t = 1, \ldots, n$, the following problem is obtained,

Minimize : $\text{Risk}_{\text{reg}} = \frac{1}{2} ||w||^2 + C \sum_{t=1}^{n} (\xi_t + \xi_t^*)$.

subject to

$$\begin{cases} y_t - (w \cdot \phi(x_t)) - b \geq \epsilon + \xi_t \\
(w \cdot \phi(x_t)) - b \geq -\epsilon + \xi_t^* \\
\xi_t, \xi_t^* \geq 0, \text{ for } t = 1, \ldots, n \end{cases}$$

(9)

By using Lagrangian multipliers and Karush-Kuhn-Tucker conditions to (10), dual problem can be formulated as

Maximize : $L_{\text{dual}}(\alpha, \alpha^*) = \sum_{t=1}^{n} \left(\alpha_t - \alpha_t^*\right) y_t - \frac{1}{2} \sum_{t=1}^{n} \left(\alpha_t - \alpha_t^*\right) \left(\alpha_t - \alpha_t^*\right) R(x_t, x_t')$

subject to

$$\begin{cases} \sum_{t=1}^{n} (\alpha_t - \alpha_t^*) = 0 \\
0 \leq \alpha_t \leq C, t = 1, \ldots, n \\
0 \leq \alpha_t^* \leq C, t = 1, \ldots, n \end{cases}$$

The solution of the above problem can obtained as

$$f(x_t, \alpha, \alpha^*) = \sum_{t=1}^{n} \left(\alpha_t - \alpha_t^*\right) w(x_t, x_t') + b$$

(10)

where $K(x_t, x_t')$ is called the kernel function defined as $K(x_t, x_t') = \left(\phi(x_t), \phi(x_t')\right)$. Any kernel satisfied Mercer’s condition can be used as the SVM kernel. See Vapnik (1995) and Cristianini and Shawe-Taylor (2000) for detail.

There are several popular SVM kernel functions including RBF, Linear, Polynomial and Sigmoid kernels. Among them, the (Radial Basis Function) RBF kernel defined as $K(x_t, x_t') = \exp\left(-\delta |x_t - x_t'|^2\right)$ is a reasonable first choice, according to Hsu et al. (2007). Dibike et al. (2001) applied several Kernel functions for fitting SVM and found that the RBF function is superior among other Kernel functions. Therefore, for whole work, I employ the RBF kernel function to train SVM. Three parameters such as the regularized parameter $C$, kernel parameter $\delta$ and loss function parameter, $\epsilon$, play an important role in the performance of SVM. Thus proper selection of these parameters is considered. In this experiment, I apply cross-validation and grid search methods to select the optimal parameters though the cross-validation method is time consuming and data-intensive. The scheme of a grid-search on $C$ and $\delta$ using 10-fold cross-validation is as follow. Pairs of $(C, \delta)$ with ranges of $C = \{2^{-8}, 2^{-7}, \ldots, 2^0, 2^1\}$ and of $\delta = \{2^{-6}, 2^{-5}, 2^{-4}, 2^{-3}\}$ are tried and the one with best cross-validation accuracy is picked. I do this process for three different values of $\epsilon = 0.3, 0.03$, and 0.003.

2.4 Forecasting Measurements

The out-of-sample volatility forecasts of all models follows larger estimation window and smaller prediction sample as in West (1996) to implement and evaluate the model-based volatility. Also, I apply the test of DM (Diebold and Mariano) to compare the predictive ability of the various models. The hypothesis to be tested says that the alternative methods are equally accurate on the average, i.e. $H_0: E[\delta(e_{AB})] = C$, where $E$ denotes expected value and $\delta(e_{AB}) = g(e_{AB}) - g(e_{AB})$. The variables $e_{AB}$ and $e_{AB}$ are forecast errors generated by two competing models A and B respectively. Loss function $\delta$ may take different forms. See Diebold and Mariano (1995) for detailed illustration.

3 EMPIRICAL ANALYSIS

3.1 Artificial Simulated Data

In this section, I investigate the forecasting performance of all models using simulated data. I generate 2000 samples from ARMA(1,0)-GARCH(1,1) with coefficients ($\mu = 0.004, \phi = 0.6, \omega = 0.05, \alpha = 0.1, \beta = 0.5$) and ARMA(1,0)-EGARCH(1,1) ($\mu = 0.004, \phi = 0.6, \omega = 0.05, \alpha = 0.15, \beta = 0.5, \gamma = 0.05$) as well as ARMA(1,0)-GJR(1,1) with ($\mu = 0.003, \phi = 0.5, \omega = 0.07, \alpha = 0.11, \beta = 0.3, \gamma = 0.00$)
with, first, Normal innovation and then the Student’s t with 7 degree of freedom. The second innovation distribution tries to model the excess of kurtosis that usually appears in real financial time series. The achieved data are fitted by the proposed nonparametric model based on the double SVMs as in (4), (5) and (10). These simulated data are also fitted again, respectively, by six different models of AR(1)-GARCH(1,1), AR(1)-EGARCH(1,1) and AR(1)-GJR(1,1) with Normal and Student’s innovations to make comparison with the double SVMs approaches. The main reason of using these simple models rather than other extended models, such as APARCH, QGARCH and so on, is that among parametric approaches it is difficult to find a volatility model that outperforms the simple GARCH(1,1) model (Hansen and Lunde, 2004). We divide the whole data, 2000 points, into two subsamples for analysis. The first sample of size 1750 is used for estimating the parametric models and also for training the nonparametric model; and the remaining data, 250 points, are reserved for out of sample forecasting. Based on NMSE in Table 1, it is seen that the proposed model outperforms the other parametric models for all cases.

### Table 1. Forecasting results (Simulated Data)

<table>
<thead>
<tr>
<th>Data</th>
<th>Models</th>
<th>NMSE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>ARMA(1,0)-GARCH(1,1)-N</td>
<td>0.93186</td>
</tr>
<tr>
<td></td>
<td>Double SVMs</td>
<td>0.54069</td>
</tr>
<tr>
<td>2</td>
<td>ARMA(1,0)-GARCH(1,1)-T</td>
<td>0.91199</td>
</tr>
<tr>
<td></td>
<td>Double SVMs</td>
<td>0.59786</td>
</tr>
<tr>
<td>3</td>
<td>ARMA(1,0)-EGARCH(1,1)-N</td>
<td>0.94313</td>
</tr>
<tr>
<td></td>
<td>Double SVMs</td>
<td>0.57395</td>
</tr>
<tr>
<td>4</td>
<td>ARMA(1,0)-EGARCH(1,1)-T</td>
<td>0.95571</td>
</tr>
<tr>
<td></td>
<td>Double SVMs</td>
<td>0.59230</td>
</tr>
<tr>
<td>5</td>
<td>ARMA(1,0)-GJR(1,1)-N</td>
<td>0.60468</td>
</tr>
<tr>
<td></td>
<td>Double SVMs</td>
<td>0.57285</td>
</tr>
<tr>
<td>6</td>
<td>ARMA(1,0)-GJR(1,1)-T</td>
<td>0.79931</td>
</tr>
<tr>
<td></td>
<td>Double SVMs</td>
<td>0.46042</td>
</tr>
</tbody>
</table>

### 3.2 Real Data of NASDAQ composite index

The data consisting of 5041 daily closing price of NASDAQ Composite Index are obtained from Yahoo Finance database for the period, January 1, 1991 to December 31, 2010. The continuously compounded daily returns at time $t$ are calculated as $r_t = \ln P_t - \ln P_{t-1}$, where $P_t$ is the index price at time $t$.

Table 2 displays the descriptive statistics of NASDAQ index return. The mean and Standard Deviation of the returns are 0.0392 and 1.5823, respectively. Moreover, return displays evidence of negative skewness and excess kurtosis; and then, the Jarque-Bera normality test significantly rejects the hypothesis of normality, implying the return series is left-skewed and leptokurtic. Furthermore, the Ljung-Box statistics and Engle-ARCH test of lag 20 indicate that returns exhibit linear dependence on squared return and strong ARCH effects. Hence, it is appropriate to model this return volatility using GARCH and its extended approach.

Before modeling volatility, I first divide the data into two subsets: in-sample (or training set) and out-of-sample data (or test set). The in-sample data, spanning from Jan. 1991 to Dec. 2009, are used to train the nonparametric model or estimate the parametric models. The out-of-sample data for the whole year 2010 with a sample of size 254 are reserved for checking model performance. I fit the return series to the combination of (4), (5) and (10) to obtain nonparametric volatility based on double SVMs. The optimal SVM kernel parameter along with cost of penalty, $C, \sigma$, are achieved to be $[2^{-1.2}, 2^{-1.2}, \sigma = 0.05]$ from training SVM in mean function and $[2^{-0.5}, 2^{-0.5}, \sigma = 0.05]$ from volatility function. This achieved model is predicted to the test data to get forecasted volatility.

### Table 2. Descriptive statistics of NASDAQ index return

<table>
<thead>
<tr>
<th>Sample</th>
<th>Skewness</th>
<th>Kurtosis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>0.0392</td>
<td>8.7719</td>
</tr>
<tr>
<td>Std.Dev.</td>
<td>1.5823</td>
<td>7010.07</td>
</tr>
<tr>
<td>Min</td>
<td>-10.168</td>
<td>5380.77</td>
</tr>
<tr>
<td>Max</td>
<td>13.254</td>
<td>1109.77</td>
</tr>
</tbody>
</table>

I also apply AR(1)-GARCH(1,1), AR(1)-EGARCH(1,1) and AR(1)-GJR(1,1) models with normal and student’s t innovations to the in-sample data to obtain model parameters and then to the out-of-sample data for prediction. The estimation results are not shown to reduce space. However, according to Swanson et al. (2006), models should be selected on the basis of their out-of-sample forecasting rather than their in-sample fit. Thus we go for out-of-sample forecasting to check the superior forecasting performance of models. Table 3 illustrates forecasting results by all models.

### Table 3. Forecasting results (NASDAQ)

<table>
<thead>
<tr>
<th>Models</th>
<th>NMSE</th>
</tr>
</thead>
<tbody>
<tr>
<td>ARMA(1,0)-GARCH(1,1)-N</td>
<td>0.79633</td>
</tr>
<tr>
<td>ARMA(1,0)-GARCH(1,1)-T</td>
<td>0.81520</td>
</tr>
<tr>
<td>ARMA(1,0)-EGARCH(1,1)-N</td>
<td>0.80009</td>
</tr>
<tr>
<td>ARMA(1,0)-EGARCH(1,1)-T</td>
<td>0.81432</td>
</tr>
<tr>
<td>ARMA(1,0)-GJR(1,1)-N</td>
<td>0.78325</td>
</tr>
<tr>
<td>ARMA(1,0)-GJR(1,1)-T</td>
<td>0.79747</td>
</tr>
<tr>
<td>Double SVMs</td>
<td>0.65884</td>
</tr>
</tbody>
</table>

NMSE indicates that the nonparametric volatility based on
double SVMs yields better performance than the parametric models. Moreover, DM tests in Table 4 also reject the hypothesis of equal prediction accuracy between the double SVMs against each of the parametric models. Hence it is found that the double SVMs gives improved forecasting accuracy.

Table 4. Diebold and Mariano (1995) test between double SVMs against each of parametric models.

<table>
<thead>
<tr>
<th>Models</th>
<th>MAE_DM</th>
<th>MSE_DM</th>
</tr>
</thead>
<tbody>
<tr>
<td>ARMA(1,0)-GARCH(1,1)-N</td>
<td>-3.8961</td>
<td>-2.0717</td>
</tr>
<tr>
<td></td>
<td>(0.00009)</td>
<td>(0.0383)</td>
</tr>
<tr>
<td>ARMA(1,0)-GARCH(1,1)-T</td>
<td>-4.1888</td>
<td>-2.1224</td>
</tr>
<tr>
<td></td>
<td>(0.00002)</td>
<td>(0.0338)</td>
</tr>
<tr>
<td>ARMA(1,0)-EGARCH(1,1)-N</td>
<td>-3.8093</td>
<td>-1.9816</td>
</tr>
<tr>
<td></td>
<td>(0.00013)</td>
<td>(0.04752)</td>
</tr>
<tr>
<td>ARMA(1,0)-EGARCH(1,1)-T</td>
<td>-3.9173</td>
<td>-1.9837</td>
</tr>
<tr>
<td></td>
<td>(0.00008)</td>
<td>(0.04729)</td>
</tr>
<tr>
<td>ARMA(1,0)-GJR(1,1)-N</td>
<td>-4.1004</td>
<td>-2.1649</td>
</tr>
<tr>
<td></td>
<td>(0.00004)</td>
<td>(0.03040)</td>
</tr>
<tr>
<td>ARMA(1,0)-GJR(1,1)-T</td>
<td>-4.3135</td>
<td>-2.2048</td>
</tr>
<tr>
<td></td>
<td>(0.00001)</td>
<td>(0.02747)</td>
</tr>
</tbody>
</table>

1. MAE_DM and MSE_DM represent DM tests based on MAE and MSE loss functions respectively.
2. Small P-values in (.) imply that the parametric models are dominated by the double SVMs.

4 CONCLUSION
In this study, I propose a new nonparametric model of financial volatility using the SVM algorithms twice to fit mean function and conditional variance. Several conclusions can be made from this work. First, the flexible nonlinear modeling capability makes the SVM capture not only symmetric GARCH based volatility but also asymmetric leverage effect volatility based on EGARCH and GJR simulations. Second, high degree of excess kurtosis in volatility data, simulated from GARCH, EGARCH and GJR with Student's t, can be better modeled by the SVMs than the classic parametric approaches. Third, the SVMs also generate superior forecasting accuracy for real data volatility of NASDAQ. Furthermore, the forecasting measures such as NMSE and DM tests strongly support the outperformance of the SVMs.

5 ACKNOWLEDGEMENTS (IF ANY)
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6 REFERENCES
ABSTRACT
If you are on the phone purchasing a Dell computer or trying to resolve an issue with Verizon internet or wireless service, then most probably your call is being handled by a service person located in the Philippines. The growth of the Philippine call center outsourcing can easily be described as phenomenal. From virtually zero in 2000, the Philippine call center industry has grown to reach almost $6 billion in revenue in 2010. Last year, the Philippines became the largest outsourcing destination in the world surpassing India, the pioneer of the outsourcing industry. This paper analyses the historical growth of the Philippine call center industry, discusses the patterns of growth, identifies the constraints and competitive advantage of this sector, and finally explores the future of the industry.

Keywords
Outsourcing, Philippines, Call centers, Contact centers, Offshoring

1 INTRODUCTION
Last year the Philippines became the largest exporter of call center services in the world, surpassing India which pioneered the industry. In just a decade the Philippine call center industry grew from virtually zero to $5.7 billion by 2010. The largest call center companies in the world now have operations in the Philippines and maintain a large presence in the country. For example, Convergys, the largest call center company has about twice the number of employees in the Philippines than it has in India. How did the Philippines accomplish this feat? This paper analyses the historical growth of the Philippine call center industry, discusses the patterns of growth, identifies the constraints and competitive advantage of this sector, and finally discusses the future of the industry. Some of the specific questions we analyze include the following. What accounts for the dramatic growth of call centers in the Philippines? Has comparative advantage shifted from India to the Philippines? If so, can this comparative advantage be sustained?
animation, engineering services, pharmaceutical research, financial research and analytics followed as companies become more increasingly aware of the value of outsourcing and as outsourcing companies emerged and became more mature. As the BPO sector evolves, one should expect the call center to diminish in terms of its share in the total BPO sector. Currently, however, the call center industry still remains the dominant source of revenue and employment within the BPO outsourcing industry of the Philippines. In 2007, for example, 3 out 4 dollars of revenue earned by the entire BPO sector was earned by the call center industry while 2 of 3 BPO employees worked for call center companies.

Figure 2. Philippine Call Center Employees, in Thousands

<table>
<thead>
<tr>
<th>Year</th>
<th>2000</th>
<th>2001</th>
<th>2002</th>
<th>2003</th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>Value</td>
<td>24</td>
<td>56</td>
<td>12</td>
<td>32</td>
<td>67</td>
<td>112</td>
<td>168</td>
<td>218</td>
<td>227</td>
<td>280</td>
<td>350</td>
</tr>
</tbody>
</table>

Sources: BPAP, BOI

Market Structure
The Philippine export market for call center services is dominated by exports to the United States, comprising more than 80% of export value. In 2005, 87 percent of export revenue was derived from U.S. clients (Aquino, 2006). Since then the share of other major export destinations such as the United Kingdom (UK) and Australia have increased but the US remains far and away the source of the major clients of the Philippines’ call center industry.

Call center companies consists of two basic types, captives and third-party providers. Captives [or shared services] are the subsidiaries of multinational companies that provide services for their own company. Captive companies in the Philippines include Dell, Siemens, JP Morgan, AIG, and HSBC. Third-party outsourcing companies sell their services to their clients. They can be specialized third party providers focusing on customer relationship management (CRM) services or they can provide broad-based services, offering not just CRM services but many other types of services including information technology outsourcing (ITO) and various types of business process outsourcing (BPO). The largest specialized third party call center providers have a substantial presence in the Philippines including Convergys, Teleperformance, Teletech, West Corporation, APAC, and Sitel. All but one of the top five global call center providers has operations in the Philippines (see Figure 3).

Figure 3. Top Five Global Call Center Companies

<table>
<thead>
<tr>
<th>Company</th>
<th>Revenue (Million $)</th>
<th>Market Share (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teleperformance</td>
<td>2568</td>
<td>3.2</td>
</tr>
<tr>
<td>Convergys</td>
<td>1986</td>
<td>2.5</td>
</tr>
<tr>
<td>Atento Group</td>
<td>1836</td>
<td>2.3</td>
</tr>
<tr>
<td>Sitel</td>
<td>1559</td>
<td>1.9</td>
</tr>
<tr>
<td>West Corp</td>
<td>1255</td>
<td>1.6</td>
</tr>
</tbody>
</table>


3 PHILIPPINE LOCATION ADVANTAGE

The availability of adequate information and communication technology (ICT) and the availability of low cost labor are necessary conditions for outsourcing of services. Digitization is the basic enabling force of outsourcing and the ability to transfer voice and data information across geographies is a necessary condition for any type of outsourcing service. Indeed outsourcing of services did not begin until the ICT revolution began in earnest. Prior to the information revolution most services were consumed “in situ” or on site because of the high cost and difficulty of transferring voice and data information.

Equally important is the availability of low cost labor especially for low end services such as call centers where cost competition is important. The Philippines is competitive with other locations such as India and China in both the availability of ICT technology and the cost of labor. Its comparative advantage, however, lies in the quality of its workforce and its talent availability and scalability. One of the major weaknesses of the Philippines is its business environment. However the establishment of special economic zones (SEZs) has fundamentally circumvented many of the difficulties of doing business in the Philippines. We discuss each in turn below.

Availability of Adequate ICT Technology
The Philippines has excellent telecommunications infrastructure. This is partly a legacy of its historical relationship with the United States which required robust
communication channels for its military bases, partly a result of the Philippines’ location in the Pacific Ocean which facilitates access to submarine fiber optic cables, and partly a result of policy deregulation of the telecommunications sector in the mid-1990s. The availability of broadband also comes with competitive costs of telecommunication. In the last five years, the cost of bandwidth in the Philippines has fallen by 85%. The availability of ICT infrastructure is also complemented by reliable transportation as well other types of economic and social infrastructure.

Costs of Operations

A study by Everest Institute found that direct operating costs of call centers in second-tier cities in the United States amounted to $70,000 per year per employee (2010). By comparison, the cost in the Philippines is only $15,000. This means that operating costs in the Philippines is only 20 cents for every dollar spent in the US. Operating costs in the Philippines also compares favorably among its potential competitors including India (Delhi) as shown in Figure 4. The Philippines and India have the lowest direct costs among the comparative countries.

Figure 4. Comparative Annual Direct Operating Costs per Full Time Employee (FTE)

<table>
<thead>
<tr>
<th></th>
<th>US</th>
<th>Mexico</th>
<th>Krakow</th>
<th>Kuala Lumpur</th>
<th>Cairo</th>
<th>Manila</th>
<th>Delhi</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cost</td>
<td>70</td>
<td>29</td>
<td>24</td>
<td>19</td>
<td>16</td>
<td>15</td>
<td>14</td>
</tr>
</tbody>
</table>

Source: Adapted from Everest (2010) as reported by BOI (2010)

Talent Availability and Scalability

The Philippines is the third largest English speaking country in the world next to the United States and India. It has a population of 97 million with a median age of 22, a 92% literacy rate (CIA fact book), and a large pool of college graduates entering the labor market (400,000 per year) and growing at rate of 3.8%. The Philippines’ BOI estimates that 2 in 3 college graduates are suitable to enter work related to the IT/BPO sector.

This latent or potential talent pool is a major advantage of the Philippines. According to a study by Everest (Sept 2009), India and the Philippines are the only two countries with the capability to support “mega-scale centers,” that is those centers that can support at least 2,500 seats or greater. This is indeed the case and in fact the large third party providers in the Philippines operate with a much larger scale. For example, Teleperformance currently has about 10,500 work stations in the Philippines supporting an estimated 16,000 employees (Teleperformance, 2011). Similarly, Convergys the largest US based contact center company has about 20,000 employees in the Philippines. By comparison, Convergys has about 646 workstations per center on average (author estimate based on annual reports) which translates to about 984 employees per call center.

Quality of the workforce.

Low costs and availability of adequate information and communication technology are necessary conditions for the location advantages of the Philippines. But it is the quality of its human resources that sets the Philippines apart from India and its other competitors. The quality of the Philippine workforce consists of the combination of language skills, people skills, and cultural traits, including language proficiency, higher educational level, cross-cultural proficiency, cultural affinity, and service orientation. This workforce quality have been described in various ways including a “more neutral accent,” a “softer approach” to customer care, the ability to handle customer complaints, more pleasing personality, greater trainability, more service orientation, greater familiarity with the American culture, and closer cultural affinity. In terms of numbers alone, India and China would have the comparative advantage over the Philippines in providing the potential low costs labor required by the industry. What distinguishes the Philippines from India and China is the Philippines’ English language proficiency and its other cultural traits that complement language proficiency.

Language Proficiency.

The Philippine workers’ proficiency in the English language is the major advantage of the Philippines compared with the major alternative destinations for call centers. English in the Philippines is closer to the American English. Analysts sometimes refer to this proficiency as the accent neutrality of English spoken in the Philippines as opposed to the thick Indian-British accent.

The Americans introduced public school system during its colonization period (1989-1946) and English remains one of the two official languages that are used in education, mass media, business, and government.

The assessments of the major BPO vendors themselves provide strong testament to the Philippines’ comparative advantage in the quality of its call center workforce. For example, Pramod Bhasin, CEO of Genpact, India’s largest BPO company and the pioneer of the call center outsourcing industry, stated that “[t]he caliber of English is better [in the Philippines] and companies don’t have to put up with the mess there [in India].” To emphasize his point further, he states that “ just 1-2 out of every 10 are recruitable for American accent voice tasks [in India].” and even after training they are not quite as good as you get in the
Andrea Ayers, president of Convergys customer support, proficiency in the Philippines tips the scales in its favour.

Similarly, Ananda Mukherji, CEO of another major BPO provider, Firstsource Solutions, emphasizes the neutral accent of Philippine speakers and says that “costs are more or less similar in both countries [but the English] accent proficiency in the Philippines tips the scales in its favour. Andrea Ayers, president of Convergys customer support, further confirms the comparative advantage of the Philippine workforce stating that Philippine agents “ are effective in debt collecting and sales work...because of their familiarity with American-style English and pop culture” (Hookway, (WSJ (2009). The CEO of another major BPO provider, WNS’s Keshav Murugesh, likewise provides confirmation that clients “definitely prefer the Philippines over...India” because clients are very conscious about accents. (Michelle, n.d)

Cultural Affinity and Cross-Cultural Proficiency
While Filipinos have maintained a distinct culture, many Philippine workers are familiar with and have been exposed to the American culture as a result of its historical relationship with the United States, the presence of US multinationals, and its close ties with the United States. Many immigrants have settled in the United States and other European countries and many maintain close financial and cultural connections with relatives thus facilitating cross-cultural borrowings and adaptation. For example, it is not unusual for U.S. immigrants to visit the Philippines once a year for at least three weeks bringing with them their cultural knowledge of American life. The ubiquity of malls and shops in the Philippines with U.S. and other western-style stores provide a visual evidence of the close cultural affinity with the western culture.

Higher Educational Skills and Higher Productivity
Another advantage of the Philippines is the ability of the country to attract college graduates for call center and other BPO work. In the Philippines, a college degree is a minimum requirement, with few exceptions. The higher educational level and better skills means that workers have more competence in responding to inquiries and issues requiring some type of judgment. New graduates are attracted by their association with multinational companies and with the possibility of making the call center job as a starting point towards a career. By contrast, call center work in the US and other client markets are provided by low-skilled workers, typically high schools graduates. The job itself is viewed as temporary and is characterized by low wages, low productivity and high worker attrition. In the United States, for example, an UNCTAD report indicate that call center agents in the US stay with their employers for less than six months while in the Philippines, call center agents stay for two years or more.

Service Orientation and Service ethic
The service ethic of Philippine workers has been pointed out as one strong cultural trait of call center workers. Call center vendors report that Philippine workers provide a higher level of client empathy and have a better ability to address customer complaints. This service orientation is not limited to the call center industry but appear to be a pervasive national trait manifesting itself in many industries including in health care (nurses and doctors), finance, retail, education (teachers), domestic work, food service work, entertainment, merchant marine service, and as hosts in the travel industry.

Business Environment
The Philippines ranks very low as a place for doing business. In 2009, the World Bank ranked the Philippines 144th out of 183 countries in terms of the ease of doing business. Neighboring countries and potential competitors such as Thailand, Malaysia, and even Vietnam ranked much higher scoring 12th, 23rd, and 93rd respectively. The World Bank’s rankings reflect the difficulty of starting and closing businesses, the uncertainty of enforcing contracts, and the weak protection of investors. However, the special policy that covers companies operating in special economic zones (SEZ’s) administered by PEZA has essentially circumvented most of the challenges related to domestic regulations and has insulated contact centers and other BPO- registered enterprises from the usual corruption and inefficient regulations associated with doing business in the Philippines. The streamlined registration process under PEZA has reduced the process of setting up a company to a few working days as opposed to the 45 days normally needed to setup a company in the Philippines. The rules and criteria to register under PEZA have also been modified to attract and facilitate the entry of call centers and other BPO companies. Two regulations in particular had significant impact in facilitating market entry by BPO companies. The first was the rule change allowing 100 percent foreign ownership by BPO and ITS firms. The second was the lowering of the minimum office-space requirement to establish a SEZs from 25 hectares to 5,000 square meters. The latter change in regulation meant that office spaces within existing buildings can be designated or certified as an SEZ.

4 THE FUTURE OF THE PHILIPPINE CALL CENTER INDUSTRY

The global market for the contact center services is expected to continue to grow as outsourcing becomes more acceptable and/or as outsourcing becomes more imperative as a way of doing business. A McKinsey&Company report (2008) estimates that the total addressable BPO market is US$150 billion in 2007 while actual worldwide BPO exports totaled US$18 billion or 12% of the market. These data imply that there is a significant latent demand for BPO services and suggests continuing growth for BPO. More direct estimates for the call center industry indicate that the current market for call center services amounted to $62 billion in 2010 and is expected to grow by 7 percent through 2013 percent (IDC data as reported by West Corp, 2010).
As for the Philippines market, the BOI estimates that the industry can grow by 20% in the medium term. What are the drivers for this growth and where will growth come from? Growth will come from the overall expansion of the call center market. For the Philippines, this means expansion in terms of the US market as well as expansion into new countries, new languages, and new verticals [verticals is the industry jargon for industries]. Growth will also come from providers switching away from India, the US, UK, and Australia [substitution effect] to take advantage of the quality talent pool available in the Philippines, from the increased demand by clients who wish to diversify and establish global delivery centers, from the continued migration of new providers such as the broad-based vendors like TCS and WNS, and from the increasing maturity of Philippine call centers.

In the last five years, the call center industry in the Philippines grew at a compounded growth rate (CAGR) of 26%. But a closer look indicates that the industry is reaching a period of maturity with growth declining from 48% in 2005-2006 to 14% in 2009-2010. Taking the IDC global growth rate as a baseline, the data suggests that the demand for call center services will continue to grow in the short run, albeit at a lower growth rate. Indeed, the president of the Contact Center Association of the Philippines (CCAP) estimates that the industry would grow by more than double the global rate at a CAGR of 15% over the next five years and expects to employ 406,000 workers this year, up by 18% from last year (Amojelar, 2011).

Are these growth rates sustainable? The main issue is whether the Philippines has the capacity to meet this continued growth in demand. In other words, the sustainability of the call center industry depends not on the demand side but on the availability of the Philippines to produce suitable talent. The main advantage of the Philippines in call center work is the availability of qualified workers at comparable cost to India and other countries. This same advantage poses the greatest limit to sustaining its comparative advantage. As early as 2003-2004, when the industry was still quite small, the success rate of producing suitable talent. The main advantage of the Philippines lies in the availability of qualified workers at comparable cost to India and other countries. This same advantage poses the greatest limit to sustaining its comparative advantage. As early as 2003-2004, when the call center industry was at its peak, success rates were between 2-5%. In addition to the difficulty of hiring qualified staff, rising attrition rates is also an issue.

The BPAP and many industry analysts suggest that the problem lies in the declining English proficiency of the Philippine population in general and college graduates in particular. While it is true that companies may be hiring less proficient agents, we suggest that it is not because English proficiency has declined significantly overall. Instead, we argue that this is simply the natural outcome of increased demand. The agents with the best English and cross-cultural proficiency are being hired first and have been absorbed by the industry. As the demand for agents increase, companies will begin to hire those with lower English and cultural proficiency. In other words, companies have harvested the “lower hanging fruits,” now they have to go higher up the tree to harvest potentially qualified agents. The observed decline of proficiency is simply a reflection of increase demand outstripping the growth of supply.

The stark reality is that the educational system may not be able to keep up with the increasing demands for call center agents in the long run at the rate it is currently growing or expected to grow. Data from the Philippines’ Department of Education indicates that the number of college graduates have in fact decreased last year to 425 thousand from a peak of 469 thousand in 2009. Even by 2012, the number of college graduates will reach only 437 thousand, still way below the peak number. To meet the projected increase in the call center industry, the industry must increase its hiring and or absorption of graduates. To do so, the industry must compete with the other sectors of the economy for workers including other higher valued BPO sectors which offer higher compensation [since call center work is considered at the bottom of the value chain]. If the call center industry can’t increase its absorption of new graduates the projected growth trajectory cannot be sustained. This would mean a sharp flattening of the growth of the industry in the not too distant future.

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ABSTRACT
This paper reviews the notion of privacy and explores how well (or poorly) it can be safeguarded. It discusses privacy principles from various perspectives - employers, employees and citizens’ needs – and evaluates the balance between privacy issues and opportunities opened by prevailing mobile tools and apps.

Keywords
Privacy, mobile technologies, regulations

1 INTRODUCTION
Wireless services have revolutionized the way we live. Our work, our personal lives, and even our social interactions have vastly moved to a computer-mediated environment which has become more pervasive thanks to smart-phones, tablets and other mobile technologies that enable us to be connected and reachable 24/7. This digital transformation has affected our privacy in many ways.

2 MOBILE TECHNOLOGIES IN ORGANIZATIONS
Mobile technologies provide remote connectivity to data and business applications through wireless devices used by organizations’ employees, clients, and partners. Such technologies encompass software applications, various types of supporting networks, and corresponding hardware. Any organization that plans to stay competitive is faced with the requirement of offering access to services through wireless technologies. If the organization also wishes to attract and retain talented employees, it must support an increasingly mobile and remote workforce that demands flexible work-hours and flexible work-locations. If it wants to conduct business with dynamic partner and suppliers, it must offer access to a secure and always available mobile network.

The effective use of mobile technologies for anytime/anywhere communication and data transfer is based on the successful interaction a large number of players, applications and platforms. Firms need to make decision about hardware (wireless laptops, smart phones, tablets, and other wireless devices); type of content-provided remotely (in-house generated, employee-generated or 3rd party); supporting applications (browser-based, emails, other downloadable applications, etc.); types of data access/networks providers (WLAN/Wi-Fi, GSM, 3G, 4G); maintenance contracts; IT support; and security (and liability) implications of each choice.

Not surprisingly, this complexity often requires imposing restrictions that limit remote use, reducing flexibility in the name of security, and interfering with private life through location tracking and always-available communication modes.

3 SAFEGUARDING PRIVACY IN MOBILE WORLDS
This increased connectivity has forced us to reflect on the importance of safeguarding personal privacy in a wireless world. In such always-on environments, together with the “wires” we seem to have dropped the rights to seclusion, solitude, and self-determination that are essential to maintaining our privacy.

Privacy and security policies are either too restrictive or non-existent. Often, any piece of data coupled with location traces is collected and archived for future use without specific purposes, simply because storage costs continue to collapse. Some see the aggregation of this vast amount of data as an opportunity for research (Holtzman, 2006) and discovery. Others see it as the realization of the Big Brother Orwellian utopia (Shilton, 2009).

The paper discusses issues and benefits of these competing views of privacy.

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Resource-based Bargaining and Underpricing in Initial Public Offerings

John S. Pearlstein  
Department of Management  
Richard Stockton College of New Jersey  
101 Vera King Farris Drive  
Galloway, New Jersey  
(609) 626-6879  
john.pearlstein@stockton.edu

David M. Townsend  
Department of Management and Entrepreneurship  
University of Oklahoma  
307 West Brooks  
Norman, Oklahoma  
(405) 325-3137  
dtown@ou.edu

Keith D. Brouthers  
MIE Department  
North Carolina State University  
1300 Nelson Hall, Box 7229  
Raleigh, NC  
(919) 513-3692  
keith_brouthers@ncsu.edu

ABSTRACT
In new venture capitalization processes, Initial Public Offerings (IPOs) provide a significant source of liquidity for high growth ventures and their investors. The pervasiveness of underpricing, however, in numerous markets around the world reflected in the average difference of 18% between the offer and closing prices on the first day of trading causes many ventures to leave substantial amounts of money on the table. As such, significant portions of these funds are appropriated by outside parties such as the underwriters. In this study, we utilize the resource-based bargaining literature in Resource-based Theory to explore why some issuers are more successful than others in reducing underpricing thereby capturing a larger portion of the IPO proceeds than other firms.

Keywords
Initial Public Offerings, Firm Valuation, Bargaining Theory

1 INTRODUCTION
In initial public offerings (IPOs) the difference between the offer price and the closing price on the first day of trading is referred to as underpricing (Daily, Certo, Dalton, & Roengpitya, 2003). Underpricing is a pervasive phenomenon globally, reaching average levels of 18.8% resulting in substantial amounts of money on the table by issuing firms for others to appropriate (Ritter & Welsh, 2002).

In the finance and management literatures, two perspectives tend to dominate research on underpricing. In the capital markets perspective, researchers argue that underpricing occurs because of inefficiencies in capital markets (i.e., asset-pricing, risk or market misevaluation, information asymmetries, etc.—Carter & Manaster, 1990). To correct these valuation errors, much of this research focuses on how improved signaling of firm value reduces underpricing (Allen & Faulhaber, 1989; Cohen & Dean, 2005). In contrast scholars taking a governance perspective contend that underpricing occurs because key stakeholders (i.e., underwriters, venture capitalists, etc.), best positioned to capitalize on the rapid appreciation of first day stock prices, engage in opportunistic behaviors to extract wealth from firms by keeping the initial offer price low (Certo, 2003; Arthurs, Hoskisson, Busenitz, & Johnson, 2008). As a result, the central focus of much of this literature explores the degree to which various governance mechanisms and arrangements reduce the agency costs associated with underpricing thereby securing higher IPO proceeds for firms (Certo, Covin, Daily, & Dalton, 2001; Arthurs et al., 2008).

Although both theoretical perspectives continue to yield important insights into why underpricing occurs (and possibly ways it can be reduced), the ability of these perspectives to fully address the key question as to why issuers would choose to leave so much wealth on the table is limited in important ways (Ritter & Welch, 2002; Loughran & Ritter, 2002). In particular this research tends to ignore the pre-trading bargaining process whereby the issuer and underwriter negotiate and set the offer price (Daniel, 2002; Cornelli et al., 2006). The lack of attention paid to the process of negotiating the offer price is curious because this price sets the baseline market price for the IPO and plays a significant role in determining the extent of underpricing.

To address this gap in the literature, finance scholars have begun to explore the link between the pre-trading process and underpricing. Daniel (2002) for example suggests that bargaining theory may shed more light on how offer prices are set and why some issuers are likely to accept more underpricing than others. In particular, bargaining between issuers and underwriters determines to a great extent how offer prices are set, and the degree to which underpricing is tolerated by the issuer (Cornelli et al., 2006). However, while the finance literature assumes that the differential bargaining power of issuers/underwriters derives from external factors such as trends in the IPO market (i.e., “hot” markets give the underwriter more bargaining power—Loughran & Ritter, 2002; Daniel, 2002; Cornelli et al., 2006), substantial evidence exists which indicates that underpricing varies even for IPOs conducted on the same day thereby calling “hot market bargaining power” explanation into question.

In light of these issues, in this study we build upon the resource-based bargaining literature in resource-based theory (Coff, 1997; Coff, 1999; Makowski & Ostroy, 2001; Lippman & Rumelt, 2003 a; b; Townsend & Busenitz, 2008) to theorize that the ability of issuers (underwriters) to negotiate a higher (lower) offer price is derived from the relative strength of the issuer’s resource endowment relative to the underwriter (cf., Lippman & Rumelt, 2003). Accordingly, issuers with stronger resource endowments relative to their underwriters will be able to negotiate higher offer prices and will tolerate less underpricing, thereby capturing a greater proportion of the IPO proceeds.
2 LITERATURE REVIEW
Recent work in the resource-based bargaining literature (Lippman & Rumelt, 2003 a; b; Townsend & Busenitz, 2008; Adegbesan, 2009; Adegbesan & Higgins, 2010) utilizes insights from cooperative game theory (CGT) to explore how resource-based factors shape bargaining processes. In CGT, games are modeled to explore how various combinations of players affect outcomes in bargaining processes based on the fundamental premise that the players divide surplus proceeds based on the quality of contributed resources (Lippman & Rumelt, 2003 a; b; Adegbesan, 2009) and the extent of bilateral dependency (i.e., “who needs whom more”—Brandenburger, 2007). Consistent with this perspective, recent work in the IPO literature explores how bargaining between issuers and underwriters affects the process of setting offer prices (Loughran & Ritter, 2002; Cornelli, Goldreich, & Ljungqvist, 2006). In these studies, the bargaining power of the issuer or underwriter is thought to hinge upon investor sentiment and trends in the IPO market. In particular, hot markets are thought to provide underwriters with greater bargaining power based on the premise that issuers would want to list shares in hot markets in order to maximize their proceeds (Ritter & Welch, 2002; Cornelli, Goldreich, & Ljungqvist, 2006). In these situations, issuers are thought to make an explicit trade-off by accepting higher levels of underpricing in exchange for listing in hot markets when the total share price is likely to be inflated upwards based on investor sentiment (Loughran & Ritter, 2002; Cornelli et al., 2006). In contrast, cold markets are thought to give issuers more bargaining power since the underwriter’s deal flow would likely be limited and the issuers might withdraw their listings in order to wait until activity in the market picks up (Ritter & Welch, 2002; Cornelli, Goldreich, & Ljungqvist, 2006).

Although trends in the IPO market undoubtedly can affect an issuer’s or underwriter’s bargaining position, numerous examples point to wide variance in the ability of different issuers to negotiate higher (lower) amounts of the IPO proceeds even when listing on the very same day. For example, on May 22, 1998, Com21 shared 29.1% of the proceeds of its initial public offering with its very prestigious underwriter. On the same day a firm, Atlantic Data Service shared none of their proceeds with its average prestige underwriter. Furthermore, although differences between the industry membership of these two issuers might explain some of the variance in returns, other examples of IPOs by firms in related fields—CMC Industries and Gateway Computers—reveal that while CMC paid only a 7% commission to its underwriter, Goldman Sachs was allocated 28% of Gateway’s proceeds. Gateway attempted to raise 10 times the number of shares and dollars as CMC and so firm principals determined they needed the services of an underwriter that had 10 times the number of institutional sales representatives than CMC’s underwriter. In doing so, Gateway made an explicit trade-off between their ability to negotiate a higher portion of IPO proceeds in order to leverage the resource-based advantages of their prestigious underwriter. Taken together, these examples suggest that resource-based factors determine the bargaining power of issuers and underwriters over and above trends in the IPO market.

In this study, we extend the resource-based bargaining perspective to explore how the relative bargaining power of issuers and underwriters derived from the combination of resources shapes the extent to which each party negotiates their share of the IPO proceeds as compensation for the resources they contribute to the transaction. Consistent with these arguments, issuers create bargaining power by contributing a bundle of critical resources such as a well-known brand name, strong financials, efficient operations, multiple patents, seasoned management, position in a high growth industry etc. At the same time, underwriters can enhance their bargaining power by contributing a bundle of resources including their reputation, network of dealers and investor clientele, financial resources on parent firm’s balance sheet among other factors. Based on various combinations of these contributed resources, issuers and underwriters use their relative bargaining power to negotiate higher shares of the IPO proceeds to provide compensation for the bundle of resources they bring to the IPO process. Figure 1 illustrates the key aspects of the resource-based bargaining process we explore in this study.

3 METHODS
To test these arguments, we utilize a sample of firms from a broad set of industries that conducted an IPO between May 1991 and June 1998. This time period was chosen since the level of IPOs was almost four times as large as the previous decade and encompasses a historically “hot” market (Ritter, 2008; Brailsford, Heaney, Powell, & Shi, 2000). Furthermore, since a significant amount of research studies in both the capital markets and governance perspectives were conducted using samples from this time period, we can more easily compare our results with these perspectives. Following the data collection methods of Ljungqvist and Wilhelm (2003), our final sample included 237 firms matched with 66 lead underwriters (these underwriters controlled 92.6% of the IPO market in the US).

4 RESULTS & IMPLICATIONS
Based on the theoretical arguments we outline above, our hypotheses predict that the initial value of the issue (i.e., initial offer price * total number of shares offered), final value of the issue, and the extent of underpricing will all be directly affected by the resource-based bargaining power of the entrepreneurial venture relative to their underwriter. Consistent with this approach, our analysis indicates that relative issuer bargaining power significantly increases both the initial value ($B = .222, p<.000, \Delta R^2 = .046$) and the final value of the issue ($B = .172, p<.000, \Delta R^2 = .027$). Furthermore, consistent with our theoretical arguments, we find that the relative bargaining power of the issuer also reduces the extent of underpricing during the first day of trading ($B = -.153, p<.05, \Delta R^2 = .019$). Overall, these results provide strong support for our central contention that
stronger resource endowments enable firms to negotiate higher offer prices and reduce underpricing, thereby leaving less money on the table for outside firms to appropriate.

### TABLE 1
**RESOURCE BASED BARGAINING AND THE INITIAL VALUE OF THE ISSUE**

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<thead>
<tr>
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<th>Model 4: Relative Issuer Barg Power</th>
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<td>-0.011</td>
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<tr>
<td>Pharma</td>
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<td>0.114 *</td>
<td>0.043</td>
<td>0.159 **</td>
</tr>
<tr>
<td>Year</td>
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<td>0.112 *</td>
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<tr>
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**Main Effects:**
- Underwriter Power: 0.166 **
- Issuer Power: 0.657 ***
- Relative Issuer Power: 0.222 ***

**Model Statistics:**
- $R^2$: 0.591
- $\Delta R^2$: 0.019
- F-statistic: 27.013 **
- F-statistic Change: 27.013 **

### TABLE 2
**RESOURCE BASED BARGAINING AND THE FINAL VALUE OF THE ISSUE**

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**Main Effects:**
- Underwriter Power: 0.517 ***
- Issuer Power: 0.718 ***
- Relative Issuer Power: 0.172 **

**Model Statistics:**
- $R^2$: 0.149
- $\Delta R^2$: 0.235
- F-statistic: 3.574 ***
- F-statistic Change: 3.574 ***
## Table 3
Resource-Based Bargaining The Underpricing

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### Model Statistics:

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<td>0.019</td>
<td>5.073</td>
<td>0.145 *</td>
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</table>

### 5 References


Jackson EM, Hambrick DC. 2002. Prestigious executives, directors, and backers of ipo's: Enduring advantage or fading gloss?, Unpublished Manuscript:


#
ETHICS IN BUSINESS EDUCATION

BY

Dr. Faith M. Pereira

Dowling College, Oakdale, NY 11769

Contact Telephone Number from September 10-25, 2011, in Mumbai, India: +91 22 26422158
Contact Telephone Number from September 26, 2011, in Long Island, USA: (+631) 472 3456
Email ID: pereiraf@dowling.edu

ABSTRACT

Looking back in time we note that whereas, for much of the past century, we in the United States of America held internationally, the number one position in many areas: including Science, Technology, Innovation, Manufacturing, Finance, and even Academia. It all seems to be in danger of being lost to other rapidly growing economies. A *litmus test* will prove that much of it can be traced to our failing Academic Standards.

In this paper we will look at the major components of academia, and suggest ways to combat the current trends, and take us back to our original status of success.

Keywords

- Litmus Test
- Academic Standards
- The Marketing Concept
- Profit Optimization
- Tertiary Business Education

1 INTRODUCTION

As we turn back the clock and the many calendars of the past decades, we realize that the current situation in society is different from what it was in the *good old days*. We wonder what has happened; when did this change occur? Our moral compass has undergone some major metamorphoses in the wrong direction, and we wonder who is to blame!

Materialism has made inroads into our character, replacing the high moral and ethical values we used to hold. Some blame for this could be imputed to the Age of Marketing, and more specifically, to the Marketing Concept that concentrates the effort of the entire organization at attempting to satisfy the Customer; making the transactions *profitable* for the organization and its stockholders.

This may be true in principle; the profit component of this concept does not necessarily involve *Profit Maximization*. The other option is *Profit Minimization*. This too is not what we want. What is preferred is *Profit Optimization*. Here some consideration is reserved for the customer, by producing satisfactory products; the people at work are provided with adequate essentials, and profits are not reserved for a select few. Unfortunately, this *Happy Medium* has been neglected; and Profit Maximization has been found to be very attractive, leading to *greed* and unethical behavior. People holding positions of power and responsibility now grab every opportunity to *get rich quick*.

Unfortunately, the corporate world does not have the monopoly here. This *infectious disease* called *greed* has spread rapidly though all levels of society, including Academia; no one is immune. We need to locate the etiology, and then fight this dreaded disease, *Greed*. Perhaps the cause could be traced to a basic element of society:

The people in *England* had adhered to their *Class System* that had little connection to financial reserves. Their birth decided their status. In *India*, the *Caste System* is also based on birth and family. Money has no place in status determination. However, in the *United States*, even though we are a major *Democracy*, we do have classes – but they are based mainly on financial status: Old family money has precedence over the *novo riche*, giving us the different classes; with no birth or other constraints, people can easily move up the *Financial Ladder*. Is it any wonder that Americans aspire to attain wealth and so climb the conventional Financial Ladder? Most successful individuals have reached their objectives by following the golden rule of ethics and good moral values.

However, there are today an increasing number of individuals who aim at satisfying just one objective: Get to the top of the Financial Ladder fast: *Get rich quick* – at any cost. It is this growing group of individuals in recent decades, that grabs the attention of the *media* and the public at large. Greed has now taken on major strides; and today we have an entire TV program entitled, *American Greed*, where relatively unknown individuals are living the lives of the rich and famous, only because of their ill-gotten wealth. In the program they are ultimately discovered, disgraced and sentenced to jail. This erroneously gives one the impression that we in the United States have the monopoly on *Greed*. Obviously, this is not the case. Greed has spread like an infectious disease. It is an Equal Opportunity *infection* that spares no one. It was believed that unethical issues and greed seem to concentrate on people in the world of Business.

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Despite these considerations we must admit that there are individuals and groups of special people in the United States and elsewhere, who have, with hard work, accumulated wealth. They have been very generous with their time and money to help people who are less fortunate than they are. Mother Drexel of a famous financial family, the Ford and other Foundations, and more recently, Bill Gates Sr. and Jr. and Melinda, Warren Buffett, Ted Turner, Aaron Feuerstein, Bono, and the list goes on and on, to the point that Mrs. Sonia Gandhi stated recently that whereas in India there are really wealthy people, we do not have examples of generosity that is so typical of Americans. These special individuals can be the guiding light for us to emulate.

We have these examples of excellent individuals, many of them living among us today. The media can play a vital role by repeatedly referring to these individuals and what they have done, and continue to do for society. Such programs could be given preferential prime time allocations, to cater to the young people and adults. If only a fraction of the attention paid by the media to the greedy elements of our society was assigned to this positive picture; and if only such positive pictures were repeatedly presented by the media, the impact on society today will certainly help to change people, especially the youth of today, the leaders and managers of the future.

This disastrous disease, greed has penetrated the world of Academia, involving even young people. The situation is very serious, for it involves not just individuals today; since our youth believe that they must emulate the unethical modus vivendi of the adults they trust and respect during the years they spend in education. Young people believe that they must emulate those superiors, to be successful as they are, when they get older. This lifestyle will be the norm in the next and future generations. These young people will later be involved in business, medicine, law, technology and academia, thus perpetuating the problem. People of all professions are exposed to this infection. The result is that we are losing our innate values and morals, making us more materialistic, as we forget the basic principles on which we were raised, and which made us the great nation that we are today; and which position we are in danger of losing: our general standing in society, in science, innovations, and even our academic standards. As in every problem situation, we must first recognize the fact that we do have failings. We must then work on them to cure them, and later, to prevent them; for Prophylaxis, we believe, is Preferred over Therapy.

This paper concentrates on the problems in academia, especially in Institutions of Tertiary Business Education. It is in these universities and colleges that we meet and educate the leaders of the future. It is these graduates who will hold senior management positions. It is these students who watch us constantly. Leading by example is imperative.

2 ADMINISTRATORS
We believe that “Parishioners are only as good as their Pastor”. This can be applied to the Presidents, Provosts, Deans and Directors in Academia. How often have they filled Technical and Staff positions based on personal preferences and other connections! How often have their decisions on appointments, promotions and tenure of their faculty been made, based on personal relationships, preferences, based on gender, national origin and business connections! What is even worse is when prevention of appointments, promotions and tenure is based on biases and prejudices! Managerial personnel responsible, are obliged to check the personal background and all necessary data of the individuals selected for employment as administrators and staff in their institutions of higher education.

Senior administrators have an obligation to make sure that the faculty they hire have degrees, and have excelled in the precise disciplines that they will be teaching, and that every selected faculty member has at least one degree above that of the classes assigned. In addition, every member of the faculty is expected to have a doctorate degree in the specific field being taught, together with years of corporate experience in that specific field. There is no excuse today to hire or retain an individual who does not satisfy these minimal requirements. The large sums of money that students pay as tuition for each class, mainly obtained as student loans, that take years and even decades to repay, should be a consideration. [To satisfy Faculty contract demands, such persons, if previously hired, can easily be transferred to positions in administration - where the academic demands are reduced]. Decisions made by administrators are watched carefully and scrutinized by the general public, particularly in the local community on which the institution depends each semester, for students to be enrolled and to fill up the classrooms.

Administrators believe that the assessing of their faculty for promotion / tenure, should satisfy certain specific criteria:

- The developing of new courses/majors for the discipline. [Some individuals split up an existing major into its components, and declare that a new major/course is created – to satisfy that stipulation].
- Publications and research [Some skirt around this stipulation by using different means as substitutes].
- Good student evaluation. [Admission numbers are down, and since most private colleges are tuition-driven, we need the numbers to fill our classrooms. To make up the numbers, open enrollment is what many schools have. We now find students with very low GPA’s; at a loss to follow the topics discussed in class. For students who come from countries that have a different medium /script, all forms of communication in the English language are major issues. Our local students, who have personal problems, are required to take on at least two jobs, in order to pay for their expensive college tuition].
Most students today, do not measure up to the high level of academic standards of the past; they are concerned about getting a good grade. To this end they try to convince the professor to reduce the class assignments. They make it very clear that they are only interested in getting a good grade. They reward the professor who complies with their expectations, with great evaluations. To please them, the professor makes things easy in different ways, thus lowering the academic standards of the school, the state and our country. Some give easy A grades, and they are assured of great evaluations. To single out one of several incidents, a student asked me to find out what class Professor X would be teaching the next semester. When I asked him why he was interested in that professor’s schedule, his reply was, “Dr. Pereira, just look at my transcript; all the grades I have are: F’s, D’s and I’s. In this Professor’s class I got an A. I did not attend any class, and I did not even buy the text book; so you see, I like to sign up for that Professor’s classes. We all give that Professor great evaluations; we tell others to do the same”. Administrators must make a serious attempt to alter the current process, for it is believed that performance evaluation is most reliable when it is conducted by trained persons.

### 3 FACULTY

Faculty must be sure that they satisfy the high standards expected of them, both academically and experientially. It is imperative today that only faculty who possess all the essential qualifications will now be considered as acceptable. Exceptions made in the past, cannot be tolerated today. Maintaining high Academic Standards is very important, especially as we note the fierce competition we all face today, and also, the financial situation globally.

For our students, we as faculty are in loco parentis. We are expected to set a good example in every way: in our speech, dress code, general behavior and even preparation for the classes we teach. Our students look up to us for guidance, so we cannot forget that the mind of a young person is like wax to receive, and like bronze to retain. We must be professional and fair at all times; prejudice and partiality being conspicuously absent.

### 4 STUDENTS

The financial situation today is a global problem; almost every country is facing it. Once admitted in an institution of Higher Education, students must realize that they are not in an extension of High School. They are responsible for their course selections, their grades and their every action. In all classes, attendance is imperative, and being on time is part of character building. Paying attention in class is also expected, as is professional behavior in the classroom. Students must have a proven record that they are fluent in the English language; comprehension, speaking, reading, and writing. They are expected to complete every assignment on the stipulated day and time. Their homework must be well prepared, well written, and well presented; it must reflect the image they want to project. Students must realize that when they graduate, there will be thousands of students graduating at the same time; all competing for the same or similar positions; so unless the C.V. includes some really good grades, coupled with an Internship that has given additional corporate practical experience, the chances of landing a good position in this economic climate, are very slim. Students today know that no generation in recent years has faced the challenges that they face. In addition to high academic achievement, students must be Management Material, so that their future managers will realize that they have made the right selection: selecting a student with a strong academic background, coupled with a good moral and ethical character, and one who has very good communication skills in the English language - all needed today to step into a position of responsibility with very little training.

### 5 PLANS TO IMPROVE OUR ETHICS & ACADEMIC STANDARDS IN BUSINESS EDUCATION:

For us in the United States of America this will not be difficult; for we started off as a country that had great moral and ethical values and the highest Academic Standards. All we have to do is take a few steps back and bring back the good ideals and values for what we were well known: charity, caring and concern for those less fortunate. Students electing to major in Business will be expected to enroll in at least one course in Ethics / Values / Social Responsibility every year. In the final year one additional course in Business Ethics will be a required course, possibly as part of the required core courses essential for graduation.

As English is the medium of our education system, all students will be tested for proficiency in the English language; that includes all forms of communication: comprehension, writing, reading and speaking. Students will be expected to have the necessary basic skills in mathematics and science too.

At the time of Admission all students will be tested for these basic academic requirements. Failure in any of these basic requirements will necessitate the re-taking and passing of the appropriate remedial courses. Only those students who qualify, will be permitted to take courses in Business.

Our objective is to raise the Academic Standards of our institutions of higher education in Business, and train our accepted students to be ethical citizens of high moral character. Our every effort will be to achieve our objectives.
The Quality of Public Administration

Maria Piotrowska
Wroclaw University of Economics
Komandorska 111/120
53-345 Wroclaw
Poland
(48) 71 3680177
maria.piotrowska@ue.wroc.pl

ABSTRACT
There are two purposes of this paper: 1) to measure the quality of local public administration in Poland and 2) to find out and rank factors affecting three aspects of the administration quality: transparency, corruption and the quality of public service delivery. Empirical research uses a questionnaire survey of 857 public officials working in 99 local administration agencies in Poland in 2009. Findings reveal that low quality of personnel management is a common problem of public administration in Poland. The modernizing factors, like meritocracy, citizen voice, education, are not the most important in stimulating the quality of public officials’ work.

Keywords
Measuring, qualitative phenomena, stimulants

1 INTRODUCTION
The quality of public administration covers three aspects - effectiveness, corruption and transparency - that can be defined as follows:

- effectiveness of public administration – measuring the quality of public service delivery by agencies of public administration;
- corruption – measuring to what extent decisions on personnel policy, budget management and service delivery are affected by connections and backstairs influence;
- transparency – measuring the availability of information inside and outside the agencies of public administration;

The paper addresses two important issues: 1) how to measuring qualitative phenomena and 2) how to explain differences in the quality of public administration agencies. These two issues are considered on a case of primary agencies of public administration in Poland that are called commune councils. The research is based on the micro data obtained from a questionnaire survey of 857 public officials working in 99 commune councils in Poland in 2009. A data set is divided into four sub-samples to investigate whether a type of a commune council (its size and localization) matters for the quality of public administration.

The paper structure is as follows: measuring problems are addressed in the second section; the literature survey on factors of administration quality is presented in the third section; in the fourth one the methodology of the research is described; the results of econometric model estimation and findings coming from the simulation are analyzed in the next two sections; finally ranking of factors affecting the administration quality is presented; conclusions close the paper.

2 MEASURING PROBLEMS
Measures of qualitative phenomena based on a questionnaire survey are exposed on problems connected with the sample construction, grouping the survey questions and a usage of perceptions.

The Construction of an Officials Sample
The research in this paper is based on a questionnaire survey of 857 public officials (public servants) working in 99 commune councils in Poland in 2009. A commune council is a primary institution of local administration in Poland. There are 2543 commune councils in total. They are divided into four types: 1586 rural commune councils, 586 urban-rural commune councils, 306 urban commune councils and 65 commune councils in big towns. Since the percentage of rural commune councils is rather big (62%), and the percentage of commune councils in big towns is small (2%), the construction of officials’ sample is not easy. If the selection of the commune councils had been representative, the rural councils would have been dominating. But such a selection would not have corresponded with the aim of the research. The results of the research are to help identify the

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1 Research project supported by the Fund of Science in the years 2008-2010
differences in perceiving various aspects of governance by officials of those four types of commune councils. Numbers of officials from all types of councils should be similar. The polling agency carrying out the survey has chosen councils at random so that the number of them conforms with their density in every province. The second principle of the construction of the sample involves the number of officials selected in each council. Generally these numbers are similar, though bigger in big towns, because more officials are employed in large urban councils. The third principle concerns the selection of officials in each council. Within each institution, a stratified random sample has been selected from each of the following decision-making ranks: top management, middle management, and ordinary officials.

Finally, the sample of the 857 public officials working in 99 commune councils covers: 226 officials from 26 rural commune councils; 227 officials from 28 urban-rural commune councils; 202 officials from 23 urban commune councils; 202 officials from 22 commune councils in big towns.

Typically, more than one question is used to describe each quality administration index and each institutional factor. In the survey all answers about individual perceptions are scaled from 1 to 5.

Grouping the Questions
The public officials survey consists of 29 questions related to 10 variables: the quality of public service delivery, transparency, corruption and several institutional factors. The measure of each variable is based on several similar questions grouped together. Two ways of grouping these questions are possible to be used: the simple average and the factor analytic techniques. The answers given by the same official to similar questions (related to the variable) occurred to be not very diversified. It allowed to use the simple average what means that each question related to the variable received the same weight.

A Usage of Perceptions
The measures applied in this research are exposed on two problems connected with a usage of perceptions: 1) a dilemma - whose perceptions should be used - officials’ or citizens’ perceptions; 2) importance of a respondent bias (individual and institutional).

Whose Perceptions
The scope of the research is limited to verifying statistical associations between three aspects of the administration quality (transparency, corruption and local government effectiveness) and a set of public administration management factors as well as two “external” (to public sector management) variables, like citizen voice and politicization. There is a problem with measuring such qualitative variables. From the supply side of public service, they can be measured by the public servants’ perceptions of these phenomena. From the demand side of public services, they should be quantified on a base of citizens’ evaluations. Both approaches are useful, however, each of them is subjected to a respondent bias. In this paper the former is applied because the main goal of this research is to reveal which of factors have statistically significant impacts on three aspects of administration quality (transparency, corruption and local government effectiveness). Therefore, it is needed not only a measure of the administration quality (what is offered by polls of the bureaucracy’s customers – individuals or entrepreneurs) but also a diagnosis of problems. In this context the public officials’ perceptions seem to be more useful. The author is aware of the fact that perceptions, in definition, are not the perfect measures of any phenomenon and they can only seen as the proxy. However, a usage of the perceptions as the measures of all variables, allow to look after the relationships in terms of “what the officials think”. How they perform, in their opinions, depends on what they think about different aspects of their work. The usage of perceptions, however, generates two another measurement problems – an individual bias and an institutional bias (See Kaufmann et al., 2002, 26-27).

Individual Bias
First of all, public officials may overstress or understate particular factors, for example: the corruption level, due to differences in their perceptions caused by differences in their education, age, gender, working experience, etc. The sample in each institution is diverse, however, the choice of officials is based on the same rules, therefore, it can be accepted that the sample is similar across institutions. These perception errors caused by individual characteristics should not carry over to the institutional level.

Institutional Bias
The second problem, an institutional effect, that arises particularly in cross-country studies, refers to the possibility that all individuals working in a particular agency may be more pessimistic or optimistic in their perceptions due to working conditions within their organization. However, this problem should not occur since all observations will be from the same country and respondents should share a common culture, norms, and moral values. It is reasonable to expect that individuals will use the same criteria to make judgments about the conditions of their own institution.

A simple test is used to estimate individual bias and institutional bias. The officials have been asked to evaluate, in general, the level of public administration effectiveness in Poland. The question should be answered in the similar way by all public officials. Deviation from the sample average captures the influence of individual characteristics as well as
the institutional effect. The percentage distribution of responses (small percentages of extreme scores) and relatively low values of standard deviation (0.72) and a coefficient of variation (23%) suggest that it is possible to accept the respondents have applied similar criteria to evaluate the aspects of their work. However, one should take into account that individual and institutional biases may affect the officials’ perceptions of any aspect, for example working conditions may influence scores given to wage satisfaction.

3 INSTITUTIONAL FACTORS OF PUBLIC ADMINISTRATION QUALITY

The second purpose of this paper is to identify factors which can determine the quality of public administration. The literature points at several potential determinants. The low quality of public administration is usually identified with bureaucracy, high corruption and a lack of transparency.

A raise of officials’ wages, as a way to improve the administrative effectiveness, has inspired long lasting debates concerning such problems as misallocation of talents between the private and public sector (Acemoglu and Verdier 1998) and high costs of such a policy tool, and danger that raising wages can attract only the dishonest (Besley and McLaren, 1993; Dabla-Norris, 2000; Wane, 2000).

The other way is a combination of hierarchical system of administrative control with accountability mechanisms based on citizen voice. Citizens should have the opportunities to express their complaints and preferences and the public administration institutions should incorporate them into the method of improving the public service performance.

Finally, politicization is pointed out as the major determinant of corruption. If decisions on personal management in public administration are based on political connections, officials’ careers depend on how much officials are useful for politicians rather than on meritocracy (Evans and Rauch, 2000). Moreover, if administrative decisions on budget and service managements are based on political connections, they lead to economic distortion and wasting public money (Menes, 1999).

Summarizing, the factors suggested in the literature can be classified as stimulants and destimulants of the administration quality. Stimulants can be divided into two categories: traditional stimulants (enforcement of rules, wages, individual honesty) and stimulants of modernization - internal (meritocracy and education) and external to public administration (citizen voice). Improvement of public administration resources can be quantitative and qualitative that is why resources can be recognize as a traditional stimulant or a stimulant of modernization. Politicization is a main destimulant.

4 INVESTIGATING RELATIONSHIPS BETWEEN THE ADMINISTRATION QUALITY AND INSTITUTIONAL FACTORS

A General Idea

In the second part of this paper the research addresses the question which factors can determine the quality of local administration in Poland. An econometric model is used to identify statistically significant factors. Three aspects of public administration quality - transparency, corruption and the quality of public service delivery - are considered key decision variables (endogenous variables) which are influenced by several factors (exogenous variables). Measures of variables are based on the public officials’ survey. Estimation of this econometric model allows: 1) to identify factors statistically significant in explaining administration quality aspects in each type of a commune council and 2) to simulate the improvement of each quality aspect due to changes in particular factors. Finally, ranking of factors for each quality aspects in each type of a commune council is set.

Variables of the Econometric Model

All variables of the econometric model are constructed on a base of the survey questions. The public officials’ behavior determines three variables: 1) the quality of public service delivery in a commune council; 2) corruption in a commune council; 3) transparency of personnel/budget/service management in a commune council. They are the dependent variables in the model. Independent variables cover: 1) a set of public administration management factors like enforcement of rules in personnel/budget/service management, meritocracy, resources, wage satisfaction, 2) personal characteristics, like personal honesty and education as well as 3) two “external” (to public sector management) factors, like citizen voice and politicization. Apart from the variables presented in Table 1, two independent variables are included in the model: a level of education (“2” = tertiary level and “1” secondary level, respectively) and a decision-making rank (“3” = top management, “2” = middle management, and “1” = ordinary officials, respectively).

Econometric Model

An econometric model of equation system, that consists of three regressions, is applied to reveal statistically important determinants of the administration quality at the local level in Poland (The method is based on the proposal developed by Kaufmann et al., 2002).
The quality of public service delivery, corruption and transparency could be determined endogenously. First of all, one should test if corruption is an endogenous variable in the regression of quality of public service delivery as well as if transparency is an endogenous variable in the corruption regression. The results of the Hausman test showed that corruption and transparency occurred to be exogenous variables. The residuals from three regressions were not correlated. It allows to estimate each regression by the ordinary least squares (OLS) method. The diagnostic tests suggest that for all regressions the residuals are not serially correlated. There is no heteroskedasticity. The residuals are normally distributed. The quality of the estimations seems to be satisfying. (The results of estimations are available on the request)

5 THE IMPORTANCE OF THE FACTORS AFFECTING THE QUALITY OF ADMINISTRATION

The estimations of the structural regressions suggest which of variables are statistically important in explaining a given dependent variable. The structural coefficients from these three regressions are used in the simulation exercise aimed at estimating to what extent one standard deviation improvement in particular variables could change the officials' perceptions of: quality of public service delivery, corruption and transparency. There are two kinds of such effects. One of them is based on the estimation of the structural parameters (direct effects) while the so-called full effects are based on the estimation of the reduced form of a given equation. The reduced-form parameters are the coefficients transformed considering the interactions between variables. The exercise allows to rank the factors which influence three aspects of public administration quality at the local level (the detail results of the simulation are available on the request)

Ranking of the factors which could improve three aspects of the administration quality at the local level in Poland shows that the increase in the quality of public service delivery can be obtained by limiting political influence mostly on personal management and financial resource allocation. The highest rank of politicization is due to its influence on corruption and then its reduction would diminish negative impact of corruption on the quality of public service delivery. Enforcement of internal rules won the second position among the factors influencing the quality of public service delivery. The third rank among the factors improving council effectiveness was won by council resources. Very low fourth rank was achieved by citizen voice. Its stronger influence on council functioning would improve all three aspects of administration quality. Unfortunately most of the council officials do not see any influence of public voice on their work quality. Salaries and bonuses occurred to be a marginal factor which could improve the quality of public service delivery. Their role would be much visible in corruption reduction but compared to limiting political pressures the impact of salary and bonus raise is still incomparably smaller. Meritocracy occurred to be a significant determinant only in explaining improvement of transparency.

6 CONCLUSIONS

Summarizing the first part of the research, the simple analysis of the officials’ responses contributes to the diagnosis on the worst elements of transparency and corruption in Poland. The lowest scores are given to personnel management (non-transparent promotions and salary raises as well as jobs purchased). A type and localization of a commune council in which the officials work do not matter. It seems that it is a common problem of public administration in Poland.

The results obtained in the second part of the research suggest the local public administration in Poland is closer to procedural governance than to market governance included in New Public Management. Enforcement of rules is the most important factor determining the quality of public service delivery. It suggests the officials are not aimed at flexible responsiveness to citizens’ needs. Considering the public voice is not regarded as important factor of council work improvement. Internal public administration modernization stimulants such as meritocracy and the level of education have much smaller impact on the quality of public service delivery then procedure abidance.

The most important factor which can improve officials’ work is the reduction in political pressures on administration decision making connected with personnel management and citizen’s affairs. The results obtained basing on perceptions of the officials employed in commune councils suggest the modernizing factors are of no significant importance to the quality of their work.

The ranks of the factors of the administration quality let pointing at the most priority factors which show the direction of improvement desired. At first the political pressure has to be limited, the citizen opinion has to be in fact considered and the transparency of councils to be strengthen. But the transparency is not to be understood as only procedure abidance but also as meritocracy and official’s level of competence and education.
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Colloborative Online Exchanges for International Studies and Trade (CoExIST) for Business Purposes: Interdisciplinary Approaches to International Business Education

Christine Elizabeth Poteau
Villanova University
Department of Romance Languages and Literatures
800 E. Lancaster Avenue
Villanova, Pennsylvania 19085, U.S.A.
(610) 688-1710
catherine.poteau@villanova.edu

ABSTRACT
This paper examines the need to develop interdisciplinary approaches to international business education to bridge the gap between international and business. With an interdisciplinary focus, the author proposes an innovative online approach that can enhance students’ learning experiences in international business programs. The author introduces Collaborative Online Exchanges for International Studies and Trade (COExIST), a unique higher educational approach to international business studies that can help prospective international business executives improve global relations and business by gaining a deeper understanding of foreign languages and cultures.

Keywords
Interdisciplinary teaching, international business, online collaborations, cultures

1 INTRODUCTION
In an expanding global market, there is an increased need to learn a foreign language (FL) and become cognizant of FL cultures. Communication is at the heart of all human activity. How language is used, how speakers interact, and what type of language is used can affect communication and, consequently, business relations and operations. In international business (IB) contexts, students should understand the cultural and linguistic norms of specific nations at the professional level. Providing students in IB programs with innovative ways to engage in FL practice can allow students to gain exposure to the FL beginning at the initial stages of their studies.

Creating learning environments for students in IB education that foster FL communication is of utmost importance in order to prepare these prospective executives for effective FL use. By encouraging students to participate in FL discourse, learners will also develop a deeper knowledge of other cultures and an understanding of how to utilize the FL in specific contexts.

2 LANGUAGE, CULTURE, AND CONTEXT
A critical aspect of effective FL use in specific contextual settings is the development of sociolinguistic competence. Sociolinguistic competence can be broadly defined as an understanding of speech norms in specific contexts. Various extralinguistic factors including age, gender, ethnicity, and social status can affect an individual’s speech and values. The IB student should have ample opportunities to practice the FL to fully understand speech norms in formal (or professional) and informal (or non-professional) contexts.

According to Jack (2004),”differences in linguistic and cultural backgrounds are usually presented as awkward stumbling blocks (or ‘grit’ in the machine), comprising opposing beliefs that manifest themselves in cultural conflicts at interpersonal, group and leadership levels” (p.
Chetwynd (2010) notes that, “according to recent research undertaken by the CBI and EDI, employers are increasingly dissatisfied with school leavers’ employability skills” and that “foreign language skills are a particular barrier” and “55 percent of those polled perceive shortfalls in school leavers’ international cultural awareness” (¶ 1). Providing business students with the appropriate cultural and linguistic tools can aid students to effectively work with others and develop cultural sensitivities. Business students must be able to experience languages and cultures firsthand inside and outside of the classroom context.

In line with developing sociolinguistic competence, Molinsky (2009) notes the need for business students to develop “cultural fluency”, a term he uses to illustrate the importance of learning “simple differences in cultural etiquette” (p. 34). In accordance with this idea, Jack (2004) explains that it is necessary to identify differences between cultures and he writes that, “‘Foreignness’ becomes a liability that not only needs to be ‘managed’, but can be managed” (p. 124). Understanding and respecting linguistic and cultural differences are separate entities that cannot simply be addressed in lecture form or directly from a textbook. Instead, business students need to be given opportunities to interact with others and experience cultures in various ways, such as through its literatures, music, art, history, and politics.

For example, music can give students an intimate perspective of culture. Bordyuk (2003) writes that literature also gives students a closer glimpse of culture and “contextualizes patterns of social behavior” (p. 10). As Bordyuk (2003) explains, this does not imply that business students must be “experts in literature but they are to be knowledgeable about the world, various cultures, interpersonal relations and human experience” (p. 10). Prospective businesses executives that plan to work in globally expanding corporations need to be aware of the specific cultural interests, sociolinguistic norms, and speech styles of their colleagues and consumers within specific regions (de Mooij, 2004; de Mooij, 1994). Authentic resources and texts can be incorporated into IB curricula to increase students’ exposure and contact with global communities. As Little, Devitt, and Singleton (1994) note, authentic texts “fulfill some social purpose in the language community for which it was produced” (p. 45). The upcoming section will review the need to include authentic texts into IB programs.

3 INNOVATIVE BUSINESS PEDAGOGY

Online collaborations can provide students with accessible authentic resources that also provide opportunities to practice utilizing the FL, which can serve to help develop reading, writing, oral, and aural skills and intercultural competence. Leask (2007) defines intercultural competency as “related to culture, cross cultural communication, meaning making and language use, dealing with otherness and difference” (p. 3). IB curricula seek to provide prospective global executives with the appropriate tools and knowledge to tackle business-related issues in specific areas—ranging from advertising to managerial affairs. Nevertheless, conducting business with foreign nations (loosely defined as nations that are non-native to the business executive) can be a challenging experience for both parties due to several reasons, including a lack of cultural understanding and poor communication skills.

Previous research on multinational corporations’ cultural misunderstandings (Li & Shooshhtari, 2007) and failures to execute acceptable advertisements in specific nations (McClenahen, 1995) are largely due to their general lack of linguistic and cultural understandings. For example, McClenahen (1995) notes that severe errors in safety manual translations have resulted in injuries and he also identifies several poorly translated advertising campaigns, including Budweiser featuring their product in Spain as the “Queen of Beers” and Kentucky Fried Chicken’s phrase, “Finger Lickin’ Good” translated in China as “eat your fingers off” (p. 17). The art of translation entails much more than literal translations and requires a cultural understanding.
of language choice.

Previous research (Chetwynd, 2010; Krishna & Ahluwalia, 2008; McClenaehen, 1995, Molinsky, 2009; Nickerson, 2002; Scherle, 2004) on the important roles of cultural understanding and language use in global markets has consistently evidenced the need to construct stronger bridges connecting IB education programs with FL studies. Though some may consider this link as nonessential or an inconceivable task, expanding global markets (as in the growing economies of Brazil, Russia, India, and China (BRIC)) demand an innovative plan to reform IB education programs.

4 REFORMING BUSINESS CURRICULA

To help business students develop a deeper understanding of other cultures and language use in various settings, several techniques and methodologies have been integrated into IB programs including the use of simulations (Molinsky, 2009) and the administering of questionnaires to evaluate perceptions on the use of certain languages in advertising (Krishna & Ahluwalia, 2008). Though these approaches are certainly a step toward improving IB programs and students’ experiences with other cultures and languages, real-world settings can provide the necessary practice for students to use the FL. Molinsky (2009) notes that simulations, for example, “don’t have the same sense of immediacy—or produce the same positive results—as real-world situations” (p. 36). With the advancement of technology and collaboration of faculty across disciplines and across borders, higher education programs can provide business students around the world with immediate access to authentic resources online and instant communication with executives across the globe.

Nevertheless, as Scherle (2004) explains, “increasing contact does not, however, automatically imply a better understanding of alternative cultures and their intricacies” (p. 232). In terms of developing a greater understanding of cultural intricacies, it is necessary for students to learn specific linguistic and cultural differences to gain cross-cultural perceptions of specific countries (Bordyuk, 2003). For example, Bordyuk (2003) writes that several multinational corporations such as, Coca-Cola, Pepsi, and Kodak, have established networks in Ukraine. Due to a lack of sufficient teaching and information on Ukraine, Bordyuk (2003) explains that foreigners maintain a common misconception of Ukraine as being linguistically and culturally identifiable with Russia. As Bordyuk (2003) writes, Ukrainians continue to “remind foreigners that ‘Ukraine is not Russia’” (p. 1). Hence, the intricate pieces of each nation are critical factors in business relations.

Wierzbicka (1999) explains that not only do individuals of different nations speak different languages, they also hold different beliefs, thoughts and collaborative styles. Though increased contact does not necessarily imply that students will automatically understand the intricacies of cultures and languages, they must be able to continually engage in meaningful collaborations and be exposed to all types of cultural resources to develop a greater understanding of cultural and communicative practices.

Today, global businesses are resorting to modern modes of communication, including e-mail, webcams, and fax machines, which are all spontaneous forms of interactions that students must be able to practice (Nickerson, 2002, p. 376). For these reasons, reforming IB curricula in ways that integrate interdisciplinary studies can bridge the gap to help students better understand other cultures and business in other countries.

An innovative and interactive global online method that may help achieve these goals is what the author of the present article refers to as Collaborative Online Exchanges for International Studies and Trade (COExIST) for Business Purposes. COExIST is model concept of a virtual learning environment that involves students in IB programs as a means to provide them with increased opportunities to communicate globally in meaningful ways to develop cultural
sensitivities, business etiquette, and strengthen their understanding of how cultures and languages affect business practices. Through global partnerships with higher educational institutions and corporations, business students can be given innumerable opportunities to interact with others in their field throughout the world via e-mail, blogging, and webcams. By using COExIST, business workshops, meetings, and conferences can be held in formal virtual settings that enable students to develop an understanding of communicative styles and business practices in other nations.

Additionally, COExIST can give students daily opportunities to meet international students and communicate informally with other students in their field to be exposed to different perspectives of the IB program in another country. Gaining experience communicating at the formal and informal levels with speakers of other languages and cultures can enable business students to examine their fields in a new light. Specifically, instructors in foreign languages and business can guide students toward an understanding of how other programs address the business needs of specific countries and how these differ and relate to their experiences as students themselves.

Part of this program also includes exposing students to the events, sounds, and sights of daily life by directing them to music, art, television programs, literature, headline news, and other multinational matters. Since conducting business in a global market does not simply entail understanding key business terminology, placing a balanced focus on interdisciplinary approaches to IB education can help students more fully experience culture.

COExIST offers a practical application of virtual environments that equip the prospective executive with a deeper understanding of business across cultures. COExIST allows educators to help their students cross borders while studying at home to understand the world of business and the world itself.

5 CONCLUSION

With an interdisciplinary approach to IB education, we can bridge the gap between the fields of business and languages by establishing stronger connections within these programs to help students in IB programs become cognizant of the power of language in business and culture.

Though many IB programs offer students opportunities to travel abroad to visit large corporations, students must have a continuous exposure to global markets. COExIST can allow for this type of continuous exposure to help IB students make connections between their field and the language of study. Additionally, COExIST helps students connect with other students and executives at the local and global levels. Integrating COExIST may strengthen students’ working relations with other nations by giving them ample opportunities to collaborate with others so that global businesses can succeed and work cooperatively. Business programs that collaborate with faculty across disciplines and across borders can help their students coexist by incorporating a solid interdisciplinary approach.

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What Does Leadership Look Like? The View from the C-Suite

N. Lamar Reinsch, Jr.
Georgetown University
McDonough School of Business
Washington, DC 20057
1-202- 687-5125
ReinschL@georgetown.edu

Jonathan A. Gardner
Penn Schoen Berland
1110 Vermont Ave, NW
Washington, DC 20005
1-202-842-0500
jgardner@ps-b.com

ABSTRACT
We report data from a national sample of executives. The executives most often selected communication and personal integrity as the very important qualities for effective leaders. We noted differences between males and females. We also noted numerous differences between older and younger executives and we suggest that these differences are probably the result of maturational effects. We call for additional study of how conceptions of leadership evolve over an individual’s life-span or business career.

Keywords
executives, leadership, life-span, qualities, sex

1 INTRODUCTION
Within the leadership literature, little attention has been devoted to the issue of whether an individual’s conception of leadership changes during adult life. In this paper we offer evidence suggesting that such changes occur, and we call for additional study of the issue.

Literature Review
Within the literature aimed at defining leadership “relatively little attention” has been given to the perspectives of “those in high-profile roles such as CEOs” (Carpenter, 2007, p. 253). Even fewer studies have considered the possibility that perspectives change during adulthood.

Studies that have solicited conceptions of leadership from individuals experienced in senior executive roles have included those by Carpenter (2007); Farkas and Wetlaufer (1996); Kets de Vries, Vrignaud, and Florent-Treacy (2004); Peterson (1972); Tait (1996); and Wood and Vilkinas (2005). These studies have varied greatly in objectives, methods, and results. For example, Farkas and Wetlaufer (1996) identified five distinct “approaches” to CEO leadership (e.g., the “strategy” approach). Tait (1996) noted four leadership attributes: vision, people and communication skills, integrity/character, and drive/ambition. And Wood and Vilkinas (2005) identified two dominant characteristics: achievement orientation and a humanistic approach. With the partial exception of Tait (1996), these studies did not explore the possibility that responses might differ on the basis of age.

Also, studies have grouped men and women together (e.g., Tait, 1996) despite the fact that leadership conceptions and behaviors are gendered (e.g., Koenig, Eagly, Mitchell, & Ristikari, 2011).

Recent studies (Day, 2012) have shed light on how childhood and adolescence relate to adult leadership. But few seem to have pondered a follow-up question: Does an adult’s leadership (or followship) perspective change over time and, if so, in what ways? This project provides an exploratory study of the issue.

Theoretical Perspective and Research Questions
The theoretical perspective from which this study begins is life-cycle development (Kegan, 1982), coupled with the notion that information processing plays a large role in leader-follower interactions. Taken together, these two concepts suggest that individuals do not achieve a permanent adult understanding of leader-follower relations but, instead, continue to adjust their understandings during the duration of their careers and lives, perhaps in predictable, age-related ways. Therefore, we pose the following research questions:

Q1. What qualities do senior American executives regard as most important for an effective leader?
Q2. Does the respondent’s sex affect the qualities that he or she regards as most important?
Q3. Does the respondent’s age affect the qualities that he or she regards as most important?

2 METHODS
Penn Schoen Berland (PSB), a leading political polling organization conducted an on-line survey. The survey collected responses from senior executives. In this instance, “senior executive” means that the respondents held one of the following job titles: CEO, CFO, COO, CTO, CIO, Chairman of the Board, President, Executive VP, Senior VP, Managing Director, or Vice President.

Random sampling continued until 303 responses had been collected, yielding estimates of population values that are accurate within 5 percentage points. Our list of potential qualities—generated partially from reviews of past research (e.g., Sashkin, 2004)—included 34 items and each respondent was asked to identify the 10 most important ones. Since the questionnaire was administered by computer, it was possible to systematically rotate the sequence in which the qualities were presented.

3 RESULTS
Three hundred and three individuals (218 M; 85 F) provided responses. Most of the respondents reported that they were married (84%). Most described their race as “White/Caucasian” (84%). All indicated that they had
completed “some college”—the majority (67%) had done graduate work. More than half (53%) worked for companies that employed more than 10,000 persons; all worked for companies that employed more than 1000 persons. All major industrial segments were represented.

The oldest respondents (2%) checked the “65 or older” range, while the youngest (3%) checked the “25-34” range. We made a median split, designating as “older” those respondents older than 50 (n = 157, 52%) and as “younger” those 49 or below (n = 146, 48%).

Table 1 shows the frequency (expressed as a percentage) with which each quality was selected. Three sets of significant differences are relevant to our project. First, when we examine column #1 vertically (i.e., the Total column), two numbers that differ by more than 5 are different at a statistically significant level. While there are many such differences we have – by means of spacing within the table – called attention to the following: (a) The qualities of “good communicator” (#1) and “ethical” (#2) stand apart as a cluster of the most frequently cited qualities; (b) A trio of qualities – trustworthy (#3), honest (#4), good listener (#5) – form a second cluster that is mentioned less frequently than the first cluster but more frequently than any other quality; (c) The largest cluster (27 qualities) includes factors that range from a high of 45% to a low of 7%, but without any obvious internal structure or natural breaks; and (d) a final cluster of two rarely selected qualities—“aggressive” (#33) and “manipulative” (#34)–has been omitted from Table 1.

**Most Important Qualities**

Our first research question asked which qualities would be identified as most important. The answer is that five qualities stand apart from the others. These five— and only these five—qualities were selected by more than half of the respondents. Furthermore, those five qualities appear to relate to two over-arching concepts: interpersonal communication and integrity.

“Good communicator” is, of course, a broad category, reaching across a number of skill sets (e.g., public speaking). But our experience with business executives suggests that what the respondents had in mind was what academics refer to as interpersonal communication. We group “good listener” under the same umbrella because practitioners – see Lewis and Reinsch (1988) and Maes, Weldy and Icenogle (1997) – tend to use “listening” to describe not only listening *per se* but also the speaking and behaving that are a part of skillful conversational enactment.

<table>
<thead>
<tr>
<th>Table 1: Most Important Qualities of an Effective Leader</th>
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<tr>
<td>(1) Total n=303</td>
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<tr>
<td>01. Good communicator</td>
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<td>02. Ethical</td>
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<td>03. Trustworthy</td>
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<td>04. Honest</td>
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<td>05. Good listener</td>
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<td>06. Decisive</td>
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<td>07. Strategic</td>
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<td>08. Fair</td>
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<td>09. Visionary</td>
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<td>10. Knowledgeable</td>
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<td>11. Competent</td>
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<td>12. Inspiring</td>
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<td>13. Approachable</td>
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<td>14. Confident</td>
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<td>15. Professional</td>
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<td>16. Motivated</td>
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<td>17. Dependable</td>
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<td>18. Supportive</td>
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<td>19. Organized</td>
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<td>20. Passionate</td>
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<td>21. Persuasive</td>
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<td>22. Disciplined</td>
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<tr>
<td>23. Proactive</td>
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<tr>
<td>24. Enthusiastic</td>
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<tr>
<td>25. Experienced</td>
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<tr>
<td>26. Focused</td>
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</table>
The other three items that appear in the two clusters of terms—ethical, trustworthy, honest—pertain to integrity.

**Sex Related Differences**

Our second research question asked about sex-related differences in the identification of qualities. We received responses from only 85 women, reducing the power of tests for sex-related differences. Perhaps for that reason, we observed only two statistically significant differences. Females—more than males—were likely to value the quality of fairness (mentioned by 55% of the women vs. 38% of the men), and the quality of supportiveness (mentioned by 36% of the women vs. 21% of the men). In fact, reviewing the data in column #3 reveals that “fair” (#8) was the third most frequently selected quality by women.

**Age Related Differences**

Our third research question asked about age-related differences. As shown, in Table 1, we observed 11 significant differences. In comparison to younger executives, the older executives were more likely to select the following qualities: ethical (#2), trustworthy (#4), good listener (#5), decisive (#6), fair (#8), approachable (#13), and dependable (#17). On the other hand, younger executives were more likely to select the following qualities: inspiring (#12), confident (#14), experienced (#25), and charismatic (#28).

Recognizing that demographic variables are frequently confounded, we tested the relationships between age and job title, and between age and sex. We found that the relationship between job title and age did not approach significance (Chi-square = 1.15; df = 2, p < .05). The relationship between age and sex, on the other hand, was statistically significant (Chi-square = 10.23 with continuity correction; df = 1, p < .01), with males somewhat older than females.

The confounding of age with sex raises the possibility that differences attributed to one of the factors might be due, at least partially to the other. While we cannot rule out that possibility in every case, we do note that in one instance we can be relatively certain that the results can be taken at face value. As noted, female respondents were more likely than men to value fairness. Since the women in the sample tended to be younger than the men, we might have expected, then, that younger respondents would value fairness more than older respondents. But the results are the reverse—older respondents were more likely than younger respondents to mention fairness (48% versus 38%).

**4 DISCUSSION**

**Most important Qualities**

The current study suggests that American executives regard as most important for effective leadership the qualities of interpersonal communication and integrity. This resembles the finding of Tait (1996) that “people and communication skills” and “integrity/character” were among the most important attributes of leadership (pp. 28-29). The other two attributes identified by Tait, however, “vision” and “drive/ambition” did not emerge as being so important in the current study—“visionary” ranked 9th (selected by 42% of the respondents) and “motivated” came in 16th (selected by 30% of the respondents).

The importance of interpersonal communication—under various labels—has also been noted in other studies (e.g., Maes et al., 1997; Wood & Vilkinas, 2005).

Integrity or character, however, has not been noted so consistently. The work of Kets de Vries and colleagues (2004)—drawing on a sample of European executives—identified several factors that can be viewed as related in some way to integrity (pp. 479-480)—but none that appear to be directly comparable to the emphasis on ethics, trustworthiness, and honesty in our survey. And Wood and Vilkinas (2005) described their Australian interviewees as giving “very little or no emphasis ... [to] having integrity” (p. 186).

**Sex-Related Differences**

The current study—with women more than men mentioning fairness and supportiveness—indicates that men and women continue to have differing experiences in the U.S. workplace (e.g., Kulich, Trojanowski, Ryan, Haslam, & Renneboog, 2011). And, given the confound between sex roles and leadership roles (e.g., Koenig, Eagly, Mitchell, & Ristikari, 2011), it should come as no surprise that we observed differences between men and women.

**Age-Related Differences**

Our most numerous results concerned differences between older and younger executives. So far as we have been able to determine, our study is the first one to show age-related differences in descriptions of leadership in a representative sample of the U.S. business executives.
The notion that conceptions of leadership evolve over eons of time (Van Vugt, 2012, pp. 158-160) seems evident. The notion that generational cohorts have differing experiences and so differ in their values and preferences concerning how they wish to be led (Stanley, 2010) seems generally accepted. But the possibility that adjacent generations separated by only a few decades might have measurably large difference in conceptions of leadership appears to be new.

The differences that we have observed might result from either of two factors. One possibility—a maturational hypothesis—is that individuals, as they age, learn to place greater value on qualities such as good communication, trustworthiness, listening, decisiveness, fairness, approachability, and dependability (and less on qualities such as inspiring, confident, experienced, and charismatic).

Or, perhaps—a cohort hypothesis—the “Boomer” generation in the U.S (which corresponds closely to our “50 or over” category) and “Generation X” (which corresponds closely to our “under 50” category) have differing conceptions of leadership, and “Generation X” managers will retain their distinguishing perspectives as they continue to gain managerial experience. In other words, this approach argues that Boomers tend to value good communication, trustworthiness, listening, etc more than do members of Generation X.

The only relevant reference we have found is a remark by Tait that her older interviewees spoke more (than the younger ones) about humility (1996, p. 29). We did not include humility in our list of qualities, but we would suggest that the notion of humility overlaps with concepts such as “good listener” and “approachable,” qualities that our older respondents selected more frequently than did our younger respondents.

We suspect—based largely on our personal experiences—that our results are maturational rather than generational.

Limitations
We have already noted implicitly a number of the limitations of this study. Others that deserve mention include our U.S.-centric focus, the absence of time-series data, and the assumption that executives are sufficiently self aware to accurately describe their mental models (Carpenter, 200, p. 270).

5 CONCLUSION
Data from a national survey of corporate executives provided insight into the qualities regarded as important for effective leaders. Further analysis revealed significant differences between males and females, and between older and younger executives. The latter set of age-related differences raises the possibility of maturation effects in adult conceptions of leadership. Such effects, if they exist (and the current data are from a point-in-time survey—not time-series) would seem to have the potential to assist those engaged in the task of leading a multi-generational team or workforce (e.g., Stanley, 2010).

6 REFERENCES
ABSTRACT

Equity theory was an important element in the workplace in the second half of the twentieth century, ensuring the fairness of employee reward systems as well as the balance among the business, government, and society sectors. Based on significant changes to each of these sectors in recent years, the utility of equity theory has been severely compromised. This paper explains the various changes that have taken place and it offers possible solutions to restore the balance so that workers can once again attain meaningful employment and the associated benefits that accrue to it.

Keywords
Management education, equity theory, underemployment

1 EQUITY THEORY

Equity theory emerged about a half century ago, during a period when several management models attempted to explain job motivation. Building on Maslow’s seminal theory on the hierarchy of needs (1943), the concept of motivation exploded in the 1960s and 1970s with significant models such as McGregor’s theory X and theory Y, McClelland’s learned needs theory, Vroom’s expectancy theory, Herzberg’s motivator-hygiene theory, House’s path-goal theory, and Handy’s motivational calculus. Perhaps more than any other model, equity theory, which was developed by John Stacey Adams in 1963, came closest to explaining workers’ motivation in the context of whether they perceive they are being treated with fairness.

In equity theory, motivation is not solely a function of individual rewards. Instead, motivation is a function of how individuals view their ratio of outcomes to inputs (i.e., rewards and effort) relative to the ratio of outcomes to inputs of referents (i.e., others with whom they compare themselves to determine if they are being treated fairly). Workers can perceive there to be an overreward or an underreward, but according to the model the latter inequity will certainly result in workers taking some sort of action to restore equity. One way that workers can restore equity is to reduce the amount of effort they put into their job. The other option is to request greater rewards, such as an increase in pay.

For the balance of the twentieth century, equity theory became operationalized in the workforce of the U.S. and other developed economies, as workers generally were successful when applying the principles of the model. If they perceived that they were being treated unfairly, then they were able to take the necessary steps to correct the inequity. In recent years, however, there has been an erosion in the applicability of equity theory due to a disturbing trend in the labor market. The trend that we have experienced has been the rise of underemployment.

2 UNDEREMPLOYMENT

Underemployment is tracked daily by the Gallup Organization. Gallup defines underemployment as the combination of unemployment and involuntary part-time employment. The U.S. Department of Labor publishes data on unemployment only; no government statistics are available on the number of persons who might be viewed as underemployed. In July 2011, the government reported that the unemployment rate in the U.S. was 9.1%, having shown little definitive movement over the last several months. Of the 153.2 million persons reported as being in the labor force, the number of unemployed persons totaled 13.9 million. Among the 139.3 million persons reported as employed the government noted that this included 8.4 million persons who were employed part-time but desired full-time employment. Moreover, the government noted that its data excluded 2.8 million persons that it described as marginally attached to the labor force (i.e., persons out of work that were ready to work but had not sought work at some point in the prior twelve months). Included among the persons marginally attached to the labor force were over 1.1 million discouraged workers, who are defined as individuals not currently looking for work because they feel that no jobs are available for them in the current employment market.

As of July 24, 2011, Gallup also reported an unemployment rate of 9.1%. In addition, Gallup reported 9.6% of the labor force as being employed part-time but wanted full-time employment. Together, Gallup reports this share of the labor force – 18.7% – as underemployed. This rate does not include those workers in the labor force that are mismatched with their jobs (i.e., they are grossly overeducated relative to others in the same occupation). As the percentage of the labor force with adequate...
employment is reported by the government as steadily declining, then a declining or flat unemployment rate signifies that involuntary part-time employment and mismatched unemployment are on the rise.

Inferior employment has existed to some extent in the U.S. economy since the Great Depression. No measures of underemployment existed, however, until the recession of the early 1980s. During that time, high unemployment rates were a threat to workers who were still employed because jobs could be downgraded by employers. Potential employees in the labor market were forced to settle for less because there were few alternatives to downgraded jobs. Conventional measures of the labor force participation rate and the unemployment rate ignored this marginal employment as an economic as well as a social problem (Clogg, Eliason, and Leicht).

As firms continue to be pressed to report profits in an increasingly competitive global economy it is expected that the problem of underemployment will persist in the job market. Consequently, in this environment workers are less likely to have as much leverage as they might like to have if they were to attempt any action to fix a situation where they are frustrated or angry. Assuming that workers can neither risk reducing their effort or demand increased rewards in today's job market – not to mention having the option of simply leaving their job – we need to reexamine whether equity theory is still relevant.

3 THE ROLES OF BUSINESS, GOVERNMENT, AND SOCIETY

Equity theory can be evaluated by using an economic construct based on the research of Heilbroner (1972), which emphasizes the critical balance that is necessary among business, government, and society. When the various theories on motivation were at their peak in the 1960s and 1970s, there was sufficient balance among these three sectors so that they each could function efficiently. With equity theory in particular, individuals in the labor force (i.e., society) possessed the ability to ensure that there were sufficient checks and balances so that neither of the other sectors (i.e., business or government) could exert too much influence and thereby destroy the balance. Over the last twenty to thirty years, there have been a series of events that have altered the role of business, the role of government, and the role of society. These events are highlighted below.

Business
- Unsustainable bubbles in the housing and financial markets
- Increases in executive compensation
- Widespread layoffs
- The shift from permanent to temporary employment

Government
- The handling of corporate fraud

- The politics of regulation
- Lost jobs to poorer countries and inadequate job creation
- Healthcare policy

Society
- Inequitable wage distribution
- The cost of retirement
- Diminishment of career opportunities for younger workers
- Psychological malaise

4 DISCUSSION

Restoring the balance among business, government, and society appears to be a daunting task. There are some things, however, that can be done to help. First, companies need to work harder to stay touch with the needs of their employees. Second, the government sector should consider reinvigorating the growth of start-up businesses. Third, corporate cultures need to be redefined to help mend the imbalance between employers (the business sector) and employees (the society sector). Without taking steps such as these, equity theory will no longer be valid in contemporary management practice.

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An Early Examination of Web Influences on Teaching the Undergraduate Capstone Strategy Course in Business.

Douglas N. Ross, Towson University, 8000 York Road, Towson MD 21252, 410-704-4071
dross@towson.edu

Douglas Sanford Towson University, 8000 York Road, Towson MD 21252, 410-704-5280
dsanford@towson.edu

Vince Luchsinger University of Baltimore, 1420 No. Charles St., Baltimore MD, 21201, 410-837-5031
vluchsinger@ubalt.edu

Al Rosenbloom Dominican University, 7900 West Division St., River Forest, IL 60305, 708-366-2490
arosenbloom@dom.edu

ABSTRACT
We examine student satisfaction with course format, whether it be traditional face-to-face, online, or hybrid (blended format). The topic is relevant because many business schools are currently being encouraged to offer more courses in technology-based formats. We discuss the course development process for blends and the kinds of trade-offs involved in order to keep the work manageable for faculty contemplating such a move. We analyze survey data from college seniors taking a capstone class at two different universities involving three different professors, and three different formats. Preliminary t-test analysis shows college student satisfaction with courses associates most strongly with the convenience of the courses primarily due to workplace commitments and the perceived learning gained. Analyses also indicate that students taking the blended format had higher perceived learning, higher convenience for arranging work for class, higher convenience for organizing non-work activities, and higher convenience for commuting to class. Implications of the study for business school practice are discussed.

Keywords
Business education, student satisfaction, on-line courses, teaching formats, hybrid/blended format.

1. INTRODUCTION.
In this paper we attempt to test whether there is “one best format” for conducting an undergraduate strategic management course. We set out to examine student perceptions of their learning and satisfaction in three modalities—face-to-face (F2F), blended (or hybrid) and online. This paper uses data from Fall 2010 and Spring 2011 based upon two hundred ten online student questionnaire responses to investigate the contribution of course format to student satisfaction with the course. Our analysis used

students in an undergraduate capstone strategic management course.

The paper proceeds in four sections. Section 1 presents a definitional schema for loosely delineating F2F, blended and online environments; section 2 describes the classroom-focused research design; section 3 presents early research findings based on multivariate analysis; and section 4 concludes with a discussion of the implications for Business school practice.

2. EARLY RESEARCH FINDINGS.
Preliminary analysis shows college student satisfaction with courses associates most strongly with the convenience of the courses and the perceived learning gained. In addition, we see the following findings

(1) Students taking the face-to-face format are more likely to:
- not be graduating
- be male
- have English as a first language
- have lower perceived learning
- think the professor matters most in a course
- not value convenience in organizing class work
- not value convenience for work
- not value convenience for non-work activities
- not value convenience for commuting

(2) Students taking the blended format are more likely to:
- expect higher grades
- be younger
- have a higher course load
- be Accounting majors
- not be Management majors
- have less experience with online courses
- be international students
- have higher perceived learning
- value convenience for organizing class work
- value convenience for organizing non-work activities
- have higher satisfaction

(3) Students taking the online format are more likely to:
- be graduating this semester
- have a lower expected grade
- be female
- be older
- have a lower course load
- be a management major
- work more per week
- not think that the professor is what matters most in a course
- value convenience for work,
- value convenience for commuting, and be less satisfied

3. IMPLICATIONS FOR BUSINESS SCHOOL PRACTICE.

While we hypothesized that blends would create the greatest student satisfaction, from our preliminary analysis, this premise did not hold. There appeared to be no difference between formats in terms of perceived student satisfaction. One possible explanation is that all three faculty members in the study were veteran teachers who each had many years of cumulative experience teaching the capstone strategic management course. Courses improve with time and experience. Thus, given each professor’s knowledge of “what works best,” it is reasonable that each course would have a high student satisfaction scores. Furthermore, while in “theory” a blended course should give best results in practice students may be put off either because they dislike online aspects or because they dislike F2F, a kind of worst of both worlds rather than the best.

We should note, however, that while there was no difference between perceived student satisfaction scores based on course format, there was a meaningful difference in terms of perceived learning. Students taking the strategic management course in the blended format seemed to have significantly higher perceived learning scores than other formats. Explanations for this higher level of perceived learning need further investigation. At this time we can only suggest that for some group of students satisfaction and learning are more tightly linked and further that for this group the “best of both” worlds offers the advantages anticipated by the study authors.

This study, while “preliminary” in nature, suggests three main implications:

(1). For administrators: It seems that administrators are enchanted by the prospects of increased enrollment and revenues that web-supported classes bring to education. Those enrollments purportedly are less of a burden on infrastructure, except for the cost of maintaining the Internet capability. The United States Distance Learning Association has tracked the increase of on-line courses and considers it a significant boost that technology can provide for education. On-line programs can reinforce the image of the institution as being with the "cutting edge technology" or "better serving students." In an era of branding, those considerations might be emphasized to seek comparative advantage. Perusal of institutional advertising would bear this out. Some of the "better institutions" have gotten on this bandwagon.

(2). For students: If tuition costs are equivalent between on-line and resident (face-to-face) students, tuition cost should not be a factor. Some institutions do attach a surcharge for on-line courses to "help defray technology costs". However, online students don't have to pay parking costs or undergo the transportation time and costs that resident students do. As convenience proved to be a potent variable in this study, the logistics factor might reinforce the convenience factor seen in the data. For many students, the face-to-face class provides personality and intimacy for learning, appreciated by many. On the other hand, for many online students, convenience provides compatibility with job schedules, travel duties, child care, or life styles. For other students, the blended format properly integrated provides advantages (and disadvantages).
(3). For faculty: Many faculty also enjoy the convenience factor of online courses. In some cases faculty enjoy the detached nature of the online relationship. Others deplore the lack of personal contact in the online teaching-learning relationship. In addition, there is general agreement that the online course, done well, acquires a very clerical nature and consumes considerable time. It could be that the role of faculty in satisfaction of students with their experience needs more exploration. Again, in the blended environment, faculty seek both the intimacy and connectivity of the traditional setting along with the efficiency of the electronic environment.

Each of the above suggests a need for further comparative study of formats with respect to cost-effectiveness. More data and experience are needed to fully understand the comparative economics. In the effectiveness realm, course and program quality play a role. Are the standards and learning outcomes equivalent among formats, especially between traditional and on-line courses? Every campus probably has heated arguments over these issues. Time, experience, and more data may shed some light on those concerns. This study is an attempt to contribute to that dialogue.

REFERENCES AND FULL PAPERS ON REQUEST.
AN IMPACT STUDY OF INTELLECTUAL CAPITAL PERFORMANCE ON PRODUCTIVITY, PROFITABILITY AND MARKET VALUATION OF KNOWLEDGE INDUSTRIES IN INDIA.

FR. JAMES SANTHANAM, S.J.
Loyola Institute of Business Administration
Loyola College
Chennai
India – 600034
919176192083
jamessanthanam@hotmail.com

Abstract
The 21st century world we live in is a world of knowledge economy, knowledge industries and knowledge workers. This inevitably calls for efficient and effective knowledge management. The existing financial measures of performance of companies and worth are essentially meant for manufacturing economy with high financial capital/tangible assets. It has become crystal clear that these financial measures have failed to do justice to knowledge industries which rely heavily on intellectual capital/intangible assets. These 500 years old accounting and financial practices also have been criticized by many business leaders, and financial analysts as “not keeping pace” with the vast changes in the business world. Hence, the purpose of this research is to measure and report the impact of intellectual capital performance on productivity, profitability and market valuation of 240 listed knowledge-intensive companies in India, covering a period of 6 years (2005-2010). Having analyzed more than 30 models that have tried to measure and report, the VAIC™ model propounded by Pulic (1998) was chosen for the research purpose, since it uses objective data collected from audited statements for measuring and reporting. This study becomes significantly important for India, as the country is heading towards becoming one of the super powers in the knowledge economy.

Keywords

Introduction
Today, the world is witnessing a post-industrial economy. In a post-industrial economy, knowledge plays a critical role in the process of creating business value (Drucker, 1993; Sullivan, 2000). In other words, today’s economy is a new economy which is known as knowledge economy. The future of the new economy will not just be made by information, knowledge and learning, but the understanding of that information (Leadbeater, 1999). From time-immemorial, wealth and power have been associated with the ownership of physical resources, be they- land, money, production rights, employees, materials, etc. This was true a century ago. Today, as Peter Drucker says, “We are in the knowledge society in which the basic economic resource is no longer capital, or natural resources, or labour, but knowledge” (Drucker, 2001). Alan Burton-Jones, author of Knowledge Capitalism, believes that the future of wealth and power will be derived mainly from intellectual capital/intangible assets. Just like the once profound Industrial Revolution the world faced, the Knowledge Revolution implies a shift of economic power (2003). Only knowledge provides the opportunity to improve the wealth of nations, the growth of organizations and the value of individuals (Bounfour & Edvinsson, 2005; O’Donnell et al., 2006). The emergence of the knowledge era has left many corporate leaders feeling that something is disturbingly out of balance. While today’s executives understand the importance of fixed assets and financial capital, they are very much in the dark about the value of intellectual capital and how to manage it effectively.

Accounting, as it is practiced today, has lost much of its ability to inform as businesses have become more and more knowledge-intensive. Intellectual capital/intangible assets are now variously estimated to constitute 70-80 percent of corporate value on average (Lev, 2002). Research to date has yet to conclude how best to measure this intellectual capital (Brennen & Connel, 2000). Current debates about intellectual capital are part of the search for a methodology and the knowledge base of a firm (Power, 2001). This is critical since a failure to properly conceptualize the nature and value of knowledge assets condemns firms and whole economies to fight competitive battles with outdated weapons and tactics (Boisot, 1998).

These are serious reasons to reengineer the traditional
accounting approach and how business information for management and investors is prepared. There are already different concepts and methodologies available – each with a different focus. The solution probably lies in a combination of these different approaches and of some other important aspects into a new comprehensive accounting, management and reporting system. The purpose of this paper is to critically examine the relevance of existing accounting measures and practices with regard to their applicability in knowledge-intensive companies and more importantly to look at a model that would do justice to the performance and worth of these companies.

**Literature Review**

An extensive research has been carried out on Intellectual capital, since financial accounting practices do not explain the performance and the increasing gap between a firm’s market value and its book value. Simply a firm’s market value exceeding its book value has been defined as intellectual capital (Edvinsson & Malone, 1997). The intellectual capital plays a significant role in the modern approach of value creation. Several authors in the field of business economics use the terms intangible, intangible resources, knowledge assets and intellectual capital as synonyms. The present study shares this usage. Moreover, although the concept of intellectual capital has been subject to diverse interpretations over the years, the proposed patterns of its representation found in the literature are based on classifications that are very similar to one another (Bontis N., 2001). Though the intellectual capital is recognised as a major corporate asset capable of generating sustainable competitive advantages and superior financial performance (Barney, 1991), it is still difficult to find an appropriate measure of intellectual capital.

The review of literature reveals mainly four types of methods for measurement and reporting of intellectual capital.

1. Direct Intellectual Capital Method (DIC)
2. Market Capitalisation Method (MC)
3. Scorecard Method (SC)
4. Return On Assets Method (ROA)

The review of literature also reveals 42 models that are widely accepted by the authorities in this field but the most commonly used methods are:

- The Balanced Scorecard (Kaplan and Norton, 1996)
- Skandia’s IC Navigator (Edvinsson and Molone, 1997)
- The Intangible Asset Monitor (Sveiby, 1997)
- Intellectual Capital Services’ IC-index (Roos and Roos, 1997)
- Value Added Intellectual Coefficient VAICTM (Pulic, 1998)

As stated above, different categories of methods and different types of models that tried to demonstrate the existence of a relation between intellectual capital and business performance encountered problems linked mainly to the measurement of intellectual capital. In recent years, a series of empirical studies have been carried out using Ante Pulic’s VAICTM (Value Added Intellectual Coefficient) (1998), which can be calculated starting from the balance sheet and profit and loss account data, as a proxy of intellectual capital. Pulic (2000a, b) proposed Value Added Intellectual Coefficient (VAIC) as an indirect measure of efficiency of value added by corporate intellectual capital. The VAIC method provides the information about efficiency of tangible and intangible assets that can be used to generate value to a firm (Pulic, 2000a, b). Financial capital (monetary and physical) human capital and structural capital have been recognized as major components of VAIC.

**Objectives of the Study**

The primary objective of this exploratory research is to study the Intellectual Capital Performance and its impact on Knowledge Industries in India.

The specific objectives of the study are:

- To measure, analyze and report the Intellectual Capital Performance and its impact on the Productivity in the knowledge sector.
- To measure, analyze and report the Intellectual Capital Performance and its impact on the Profitability in the knowledge sector.
- To measure, analyze and report the Intellectual Capital Performance and its impact on the Market Valuation of knowledge in the knowledge sector.
- Finally to measure, analyze and the different kinds of impact the Intellectual Capital Performance has on different industries in the knowledge sector taking into consideration the unique characteristics of these industries.

**Assumptions:**

1. The 21st century economy is a knowledge economy. Knowledge is the cutting-edge factor of production in today’s business world.
2. The 500 years old financial accounting measures which were meant primarily for manufacturing sector, is not adequately suitable for knowledge sector.
3. The application of these financial measures have resulted in misrepresentation of the performance and worth of knowledge-intensive companies
4. There is ever increasing need to adopt intellectual capital reporting in addition to financial reporting in order to do justice to different stakeholders.

**Definitions**

The term intellectual capital was used by Thomas A. Stewart who wrote a book with this title. Stewart defined intellectual capital as "intellectual material—knowledge, information, intellectual property, experience—that can be put to use to create wealth". (Stewart T, 1997).

Skyrme and others suggest considering intellectual capital as divided into three categories

- human capital (know-how, levels of skill and experience)
- customer capital (numbers and types of customer, value of business, customers that enhance your knowledge)
- structural capital (databases, processes, infrastructure etc.) (Skyrme, 2003)

Ante Pulic defines intellectual capital as the sum of Capital Employed Efficiency (CCE), Human Capital Efficiency (HEC) and Structural Capital Efficiency (SCE). (Ante Pulic, 1998).

**Formation of Hypotheses**

Given the importance of intellectual capital in creating and sustaining an organisation’s competitive advantage and capabilities, which will influence its performance, the following three hypotheses are stated:

All other factors remaining the same at the organizational level, in a given industry, the greater the value (performance) of a company’s intellectual capital,

- The greater the company’s productivity
- The greater the company’s profitability
- The greater the market’s valuation of the company relative to the value of its financial and physical assets.

**Hypothesis. 1**

Ho = Intellectual Capital performance of a company does not impact its productivity (ATO).

Ha = The greater the performance of a company’s intellectual capital, the greater will be the impact on its productivity (ATO).

**Hypothesis. 2**

Ho = Intellectual Capital performance of a company does not impact its profitability (ROA).

Ha = The greater the performance of a company’s intellectual capital, the greater will be the impact on its profitability (ROA).

**Hypothesis. 3**

Ho = Intellectual Capital performance of a company does not impact its market valuation (MV).

Ha = The greater the performance of a company’s intellectual capital, the greater will be the impact on its market valuation (MV).

These hypotheses’ relationships are measured as follows:

**Equation 1**

\[ ATO = \alpha + \beta_1 \left( VAIC^{TM} \right) + \beta_2 \left( PC \right) + \beta_3 \left( OS \right) + \beta_4 \left( DER \right) + \beta_5 \left( IT \right) + \epsilon \]

**Equation 2**

\[ ROA = \alpha + \beta_1 \left( VAIC^{TM} \right) + \beta_2 \left( PC \right) + \beta_3 \left( OS \right) + \beta_4 \left( DER \right) + \beta_5 \left( ATO \right) + \beta_6 \left( IT \right) + \epsilon \]

**Equation 3**

\[ MB = \alpha + \beta_1 \left( VAIC^{TM} \right) + \beta_2 \left( PC \right) + \beta_3 \left( OS \right) + \beta_4 \left( DER \right) + \beta_5 \left( ATO \right) + \beta_6 \left( ROA \right) + \beta_7 \left( IT \right) + \epsilon \]
Where:

<table>
<thead>
<tr>
<th>VAIC™</th>
<th>Intellectual capital performance as measured by Value Added intellectual Coefficient™</th>
</tr>
</thead>
<tbody>
<tr>
<td>PC</td>
<td>Physical capital intensity as measured by fixed assets divided by total assets</td>
</tr>
<tr>
<td>OS</td>
<td>Company size as measured by the market capitalisation of the company</td>
</tr>
<tr>
<td>DER</td>
<td>The risk profile of the company as measured by debt-equity ratio</td>
</tr>
<tr>
<td>IT</td>
<td>Industry type as measured with the use of dummy variables</td>
</tr>
<tr>
<td>ATO</td>
<td>Company productivity as measured by the assets turnover ratio</td>
</tr>
<tr>
<td>ROA</td>
<td>Company profitability as measured by the company’s return on assets</td>
</tr>
<tr>
<td>MB</td>
<td>Market valuation of the company as measured by ratio of market capitalization to book value of assets</td>
</tr>
</tbody>
</table>

For each hypothesis: \( \beta_1(\text{VAIC}^{TM}) > 0 \)

The null hypothesis \( H_0 \) is that \( \beta_1(\text{VAIC}^{TM}) \leq 0 \)

The alternative hypothesis \( H_1 \) is that \( \beta_1(\text{VAIC}^{TM}) > 0 \) (i.e. a right-tailed test that there is a positive relationship between \( \beta_1(\text{VAIC}^{TM}) \) and company performance and worth).

**Methodology**

The hypotheses in this study propose functional relationships among multiple constructs. Consequently, correlation and multiple regression analyses are used to test the hypotheses that are derived from the research question. Any transformation that is required to meet the assumptions of normality will be made after the data had been examined.

Any evidence of multi-collinearity found among independent variables will be reported with statistical results. Statistical significance will be assessed at the \( \rho = 0.05 \) level.

**Measure of dependent variables**

Productivity, profitability and market valuation are taken into account as dependent variables for the purpose of conducting the relevant analysis in the present research. The relevant literature documents various accounting and market-based measures that may be utilized as a proxy measure that is designed to capture the respective properties of the three dependent variables. At present there is no specific theoretical perspective or empirical evidence that supports any one specific proxy measure over another. Therefore, the researcher decided to use proxy measures that are deemed to have been used widely in related research studies. Consequently, the proxy measures for each dependent variable are defined as follows:

1. ATO: The ratio of total revenue to the total book value of assets as reported in the company’s annual reports of 2004-2005 to 2009-2010.
2. ROA: The ratio of net income divided by the book value of total assets as reported in the company’s annual reports of 2004-2005 to 2009-2010.
3. MB: The ratio of market capitalization (share price multiplied by the number of outstanding common shares) to the book value of net assets as reported in the company’s annual reports of 2004-2005 to 2009-2010.

**Measure of independent variables**

The Value Added Intellectual Coefficient™ (VAIC™) (Pulic 1998) forms the underlying basis of measurement for the major explanatory independent variable (performance of intellectual capital) in the present study. VAIC™ is an analytical model that is designed to enable management, shareholders and other relevant stakeholders to effectively monitor and evaluate the efficiency of the value added (VA) by a company’s total resources and each major resource component. Formally, VAIC is a composite sum of three separate indicators: (1) Capital Employed Efficiency (CEE) – an indicator of VA efficiency of capital employed; (2) Human Capital Efficiency (HCE) – an indicator of VA efficiency of human capital; and (3) Structural Capital Efficiency (SCE) – an indicator of VA efficiency of structural capital.

The following equation formalizes the relationship algebraically:

\[
\text{VAIC}^{TM}_i = \text{CEE}_i + \text{HCE}_i + \text{SCE}_i
\]

Where:

- \( \text{VAIC}^{TM}_i \) = VA intellectual coefficient for company \( i \);  
- \( \text{CEE}_i = \text{VA}_i/\text{CE}_i \) = VA capital employed coefficient for company \( i \);  
- \( \text{HCE}_i = \text{VA}_i/\text{HC}_i \) = human capital coefficient for company \( i \); and  
- \( \text{SCE}_i = \text{SC}_i/\text{VA}_i \) = structural capital VA for company \( i \). 

\( \text{VA}_i = \text{OP}_i + \text{DP}_i + \text{EC}_i \) = VA, for company \( i \) is computed as the sum of operating profit (OP); depreciation (DP); employee salary (EC); 

\( \text{CE}_i = \text{book value of the net assets for company } i \);
$HC_i = \text{total investment in salaries and wages for company } i;$

$SC_i = VA_i - HC_i; \text{ structural capital for company } i;$

**Factors at the organizational level (control variables)**

For the purposes of the present study it is decided to use the following control variables that are deemed to have been widely used in relevant literature:

1. Size of the company (LCAP): the natural log of the total market capitalization (number of issued shares multiplied by market price per share).
2. Risk (LDER): The natural log of the total debt divided by the book value of the total assets.
3. Industry type (IT): Dummy variables that represent six major industries within the highly knowledge-based business sectors.
4. Physical capital intensity (LPC): The natural log of the ratio of a company’s fixed assets (physical assets owned by the company) to its total assets (comprising the company’s physical assets and financial assets) (both in Rupees).

**Sample selection and descriptive statistics**

A sample of 240 companies that are listed on the BSE will be taken for the purpose of this study and the companies’ performances will be measured with the use of financial data from annual reports. The required data will be collected from the annual reports for the financial years 2005-2007 from CMIE and India Infoline. The sample was limited to Information Technology, Pharmaceutical, Chemical, Electronics, Communication and Finance & Banking industries in view of the exploratory nature of the study and the desire to investigate a homogenous sample (high knowledge base). The population in this research study can be defined as all the companies that display the key variable of staff costs. Of the total number of 640 companies identified in the CMIE and Indian Infoline data bases, 480 companies displayed the key variable of staff costs. As a result of data-screening and transformation procedures, 224 companies were included in the final sample of which 160 companies satisfied the criteria for inclusion in the highly knowledge-based group. The final data set contained a total of six industries for the highly knowledge-based group.

**Preliminary Research, the Results achieved and the Lessons Learnt**

In view of the research outlined above, a pilot study was carried out on a smaller scale with a smaller sample and for a shorter period of three 3 financial years from 2004-2005 to 2006-2007. The results achieved and the lessons learnt are presented below.

**Sample selection and descriptive statistics**

A sample of 160 companies that were listed on the BSE was taken for the purpose of this study and the companies’ performances were measured with the financial data from annual reports. The required data was collected from the annual reports for the financial years 2005-2007 from CMIE and India Infoline. The sample was limited to Information Technology, Pharmaceutical, Chemical, Electronics, Communication and Finance & Banking industries in view of the exploratory nature of the study and the desire to investigate a homogenous sample (high knowledge base). The population in this research study can be defined as all the companies that display the key variable of staff costs. Of the total number of 640 companies identified in the CMIE and Indian Infoline data bases, 480 companies displayed the key variable of staff costs. As a result of data-screening and transformation procedures, 224 companies were included in the final sample of which 160 companies satisfied the criteria for inclusion in the highly knowledge-based group. The final data set contained a total of six industries for the highly knowledge-based group.

**Table 1** High knowledge-base industries and frequency

<table>
<thead>
<tr>
<th>Industry</th>
<th>Frequency</th>
<th>Percentage (%)</th>
<th>Cumulative (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Information Technology</td>
<td>40</td>
<td>31.25</td>
<td>31.25</td>
</tr>
<tr>
<td>Pharmaceuticals</td>
<td>35</td>
<td>21.87</td>
<td>46.87</td>
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<tr>
<td>Chemical</td>
<td>25</td>
<td>15.63</td>
<td>62.5</td>
</tr>
<tr>
<td>Electronics</td>
<td>25</td>
<td>15.63</td>
<td>78.13</td>
</tr>
<tr>
<td>Communication &amp; Banking</td>
<td>20</td>
<td>12.5</td>
<td>90.63</td>
</tr>
<tr>
<td>Finance</td>
<td>15</td>
<td>9.37</td>
<td>100</td>
</tr>
<tr>
<td>Total</td>
<td>160</td>
<td>100</td>
<td>100</td>
</tr>
</tbody>
</table>
## Table 2

### Descriptive statistics of dependent and independent variables

<table>
<thead>
<tr>
<th>Year</th>
<th>2005 n = 160</th>
<th>2006 n = 160</th>
<th>2007 n = 160</th>
</tr>
</thead>
<tbody>
<tr>
<td>Variable name</td>
<td>Mean</td>
<td>SD</td>
<td>Mean</td>
</tr>
<tr>
<td>ATO</td>
<td>1.24</td>
<td>1.29</td>
<td>1.38</td>
</tr>
<tr>
<td>ROA</td>
<td>0.13</td>
<td>0.12</td>
<td>0.14</td>
</tr>
<tr>
<td>MB</td>
<td>3.04</td>
<td>2.77</td>
<td>3.22</td>
</tr>
<tr>
<td>VAIC</td>
<td>5.84</td>
<td>3.54</td>
<td>6.64</td>
</tr>
</tbody>
</table>
Discussion, analysis and interpretation of Results

Table 2 presents the mean and standard deviation of the untransformed dependent variables, and the primary independent variable for the year 2004-2005. Productivity (ATO) and Profitability (ROA) have means of 1.24 and 0.13 respectively. The overall financial performance of the sample companies is sound as indicated by the reasonably high ROA. Productivity is at low levels as indicated by the fact that for Re. 1 spent on assets, only Rs. 1.24 is generated in turnover. The mean for market valuation (market price per share divided by book value per share) of 3.04 indicates that investors generally value the sample companies in excess of the book value of net assets as reported in the financial statements. The mean of 5.84 for intellectual capital performance suggests that during 2004-05 the sample companies were generally effective in generating value from their intellectual capital.

The same Table also presents the mean and standard deviation of the untransformed variables, and the primary independent variable for the year 2005-2006. Productivity (ATO) and Profitability (ROA) have means of 1.35 and 0.15 respectively. The overall financial performance of the sample companies is sound as indicated by the reasonably high ROA. Productivity has improved by the fact that Re. 1 spent on assets has generated Rs. 1.35 in turnover which is certainly higher than the previous year’s performance. The mean for market valuation of 3.22 on each share with book value indicates that investors closely monitor the intellectual capital performance and value the sample companies in excess of the book value of net assets as reported in the financial statements. The mean of 6.64 for intellectual capital performance suggests that during 2005-2006, the sample companies were generally effective in generating from their intellectual capital.

While the information arising out of the analysis of untransformed variables is quite positive on the hypotheses, it would be interesting to find out how this model performs with the transformed variables. Hence, an attempt is made in this direction and the results are much different, pointed and revealing. It becomes crystal clear from the following analysis that the primary independent variable does have some impact on Productivity and Profitability. But in the case of Market Valuation, it has very little impact. Perhaps, the reason may be that the investors do not have adequate information to value the market. However, the pharmaceutical and chemical industries seem to be influenced by VAIC on productivity, profitability and Market Valuation. Communication industry is particularly influenced on profitability whereas the finance industry fares very poorly on all counts. Perhaps, this industry does not rely on intellectual capital as much as other industries covered in the study.

The same Table goes on to present the mean and standard deviation of the untransformed dependent variables, and the primary independent variable for the year 2006-2007. Productivity (ATO) and Profitability (ROA) have means of 1.85 and 0.16 respectively. The overall financial performance of the sample companies is sound as indicated by the reasonably high ROA. Productivity has remarkably improved from the previous two years as indicated by the fact that for Re. 1 spent on assets, Rs. 1.85 is generated in turnover, which is certainly higher than the previous two years performance. The mean for market valuation (market price per share divided by book value per share) of 3.54 indicates that investors continue to monitor very closely the intellectual capital performance and accordingly value the sample companies in excess of the book value of net assets as reported in the financial statements. The mean of 7.71 for intellectual capital performance suggests that during 2006-2007, the sample companies were generally effective in generating from their intellectual capital. This is all the more evident that in spite of the continued decrease in the physical capital, the companies have performed well and rated highly in the markets. Again, the reason can be none other than the improved performance of intellectual capital of the companies. The additional investment made in human capital during the previous years has also contributed to the performance and value of the companies in a very significant manner. Once again, these results clearly justify the reason for capitalizing the wages and salaries paid to the employees.
Table 3

Linear multiple regression of Productivity (ATO)

<table>
<thead>
<tr>
<th>Year</th>
<th>N</th>
<th>Adjusted R²</th>
<th>F-statistics</th>
<th>Significance</th>
<th>Independent and control variables</th>
<th>Standard beta</th>
<th>t-statistic</th>
<th>Significance</th>
<th>Standard error</th>
</tr>
</thead>
<tbody>
<tr>
<td>2005</td>
<td>160</td>
<td>0.359</td>
<td>6.072</td>
<td>0.000</td>
<td>VAIC</td>
<td>0.080</td>
<td>1.029</td>
<td>0.305</td>
<td>0.127</td>
</tr>
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<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>PC</td>
<td>-0.009</td>
<td>-0.090</td>
<td>0.929</td>
<td>0.097</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>OS</td>
<td>0.030</td>
<td>0.356</td>
<td>0.722</td>
<td>0.064</td>
</tr>
<tr>
<td>2006</td>
<td>160</td>
<td>0.171</td>
<td>4.632</td>
<td>0.000</td>
<td>VAIC</td>
<td>-0.086</td>
<td>-1.102</td>
<td>0.274</td>
<td>0.009</td>
</tr>
<tr>
<td></td>
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<td></td>
<td></td>
<td>DER</td>
<td>-0.171</td>
<td>-2.109</td>
<td>0.037</td>
<td>0.032</td>
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<td>PC</td>
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<td>0.702</td>
<td>0.484</td>
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<td>OS</td>
<td>0.020</td>
<td>0.258</td>
<td>0.796</td>
<td>0.000</td>
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<tr>
<td>2007</td>
<td>160</td>
<td>0.415</td>
<td>11.865</td>
<td>0.000</td>
<td>VAIC</td>
<td>-0.102</td>
<td>-1.422</td>
<td>0.157</td>
<td>0.110</td>
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<td>DER</td>
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<td>0.027</td>
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<td>PC</td>
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<td>OS</td>
<td>-0.081</td>
<td>-1.155</td>
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<td>0.008</td>
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</table>
Linear multiple regression analysis and interpretation

Combined VAIC impact on Productivity (ATO) - a statistical interpretation for 2004-2005:

In table 3 the model explains 35.9% of variation with F value of 6.072. Most of the variation is explained by three dummy variables referring to Pharmaceutical, Chemical and Finance industries. Pharmaceutical and Chemical industries have reported a positive relationship with LATO, while Finance industry reported a very strong negative relationship.

Combined VAIC impact on Productivity (ATO) - a statistical interpretation for 2005-2006:

The model explains 17.1% of variation with F value of 4.632. Among the independent variables, LDER reported a moderately strong negative relationship with LATO. Among the dummy variables Chemical and Electronics sectors reported two moderately significant positive relationships.

Combined VAIC impact on Productivity (ATO) - a statistical interpretation for 2006-2007:

The model explains 41.5% of variation with F value of 11.865. Among the independent variables, LDER reported a strong negative relationship with LATO. Among the dummy variables, Pharmaceutical and Chemical sectors reported two moderately significant positive relationships.
Table 4

Linear multiple regression of Profitability (ROA)

<table>
<thead>
<tr>
<th>Year</th>
<th>N</th>
<th>Adjusted R²</th>
<th>F-statistics</th>
<th>Significance</th>
<th>Independent and control variables</th>
<th>Standard beta</th>
<th>t-statistic</th>
<th>Significance</th>
<th>Standard error</th>
</tr>
</thead>
<tbody>
<tr>
<td>2005</td>
<td>160</td>
<td>0.316</td>
<td>7.141</td>
<td>0.000</td>
<td>VAIC -0.103</td>
<td>1.366</td>
<td>0.174</td>
<td>0.157</td>
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<td>DER -0.375</td>
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<td>PC 0.060</td>
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<td></td>
<td></td>
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<td>OS 0.155</td>
<td>0.057</td>
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<td>0.068</td>
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<tr>
<td></td>
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<td></td>
<td></td>
<td>ATO 0.408</td>
<td>4.753</td>
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<td>0.453</td>
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<tr>
<td>2006</td>
<td>160</td>
<td>0.211</td>
<td>5.241</td>
<td>0.000</td>
<td>VAIC 0.172</td>
<td>2.250</td>
<td>0.026</td>
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<td>PC -0.013</td>
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<td>OS 0.022</td>
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<td>ATO 0.288</td>
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<tr>
<td>2007</td>
<td>160</td>
<td>0.329</td>
<td>7.753</td>
<td>0.000</td>
<td>VAIC 0.230</td>
<td>2.977</td>
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<td>ATO 0.364</td>
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<td>0.098</td>
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</tr>
</tbody>
</table>
Combined VAIC impact on Profitability (ROA) - a statistical interpretation for 2004-2005:

In table 4 the model explains 31.6% of variation with F value of 7.141. The primary independent variable VAIC has a moderately significant positive relationship. Among the other independent variables, LATO and LDER reported relationships with LROA in opposite directions. While LATO reported a very strong positive relationship, LDER reported a very strong negative relationship with LROA. Among the dummy variables Pharmaceutical sector reported a strong positive relationship, while Chemical and Finance sectors reported moderately strong relationships in similar direction with LROA.

Combined VAIC impact on Profitability (ROA) - a statistical interpretation for 2005-2006:

The model explains 21.1% of variation with F value of 5.241. Among the independent variables, LATO and LVAIC reported two positive relationships respectively, while LDER reported a very strong negative relationship with LROA. None of the dummy variables representing various industry sectors reported a significant relationship with LROA.

The current year’s variation and the F value are lower than the previous year. There is a direct declining trend and so one can conclude that with the passage of time, the explanatory power of the independent variables tend to diminish. This is true of dummy variables as well.

Combined VAIC impact on Profitability (ROA) - a statistical interpretation 2006-2007:

The model explains 32.9% of variation with F value of 7.753. Among the independent variables, LOS and LATO reported two very strong positive relationships respectively and LVAIC reported a strong relationship with LROA. Among the dummy variables, Pharma sector reported a strong significant positive relationship.

The results relating to ROA in the current year are very significant and revealing. The model’s explanation of 32.9% variation with F value of 7.753, compared to 31.6% and 7.141; 21.1 and 5.421 for 2004 and 2005 proves the fact that the independent variables do have strong impact with the passage of time.
<table>
<thead>
<tr>
<th>Year</th>
<th>N</th>
<th>Adjusted R²</th>
<th>F-statistics</th>
<th>Significance</th>
<th>Independent and control variables</th>
<th>Standard beta</th>
<th>t-statistic</th>
<th>Significance</th>
<th>Standard error</th>
</tr>
</thead>
<tbody>
<tr>
<td>2005</td>
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<td>0.343</td>
<td>7.301</td>
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</tr>
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<td>0.456</td>
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<tr>
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<td>1.372</td>
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<td>0.296</td>
<td>6.267</td>
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<td>-1.102</td>
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<td>DER</td>
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<td>0.000</td>
<td>0.070</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>ATO</td>
<td>0.215</td>
<td>2.107</td>
<td>0.037</td>
<td>0.780</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>ROA</td>
<td>0.054</td>
<td>0.597</td>
<td>0.552</td>
<td>0.666</td>
</tr>
</tbody>
</table>
Combined VAIC impact on Market Valuation (MB) - a statistical interpretation 2004-2005:

In table.6 the model explains 34.3% of variation with F value of 7.301. Among the independent variables, LMCAP reported a very strong positive relationship with LMB. None of the dummy variables representing various industry sectors reported a significant relationship with LMB.

Combined VAIC impact on Market Valuation (MB) - a statistical interpretation 2005-2006:

The model explaining LMB was insignificant with an F value of 1.372 and explained just 2.5% of variation. Among the various independent and dummy variables included in the model, only the dummy variable referring to chemical industry sector reported a moderately strong negative relationship.

It is totally revealing to note that in the current year the variation is only 02.5% with F value of 1.372 compared to the previous year variation of 34.3% with F value of 7.301. This finding confirms the fact that with the passage of time, the explanatory power of independent variables diminishes.

Combined VAIC impact on Market Valuation (MB) - a statistical interpretation 2006-2007:

The model explains 29.6% of variation with F value of 6.267. Among the independent variables, LOS reported a very strong positive relationship while LATO reported a moderately strong positive relationship with LMB. None of the dummy variables representing various industry sectors reported a significant relationship with LMB. Though the variation and F value for the current year higher than 2006, it does show unpredictability as it is lower than 2005. Hence, the 3 year data may not be sufficient enough to have a clear result.

Conclusion

This research study investigated whether intellectual capital performance can impact a company’s performance and worth in the Indian knowledge industries. Company’s performance was examined in three dimensions, namely productivity, profitability and market valuation.

One research question was formulated for the study. The question dealt with the impact of intellectual capital performance on productivity, profitability and market valuation. In respect of the research question, the results indicate that intellectual capital has impact in respect of productivity and profitability but not market valuation. The movement of money through a company is ultimately the most tangible measure of its value even for these companies. It is also the source of its rewards in terms of profits, salaries and earnings. The history of business, apart from all the changes in technology, organisation and management theory, is merely an allegory of how to attach monetary value to activity and assets. Consequently, if intellectual capital is to have value, it should be converted into cash, profits and earnings. This research study provides empirical evidence that intellectual capital is an asset that can be utilized as a vehicle for improving a company’s profitability and wealth maximization.

These results are reason for grave concern as they imply that publicly traded companies and the business environment in India may dictate a trade-off between tangible assets and intellectual capital performance. This means that companies in India that seek to increase productivity through employment of tangible assets put less effort into using their intellectual capital base. Alternatively, a company that focuses its attention on intellectual capital/intangible assets appears to place less importance on the effective use of tangible assets.

The finding that no significant relationship was found between intellectual capital performance and market valuation is not an encouraging result as it implies that the market in India does not place serious emphasis on returns from investments made in intellectual capital assets. A likely reason is that standard accounting models were designed for informing the users of annual reports on stocks and flows of value – value that could be attributed to places, periods of time, products, customers and activities. Most of these factors are quantifiable and subject to generally accepted accounting principles and practices (GAAP). In contrast, intellectual capital is a relatively new and enigmatic concept, relating primarily to a company’s intangible assets. As such, the current accounting model does not adequately capture their value nor represent them in a concise and meaningful format. Therefore the users of annual reports are unable to incorporate in their valuation models the relevant information on investment in intellectual capital assets, because the information is not adequately disclosed. If there is to be a change in the empirical findings (relating to this component of the research study), accounting for intellectual capital will ultimately require the intervention of new financial and management accounting concepts and practices to enable the relevant information about investments in intellectual capital assets to be efficiently communicated to the users of annual reports.
The implication of these findings is that management will have to adjust or intensify initiatives to encourage greater acceptance and understanding of the concept of intellectual capital and the development of related assets. There are some possible explanations for the phenomenon that management focuses attention on investments in tangible assets only. First, although management realizes that there are a variety of important benefits to investments in intangible assets such investments are inherently more risky than investments in tangible assets. Secondly, management is unable to quantify the benefits of investing in intellectual capital assets. Thirdly, the costs related to the maintenance of intellectual assets are high.

There are two principal reasons for management’s lack of understanding of and ability to quantify the benefits of investing in intellectual assets, namely:

1. Comprehension of the impact of intellectual capital in developing economies, such as India, is still very much in its infancy.
2. The propensity for complexity in respect of investing in intellectual capital assets suggests that a rigorous approach to managing and measuring intellectual capital would require a large investment in training and development by the organisation to ensure that its management has the expertise and ability to manage intellectual capital assets.

Overall, the empirical findings which are based on linear multiple regression analysis of the relationship between intellectual capital performance and the three traditional dimensions of a company’s performance, clearly indicate that intellectual capital performance is the only positive predictor of a company’s performance in terms of productivity and profitability. The finding suggests that the more intensively a company manages its intellectual capital, the greater its productivity and profitability can be, which is a major breakthrough in the understanding of how intellectual capital measures relate to financial performance. However, intellectual capital performance does not have a positive impact on analysts and investors. In addition, the empirical findings also suggest that there are efforts afoot to improve India’s intellectual capital base. However, the business environment and market in India should endeavour to gain a better understanding of the measurement and management of intellectual capital.

**Limitations and Recommendations**

The findings of this study are subject to the following limitations:

One of the reasons for the varied results is the methodology used for measuring the value of intellectual capital performance. The focus of this study is on one specific measure of intellectual capital performance. The VAIC model cannot prescribe in precise terms the actions that management or regulators should take in a company, business sector or economy to strengthen value creation. Similarly, this model does not provide stakeholders, such as investors with a precise tool with which to deal with their specific interests in a company or business sector.

The methodology of value creation efficiency is only a power pointer that is as effective starting point from which to direct further in-depth investigation of a company, business sector or economy with the support of other measurement and management tools of intellectual capital.

In the light of the findings of the current study, the researcher has learnt the following home truths:

First of all, there should be openness on the part of the Accounting professionals and the Regulatory bodies to recognize and accept the importance of intellectual capital in today’s knowledge economy.

Secondly, both the groups should make a concerted effort to bring about standardized procedures to account for intangible assets in the annual reports.

Thirdly, as we find in the field of financial accounting, a generally accepted accounting principles and practices should be formulated for intellectual capital accounting.

Fourthly, different stakeholders in business scenario should be educated and trained in the field of intellectual capital management and accounting.

Last but not least, corporate vision and strategy should take into account the management of intellectual capital, i.e. human capital, structural capital and customer capital right from the time of incorporation.

**References**


Unsupervised Regime Discovery and Improved Forecasting in
Finance and Macroeconomics

Ranjan Santra
Department of Electrical Engineering
University of Delaware
Newark DE 19711
USA
(302)-438-1397
ranjansantra@hotmail.com

ABSTRACT
Nonstationary behavior in economic and financial data have traditionally been studied using, for example, nonlinear regime switching models within the econometrics community, where regime switching nonlinearity is addressed by applying different models in different regimes. The unsupervised machine learning approach described in this study employs instead gated experts, each expert specializing on a distinct region of the input space. The input space is soft partitioned according to the performance of the experts as determined by a competitive mechanism, moderated by a gating module. The experts and the gate are nonlinear feed forward neural networks. The different regions characterized by different variance levels are simultaneously identified and modeled, resulting in unsupervised learning from the available data without imposing a prior, possibly mismatched parametric structure. We postulate that these input dependent mixtures are also better able to model asymmetric and fat tailed distributions. We demonstrate the ability of the system of gated experts to segment financial and macroeconomic data. Finally we provide statistical evidence that by discovering these regimes we obtain superior forecasting in predicting the US unemployment rate.

Keywords
Gated experts, machine learning, regime switching, economic forecasting

1 INTRODUCTION
Piecewise regime switching nonstationarity has traditionally been studied using, for example, within the econometrics community where by different parametric models are applied in different regimes. This includes the Self Exciting Threshold Autoregression (SETAR) model where the regimes are determined by past observable variables and Markov Switching models (Tsay, 2010) where the regimes are determined by an unobserved stochastic process.

In this paper we present a new approach originating from research in unsupervised temporal segmentation in Machine Learning that addresses the modeling of switching regimes in financial and macroeconomic data. We concentrate in this study on the aspects of non-Gaussian distributions, in particular asymmetric, multimodal and fat tailed distributions. We postulate that the asymmetry evident in time series data or the empirical evidence of the bimodal density estimates presented below suggests bifurcations or multiple data generating processes. Such returns cannot be modeled by normal distributions with a fixed mean and variance (Jondeau et al, 2010). However it is known that a sum of Gaussian distributions can approximate any continuous distributions whereby most of its component distributions model the majority of the normally distributed observations while having a large variance in one of the components enables the overall distribution to model the excess kurtosis (Frühwirth, 2006).

We postulate that explicit modeling of asymmetric, multimodal and fat tailed distributions will lead to better out of sample forecasting. A mixture of Gaussians is able to model both multimodal, asymmetric as well as heavy tailed distributions and can segment piecewise stationary time series in a completely unsupervised fashion. However such a mixture model can only model data without memory and it is hard to estimate the mixing coefficients that would generate the overall distribution. Hence what is required is an input dependent mixture model that would model the temporal correlations (Fancourt et al, 2001).

| Keywords |
| Gated experts, machine learning, regime switching, economic forecasting |

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These observations point to the desirability of an ensemble of models specializing in different regions. The mixture of experts formalism, in particular the gated experts architecture (Weigend et al, 1995) provides just such an input dependent mixture model that allows us to identify and isolate the constituent piecewise stationary processes as switching between a small set of unknown stationary processes; such processes are able to generate multimodal mixtures with memory (Fancourt et al, 2001).

The segmentation problem is therefore: given a single realization of piecewise ergodic random process, can we segment it into contiguous stationary regions - an offline segmentation problem where we do not know the number of stationary regions nor the temporal boundaries nor the generative models or the probability distributions that

| 429 |
characterize these stationary regions. This is a very difficult unsupervised segmentation problem.

In the absence of a teacher mechanism where there is no ground truth of the segmentation in real world data, the regimes must be discovered in a completely unsupervised manner. Therefore recognizing and modeling recurring regimes requires 2 or more adaptive models which implies a competitive mechanism to distinguish between different regimes whereby an element of supervised learning is introduced by a prediction mechanism that predicts up to a random term; namely the next value that is considered to be the correct value to be predicted. The regimes are identified from the prediction errors of these predictors, thus avoiding the complex process of estimating multivariate probability distributions; the process is therefore called prediction error decomposition.

The ensemble method we implement follows the model that has been called gated experts by Weigend et al (1995).

\[
\text{Figure 1. Gated Experts}
\]

Figure 1 shows the gated experts architecture. A d dimensional vector formed from d delays of the time series \(x(n)\) is input to K experts with a single output each, \(y_1, \ldots, y_k\), and a gate with K outputs \(g_1, \ldots, g_k\) that mediates the outputs of each of the K experts. The final output given by \(y = \sum g_j y_j\) being the product of two functions, is a different functional class than that generated from a single network and is thus much more flexible (Weigend et al, 1995).

The input space is partitioned according to the performance of the adaptable experts as determined by a competitive mechanism, moderated by an adaptable gating function that evaluates and moderates the assignment of each expert for a particular stationary segment of the data. Each expert and the gate are nonlinear multilayer feedforward neural networks, free from the constraints of classical regression assumptions. The gate discovers the regimes which partition the input space in a nonlinear manner to perform a classification function by estimating the a priori probabilities that assigns each regime to an expert, while the experts perform nonlinear regression to model the data in its region of responsibility by making a point prediction. The experts regress on same data to concurrently learn several local models that predict the conditional mean in each regime and are thus always in competition to explain it; the expert that has performed well in recent past is given an advantage. To our knowledge this is the first an in-depth study of the application of gated experts to regime switching piecewise stationary financial and macroeconomic data, with special regard to forecasting performance.

2 GATED EXPERTS APPLIED TO FINANCIAL AND MACROECONOMIC DATA

The architecture is as in Figure 1 with 2 experts and one gate. The experts are 1 hidden layer neural networks with tanh activation functions and linear output functions. The system is trained from different initialization points, the points being randomly chosen. Four different algorithms for the nonlinear optimization in the M step were investigated, namely standard gradient descent, conjugate gradient, scaled conjugate gradient and quasi-Newton. The results reported here are those resulting from the scaled conjugate gradient method. The initial variances of the experts are set large, reflecting the uncertainty of the performance of the experts. A typical value for maximum iterations of the EM algorithm is 50.

Figure 2 displays the results of the mixture of gated experts applied to once differenced unit root stationary Treasury bills time series data in the second panel. The top panel shows the actual level data while the third and fourth panel shows the automatic regime discovery made by the 2 gates specializing on the low and high variance regions. Gate 2 takes responsibility for the high variance regions at the center and to the sides while gate 1 is responsible for the rest of the low variance regions elsewhere.

\[
\text{Figure 2 Regime Discovery in Treasury bills}
\]

It is seen that in each case the outputs of the 2 gates effectively discovers, in an unsupervised manner, the two seemingly structurally different patterns or regimes of behavior in both the original data and the differenced data.
We present below for illustrative purposes the clean segmentation of level data which might also be unit root non-stationary.

**Figure 3** Level segmentation of Canadian Dollar and Swiss Franc vs US dollar

### 4 US UNEMPLOYMENT RATE MODELING – A COMPARISON STUDY

We next present a detailed comparison on the regime discovery and modeling performance of linear AR, SETAR and the gated experts models in the context of modeling the US unemployment rate shown in Figure 4 where 2 regimes of asymmetrical cyclical movements is apparent in the level data i.e. unemployment increases more sharply, and decreases are gradual, declining over longer periods.

The histogram with a superimposed normal in Figure 5 indicates the unemployment data is non-Gaussian and multimodal suggesting that there could be 2 distinct data generating processes corresponding to rising and declining unemployment.

The level segmentation suggested by the SETAR and gated experts model fitted to the differenced data is shown in Figure 6. The models were applied to the unit root stationary once differenced unemployment data shown in Figure 4 where there are no visually distinguishable regimes. The gate outputs represent their regime selection decisions. Figure 6 shows the output of the one of the gates when plotted together with the original unemployment level data – showing that it has discovered the regime that corresponds to steep rises of unemployment. The expert gated by the other gate output takes responsibility for the other regime where unemployment declines gradually.

Table 1 presents the residual variances of the different models and regimes; it is seen that the gated experts has lower or comparable residual variance, and hence better models, in each regime than either the linear model or the regimes of the SETAR.

### 5 FORECASTING PERFORMANCE

Forecasting performance is evaluated in terms of magnitude measures, namely mean squared forecast errors, and a directional measure, as a profitability measure, where we measure correct prediction of the sign of future returns. Forecasts from nonlinear models can exhibit multimodalities and asymmetries and can be complex mixture of forecasts from different regimes (Franses et al.,...
Thus again suggesting the gated experts’ ensemble architecture. For example, forecasts could be an average of 2 optimal forecasts from 2 regimes where the weights are probabilities of being in a particular regime at the forecast origin. Forecasting accuracy thus depends on the correct classification of the regime a process is in at any point in time and thus adds additional complexities as compared to forecasts from linear models.

In the gated experts’ architecture, the learned models can generalize to new unseen segments if they are generated by the same learned processes. In particular, the gated expert architecture adapts the variance of each expert to the noise level of the regime it is modeling, thus the regions are defined by both similar structures and noise levels. In particular the weight update is “sensitive to the local noise in a particular regime when an expert is active – giving preference to low noise regions and discounting learning where the noise levels are large” (Weigend et al, 1995). This leads to less over fitting in forecasting applications and hence better forecasts.

The comparative forecast rankings (with respect to the Random Walk model) of the gated experts and 3 other models are shown in Table 2. Forecasts of SETAR and gated experts models are averages over 100 epochs. Since there are no closed form expressions for multistep forecast from nonlinear models, forecasts from SETAR and gated experts models are evaluated using Monte Carlo and Bootstrap simulations (with 1000 replications) both of which are reported in table 1.

Table 2. Relative MSE at different forecast horizons

<table>
<thead>
<tr>
<th>Model</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>RW</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>AR(12)</td>
<td>0.09</td>
<td>0.10</td>
<td>1.05</td>
<td>0.08</td>
<td>0.38</td>
</tr>
<tr>
<td>SETAR m</td>
<td>0.07</td>
<td>0.06</td>
<td>0.66</td>
<td>0.00</td>
<td>0.44</td>
</tr>
<tr>
<td>SETAR b</td>
<td>0.07</td>
<td>0.06</td>
<td>0.66</td>
<td>0.00</td>
<td>0.44</td>
</tr>
<tr>
<td>Gated experts m</td>
<td>0.001</td>
<td>0.10</td>
<td>0.39</td>
<td>0.01</td>
<td>0.18</td>
</tr>
<tr>
<td>Gated experts b</td>
<td>0.001</td>
<td>0.08</td>
<td>0.48</td>
<td>0.05</td>
<td>0.22</td>
</tr>
</tbody>
</table>

It is apparent that for the one step ahead forecasts AR models perform better than random walk models. SETAR models using both Monte Carlo and bootstrap methods perform better than the linear model – improvements are of an order of magnitude better.

The gated expert 1 step forecast is again better than the SETAR, both for Monte Carlo and Bootstrap simulations and hence is the best performer for 1 step ahead forecasts. At forecast horizons greater than 1 however, the results are mixed although both the SETAR and gated experts models consistently perform better than the linear models.

To determine if these improved forecast performance of the SETAR and gated experts as compared to those from the linear model are statistically significant – we present in Table 3, the p values of the Diebold Mariano (DM), sign and F test of the forecasts. It is apparent that the low p values of DM and sign test statistics strongly confirm that the SETAR and gated experts forecasts are indeed better than the linear. The F test is less convincing.

Table 3. Statistical Significance with respect to Linear Forecast

<table>
<thead>
<tr>
<th>Model</th>
<th>DM</th>
<th>SIGN</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>SETAR m</td>
<td>0</td>
<td>5.7330e-007</td>
<td>0.2812</td>
</tr>
<tr>
<td>SETAR b</td>
<td>0</td>
<td>5.7330e-007</td>
<td>0.2833</td>
</tr>
<tr>
<td>Gated experts m</td>
<td>0</td>
<td>2.5597e-012</td>
<td>0.2385</td>
</tr>
<tr>
<td>Gated experts b</td>
<td>0</td>
<td>2.5597e-012</td>
<td>0.2457</td>
</tr>
</tbody>
</table>

m=Monte Carlo b=bootstrap

DM asymptotic test of Diebold and Mariano p value
SIGN sign test statistic p value
F simple F test statistic p value

Table 4 presents the performance of the different models in predicting the direction of change. The success ratio is the fraction of time the sign of a particular h step forecast is predicted correctly. It is seen that that linear and gated experts models have better performance that SETAR models. The Directional Accuracy (DA) (Franses et al., 2000), statistically determines if the value of the success ratio differs significantly from the null hypothesis that the success ratio that would be obtained if the actual and forecasted values were in fact, independent. The DA p values, although not very convincing, are better for the linear and gated experts models, perhaps signifying the difficulty of predicting the correct regime for SETAR models.

Table 4. Directional Forecast

<table>
<thead>
<tr>
<th>Model</th>
<th>success ratio</th>
<th>DA p values</th>
</tr>
</thead>
<tbody>
<tr>
<td>Linear</td>
<td>0.80</td>
<td>0.6325</td>
</tr>
<tr>
<td>SETAR</td>
<td>0.20</td>
<td>-0.9487</td>
</tr>
<tr>
<td>Gated Experts</td>
<td>0.80</td>
<td>-0.6325</td>
</tr>
</tbody>
</table>

Another measure of the directional accuracy of forecast is the contingency table that summaries the hits and misses in predicting the ups and downs in a forecast. Larger diagonal values indicate better forecasts. The small p values of the SETAR and gated experts calculated from Table 4 χ² statistic, 0.0298 and 0 respectively, indicates that forecasting performance of these 2 models are beyond random chance to a high degree of certainty.
Table 5. Contingency table

<table>
<thead>
<tr>
<th></th>
<th>SETAR Predicted</th>
<th>Gated Experts Predicted</th>
</tr>
</thead>
<tbody>
<tr>
<td>Actual</td>
<td>up</td>
<td>down</td>
</tr>
<tr>
<td>up</td>
<td>93</td>
<td>7</td>
</tr>
<tr>
<td>down</td>
<td>83</td>
<td>17</td>
</tr>
</tbody>
</table>

We see that indeed the gated experts has the best performance amongst the models studied in this paper – both in terms of mean forecast error and mean squared error. This highlights a practical importance of having the correct model in the regime that forecast are made, rather than having one global model for all regions.

6 CONCLUSION
We have demonstrated that these experts are able to discover in a completely unsupervised manner the structurally different regimes embedded in data differenced to be unit root stationarity. We obtain better residual analysis with better Gaussian characteristics, less autocorrelation and ARCH effects (not presented) and smaller residual variances.

The remarkable fact that segmentation of the differenced data, when matched up to the original level data, actually reveals meaningful real world economic behavior such as steep rises in unemployment, validates the segmentation capabilities of the gated experts; we find this to be the most exciting result of our study.

More generally the fact that the gated experts could segment statistically different regimes in noisy differenced unit root stationary data is the most valuable practical aspect of our study. We feel that the gated experts would be a much welcomed new statistical tool in the econometrics community for the automatic, perhaps exploratory, discovery, detection and modeling of unknown regime switching data; and we consider that to be the most important contribution that this study makes.

We are working on several more advanced variants of this architecture including models with memory added to either the gates or experts (Pawelzik et al. 1996), Markov gated experts (Shanming et al., 1997), output based gating (Pawelzik et al., 1999), multistep prediction, experts that work by reconstruction in a reduced dimension (Fancourt et al., 1998) and Self Organizing Maps (Fancourt et al., 1997).

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Valuation of Product Portfolio Strategy in the Pharmaceutical Industry

Mary E. Schramm
Quinnipiac University
School of Business
Department of Marketing & Advertising
275 Mt. Carmel Avenue
Hamden, CT USA 06518
203.582.6438
Mary.Schramm@quinnipiac.edu

Michael Y. Hu
Kent State University
College of Business
Department of Marketing
P.O. Box 5190
Kent, OH USA 44242
330.672.1261
mhu@kent.edu

ABSTRACT
The brand name sector of the pharmaceutical industry faced a series of structural changes during the past three decades. As a result, the sector’s product portfolio shifted focus from new drugs to brand extensions. This research studies the effect of the strategic change on financial performance. A market valuation model is developed to determine the relationship between performance and the change in product portfolio balance. The overall results reveal a significant relationship between product portfolio strategy and performance. The model also confirms the evolving roles of new drugs and brand extensions in driving market value across the period studied.

Keywords
Pharmaceutical industry, product portfolio strategy, market valuation, structural change

1 INTRODUCTION
During the past three decades, significant structural changes occurred in the pharmaceutical industry. These changes amplified the negative price pressure imposed on the brand name sector and increased its drug development cost. In response, the pharmaceutical industry’s brand name sector increased reliance on brand extensions, relative to new drugs, in its product portfolio. While it is evident that the brand name sector of the pharmaceutical industry changed its product portfolio strategy in response to structural change, the effect of this strategic change on performance, in terms of market value, is not clear. As marketers are urged to define their contribution to the organization in terms of firm-level measures such as shareholder value (Day and Fahey, 1988; Webster, 2005), understanding the relationship between strategy and financial performance becomes critical. This research develops a market valuation model to assess the relationship between changes in product portfolio strategy and performance in the brand name sector of the pharmaceutical industry. The model links changes in strategy, measured in terms of new drug and brand extension product introductions, to financial performance.

The structure-conduct-performance paradigm predicts that industry conduct will evolve in response to structural changes affecting the industry (Scherer, 1980; Teece, 1984). Changes in conduct, which reflect the changes in strategic actions of firms in the industry, drive industry performance. Firms change strategy in the face of change to maintain their competitive advantage (Barney, 1991; Grant, 1991).

Historically, the introduction of new, blockbuster drugs has driven growth in the brand name sector of the pharmaceutical industry (Aiken, Berndt, & Cutler, 2009; Prabhu, Chandy, & Ellis, 2005). However, structural changes in the industry have motivated the brand name sector to shift the balance of its product portfolio to a greater reliance on brand extensions, relative to new drugs, to reduce risk and while driving short-term gains in order to offset the new challenges it is facing (Ahn, Meeks, Davenport, & Bednarek, 2010). These product strategy decisions are critical since product offerings become part of the firm’s long-term strategy and directly effect long-term performance (Chao & Kavadias, 2008; Cooper, Edgett, & Kleinschmidt, 2001).

2 METHODOLOGY
This research defines a market valuation model to study the change in financial performance resulting from changes in product portfolio strategy in the brand name sector of the pharmaceutical industry from 1980 to 2009. In the model, change in product portfolio strategy is framed in terms of the two major product classes in the brand name sector: new molecular equivalent (NME) drugs and brand extensions. Parallel models use change in Tobin’s Q, or the change in the ratio of the firm’s market value to the current replacement cost of its assets, and stock return to measure performance. Brand name pharmaceutical firms comprise the sample for this research. Data across firms in the sample are totaled to generate industry-level data for each variable. The market valuation model is evaluated using time-series regression. A review of the product data reveals that the relative number of NME drugs and brand extensions bifurcated after 1994. To study the differences in performance between these periods, models are run for all years, then the periods before and after the bifurcation.

3 RESULTS
The change in Tobin’s Q model is significant for all three periods studied indicating a relationship between change in product portfolio strategy and performance. Wald Test results indicate a significant difference in strategy between
pre- and post-1994 periods. Changes in model coefficients reveal the evolving roles of new drugs and brand extensions in driving performance. Up to 1994, both NME drugs and brand extensions drove performance. After 1994, only brand extensions drove performance. The significance of the stock return model varies across the periods studied. This difference in results, relative to the Tobin’s Q model, is attributed to greater variation in stock return data. The Wald Test is significant for the stock return model.

4 DISCUSSION & CONCLUSION

Results from this research demonstrate the structure-conduct performance paradigm’s prediction that industry conduct will evolve in response to structural changes. In this case, the brand name sector shifted the focus of its new product portfolio from new to incremental innovation. The market valuation models showed this shift in focus affects market value. Changes in industry structure change the role of innovation type in driving performance. These results are quite interesting considering the brand name sector’s historical focus on discovering new drugs.

The shift in product portfolio emphasis in the brand name sector of the pharmaceutical industry provides an example of the classic dilemma faced by managers as market conditions drive them to maintain short-term performance at the expense of long-term gains. However, the reality is that under the current industry structure, the sector cannot continue to fund the level of research and development needed to sustain prior levels of new drug introductions. This shift is reflected in the product portfolio. Brand name firms will face increasing competition from generic equivalent offerings as the rate of patent expirations continues to increase. This change, along with pending changes in the legislative landscape such as health care reform, will restrict the industry’s’ long-term growth rate and compel marketing managers to choose more conservative approaches to maintaining the firm-level financial performance.

REFERENCES


Girish Shambu
Department of Management
Canisius College
2001 Main Street
Buffalo, New York, USA
(716) 888-2796
shambu@canisius.edu

ABSTRACT
This paper proposes that the 2007 web video “The Story of Stuff” by Annie Leonard can be used to introduce students to a rich interconnected view of a supply chain while at the same time infusing this view with a deep sustainability consciousness and a critical edge. Specifically, four aspects of the supply chain can be addressed with the use of this video: the role of multiple functional areas (such as accounting, marketing and product design) in the supply chain; the various stages of the supply chain and the actions that take place at each stage; the use of a “triple bottom line” approach; and calling into question the universal business imperative of “unlimited growth.”

Keywords
Sustainability, supply chain, “Story of Stuff.”

1 INTRODUCTION
Annie Leonard’s remarkable viral video “The Story of Stuff” can be put to powerful use in the business classroom. “The Story of Stuff” is a 22-minute polemical documentary that first appeared on YouTube in 2007. This video can be used to productively counter many of the key drawbacks of business practice and pedagogy. This paper will take up several of these drawbacks and illustrate how the video critiques and corrects them, thus making for a useful teaching resource.

2 THE UNSUSTAINABLE SUPPLY CHAIN
“The Story of Stuff” video takes as its backbone the life cycle of “stuff” (manufactured goods) from extraction all the way to disposal. Leonard breaks down this supply chain into its components, demonstrating the interconnectedness of managerial decisions in operations, marketing, accounting, and finance. But even as she dismantles the supply chain into its constituent parts, she does so while unifying her observations under the umbrella of a searing critique of business practices that spring from a deep sustainability consciousness.

Business Functions and the Supply Chain
In the last few decades, businesses have increasingly recognized the dangers of functional specialization and silo formation. The use of cross-functional teams has often been intended to counter these deleterious effects of excessive specialization. But it is ironic that the structures of most business curricula continue to mirror those of functional specialization.

Leonard takes the example of a radio that sells for $4.99 at a big-box retailer, and traces its journey backwards through the supply chain. Beginning with her incredulity that the radio sells for such a suspiciously low price, she points out, at each stage of the supply chain, who or what “really paid” for the radio. For example, at the extraction stage, a cost was incurred in terms of depleted natural resource space. At the manufacturing stage, the cost was borne by loss of (for example) clean air, with resulting increase in illness-related costs among the local population. Sometimes, employees at the plant or at the retail store also contributed to covering this cost by paying for their own health insurance. Leonard is illustrating two things here: the concept of “externalized cost”; and the linkages between accounting and operations at each stage of the supply chain. She grounds the illustration in a critique of cost accounting systems that allow products to emerge from a global supply chain and proceed to the customer with their “true” costs unaccounted for and unreflected in the marketplace.

The video also illustrates the roles of marketing and product design – and their linkages with operations and the supply chain – but do so in a critical fashion driven by a sustainability imperative. In the case of product design, Leonard asserts that in order for continuous “material flow” to take place, and to continue to grow over time, products are deliberately designed to have short life – “planned for obsolescence” and “designed for the dump”. She indicts marketing’s role in this process by citing another kind of waste – “perceived obsolescence”. By making consumers feel guilty for continuing to use “last season’s goods,” marketing efforts aim to instill in consumers a never-ending impulse to shop and replace their material possessions on a continuous basis.

In all three cases cited above – accounting, product design and marketing – rather than use traditional examples of the roles these functional units perform in the supply chain, Leonard chooses to bring a critical sustainability perspective to bear on them. This helps to communicate to
students early in the course that the purpose of the class is not only to acquire knowledge about supply chain processes but to also be unafraid to critique these processes and their underlying assumptions which we often take for granted.

**Focusing on actions rather than actors**

Leonard makes powerful and strategic use of language in the video. Her animated graphics – for instance, her flowchart of a typical supply chain – are clear, uncluttered and easy for students to take in at a quick glance. But she subtly renames and restitutes several stages of the chain. The conventional supply chain model often consists of 5 stages: supplier → manufacturer → distributor → retailer → customer. In its place, Leonard substitutes the following chain: extraction → production → distribution → consumption → disposal. By replacing the elements of the chain with business actions rather than actors (entities), she is able to highlight the ravages to society and the environment from start to finish of the product life cycle, invoking responsibility and accountability for the actions at each stage.

For example, instead of calling the most upstream phase “raw materials supply,” she bluntly refers to it as “extraction,” which immediately brings to mind images of natural resource exploitation. Most basic supply chain charts do not explicitly include the process of product disposal; it is simply assumed to take place once the customer either decides to terminate the product’s life or is forced to dispose of the product because it no longer works. In Leonard’s model, the final stage in the supply chain is not “customer” (as it is in the traditional supply chain flowchart) but that of “disposal.” This serves the purpose of rendering the action of disposal visible and bringing its attendant problems to the fore for consideration and discussion.

Perhaps Leonard’s most radical renaming occurs when she substitutes, in place of “customer” on the traditional supply chain diagram, the word “consumption.” Her intention is threefold. First, rather than focus the discussion on the customer and customer service, she redirects it to a critique of excessive consumption. Second, she discusses total material flow through the system and situates it in a sustainability context with a reminder: 99% of the total materials flow through the chain will find themselves discarded within six months. Third, she links up consumption with design by invoking the notion of “perceived obsolescence” (mentioned above) which is a kind of obsolescence that refers to “desirability.” Even if an object functionally perfectly well, it can still become obsolete – by virtue of customer perception that judges it “out of style” or “out of fashion.”

**Three Bottom Lines, Not One**

Business – and business education – have for too long taken for granted the supremacy of the single metric of profit. In illustrating supply chain decision-making, the video insistently maintains three bottom line metrics in view: social, environmental, and economic. The “triple bottom line,” a term created by sustainability advocate John Elkington, is not used explicitly in the video but demonstrated by example at each stage of the unsustainable supply chain. In fact, since the economic bottom line is universally recognized and used, Leonard focuses attention at each stage of the supply chain on the other two bottom lines, environmental and social.

The cataloging of environmental effects at each stage of the supply chain is substantive and useful, but even more significant is Leonard’s focus on the social impact of unsustainable business. At various points of her discussion, she weaves in treatment of issues such as public health impacts, labor practices, human rights, product responsibility, and the negative effects of advertising.

**The Perils of Constant Growth**

The notion of unlimited growth is so deeply and unquestioningly embedded in business thinking and practice that it goes virtually unchallenged today. (The work of James Gustave Speth and Jay Forrester are among the few exceptions.) Businesses think of growth as unimpeachably good but Leonard takes this unchallenged assumption to task by examining the results of unchecked growth. She diagrams the supply chain as a linear system, and points out that “you cannot run a linear system on a finite planet indefinitely.” She gives vivid examples that resonate immediately with students, for example: in the past three decades, one-third of the planet’s natural resources base has been consumed; 75% of global fisheries are now fished at or beyond capacity; and in the Amazon alone we are losing 2000 trees a minute (seven football fields worth). These examples of the pernicious tangible effects of escalating growth strike an immediate chord with students.

3 **CONCLUSION**

“The Story of Stuff” is a powerful pedagogical tool when used in the early stages of undergraduate and graduate courses in (especially) Operations Management or Supply Chain Management. It helps provide a holistic picture of interconnectedness: supply chains whose members affect each other, society and the environment; and functional domains within each firm whose decisions are interlinked. By mounting a strong critique of current business practices in general, and supply chain management practices in particular, the video drives students to think critically and questioning for the remainder of their course and business program.

**REFERENCES**


Analyzing Newspaper Coverage of Ethical Issues Affecting the Pharmaceutical Industry

George P. Sillup, Ph.D., M.S.
Chairman, Pharmaceutical & Healthcare Marketing, and Associate Professor
Saint Joseph’s University
5600 City Avenue, Philadelphia PA 19131

Stephen J. Porth, Ph.D.
Associate Dean of Academic Affairs, Haub School of Business and Associate Professor
Saint Joseph’s University
5600 City Avenue, Philadelphia PA 19131

ABSTRACT
Audits of the top five U.S. newspapers as defined by circulation, USA Today, Wall Street Journal, New York Times, Los Angeles Times, and Washington Post, were conducted using a standardized review methodology. The audits identified “hot button” issues attracting media attention in 2010 and reported on the pharmaceutical companies and brands most often cited in the newspapers. Noting the media’s focus on healthcare reform, analyses were also conducted about how issues related to healthcare reform were reported by the press. Key results indicate that coverage about the pharmaceutical industry increased 26% compared to 2009 and is the highest it has been since 2006. Flu vaccines were the most reported issue by a wide margin followed by the FDA and Regulatory issues while Drug Prices are receiving less media scrutiny than in recent years. Merck, GSK and Pfizer were the companies identified most frequently in the news. Overall, four of the five newspapers reported on the front-page or in editorials about healthcare reform (the Wall Street Journal was the exception) and coverage decreased 13.5%. Coverage by the four newspapers reporting about healthcare reform was primarily neutral (77%) again this year but only 45.9% of the articles included the industry’s perspective compared to 81.3% last year.

INTRODUCTION
2010 saw a continued focus on healthcare reform, the FDA and drug safety but the top story of the year was… flu vaccines. Yes, flu vaccines received more than double the media-related issue in 2010 And, despite intense coverage of the Gulf oil spill and the continued focus on healthcare reform; the results of the seventh Annual Press Audit of issues in the pharmaceutical industry indicate that the media’s scrutiny of pharma intensified in 2010.

The annual audit sponsored by the Arrupe Center for Business Ethics at Saint Joseph’s University tracks and analyzes the industry issues covered by the media. Prior audits have found that media coverage is largely negative toward the positions taken by pharma. This year’s audit identifies the “hot button” issues attracting media attention in 2010, compares the issues and how they are covered to previous years, and reports on the pharmaceutical companies and brands most often cited in the news. We also followed-up on our analysis of how healthcare reform has been reported by the press.

Some of the top findings for 2010 include:

- Coverage of pharma is up 26% from last year and the highest it has been since 2006.
- For the first time ever and by a wide margin, flu vaccines are at the top of the list of hot button issues, jumping from twelfth place to first.
- The FDA and regulatory issues along with drug safety remain hot issues, ranking second and third on the list, respectively.
- Drug prices are receiving less media scrutiny in recent years, steadily moved down the list from third place in 2008 and 2009 to eighth place in 2010.
- Merck, GSK and Pfizer were the companies identified most frequently in the news.

Four of the five newspapers reported on the front-page or in editorials about healthcare reform (the Wall Street Journal was the exception) and coverage decreased 13.5% (from 86 to 74 articles).

Coverage by the four newspapers reporting about healthcare reform was primarily neutral (77%) again this year but only 45.9% of the articles (34 of 74) included the industry’s perspective compared to 81.3% last year (13 of 16 articles).

PROCESSING THE NEWS
Once again we analyzed the top five newspapers in the United States as defined by circulation for a 12-month period and identified all front-page and editorial articles pertaining to “hot button” pharma issues. The purpose of the audit was to shed light on the following questions:

Cynthia Slater, Saint Joseph’s University’s Business Reference Librarian, and students, Elizabeth Fox and Leo Porth, contributed to this research.
What ethical and legal controversies face the pharma industry—and what kinds of coverage do they attract?

Do the articles and headlines support or oppose the positions taken by the industry, as defined by the Pharmaceutical Research & Manufacturers’ Association (PhRMA)?

How often do reporters include the industry’s perspective in the stories that cover the issues of the day?

What pharmaceutical companies and brand names are identified and discussed in the articles?

What are the implications of these findings for the industry?

To be included in the study and in our EthicsTrak™ database, an article had to be published between October 1, 2009 and September 30, 2010 in one of the top five US newspapers (as measured by circulation) – USA Today, Wall Street Journal, New York Times, Los Angeles Times, and the Washington Post. It also had to (a) focus on an ethical or legal issue facing the pharma industry and (b) appear either as a front-page story or on the editorial page—an indication of major news and public sentiment. We focused on daily newspapers rather than the broadcast media or weekly magazines for a number of reasons. The newspapers cover a broader range of issues and in more depth than the sound bites reported on radio and TV. Business and news magazines are also constrained by their weekly or monthly formats while the newspapers have the advantage of editorial coverage that takes a specific and unambiguous position – pro or con – toward the controversies in question.

For each article, we examined four elements:

Issues We identified and categorized the hot-button issues (as defined by PhRMA) that were discussed in each article. Many articles covered two or more issues that were included in relevant sections.

Headlines We analyzed the headlines and categorized them as positive, negative, or neutral toward the industry. For example, “Big Pharma Sells Out” (Wall Street Journal, November 27, 2009) and “Bad Drugs and Bare Shelves” (Los Angeles Times, May 27, 2010) were classified as negative headlines, while “Melanoma Drug Shrinks Tumors; Rare Breakthrough Could Revolutionize Treatment” (USA Today, August 26, 2010) and “Two Steps Forward in the War Against Cancer” (Wall Street Journal, June 9, 2010) were labeled positive.

Tone We also analyzed each complete article to determine whether it took a positive, negative, or neutral position toward the pharmaceutical industry. For example, any article that called for restrictions or a prohibition on DTC advertising—a position that the industry opposes—was deemed negative. In contrast, an article that claimed that DTC advertising resulted in more informed patients was designated as positive.

Balance Regardless of the dominant position taken by the article, we also looked to see if the stories included the opposing point of view. When an explicit statement about an opposing view was included in the article—even if the two sides did not receive equal coverage—we concluded that the article covered both sides. When no mention of the opposing view was presented, the article was labeled as one-sided.

Figure 1 below shows the number of articles for 2010 compared to previous years. Results indicate that the amount of coverage the industry received is up 26% year over year and the highest it has been in four years.

Table 1 on the next page shows the breakdown of the coverage by newspaper. Coverage is down in three of the five newspapers but a 112% increase in New York Times articles and a 50% increase in the Washington Post more than offset the decline in the other outlets.

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1 The EthicsTrak database contains assessments of 1116 newspaper articles evaluated over a six-year period.
Table 1 – Number of Articles by Newspaper and Section

<table>
<thead>
<tr>
<th>Newspaper</th>
<th>Front Page</th>
<th>Editorial</th>
<th>2010 Total</th>
<th>2009 Total</th>
<th>% Change from 2009</th>
</tr>
</thead>
<tbody>
<tr>
<td>USA Today</td>
<td>15</td>
<td>10</td>
<td>25</td>
<td>27</td>
<td>-7.4%</td>
</tr>
<tr>
<td>Wall Street Journal</td>
<td>4</td>
<td>8</td>
<td>12</td>
<td>15</td>
<td>-20.0%</td>
</tr>
<tr>
<td>New York Times</td>
<td>30</td>
<td>23</td>
<td>53</td>
<td>25</td>
<td>112.0%</td>
</tr>
<tr>
<td>Los Angeles Times</td>
<td>6</td>
<td>20</td>
<td>26</td>
<td>30</td>
<td>-13.3%</td>
</tr>
<tr>
<td>Washington Post</td>
<td>21</td>
<td>18</td>
<td>39</td>
<td>26</td>
<td>50.0%</td>
</tr>
<tr>
<td>Total</td>
<td>76</td>
<td>79</td>
<td>155</td>
<td>123</td>
<td>26.0%</td>
</tr>
</tbody>
</table>

WHAT ARE THE HOT BUTTON ISSUES?

Table 2 identifies the issues covered in the articles, the frequency of their coverage, and how the results compare to previous years. At the top of the list of issues attracting media attention in 2010, for the first time ever, are flu vaccinations. The media’s coverage of this issue is telling, as it shifted from alarming reports of vaccine shortages to the relatively mild strain of the virus to an over-supply by the end of the year.

At the beginning of the cycle, the Los Angeles Times reported a shortage of H1N1 vaccines due to delays and difficulties in production as well as the lack of production within the United States (“Short on Shots,” Los Angeles Times, October 31, 2009). By December, the LA Times was reporting a different story – the swine flu pandemic seemed to have reached its peak, was on the decline, and was a relatively mild strain this year (“The Swine Flu, As of Now,” Los Angeles Times, December 1, 2009, p A34). By the end of the review year, the story was the abundant supply of flu vaccines, many of which would go to waste. Although they may have over-compensated, health authorities should not be faulted for the steps they took to protect the population (“H1N1 Vaccine Still Available,” New York Times, April 8, 2010, p A30).

Scrutiny and criticism of the FDA and Regulatory Issues remained a hot topic in 2010, placing second on the list. This issue ranked first or second for four consecutive years. Next up on the list is the related issue of drug safety, another perennially focus of the media. Taken together these two issues, FDA and drug safety, reveal the continuing media scrutiny on the drug approval process, cases of misuse or abuse of prescription drugs, adverse impact and lawsuits related to drug safety. As you might expect, most of those articles were critical of the industry and/or a specific pharma company or brand.

The focus on high drug prices declined in 2010, dropping from third to sixth on the list. Furthermore, two related pricing issues - importation/reimportation of drugs and differential pricing and distribution – received almost no attention and, in fact, did not appear on the list. This is an interesting finding in light of reported drug price increases last year. The LA Times reported that the drug industry ramped up prices by 9% during the year to counteract the anticipated impact of healthcare reform. According to the article, the industry claims to have raised prices to pay for drug research and development but it seems more likely that the increased prices are to establish a higher base before the healthcare reform bill is passed (“The Drug Industry Cashes In”, Los Angeles Times, November 18, 2009, p A34).

Speaking of healthcare reform, it emerged again as a hot issue in 2010 after surfacing for the first time last year. We separated the healthcare reform articles into two populations – one that specifically referred to the response of drug makers to reform (10 articles) and the other that focused more generally on the health care reform movement and debate over its provisions (74 articles). We discuss our findings of this latter group of 74 articles in more depth in a separate section of this paper.

As shown in Table 2 on the next page, the 10 articles discussing (or at least mentioning) pharma’s reaction to healthcare reform makes this issue a top story in 2010, although the focus is down considerably from last year’s 25 articles. Several of the articles discussed the pros and/or cons of the industry’s price increase response to the threat of healthcare reform. The New York Times article, “Drug Companies Increase Prices in Face of Change,” (November 16, 2009) reported that increasing drug prices were in response to the threat of price restrictions in healthcare reform. The drug companies argue that they need to raise prices to cover research and development costs, especially in light of upcoming patent expirations of several leading drugs. Critics of the industry argue that drug companies are poised to make more profit after healthcare reform and the $80 billion industry offering is inconsequential compared to the potential new revenue opportunities afforded by reform.
Table 2 - Analysis of Ethical Issues

<table>
<thead>
<tr>
<th>Ethical Issues</th>
<th># of References</th>
<th>2010 Ranking</th>
<th>2009 Ranking</th>
<th>2008 Ranking</th>
<th>2007 Ranking</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flu Vaccines</td>
<td>65</td>
<td>1</td>
<td>12</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Interaction with FDA and Regulatory Affairs</td>
<td>25</td>
<td>2</td>
<td>1</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Drug Safety</td>
<td>21</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Research &amp; Development love</td>
<td>13</td>
<td>4</td>
<td>7</td>
<td>7</td>
<td>7</td>
</tr>
<tr>
<td>Healthcare Reform</td>
<td>10</td>
<td>5</td>
<td>4</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Drug Prices</td>
<td>8</td>
<td>6</td>
<td>3</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>Medicare/Medicaid</td>
<td>7</td>
<td>7</td>
<td>7</td>
<td>7</td>
<td>9</td>
</tr>
<tr>
<td>Generic Drugs</td>
<td>6</td>
<td>8</td>
<td>6</td>
<td>7</td>
<td>10</td>
</tr>
<tr>
<td>Data Disclosure - Clinical &amp; Manufacturing</td>
<td>6</td>
<td>8</td>
<td>10</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>Clinical Study Design and Sponsorships</td>
<td>6</td>
<td>8</td>
<td>11</td>
<td>14</td>
<td>5</td>
</tr>
<tr>
<td>Marketing and Sales Incentives</td>
<td>3</td>
<td>11</td>
<td>5</td>
<td>9</td>
<td>6</td>
</tr>
<tr>
<td>Biotech/Genomics</td>
<td>3</td>
<td>11</td>
<td>9</td>
<td>5</td>
<td>N/A</td>
</tr>
<tr>
<td>DTC Advertising</td>
<td>2</td>
<td>13</td>
<td>12</td>
<td>13</td>
<td>11</td>
</tr>
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</table>

Table 3 – Analysis of Headlines and Full-Text Articles

<table>
<thead>
<tr>
<th>Headlines</th>
<th>Positive</th>
<th>Negative</th>
<th>Neutral</th>
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<tbody>
<tr>
<td>2007</td>
<td>14.3%</td>
<td>52.4%</td>
<td>33.3%</td>
</tr>
<tr>
<td>2008</td>
<td>10.7%</td>
<td>67.3%</td>
<td>22.0%</td>
</tr>
<tr>
<td>2009</td>
<td>7.3%</td>
<td>40.7%</td>
<td>52.0%</td>
</tr>
<tr>
<td>2010</td>
<td>13.5%</td>
<td>26.5%</td>
<td>60.0%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Articles</th>
<th>Positive</th>
<th>Negative</th>
<th>Neutral</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007</td>
<td>29.3%</td>
<td>61.2%</td>
<td>9.5%</td>
</tr>
<tr>
<td>2008</td>
<td>12.0%</td>
<td>66.0%</td>
<td>22.0%</td>
</tr>
<tr>
<td>2009</td>
<td>12.2%</td>
<td>49.6%</td>
<td>38.2%</td>
</tr>
<tr>
<td>2010</td>
<td>14.2%</td>
<td>27.1%</td>
<td>58.7%</td>
</tr>
</tbody>
</table>

WHAT ABOUT THE COMPANIES AND PRODUCTS?
As part of our audit we also track the names of the drug companies and brands identified in the articles. The companies mentioned most frequently this year are Merck (13 times), GlaxoSmithKline (13) and Pfizer (12), each involved in major news stories for drug safety and/or efficacy. The results of the trial known as “Arbiter 6,” questioning the efficacy of Merck’s cholesterol drug, Zetia®, received ample attention. Similarly, drug safety reports about GSK’s Avandia® and ongoing troubles with Paxil® were reported widely. Johnson & Johnson/McNeil garnered attention after receiving a warning letter from the FDA for a musty or moldy odor of certain products, leading to product recalls of McNeil’s children’s Tylenol® products, including Tylenol, Motrin®, and Benadryl®. Although the actual risk to consumers who purchased or used the recalled products is limited, the FDA is concerned about poor practice and lack of adherence to guidelines in McNeil’s manufacturing facilities.

Next was coverage about merger and acquisition strategies. The brands most frequently cited are Wyeth’s Phenergan® and Pfizer’s Lipitor®. Lipitor made the news as it is about to go off patent. According to the Wall Street Journal, “analysts have been predicting major industry consolidations like Pfizer-Wyeth because of the patent cliff, but the risk is that the cost savings and bureaucratic mayhem from combining labs and streamlining R&D end up stifling research productivity” (“Lipitor - The Pfizer Drug Warning,” January 28, 2009, p. A 14). Phenergan made the news due to a tragic human error when a physician’s assistant used the wrong method of injection, the patient’s...
arm turned gangrenous and ultimately had to be amputated. This despite the fact that the “label on Phenergan says six times, in different ways, some of them in boldface capital letters, that if Phenergan gets into the arteries, the result can be disastrous” (The Washington Post, “Drug Regulators in the Jury Box,” March 13, 2009, p. A 17).

NEWPAPERS COVERAGE/HEALTHCARE REFORM

Again this year, we identified and tracked a large number of articles specifically about healthcare reform, although the number decreased from 86 to 74 articles. Each of the healthcare reform articles was analyzed and included it in the EthicsTrak database. This coverage addressed healthcare reform as well as perspectives from the newspapers about the pharmaceutical industry’s response to healthcare reform efforts.

Issues of note about healthcare reform and how it relates to the pharmaceutical industry that attracted media attention are:

- Four of the five newspapers reported about healthcare reform; the Wall Street Journal did not report about healthcare reform in a front-page article or editorial.
- The Washington Post accounted for 40.5% (30) of the 74 articles.
- Seventy-seven percent (57 of 74) of the articles took a neutral stance on healthcare reform.
- Medicare/Medicaid coverage for drugs was the most frequently identified issue in the healthcare reform articles.

The coverage this year for healthcare reform was a little less than half of the coverage for the articles we identified for ethical issues affecting the pharmaceutical industry (74 vs. 155). The coverage was evenly split between front-page articles and editorials (38 vs. 36). Coverage decreased in four of the five newspapers – Washington Post, USA Today, Los Angeles Times and Wall Street Journal. The decrease in the Los Angeles Times was slight (20 to 18 articles) while the Wall Street Journal coverage dropped from three articles last year to none. Interestingly, coverage in the New York Times increased dramatically, going from six to 16 articles. Not surprisingly based on its proximal location to the epicenter of healthcare reform debate, the Washington Post reported most frequently again this year, accounting for 40.5% of the articles (30 of 74). An overview of this coverage is depicted in Table 4 in the next column.

<table>
<thead>
<tr>
<th>Newspaper</th>
<th>Front Page</th>
<th>Editorial</th>
<th>2010 Total</th>
<th>2009 Total</th>
<th>% Change 2009-2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>USA Today</td>
<td>6</td>
<td>4</td>
<td>10</td>
<td>14</td>
<td>(28.6)</td>
</tr>
<tr>
<td>Wall Street Journal</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>3</td>
<td>(100)</td>
</tr>
<tr>
<td>New York Times</td>
<td>9</td>
<td>7</td>
<td>16</td>
<td>6</td>
<td>167</td>
</tr>
<tr>
<td>Los Angeles Times</td>
<td>9</td>
<td>9</td>
<td>18</td>
<td>20</td>
<td>(10)</td>
</tr>
<tr>
<td>Washington Post</td>
<td>14</td>
<td>16</td>
<td>30</td>
<td>43</td>
<td>(30.2)</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>38</strong></td>
<td><strong>36</strong></td>
<td><strong>74</strong></td>
<td><strong>86</strong></td>
<td><strong>(13.5)</strong></td>
</tr>
</tbody>
</table>

Consistent with Congressional debate about healthcare reform, a little over 70% of the coverage occurred primarily during the fourth quarter of 2009 (52 of 74 articles). Further exploration of the dramatic increase in coverage by the New York Times revealed that it was skewed to the fourth quarter with nine articles in December covering very pertinent issues that ranged from “Lieberman Gets Ex-Party to Shift On Health Plan” (December 15, front page) to “The Next Step on Healthcare Reform” (December 27, editorial).

THE PHARMACEUTICAL INDUSTRY AND HEALTHCARE REFORM

Using the methodology described above, we analyzed the top five U.S. newspapers to address the following questions:

- Do the healthcare articles and headlines support or oppose the positions taken by the industry?
- What ethical issues face the pharma industry in these articles on reform?
- How often are the industry’s perspectives included in the articles?
- What pharmaceutical companies and/or brand names are identified in the articles?
- What are the implications of these findings for the industry?

The headlines were analyzed as positive, negative, or neutral toward the industry. We also analyzed each complete article to determine whether it had a positive, negative or neutral position toward the pharmaceutical industry. Sometimes, the headline conveyed a different message than the complete article. An example is the New York Times editorial (December 18, 2009), “The Hardest
Call” where the headline was neutral but the article was negative toward the industry.

Again this year, the headlines were overwhelmingly neutral toward the industry with 77% (57 of 74) of the headlines expressing a neutral position toward the industry, compared to 70.9% in 2009. About 15% (11 of 74) of the headlines were negative toward the industry with only six indicating a positive perspective. When the full articles were assessed, 77% remained neutral. There was, however, a shift in those that were negative and positive toward the industry. Negative articles lessened from 11 to eight while positive articles increased from six to nine. These analyses are summarized in Table 5 below.

<table>
<thead>
<tr>
<th>Table 5 – Analyses of Headlines and Full-Text Articles</th>
</tr>
</thead>
<tbody>
<tr>
<td>Headlines</td>
</tr>
<tr>
<td>-----------</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Articles</td>
</tr>
</tbody>
</table>

When compared to the 2009 results, neutral coverage for 2010 increased from 70.9 to 77 percent for all newspapers. This increase was reflected by increases in neutral coverage for the New York Times, USA Today and the Washington Post. The Los Angeles Times decreased substantially from 80% to 66.7% as did the Wall Street Journal by virtue of no coverage. Positive coverage went down in the New York Times, USA Today and the Washington Post while it went up in the Los Angeles Times from none in 2009 to 22.2% this year. Negative coverage decreased appreciably in the New York Times, USA Today and Los Angeles Times while it increased slightly in the Washington Post from 14% to 16.7%. Comparisons of coverage by newspaper are depicted in Table 6 in the next column.

<table>
<thead>
<tr>
<th>Table 6 – Analysis of Full-Text Articles by Newspaper</th>
</tr>
</thead>
<tbody>
<tr>
<td>Newspaper</td>
</tr>
<tr>
<td>NY Times</td>
</tr>
<tr>
<td>USA Today</td>
</tr>
<tr>
<td>Washington Post</td>
</tr>
<tr>
<td>LA Times</td>
</tr>
<tr>
<td>Wall Street Journal</td>
</tr>
<tr>
<td>Total</td>
</tr>
</tbody>
</table>

LINKING PHARMA AND HEALTHCARE REFORM
Our analysis of healthcare reform articles revealed that 77% (57 of 74) of them reported generally about healthcare reform and did not address an issue specific to the pharmaceutical industry. This is considerably more than the 53% (46 of 86) of the articles that did not address a specific issue last year. Of the articles that addressed specific issues related to healthcare reform, seven articles mentioned more than one issue. Medicare/Medicaid coverage for drugs was the number one issue (7 mentions), followed by followed by Reimportation/Importation (two mentions) and High Drug Prices (one mention). Not surprisingly, much of the coverage chronicled the debate about healthcare reform in Congress and occurred at the end of the year, such as the Los Angeles Times front-page article, “Senate to Dump Medicare Option” (December 16, 2009).

INCLUDING THE PHARMA’S PERSPECTIVE
The articles were analyzed to determine whether they included the industry’s perspective no matter what position was taken by the article. Less than half of the articles (34 of 74 or 45.9%) included the industry’s perspective. This is a substantial decrease from 2009 where 81.3% of the articles (13 of 16) mentioned both sides. An example is USA Today’s article, “Health Care Bill Heads for Showdown; Obama Delays Trip to Nudge Support” (03/19/2010), in which both perspectives were mentioned and was neutral about the industry.

MENTIONING COMPANIES AND/OR PRODUCTS
Few of the healthcare reform articles included specific references to companies and/or their products. No products and only three companies were mentioned in two articles. Genentech was mentioned in the New York Times front-page article, “In House Record, Many Spoke with One
Voice: The Lobbyists” (11/15/2009) and two medical device companies, Medtronic and Biomet, were mentioned in the Washington Post front-page article, “Medical Device Makers Court Unlikely Allies; Pro-Reform Democrats Defend Home-State Firms” (10/18/2009). This coverage represents a decrease from 2009 where six companies and/or their products were identified and is surprising given the aggressive pricing by several companies following passage of healthcare reform discussed earlier in this press audit.

**IMPLICATIONS OF THIS YEAR’S FINDINGS**

The media continues to track the industry closely. Coverage increased by 26% from 2009 while the proportion of both negative headlines and negative articles declined significantly from previous years. However, articles and headlines were still about twice as likely to be negative as positive toward the industry. Despite this tendency toward negative coverage, there is recognition of the industry’s capacity to develop and implement solutions to medical problems as evidenced by migration of the “hot button” issue of flu vaccines to the most reported issue with coverage ranging from concerns about shortages of H1N1 vaccine in December 2009 to acknowledgement of sufficient quantities in April 2010.

From a company and product perspective, Merck, GSK and Pfizer attracted attention due to product problems. The Pfizer coverage also resulted from its acquisition of Wyeth. Coverage of Johnson & Johnson’s product problems contributed to making Drug Safety the third most reported issue this year.

Dropping from third to eighth place can be a good thing, especially when it comes to concerns about high drug prices. Pharma has been treading lightly with pricing ever since significant price increases by many pharma companies in 4Q2009 which detracted from positive coverage pharma received for its $80 billion commitment to healthcare reform. The second most reported issue, Interaction with FDA, is a continuance from last year’s audit in which realignment of the FDA by splitting it into a food division and drug division with appropriate budgets was suggested to help the industry by enabling the FDA to deal more effectively with applications than it currently does.

**THE INDUSTRY AND HEALTHCARE REFORM**

While the economy, oil spills and wars remain our primary concerns, healthcare reform still garners attention. Coverage about it was down by 6.1% from 2009 to 2010 and was more neutral (77% vs. 70.9%) this year. However, the anticipated Congressional debate about it is likely to increase coverage in 2011. Additionally, the partisan nature of the debates to date suggests that coverage will be more polarized in 2011. The amount of media attention pharma attracts will depend, in part, on the legality of its promotional activities as well as the visibility of its lobbyists. Assuming there are no off-label promotions and the lobbyists are invisible, industry coverage may be minimized.

**WHAT WILL HEALTHCARE REFORM MEAN TO THE INDUSTRY?**

In the short term, the imposed discounts and rebates along with raised industry fees are likely to have a negative impact as the industry will face several patent expirations in 2011. Long term, 2015 and beyond, the short-term negative impacts should be offset by greater consumption by the larger number of insured people (Datamonitor, 2010). Long term may prove to be challenging for the industry. It’s not unrealistic that undesirable measures, such as drug reimportation or Medicare Part D price negotiations, get introduced as a way to contain expected increasing overall healthcare expenditures.

Optimistically, the healthcare debate will not focus on the pharmaceutical industry. Instead, Congress will broaden its scope to explore the underlying causes of increasing healthcare expenditures, such as the 20% of expenditures directed to administrative fees compared to the 1-2% in other countries (Reid, 2010). Stakeholders in U.S. healthcare delivery other than pharma are likely to be impacted at the bottom line. Healthcare insurers, for example, will lose profitability with not being able to restrict pre-existing conditions or lifetime coverage limits. Pharma also has the opportunity to work constructively with those developing innovative ways to deliver healthcare, such as states seeking grants (Haberkorn and Kliff, 2011). As re-evaluation of the Patient Protection and Affordable Care Act unfolds, the industry’s activities will continue to be monitored.

**WORKS CITED**


The Economic Benefit of Catfish Farming in Nigeria

Oboreh Jacob, Snapps Ph.D
Department of Business Administration, Delta State University, Abraka, Nigeria.
snapps2008@yahoo.com

Mouboghrare Patrick Ph.D
Professor of Physical and Health Education Delta State University, Nigeria, Nigeria.
patmuoboghare@yahoo.com

Abstract

The paper examines the economic benefits of Catfish farming as a way of determining the profitability and viability of commercial catfish production. Simple random sampling technique was used in selecting 60 catfish farmers drawn from two of the four important Catfish farm locations in Delta State of Nigeria. Primary data were collected with the aid of well-structured sets of questionnaire. The data collected were analyzed using Benefit-Cost Ratio (BCR) and Cost Return Analysis (CRA). The result of the study showed that an estimated average initial capita of about $2,666.00 was sufficient to set up a 40 by 25 feet catfish pond. The result also showed that an estimated $6,451.61 gross revenue returns is possible in every six months, which point to the fact that catfish farming is a profitable business in the study area. The paper posited that this could be a sure way to eradicate poverty.

Key Words: Catfish Farming, Profitability, Poverty Eradication

Introduction

The demand for Catfish in Nigeria today is unprecedented so much so that no matter the quantity supplied into the market is consumed by ready buyers (Okoye, and Ayanda, 2004). This is so because of its low caloric value, low carbohydrate content, rich in protein, low in fat, quick and easy to prepare as a delicious meal Catfish is responsible for a multi-million Dollars. Catfish are raised in controlled environments that help ease the increased demand for improved, quality protein sources to feed our ever increasing population. Farm-raised catfish is consistently high in quality and available all-year round at a price unaffected by external environmental conditions (Satia,1990). The importance attached to the culture of Catfish in Nigeria is not only because it is a highly esteemed species that command high market value, but it is hardy and can survive where most other fish species cannot. These qualities coupled with its low bone content, fine flavour, high growth rate and its ability to feed on virtually anything make this fish the bride of most fish farmers in Nigeria. The context of the development of Catfish production and marketing in most part of Nigeria today means the improved supply of Catfish as an irreplaceable source of high quality and cheap animal protein crucial to the balance of diets in marginally food secure communities.

The major objective of this study is therefore, to analyze the economic benefits of Catfish farming in Delta State of Nigeria. However, the specific objectives are to; determine the economic characteristics of Catfish farmers, investigate the inputs employed in Catfish farming business, analyze returns to Catfish farmers, and identify the problems mitigating against catfish farmers..

Literature

Statistics indicate that Nigeria is the largest African aquaculture producer, with Production output of over 15,489 tons per annum, which constitutes about 4% of the nation's agricultural G.D.P. However, Federal office of Statistics estimated that Nigeria imports about 560,000 tons of fish estimated at about $400 million annually while annual domestic fish supply in Nigeria stands at about 400,000 tons. This makes Nigeria one of the largest importers of fish in the developing world.

To solve the country's high demand for fish, Nigerians have turned to their under-utilized in-land waters for improved fish production and aquaculture. However, aquaculture expansion has been a slow process as private sector fish farmers have faced major constraints including lack of seed and quality feed (Akolisa and Okonji, 2005). As in most parts of Africa, the most commonly cultured species of the Catfish in Nigeria include Clarias Gariepinus, Clarias lazera and Heterobrachus. Many commercial fish farmers in Delta state, focuses on Catfish, due to availability of market value of two to three times more than other species. Past records indicate that, encouraging fish production has helped to curb the deficiency of protein in most communities in Nigeria and boost job creation.

Methods of rearing Catfish can be based on a number of criteria such as number of species cultured, technology of production and cultivation stages among others. They can however be cultured under the following methods: Mono-
culture, Integrated Aquaculture, Intensive culture, Semi-
intensive culture and Extensive culture. Catfish can be raised
either to fingerlings, juvenile or grow-out using different
facilities such as earthen pond, concrete tanks, reinforced
plastic tanks, wooden trough and or cages (Bamidele
Omitoyin, 2009). The construction methods and
management of these rearing facilities however differs from
each other. The choice of any facilities also depends on
some factors such as location, availability of water, land,
intensity of culture and choice of the farmer. To ensure
better growth and higher survival in catfish farming, regular
monitoring of water quality parameters such as dissolved
oxygen, nitrite, ammonia, water hardness and alkalinity is
very important. Available literature shows that Catfish
business is less risky and required minimal capital outlay.
The business could be started with about 1000 to 1600
fingerlings and about $950.00 to $1950.00 as start-up
capital. The fingerlings could be purchased in the open
market and from other Catfish farmers who specialize in the
production of fingerlings or hatcheries. Matured Catfish are
sold off after five or six months in kilograms. Studies of
Akpan (1973) show that there are some challenges in the
Catfish business in Nigeria. These include very high cost of
feeds, which are mostly imported from Israel and Europe.
Also, the need for constant and fresh water supply,
inadequate energy to power the water supplies.

Methodology

Primary data was collected through questionnaires
from 60 catfish farmers across Delta State of Nigeria.
Delta State was chosen because of the prevalence of
Catfish farmers in the area. This was arrived at from
the record of the Catfish Farmers Association of
Nigeria. The data were collected with the assistance of
fisheries extension officers. Data were analyzed
using tables, frequencies, mean and percentages of
respondents. Cost and returns analysis (CRA) was
also carried out to investigate the profitability of the
Catfish business. Inferential statistics of regression
analysis was used to establish the relationship
between the dependent variable and independent
variables. This is implicitly expressed as: 
\[ Y = f \left( x_1, \ldots, x_n \right) \]
where, \( Y \) is the total revenue generated by
respondents and \( X \) includes rent on land, \( X_1 \) stocking
density, \( X_2 \) pond construction cost, \( X_3 \) cost of
fingerlings, \( X_4 \) feed cost, \( X_5 \) cost of veterinary
services and drugs, \( X_6 \) transportation cost, \( X_7 \) level of
education, \( X_8 \) years of experience, \( X_9 \) salaries
and wages and \( X_{10} \) cost and returns analysis to
investigates the profitability of the business: to
achieve this the following computation was made

- Total revenue = Output x Unit price
- Total cost = Total variable cost + Total fixed cost
- Gross margin = Total revenue - Total variable cost
- Profit = Gross margin - Total fixed cost (depreciated value)
- Benefit cost ratio = Total revenue/Total cost

Findings and Discussions

Data collected showed that both male and female were
involved in the Catfish business in Delta State, 78.3% of
the respondents were males while 21.7% were females. It
revealed that 50% of the respondents were between the age
range 41-50 years and they constitute the largest population
of the Catfish farmer’s respondents.

Table 1 shows different types of inputs employed by the
respondents in their production activities. Most (90%) of the
farmers in the study area employed earthen ponds while
only 10% use catfish tanks. There are variations in pond
sizes of respondents. large ponds are economical, but cannot
be easily managed. Smaller ponds are easily managed and
more suitable for those just venturing into the enterprise.
Average pond size in the study area was 482 m² with an
average depth of 3m.

Table 1 shows the stocking schedule of fingerlings by the
farmers in the study area. Average stocking rate for the
respondents was 1640 fingerlings. Cop pens feed is an
important input to catfish farming in the study area. About
86.7% of respondents claimed to use this feed at the initial
stage of the business- up to the third month, 10% use locally
made feed - called 'Blood meal' while 3.3% use fish
remains and other food remnants. About 67% of
respondents claimed to depend on family/group labour,
while 33% use hired labour. Other inputs used by the
respondents are: land, water, feed, shovels, fishing nets,
veterinary services and drugs. The average land area allotted
to fishing activities by respondents was about 1.5 hectares.
This conforms to Delgado (1973)' s finding that fish
farming requires less land area compared to crop and
livestock production. Underground water and rain water are
major sources of water for fishing activities in the study
area.

Cost and returns analysis per harvest:
According to the respondents harvesting is carried out
twice in a year at the interval of months

<table>
<thead>
<tr>
<th>Fingerlings (stock rate)</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1200-1500</td>
<td>36</td>
<td>60.0</td>
</tr>
<tr>
<td>1600-2000</td>
<td>24</td>
<td>40.0</td>
</tr>
</tbody>
</table>

Table 1: Inputs employed by respondents

<table>
<thead>
<tr>
<th>Fish pond</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Earthen pond</td>
<td>54</td>
<td>90.0</td>
</tr>
<tr>
<td>Concrete tank</td>
<td>6</td>
<td>10.0</td>
</tr>
<tr>
<td>Total</td>
<td>60</td>
<td>100.0</td>
</tr>
</tbody>
</table>

447
Total 60 100.0

**Feeds**
- Coppens 52 86.70
- Blood meal (Local) 6 10.0
- Fish remains/food remnants 2 3.3

**Total** 60 100.0

**Labour (Type)**
- Family/Friends 20 33.3
- Hired 40 66.7

**Total** 60 100.0

The following analysis is done based on per cropping operation. The average values for the sixty (60) respondents were used. Variable cost components for the respondents include fingerlings, fish meal (Cop pens), Blood meal, lime, veterinary services and drugs, transportation, salary and wages:
- Average variable cost = $256,930.55.
- Fixed cost components for the respondents include rent on land, pond construction, fishing-net, shovel, etc. a year at 6 months interval.
- Average fixed cost = $371.92

Average total cost = Average variable cost + Average fixed cost = $1626.14 + $371.92 = $1998.06

Revenue = Quantity harvested(kg) x price per kg = 1,558.78 x $2.78 = $4333.30

Benefit Cost Ratio (BCR) is total revenue divided by total cost i.e., TR/TC

\[
BCR = \frac{TR}{TC} = \frac{4330}{1998.06} = 2.17
\]

An investment is profitable if the BCR IS > 1. Gross Margin is calculated as revenue minus variable cost.

\[
GM = R - VC
\]

\[
= 4340 - 1626
\]

\[
= 2714.67
\]

This shows that catfish production is profitable. Profit is the net benefit of the business.

Profit = Gross margin – FC (i.e. revenue – cost) = 2714.67 - 371.92 = $2342.74

Going by the above analysis, a Catfish pond of 482m² in Delta state stocked with 1640 fingerlings within the next 6 months will yield 1,558.74kg of Catfish to give profit of $2342.75 to the farmer. This finding agrees with Higginbotham (2003) who posited that Catfish farming is a profitable enterprise. Despite the popularity of the Catfish business and its great market potentials, a number of problems confront the industry. Prominent among these are: poor management skills, scarcity of good quality seed, lack of capital, high cost of feed, faulty data collection, lack of environmental impact consideration and marketing of the products.

**CONCLUSION**

This study has shown clearly that Catfish farming is not only profitable but equally viable in Delta State. All stakeholders must therefore endeavor to ensure its survival and sustainability of the emerging Catfish industry. The high initial capital outlay could serve as a disincentive for would-be Catfish farmers, especially young unemployed graduates who may be resource-poor, thus resulting to fewer people engaging in the Catfish production in Nigeria. Based on the findings and conclusion of the study, the following recommendations are made:

- That more people should be encouraged to participate in the business so as to increase their income.
- Catfish farmers should form themselves into cooperative groups or association and purchase inputs in bulk for the use of their members so as to reduce per head cost of production.
- The Association of Cat fish Farmers should organize training, workshops and seminars for their members so that they could have access to improved methods and technologies of catfish production.

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the Fisheries Society of Nigeria (FISON) ,8-12 December, 2003 , Owerri, Nigeria.

AN EMPIRICAL ASSESSMENT OF HUMAN CAPITAL DEVELOPMENT PROGRAMS IN THE NIGERIAN OIL COMPANIES: THE CASE OF SPDC WARRI NIGERIA.

Oboreh J. S. Ph.D
Department of Business Administration,
Delta State University, Abraka, Nigeria.
snapps2008@yahoo.com

Abstract
This research examines the effects of human capital development programs in the development of the Nigeria oil industry. The purpose is to determine the relationship between developed and undeveloped staff in their job performance and also to determine if actually the available human capital development programs have impacted significantly on the development of managerial and vocations skills in the oil industry. Questionnaires were administered to 427 samples for the study and the data collected were analyzed using the chi-square statistical technique. It was observed that human capital development programmes improves staff efficiency and productivity. Consequently appropriate recommendations were made to improve productivity in the Nigerian oil industry.

Keywords
Human Capital Development, Job Performance, Productivity

Introduction
The importance of adequate human capital development utilization for the required performance of every organization of which those of oil companies are not exceptions. All organizations whether public or private are made up of people or human resources who work together in group to attain the organizational objective. These objectives such as profit maximization, share of market and social responsibilities cannot be achieved without proper development and utilization of human capital through guided adequate policies and practices (Omenai, 1986). This is important because it is the human resources that co-ordinates all the activities of the organization using other factor of production. This is why in recent times the term human resources has began to be used instead of personnel or manpower. This emphasizes the fact that the people employed in a firm are resources, which are as important as financial or material resources (Amstrong, 1999). Hence, it is important that every organization adopt good policies and practices towards the development and utilization of its human resources. The performance of an organization is a function of its human resources ability.

An organization may have employees of ability and determination with appropriate equipment and managerial support yet productivity or performance falls below expected standards (Butler 1991). Among the missing factors in many cases according to Nwachukwu (1988) is lack of proper human capital development acquired through the required development programmes which must also be adequately utilized. The truth is that both effective development and utilization of human resources cannot be achieved in an organization without adequate policies and practices devoted to human capital development.

This is why this study become imminent to investigate the extent to which oil companies have been effective and efficient in adoption of both policies and practices in their human capital development and utilization for the achievement of the expected organizational performance and other objectives. The major capital stock of any industrial advanced nation is not its physical equipment, it is the body of knowledge amassed from tested findings and discoveries, empirical science and the capacity and training of its population to use its knowledge (Ojo, 1986).

Conceptual Framework
The study of manpower development sets out to achieve a number of major aims, some of which are:

(a) Provision of the right skill, knowledge and job attitude,

(b) Improvement of the performance of employees as regards accuracy, speed, economy and safety. Good organization gives their employees regular training programmes some every six months, some once a year or once every three or more years. If production or service falls below standard this would be an indication that training is required, it must be emphasized that low performance and productivity could also be caused by poor moral faulty equipment or poor quality of services or raw materials. Gomez and Cardyl (2002) have pointed out that there are three basic ways of approaching training and development in an organization.
(i) Organizational Analysis – Determine where, within the organization, training and development in terms of
(ii) Operational analysis – Determine what should be the content of training and development in terms of what an employee must do to perform a task, job or assignment in an effective way.
(iii) Man Analysis – Determine what skills, knowledge or attitude on employee must develop if he is to perform the tasks which constitute his job in the organization

These three-way approach recognized the fact that a training and development programme looks at the organization, its operation and the man. In looking at the manpower requirement programme, Robins (2003) succinctly summed it up as $D = M - k$ Where:

- $D =$ Deficiency in the employee
- $M =$ Complete list of behaviour necessary for mastery of the job
- $K =$ Knowledge of behaviour necessary for the job which the employee has already acquired.

This method requires adequate knowledge of the job to be performed and a good understanding of the knowledge which the worker possesses.

All the same, the former does help to simplify the task of knowing in what area the training and development is needed and also to assess. Manpower planning, is like any form of planning, is, a means to an end. In this case, the end is a secure supply of manpower able to undertake all the activities required to achieve the organization corporate objectives.

Organizations require resources such as materials, men, machine and money to operate. All these resources may be required in varying quantities. It has been asserted by economists that the most important of these resources of the factors of production is human resources. Man is the most important because he has the responsibility to organize other factors-materials, machine and money to achieve the objectives of the organization. As Hicks and Gullet (1981) put it, persons are the essential core elements in an organization. Man has to utilize these resources for optimum productivity.

The reason why human capital development should be undertaken is because of the changes posed by modern technology. Changes take place every minute, hour, day, etc and the world is faced with an era of technological advancement that can make already acquired training and development of human resources obsolete. Human resources and development is, therefore, not restricted to the new or old employees alone, but to both and even senior management personnel. Human capital development cannot be complete without training (even though the two context are synonymous) because training brightens employee’s behavior and attitude towards his work and thereby improve job performance at all level which in turn facilitates the realization of both individual and organizational objectives.

The changes in the legal framework, economic and technological environment of oil companies such as Shell-Petroleum Development Company SPDC requires substantial investment in human capital. It is also to be expected, therefore, that any person who has the opportunity to serve within the organizational environment of these oil firms is exposed to the acquisition of unique skills and expertise in management in the course of the persons career. Development and growth in any country is impossible without a workforce that is adequately skilled and motivated. Therefore, for the oil industry to progress in Nigeria, it must not only invest in human capital but must also ensure their effective and efficient utilization otherwise it would be seen as liability rather than assets.

**Methodology**

The objectives of this work were to determine whether there is an established system of human capital development plan in the oil industry with particular reference to SPDC Warri, determine the relevance of human capital development to the operations of the oil industry, and examine the development programmes available to staff of the oil industry. The population for this research work consisted of the employees of SPDC and it was limited to the Western Division with Headquarters in Warri, Delta State.

The research is a survey research design. The choice of this research design method is informed by the fact that it suits the study of the respondents who are basically Oil Companies workers with varying knowledge, and opinions. The method also enables respondents’ to respond to issues relative to the topic when they are alone, it has ability to cover a wide range of information as well as representative samples which permits inferences and generalization to the study population (Yomere and Agbonifo, 1999).

The population consists of 2200 staff of SPDC Warri. A sample size of 412 staff was randomly selected, accounting for 18.72% of the entire Staff were considered quite adequate. Our decision is justified by the studies of Peretomode (1996), Yomere and Agbonifo (1999), and Owojori (2002) where both recommended at least 10% sample size to be adequate for scientific studies. A total 412 questionnaires were distributed to our respondents out of which 400 were returned and used for the study. The questionnaire contains 21 questions which were designed with both structured and unstructured questions.

The structured questions were designed to enable the respondents to give uniform answer that will enable the researcher to draw a meaningful inference from it. The questions used for the analysis required responses such as yes and No, while others required tremendous increase, slight increase, and stagnation. The unstructured questions were used to give the respondent enough room to reveal their motives or attitudes and to specify the background or
the provisional conditions upon which their answers are based.

In pursuance of our research objective the following research hypotheses were used in this study:

(i) There is no relationship between staff development and staff motivation in the oil industry
(ii) There is no relationship between the performance of developed and undeveloped staff in the industry
(iii) Manpower development programmes have not impacted significantly on the development of managerial and skill vocation within the industry

The statistical technique used to test the formulated hypotheses was the chi-square.

RESULTS AND DISCUSSION

The results from the analysis of the research questions were synonymous with that gotten from the test of the hypotheses. The following assumptions were made for the purpose of this test

**Hypothesis 1**
There is no relationship between staff development and staff motivation in the oil industry

Table 1

<table>
<thead>
<tr>
<th>O</th>
<th>E</th>
<th>O-E</th>
<th>(O-E)^2</th>
<th>(O-E)^2/E</th>
</tr>
</thead>
<tbody>
<tr>
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<tr>
<td>400</td>
<td>400</td>
<td>0</td>
<td>103</td>
<td>10.556</td>
</tr>
</tbody>
</table>

**Source:** Analyzed Data from Field Survey 2011.

Calculated $\chi^2 = 10.556$. Table value using 0.05 level of significance = 7.815

Table 1 above indicates that there is indeed a significant relationship between staff development and staff motivation in SPDC. This was proved through the analysis of data collected using the Chi-square ($\chi^2$) method to test the hypothesis, based on response gotten from the respondents the calculated value of the $\chi^2$ was 10.556 which is greater than the critical or table value of $\chi^2$ which was 7.815 at 0.05 or 5% level of significance and 3 degree of freedom.

Hypothesis 2
There is no relationship between the performance of developed staff and that of undeveloped staff

Table 2

<table>
<thead>
<tr>
<th>O -</th>
<th>E</th>
<th>O - E</th>
<th>(O - E)2</th>
<th>(O - E)2/E</th>
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<td>5</td>
<td>-5</td>
<td>25</td>
<td>5</td>
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<tr>
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<td>1</td>
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<td>1</td>
<td>1</td>
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<tr>
<td>400</td>
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</tr>
</tbody>
</table>

**Source:** Analyzed Data from Field Survey 2011.

Calculated $\chi^2 = 13.12$. Table value using 0.05 level of significance = 7.815

From table 2, it was revealed that there is a significant difference between the performance of developed and undeveloped staff of SPDC. This was made clear through the analysis of the data collected to test the hypothesis using the chi-square ($\chi^2$) method based on the response from the respondents. The calculated value was 13.12 which is greater than the critical value which was 7.815 at 0.05 or 5% level significance at 3 degree of freedom.
Hypothesis 3
Manpower development programmes have impacted significantly on the development of managerial and skill vocations within the Nigerian oil industry.

Table 3

<table>
<thead>
<tr>
<th>O</th>
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<th>O – E</th>
<th>(O – E)^2</th>
<th>(O – E)^2 / E</th>
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<td>1</td>
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<td>1</td>
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<td>-1</td>
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<td>1</td>
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<td>0</td>
<td>436</td>
<td>10.69</td>
</tr>
</tbody>
</table>

Source: Analyzed Data from Field Survey 2011.

Calculated $\chi^2 = 10.69$

From table 3, one can easily deduce that manpower development programmes have significantly impacted on the development of managerial and skill vocations within SPDC. This deduction was proved through the analysis of data collected to test the hypothesis, the statistical method used was the $\chi^2$. An empirical analysis of the response from the respondents gave the calculated value of the $\chi^2$ to be 10.69 and the table or critical value to be 7.815 at 0.05 or 5% level of significance and 3 degree of freedom. With regard to the unstructured questions put forward to the respondents to know if there are any shortcomings in SPDC manpower development programmes, the response, were as follows:

The respondent believed that there is no modified form to cover different types of assignment from other affiliations. Delay in planning the manpower development programmes, without attention been paid to the development of career opportunity programmes and non-incorporation of it into career progression, no adequate job rotation as pointed out by the respondents. Most respondents were of the opinion that all categories of staff should be given the opportunity to prove themselves worthy of their jobs.

CONCLUSION

The paper, submit that oil companies should be involve in constant manpower development programmes to enhance organizations effectiveness. Career opportunity programmes should be developed and incorporated into career progression within SPDC, there should be regular development of human resources by creating various programmes for employees to help them update their knowledge, employees should be equipped with materials that conform with the present economic and technological environment.

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Management Education and the MBA:  
A Collection of Critique

Lauren Spatig, MBA, MA  
Doctoral Student  
Fielding Graduate University  
610-716-4324  
Lauren.Spatig@yahoo.com

Academic criticism has been directed at Master’s of Business Administration programs over the past 20 years. This paper aims to present the collective critique for evaluation. Primary among the criticisms are: an over emphasis on quantitative curriculum; lack of entrepreneurial or path finding teaching; narrow student selection; lack of management and leadership curriculum; non-reflective nature of the program; overemphasis on profit motive; lack of ethics and social responsibility curriculum; lack of integration across functional disciplines; focus on producing scientific research rather than developing managers, and the reactive to market needs rather than purpose driven.

An Early Argument for Management Education:

In 1916, Henry Fayol called for establishing management education, and puzzled as to its absence in comparison to the extensive focus on technical education (e.g., engineering). He claimed that management could indeed be “acquired in the same way as technical ability, first in school, later in workshop” (Fayol, 1949, p. 14) and posited that the lack of management education resulted from an absence of theory. In General and Industrial Management, Fayol (1949, p. 3) outlined the undertakings of industry as the following activities: technical, commercial, financial, security, accounting and managerial. He argued that the first five were all very well understood at the time, and dedicated less than two pages to their treatment; it was management that required more discussion, principle development and theory building.

Fayol wrote about the same time the first MBA program commenced at Harvard University in 1908. Other business oriented schools existed before that time with roots in the Prussian school in Germany, however 1908 marks the beginning of the MBA program in its form seen today (Mintzberg, 2004). Over the past century, the MBA program has experienced explosive growth with 900 universities offering an MBA by 1998, resulting in over 100,000 graduates per year, or one million per decade, compared to 3,200 degrees awarded in 1956 (Clarke, 2008).

Collected Critique of the MBA Program

Twenty years ago, Harold Leavitt (1989) of Stanford provided a compelling narrative regarding the “significant and painful” (Leavitt, 1989, p.39) changes needed within the MBA program:

While we teach many of the right things in our MBA programs, we don’t teach some critical things we ought to teach. The major reason we don’t is because if we teach those untaught things it will become more difficult to teach and to justify what we already teach. So we have built a weird, almost unimaginable design for MBA level education. We then lay it upon well proportioned young men and women, distorting them…into critters with lopsided brains, icy hearts and shrunken souls. (Leavitt, 1989 p. 39).

Leavitt (1989) contended that business schools teach descriptive business functions such as the banking system and financial markets, along with problem solving through analytical planning, organizing and control methods. He argued that 80% of the coursework in MBA programs is dedicated to analytical functions such as finance, accounting, economics, decision science, and marketing to name a few. MBA programs provide little or no focus on what he terms pathfinding or visionary leadership and entrepreneurial thinking. In addition, business schools lack coursework on implementation or action which usually “translates into social action - getting things done through people” (Leavitt, 1989, p. 40).

Leavitt (1989) describes the systemic causes that contributed to the overemphasis on analytics in business schools. First, core business school content was born out of the early “unplanned intellectual coalition” (Leavitt, 1989, p. 40) of management theorists at the turn of the 20th century based their theory on the scientific method. In addition, the rise of the large organization brought an
increasing desire for measurement and observation in management studies. Second, there remained a desire to raise business school status from its trade school reputation to the level of other accepted academic disciplines. Research became the method of choice to accomplish reputation transformation; primarily a positivist approach utilizing quantitative research, resulting in a “quantitative revolution” (Leavitt, 1989, p. 41) in business schools during the 1950’s post war era. Success with quantitative analytical methods served to improve the academic reputation of the business schools, earning recognition from other disciplines and businesses to recruit business students. 

Third, in seeking students who would succeed in this quantitative environment, business schools placed greater emphasis on the quantitative GMAT score for admissions, selecting management candidates based on an “archaic, provincial and elitist…narrowly defined, IQ type intelligence” (Leavitt, 1989, p. 43). MBA candidates were necessarily drawn from undergraduate disciplines such as economics, mathematics or engineering, rather than the humanities or the arts, which foster creative thinking (Leavitt, 1989, p. 44). Fourth, pathfinders were viewed as deviant by both analytic types and behaviorialists. The analytics are at natural odds with the intuitive thinkers with “alien cognitive styles” (Leavitt, 1989, p. 43). The behavioralists became unlikely adversaries since they work to get things done through people in small groups and pathfinders tend to buck group norms (Leavitt, 1989)

Through this business schools had structurally suppressed transformational thinking, pathfinding, entrepreneurial leadership approach from the curriculum (Leavitt, 1989, p. 45). All of this served to reinforce the business school approach, teaching students to conform and obey while rejecting any alternate, experimental teaching methods, such as games and exercises, not based on analytical research (Leavitt, 1989). The effects of these systemic forces produced the reinforcement of the rational, analytical state, and led to a series of unintended consequences. First, innovative, intuitive thinkers were excluded from business schools and ultimately away from the large organization (Leavitt, 1989, p. 40), given their absence from the recruiting pool. Second, the heavy reliance on situational analysis for contingent management approaches (Leavitt, 1989) and environmental scanning for strategic planning places the manager in constant reactive mode to the environment, rather than leading and transforming it (Leavitt, 1989). Rather an image appears of new MBA’s armed with rational toolbox all making the same decisions given the same context (Leavitt, 1989). Leavitt ultimately proposes a business school curriculum which teaches in three domains: vision, values and determination. Vision comprises the creativity, innovation and imagination associated with long term thinking. He argued changes are necessary to create a “whole” MBA experience for the student.

Henry Mintzberg (2004) describes the MBA as “a 1908 degree with a 1950’s strategy” (p. 7). Mintzberg (2004) effectively argued that MBA programs select the wrong people and teach in wrong ways, resulting in a series of wrong consequences. Mintzberg’s (2004) argument holds that MBA education should be a reflective one designed for experienced, practicing managers rather than an attempt to pour a body of knowledge into an “empty vessel” (p. 9) not capable of connecting experience with teaching. Conventional MBA programs tend to admit those without any managerial experience, either right out of undergraduate school or two to four years of work experience, not required to be managerial (Mintzberg, 2004, p. 13). Thus, business schools admit from a pool of self selected candidates, seeking a move up or out of their current organization, rather than actual managers who have identified a willingness to accept responsibility to manage people (Mintzberg, 2004). A corollary to this discussion, is noted at the ‘wrong time’. Indeed some of these candidates may be the right candidates, but they seek the education at the wrong time. Mintzberg also argues the Graduate Management Admissions Test (GMAT) generates selection of potentially wrong candidates (Mintzberg, 2004). Mintzberg (2004) notes that the GMAT measures intelligence, which ultimately serves to identify good students rather than good managers).

Second, Mintzberg (2004) asserts the education is delivered in the wrong ways. The functional disciplines of accounting, finance, marketing, information technology, operations management, management science, and strategy separately comprise the total MBA curriculum in a disconnected manner. Likewise there is not a functional department focused on the study of management as with the functional specialties. Mintzberg highlights the irony that MBA students may never actually take a class on management. Business Policy came to represent integrated teaching about management for some time, but became usurped by the strategy revolution of Michael Porter in the 1980’s. Academics welcomed Porter’s strategy process, admiring its analytical approach to markets and selection among generic strategies based on hard data. This coursework replaced business policy as the capstone course of the MBA program. This left the primary management course within the MBA program as a narrowly focused, highly quantitative, analytical process that trains analysts, rather than one which develops managers (Mintzberg, 2004, p. 34-36). In addition, the lack of soft skill education, meaning actual management of people in organizations,
leading, ethics, remains a gaping hole in the MBA education (Mintzberg, 2004, p. 41).

Mintzberg (2004, pp 43-68) questions the methods business schools offers as real world practice, including the computer or entrepreneurial simulation, consulting projects and case study. Program simulations of marketing, financial and operations decisions to determine instantly how the decisions play out in the market, is at best an imaginary exercise, since this neither represents reality nor teaches management. Consulting projects seem beneficial to client and student superficially, and some good ideas arise from the exercise, however, the real learning takes place in a more deeply reflective mode, which faculty with full teaching loads do not have time to facilitate (Mintzberg, 2004). Case study analysis, used as a primary teaching method at Harvard Business School, estimated at over five hundred per student over the two years in the program, also falls short of providing management learning (Mintzberg, 2004). Mintzberg suggests that business schools provide students with a false sense of confidence that they can manage and make decisions in any environment. Mintzberg continues on with an assessment of the consequences of the MBA education which include corruption of: the educational process; managerial practice, established organizations; and social institutions.

Beyond the critique, Mintzberg (2004, pp. 238-275) aims to be constructive, and offers a series of propositions as a way to create a path to management education. This includes restricting education to practicing managers which leverages their experiences in the classroom allowing reflection and sense making of their experiences in a facilitative rather than directive environment. He also proposes a change in the purpose of business schools to achieve broader societal improvement through organization development, it can develop managers with that intent (Mintzberg, 2004, p. 379). He suggests restructuring the business schools as follows: First, the MBA should be decomposed into master of specialties, such as MBF, MBM (Masters in Finance, Masters in Marketing) to make clear that these are not producing management degrees, rather functional specialists and analysts. Second, create a Masters of Practicing Management (MPM) at two levels, one for those midcareer practicing managers sponsored by their companies and another for newly appointed managers to provide business function knowledge. Third, Development Programs for Practicing Managers to provide ongoing development, but delivered in innovative ways to encourage learning rather than the exploitive, income generating approaches used by universities currently (Mintzberg, 2004, p. 384).

Other academic voices echo Mintzberg’s volume in current articles. Bennis and O’Toole, (2005) find business schools failing on all fronts, with criticisms launched from a number of constituents: students, employers, the media, and even the deans of business schools themselves. They report that business schools fail to prepare graduates with useful skills, leadership ability and ethical behavior and point to the overemphasis on academic research as a means for measuring school success rather than preparing competent professionals. Bennis and O’Toole (2005) highlight the concern that business students spend the majority of their time analyzing numbers and calculating wealth maximization. Ultimately, business schools must balance the objectives of management education and knowledge creation to become more effective (Bennis & O’Toole, 2005).

Starkey and Tempest (2008) review the history and identity of the business schools, citing its struggle with a number of issues and project an uncertain future for the business school. Business views the business school as a provider of research, consulting and teaching for business consistent with the business purpose, while academics view business schools as knowledge creators about business.

This adds a new dimension to the purpose of the business school. Management schools can become more effective by incorporating social sciences, humanities and liberal arts into the curriculum along with “fundamentals of knowledge, with self knowledge, wisdom, and leadership, self development, integrative thinking, reflexivity…inspiring lessons of creativity, leadership imagination, inspiration” (Starkey & Tempest, 2008, p. 385). There may be a need to look to European business schools which have developed their own identities separate from US schools, which offer a more integrative, reflective approach to teaching management (Clarke, 2008). In addition, sustainability has become an imperative the business schools must address (Clarke, 2008, p. 54). The call for a new type of management education is clear, in order to create what may be described as the “metamanager, a new breed of leader” (Smith, 2007) through an exposure to the liberal arts and original theory as an overarching connecting tools among the various business disciplines.

Related Research:

In an effort to understand how business schools are responding, a number of studies have been completed. One study (Athavale, Davis & Myring, 2008) reviewed the ability of AACSB accredited business schools to integrate the curriculum for a better overall understanding of how business organizations functions, with an emphasis on interrelationships among disciplines rather
the disconnected delivery of coursework in separate functions. Through the literature review, the researchers make the case for multi-disciplinary, integrated approach to create and organization-centric view of business and management. This includes a call for integration from the AACSB. They surveyed 630 deans, with 143 respondents to determine the extent of integration, along with the dean perceptions of the integration process and business school practices for integration. The study concludes that while most deans agree with the need for disciplinary integration, few have made any significant progress toward integration, due to the time and financial investment to do so (Athavale, Davis & Myring, 2008).

Organizational Behavior (OB) represents the one class that teaches management principles and theory in the otherwise profit-maximizing themes emanating from business schools (Singh & Schick, 2008). An argument for a reevaluation of organizational behavior courses for greater relevance is offered by Singh and Schick (2008). They researched how business students perceive organizational behavior in comparison to other courses, found that the majority (over 72 percent) ranked financial management or accounting as either the first or second most important course. In responding to questions as to the importance of generating profits or treating employees fairly, students scored generating profits as higher than treating employees fairly. In addition, students perceived that CEO’s would choose profits over people.

Another study focuses on the desirability of the MBA with specializations. Specialization has become an increasing trend within the business schools, and would seem a reasonable idea, recalling Mintzberg’s (2004) concluding argument which includes specialization. Gupta and Saunders (2007) examined the employer desirability of specialized degrees which have increased in recent years. The results revealed that 96 percent of the job postings preferred a general MBA and only 4 percent required specialization. If skills were required for the position, it was referenced as an undergraduate degree requirement, with a general MBA. Yet, a review of the top thirteen MBA programs in the United States, found all offered a number of specialties, revealing quite a disconnect between what companies want and what universities offer (Gupta and Saunders, 2007).

One Example of Change

It appears there may be hope for change in the century-old MBA program. The FW Olin Graduate School of Business at Babson College may have tackled the lack of: pathfinding education (Leavitt, 1989), interdisciplinary approaches, ethics, liberal arts, qualitative approaches and leadership through a total redesign of its program in the mid-1990’s. For ten years, Babson College has been ranked number one for entrepreneurship by US News and World Report (Pinard & Allio, 2005). In addition, 97% of employers of Babson MBA graduates report that Babson graduates are good or excellent in their ability to develop creative solutions to business problems (Pinard & Allio, 2005). Babson has replaced the traditional curriculum with four to ten week interdisciplinary modules (Pinard & Allio, 2005). The first required course, called “Creative Management in Dynamic Organizations” focuses on leadership, ethics and innovation. Through the creativity stream students practice and demonstrate their understanding of the creative process (Pinard & Allio, 2005).

Conclusion:

Henri Fayol (1916) argued for management education nearly a century ago. Yet it appears that Fayol’s call has not yet been answered, at least not through the MBA program. Fayol posited the absence of accepted management theory as the cause for the gap in management teaching. Today, lack of management teaching is not due to lack of theory, but a number of separate forces both internal and external to business schools which offer the MBA program. The critique is clear, and perhaps the accrediting bodies, such as the IACBE and AACSB could take up an advocacy role for MBA reform.

References available upon request.
ABSTRACT
Transformational leadership has emerged as a dominant leadership style necessary for both individuals and organizations alike in the twenty-first century and is extensively supported by academic and organizational leaders in the published literature. However, the current literature lacks an exploratory analysis of the relationship between resilience and the demonstration of transformational leadership behaviors. Given the past decade of dynamic change, this is a topic of importance. Therefore, the relationships among resilience, key demographics, and the transformational leadership behaviors of frontline sales professionals were explored. The effect that the independent variables, the dimensions of resilience and key demographics including gender, age, education, years of experience, and salary level, have on the transformational leadership behaviors was measured through an online survey panel of 356 sales professionals. The results indicated a significant positive relationship between resilience and transformational leadership behaviors which explains approximately 22.7% of the variance in the transformational leadership behaviors demonstrated by the frontline sales professionals in this study.

KEYWORDS
Transformational Leadership, Resilience, Frontline Sales Professionals, Organizational Development, Change, Leadership

1 INTRODUCTION
There is a gap in the literature that unequivocally associates these two concepts, transformational leadership behaviors and resilience. Additionally, while researchers have advocated for transformational leadership flowing through all levels of an organization, much of the references and empirical research have focused on upper or mid-level managers. This study focuses on the self-assessed level of resilience and the transformational leadership behaviors demonstrated by sales professionals operating on the frontlines of their respective organizations. Sales professionals are individuals who have to drive the revenue-line of the business while being focus on the competitive landscape that may require them to change or alter direction at any given time. Therefore, the primary purpose of this study was to explore the impact of resilience and key demographics on the transformational leadership behaviors demonstrated by sales professionals. The secondary purpose of this research study included the following: (a) determining whether transformational leadership behaviors of sales professionals differed relative to various key demographics and (b) which of the dimensions of resilience and key demographics are most predictive of the transformational leadership behaviors demonstrated by frontline sales professionals.

2 LITERATURE REVIEW
A. Transformational Leadership
There are numerous theories of leadership that provide the foundation for what are referred to as the relational theories (transactional and transformational leadership theories). The term transformational leadership was first suggested by J.V. Downton in 1979 and was coined to describe the connection, relationship, or influence between the leader and their direct reports. Transformational leadership was first suggested by J.V. Downton in 1979 and was coined to describe the connection, relationship, or influence between the leader and their direct reports. Transformational leaders incorporate inspiration, enthusiasm, and motivational support to encourage their team members to see the importance of the higher goal of the task or work at hand and to rise up to meet these demands (Bolman & Deal, 1997; Sparks & Schenk, 2001; and Tucker, 2004). Transformational leaders are aware of the overall performance of the whole team but are also focused on encouraging each person to fulfill his or her full potential (Bass, 1985). As stated by Bass (1985), leaders demonstrating transformational leadership, usually have high ethical and moral values. Therefore, transformational leadership goes beyond meeting the basic needs of subordinates (Kouzes & Posner, 1987). It takes the relationship between the leader and the followers to the next level (Burns, 1978, p. 20). A joint purpose or common goal results and, therefore, transformational leaders create, change, and improve the culture within the organization and, ultimately, heighten the performance of all participants – from the leader to the followers (Burns, 1978, p.20; Kouzes & Posner, 1987).

Bass (1990) indicated that leadership that is transformational can result in significant alterations in individuals, the corporations in which they are employed, and society as a whole (p. 17). Bass further suggested that leadership that is transformational could have an impact on the overall
organization’s performance. According to the research literature on this topic, transformational leadership has been strongly associated with positive job characteristics including: employee job satisfaction, organizational commitment, organizational effectiveness, and employee productivity (Dunham-Taylor, 2000; McNeese-Smith, 2001; and Taylor, 1996). Therefore, with this level of positive impact on organizational goals, the question on whether or not transformational leadership could be documented to have a positive financial impact for an organization was questioned. Barrick, Day, Lord, and Alexander’s (1991) research stated that transformational leadership can positively impact an organization financially. They estimated that the financial impact of transformational leadership was approximately “25 million dollars (after taxes) through an executive’s average career span” (p.19). Maister (2001) and Kotter and Heskett (1992) concurred that leadership from individuals working within organizations has a positive impact on the organization’s performance. Maister (2001) further stated that an organization’s bottom line could be improved by the quality and level of the customer relationships established which are job components driven by creatively inspired and motivated employees who are satisfied, content, and fulfilled in their job. According to Maister (2001), an employee’s job satisfaction is positively impacted by the values and standards of the organization, the training and coaching, and elements of empowerment.

B. Resilience

A decade into the twenty-first century, and organizations and individuals alike are under pressure to keep up and to change. In order to manage today, resilience is needed at all levels of an organization (Luthans, Youssef, & Avolio, 2007). Conner (1993) remarked that the word resilience is a derivative of a Latin term which suggests one’s ability to jump or bounce back. Although the term resilience has no widely accepted definition, most of the definitions proffered do possess several similarities. First, as outlined by Higgins (1994), the word resilience implies growth or recovery, either mentally and/or physically. In addition, Garvey (1993) supplemented the literature on the awareness of individuals being resilient after surviving various psychological crises. Resilient individuals learn how to adapt or react in the presence of stress or trauma and are able to function in a more effective manner when stress, adversity, or crises are encountered because past experiences and knowledge provide them with skills to fall back on (Bolgar & Hulse-Killacky, 2006; Reinmoeller & van Baardwijk, 2005).

Second, the term resilience implies an act of strength, courage, or determination which is frequently referred to as snapping back, possessing the ability to respond to a frustrating situation and/or persisting in the face of adversity, modifying one’s behavior or environment, and negotiating stress and obstacles (Colgate, 1995). “A resilient person perseveres until a task is completed or the goal is achieved” according to Dyer & McGuinness (1996, p. 277).

Third, the concept of resilience implies that one has influence and impact on the situations and environment in which one resides and works. It is through these experiences and/or situations that Flach (1988) proposed that being resilient is a strength that most individuals can learn in order to turn trauma and crises in one’s life to one’s own benefit instead of falling victim to one’s environment. The possibility that individuals can learn to more effectively handle crises and trauma seems to corroborate Rotter’s (1966) theory that one’s perception of the positive and negative events that occur in life are directly related to one’s own actions or behavior.

As remarked by Siebert (2005), resilient individuals cope or manage better under significant disruptive change and possess the ability to maintain good health and energy even when faced with constant pressure and stress. Change, pressure, and stress are elements visibly present in this twenty-first century (Marshak, 2002). Consequently, resilient behavior at the individual level has begun to take on significant meaning within organizations (Norman et al., 2005). According to Norman et al. (2005), as a psychological and organizational strength, resiliency has received attention from both behavioral scholars and managers alike. While the world and especially the corporate environment is changing at a rapid rate, employees, managers, leaders, and organizations are grappling with change as it occurs and the need to take action as quickly as change is initiated (Deevy, 1995). Deevy recognizes that a gap exists in many organizations and that the “challenge of organizations today is to develop a new organizational form; one with the capability for continuously responding to change” (1995, p. 6).

Research suggests that personal resilience can improve organizational performance and, therefore, is important to develop this strength in individuals in order to encourage them to possess a greater capacity for change (Brooks & Goldstein, 2003; Deevy, 1995; and Maddi & Khoshaba, 2005). Research by Wanberg and Banas (2000) further suggested that individuals with greater resilience are more adept at accepting change as it occurs in a reorganizing workplace.

When taking into consideration the revenue-generating role fulfilled by sales professionals for any organization, one can see why transformational leadership, resilience, and change are key topics of interest. Sales professionals need strong leadership in order to achieve their mission, vision, and performance goals but must also be resilient and able to deal with rejection and adverse conditions during times of almost constant change, ambiguity, and uncertainty.

3 METHODS

The research objective of this study was to investigate the impact of resilience and key demographic characteristics on the transformational leadership behaviors as demonstrated by an online survey panel of frontline sales professionals.
A. Participants
The sample consisted of a previously recruited, computer-randomized group of approximately 2250 full- or part-time sales professionals who were employed and live in the United States and represent a panel of research participants obtained from MarketTools, a market research firm. The sample of research participants or frontline sales professionals were identified based on current employment in a sales profession as specified on their profile retained by MarketTools, representative of both genders, over the age of 18, and representing industries both large and small. The profile of prospective panelists was validated with third party consumer financial institutions to confirm that the prospective panelists or sample was who they say they were and do live and work in the United States. Once the key attributes were identified as outlined above, a list of prospective research participants was identified and then randomized multiple times per minute until the final panel was pulled.

B. Data Collection
This research project incorporated three questionnaires into one survey: The first part of the questionnaire was the Leadership Practices Index (LPI - Self-form) comprising 30 questions to measure the transformational leadership behaviors of sales professionals (Kouzes & Posner, 1987). The second section of the survey consisted of the 70 questions from the Personal Resilience Questionnaire (Conner, 1993) which measures the level of resilience of sales professionals. The third section of the survey included the demographic survey comprised of 9 questions which are reflective of demographic characteristics well documented in the organizational and social science literature as ascertained by Muchinsky and Tuttle (1979). This quantitative study utilized two well-documented, reliable, and validated research instruments, the LPI (Kouzes & Posner, 2001), the PRQ (Connor, 1993), and routine demographic questions.

4 RESULTS
The dimensions of resilience and transformational leadership behaviors of frontline sales professionals are correlated (Hypothesis 1). There was no statistically significant difference in the total transformational leadership behaviors demonstrated by male and female sales professionals working on the frontlines of various organizations (Hypothesis 2-1). There was, also, no statistically significant relationship between the total transformational leadership behaviors demonstrated and the age of the frontline sales professionals (Hypothesis 2-2). There was also insufficient evidence to link the level of education attained and the transformational leadership behaviors demonstrated by frontline sales professionals (Hypothesis 2-3). There was no statistically significant relationship between the total transformational leadership behaviors demonstrated and the job tenure or years of work experience in their current position for frontline sales professionals (Hypothesis 2-4). There was no statistically significant difference in transformational leadership behaviors demonstrated by frontline sales professionals possessing various income levels (Hypothesis 2-5). Additionally, demographics variables were not a statistically useful predictors for determining the transformational leadership behaviors demonstrated by frontline sales professionals which confirms the results previously published in the research literature.

5 DISCUSSION
The objective of this independent investigation was to assess the impact of resilience and key demographics on the transformational leadership behaviors demonstrated by frontline sales professionals. The data obtained in this study confirms that the level of resilience of frontline sales professionals can be used to predict a portion of the level of transformational leadership behaviors demonstrated throughout organizations of varying size. The results of this independent research study can have a potential impact on performance management systems of organizations by further including an assessment of transformational leadership skills possessed by not only individuals in traditional hierarchical leadership positions such as upper- and mid-level management but throughout the entire organization. Additionally, this investigation provides further evidence to suggest there might be some benefit in training individuals to build transformational leadership behaviors and skills as well as in learning to possess a resilient capacity to change. Therefore, these findings have several implications for organizations and individuals alike.

Key points from the research literature and the results of this research study:
1. Front line sales professionals demonstrate transformational leadership behaviors similar to the leadership behaviors found in other professional areas.
2. Transformational leadership is important in the current business environment and it makes sense for transformational leadership behaviors to exist and be emphasized at all levels of an organization.
3. If transformational leadership needs to exist at all levels of an organization, and transformational leadership can be learned, then transformational leadership development and training should be implemented at all levels within an organization.
4. Resilience allows individuals to make positive adaptations as change occurs.
5. Resilience is correlated and predicts a low to moderate portion of the transformational leadership behaviors demonstrated by sales professionals operating on the frontline of organizations.
6. Since resilience, like transformational leadership, can be learned, then resilience should be part of corporate developmental training programs if organizations want to create a competitive advantage in the twenty-first century.
Summary

Business leaders and academic scholars seem to agree that resilience and transformational leadership are both crucial for success in the twenty-first century (Harland et al., 2005, Luthans, 2002; Luthans & Avolio, 2003). This study indicates that in frontline sales professionals, three of the dimensions of resilience explain 22.7% of the variance of the transformational leadership behaviors demonstrated by frontline sales professionals. Given the frenetic pace of change and the difficulty of leading while continuing to thrive in today’s organizations, the capacity of developing a transformative style of leadership throughout an organization while continuously building skills at being resilient is a very promising area for continued academic and organizational research (Conger, 2004).

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Couponing, Frugality, Thrift Mavenism, and the Love of Shopping: Related or Not?

Julie M. Szendrey, D.B.A., PCM
The DeVille School of Business
Walsh University
2020 East Maple Street
North Canton, OH 44720, USA
(330) 490-7124
jszendrey@walsh.edu

ABSTRACT
This research evaluates the characteristic of coupon proneness, in comparison to individual consumer characteristics of frugality, enjoyment/antipathy of shopping, and thrift mavenism, and the demographics of perceived social class, education level, household size, gender, and age. Utilizing a survey distribution, a combined sample of n = 399 adults was evaluated, representing “couponers” in attendance at a coupon seminar versus a general population sample. Results indicate that relationships exist between coupon proneness and several of the tested consumer behavior traits and demographic variables. Additionally, the frugality scale was confirmed to be two-dimensional and tested in accordance with coupon proneness. Suggestions for enhancing the effectiveness of coupon promotions are provided in conjunction with research and managerial implications.

Keywords
Coupon, frugal, thrift, shopping, maven, consumer behavior

1 INTRODUCTION
Who are these people referred to as “couponers?” What motivates them to slave over the Sunday newspaper inserts to save money on all types of purchases? And then brag about their savings? Are they truly frugal? Do they really enjoy shopping or not? Do their friends refer to them as being “thrift mavens” of the marketplace? And demographically, who do they represent? The objective of this research is to determine the characteristics of those consumers who are more prone to using coupons.

2 LITERATURE REVIEW
Frugality and Coupon Proneness
The driving force behind this research is the reevaluation of the relationship tested between the consumer behavior trait of frugality, defined by Lastovicka, Bettencourt, Hughner, and Kuntze (1999), and coupon proneness (Lichtenstein, Netemeyer, & Burton, 1990). Frugality, as defined by Lastovicka et al. (1999, p. 88) is “a unidimensional consumer lifestyle trait characterized by the degree to which consumers are both restrained in acquiring and in resourcefully using economic goods and services to achieve longer-term goals.” Although frugal individuals focus on saving money, the original research indicated that coupon proneness of consumers, the degree to which consumers respond to coupon offers (Lichtenstein et al., 1990), was not related to frugality (r = .14, p > 0.05). As referenced in a Tightwad Gazette (Dacyczyn, 1998), coupon usage may not lead to total resource savings when all things are considered. However, with the present day “popularity” of coupon usage in a struggling economy, can such a relationship be shown to be statistically significant? Does it help to target those who are frugal to increase coupon usage?

Additional research has evaluated both frugality and coupon proneness in terms of the consumer characteristic of value consciousness. Value consciousness is defined as “a concern for paying low prices, subject to some quality constraint” (Lichtenstein et al., 1990, p. 56). Work by Shoham and Bencic (2004) indicated a positive correlation between frugality and value consciousness, while work by Jayasingh and Eze (2010), Lichtenstein et al. (1990), and Swaminathan and Bawa (2005) indicated a positive relationship between coupon redemption behavior and value consciousness. Although Lichtenstein et al. (1990) confirmed that “coupon-responsive behavior” (redeeming coupons) is a combination of both the psychological constructs of value consciousness and coupon proneness, this research focuses on the construct of coupon proneness in evaluating coupon usage to maintain consistency with the original work of Lastovicka et al. (1999). Consequently, the relationship between coupon proneness and frugality is reevaluated in this research.

Thrift Shoppers, Thrift Mavens, and Market Mavens
Thrift shoppers, those who buy previously owned items, are similar to frugal consumers in that both groups tend to plan ahead to maximize savings; however, research by Bardhi and Arnould (2005) indicated that thrift shoppers enjoy the shopping experience while frugal shoppers do not (Bardhi &
Arnould, 2005). A hedonic element is present for thrift shoppers that is not present for those who are frugal in that thrift shoppers enjoy the satisfaction obtained by saving money while shopping. The consumer characteristic of love/antipathy of shopping is further discussed in the following section.

Christiansen and Snepenger (2005) defined a “thrift maven” as being “someone who could and does transmit information about the thrift market to other individuals” (p. 323). Thrift mavens actively participate in thrift shopping; however, they possess the “generalized knowledge” and desire to share this knowledge with fellow consumers. Thrift mavens were shown to be frugal ($r = .359, p < 0.01$, two-tailed) in the research by Christiansen and Snepenger (2005). Although reference was made to thrift mavens possibly providing coupons to other consumers, coupon proneness in relationship to the characteristic of thrift maven was not tested. Price, Feick, and Guskey-Federouch (1988) indicated that market mavens, who focus on products new (as opposed to used) to the marketplace, are avid coupon users. Are thrift mavens also coupon prone?

The Love/Dislike of Shopping and Coupon Proneness

The variable of shopping antipathy (dislike) was included in this research due to the variation in results noted in Bardhi and Arnould (2005) which indicated that frugal consumers do not enjoy shopping while thrift shoppers do enjoy shopping. Shopping antipathy is defined by the degree to which a consumer believes shopping is an unpleasant and unlikable activity to engage in, a reverse of the shopping enjoyment (grocery) scale developed by Urbany, Dickson, and Kalapuranakal, 1996.

Price et al. (1988) indicated that market mavens enjoy the satisfaction gained from being smart shoppers and are heavy coupon users. Does a similar relationship exist regarding couponing such that coupon proneness relates to a love or dislike of shopping?

Demographics

The demographic variables included in this research are listed as the following and explained by supporting documentation within the Hypotheses Section: age, gender, household size, perceived social class, and education level.

3 HYPOTHESES

Although the initial research by Lastovicka et al. (1999) did not show a relationship between frugality and coupon proneness, a positive association deems likely in the frugal individual focus on saving money while coupon usage is viewed as a means to save money. Value consciousness is indicated to be a trait of frugal (Shoham & Brencic, 2004) and coupon prone (Jayasingh & Eze, 2010; Lichtenstein et al., 1990; Swaminathan & Bawa, 2005) individuals. Therefore the original hypothesis is proposed:

**H1:** Frugality is positively associated with coupon proneness.

The original work by Lastovicka et al. (1999) referred to the trait of frugality as being one-dimensional, subsequent research indicated two subfactor loadings within the frugality construct, those items focusing more on the acquisition of resources in comparison to the usage of resources (Szendrey & Bruce, 2011). The following two hypotheses are proposed to test each of these subfactors in comparison to coupon proneness.

**H2:** Frugality (acquisition) is positively associated with coupon proneness.

**H3:** Frugality (usage) is positively associated with coupon proneness.

Research by Christiansen and Snepenger (2005) indicated a significant relationship between thrift mavenism and value shopping of which value shopping focuses on pursuing sales, discounts, and bargains (Arnold & Reynolds, 2003). Is value increased by using coupons to obtain the discount/bargain?

**H4:** Thrift mavenism is positively associated with coupon proneness.

Based on the research by Price, et al. (1988), it is hypothesized that shopping antipathy (dislike) and coupon proneness are negatively related, with implications of the reverse such that consumers who like to shop also more likely to use coupons.

**H5:** Shopping antipathy (dislike) is negatively associated with coupon proneness.

Household size (the number of individuals living in one’s household) was determined to be a significant positive variable in association with the “value of coupons used per week” ($t = 3.77, p < .00$) in Price et al. (1988); however, a significant relationship was not shown between household size and thrift mavenism in Christiansen and Snepenger (2005). A positive association is hypothesize between household size and coupon proneness for this research. Households containing more people, whether children or adults, have greater operating costs which influence the household “shoppers” to reduce costs by using coupons.

**H6:** Household size is positively associated with coupon proneness.

Baker and Hagedorn (2008) indicated a significant negative correlation between age and “frugality-distrust” ($r = -.20, p < .01$, two-tail test), a variable similar in nature to frugality. No significant relationships existed between age and “thrift mavenism” in Christiansen and Snepenger (2005) nor age and frugality in Lastovicka et al. (1999). A negative association is hypothesized between age and coupon proneness for this research because it is anticipated that as an individual ages, less focus is placed on saving money in
comparison to earlier years in life when financial resources are typically less abundant.

H7: Age is negatively associated with coupon proneness.

Ashworth, Darke, and Schaller (2005) indicated that men are less likely to use coupons than women (p. 301) while Price et al. (1988) showed that “market mavens” are more likely to be female than male. Christiansen and Snepenger (2005) indicated no relationship between gender and thrift mavenism, as men are equally likely to be thrift mavens as women. For this research the following is hypothesized based on the work of Ashworth et al. (2005).

H8: Females have a greater tendency towards coupon proneness than males.

Level of education was determined not to be significant in comparison to coupon proneness in Price et al. (1988) nor in comparison to thrift mavenism in Christiansen and Snepenger (2005). Education level was found to be negatively related to frugality-distrust \( (r = -0.25, p < 0.01, \text{ two-tail test}) \) in Baker and Hagedorn (2008). For this research a negative relationship is hypothesized between education level and coupon proneness in that those individuals with less education typically have lower income levels and therefore use coupons more frequently to compensate for less financial resources.

H9: Education level is negatively associated with coupon proneness.

Consumers indicating lower “thrift maven” characteristics had significantly higher income levels, with income being the only significant demographic difference noted in research by Christiansen and Snepenger (2005). Income negatively correlated with frugality-distrust \( (r = -0.15, p < 0.05, \text{ two-tailed test}) \) in Baker and Hagedorn (2008), although no significant relationship existed between income and frugality in Lastovicka et al. (1999).

For this research, the variable “perceived social class” was used because incomes vary inconsistently by region of the U.S. Furthermore, Schaninger (1981) showed that social class is superior to income in segmenting shopping behaviors. A negative relationship is hypothesized between social class and coupon proneness in that those individuals with less financial resources use coupons more because they are more focused on trying to save money.

H10: Perceived social class is negatively associated with coupon proneness.

Individuals interested in couponing are presumed to be more “coupon prone” than those in the general population. Those who attend related events were determined to be “couponers” and consequently show greater coupon proneness than the general population.

H11: “Couponers” show greater coupon proneness in comparison to the general population.

4 METHODOLOGY

Sampling
To test the proposed hypotheses, data was collected using a survey questionnaire containing validated scales discussed in the Measurements section. The questionnaire was administered to the attendees of a “coupon usage workshop” open to the general public \( (n = 79) \) and to the general public through various venues, providing a total sample of \( n = 399 \). To ensure a 95% confidence level with a 5% acceptable sampling error, a minimum sample size of \( n = 385 \) was exceeded for this research. Data were evaluated for missing data, outliers, skewness, kurtosis, homoscedasticity, and linearity. Multicollinearity did not exist between the variables being tested with all correlations less than .392.

Demographics
Age (range = 18-74, mean = 35.13, s.d. = 13.05)
- 18-24 years: 28.4%
- 25-34 years: 22.9%
- 35-44 years: 23.8%
- 45-54 years: 15.8%
- 55-64 years: 6.6%
- 65-74 years: 2.5%

Gender (43.6% male, 56.4% female)

Perceived social class:
- Lower: 3.3%
- Lower-middle: 21.8%
- Middle: 56.1%
- Upper-middle: 15.3%
- Upper: 1.1%

Education level obtained:
- Elementary: 0.0%
- High School: 38.1%
- Associates: 12.0%
- Bachelors: 37.3%
- Masters: 11.5%
- Doctoral: 0.8%

Total people in household (range = 1-8, mean = 3.39; s.d. = 1.50)

Measurements
Coupon proneness was measured using a five item, six-point, non-comparative itemized rating scale from \( 1=\text{definitely disagree} \) to \( 6=\text{definitely agree} \). For each participant, the coupon proneness score was the summation of the items. The scale provided good reliability when developed and used by Lichtenstein et al. (1990) \( (\alpha = .88) \). This research further indicated good reliability \( (\alpha = .92) \). Principle component factor analysis using the varimax rotation method was used (Mertler & Vannatta, 2005) with all factor loadings greater than the recommended 0.50 to be retained in the analysis (Hair, Black, Babin, Anderson, & Tatham, 2006). The five items loaded into a single component accounting for 76.1% of total variance. Mean = 18.2, standard deviation = 6.92.

Frugality was measured using an eight item, six-point, non-comparative itemized rating scale ranging from \( 1=\text{definitely disagree} \) to \( 6=\text{definitely agree} \). For each participant, the
frugality score was the item summation. The scale-provided good reliability when developed and used multiple times within the Lastovicka et al. (1999) study (\(\alpha = .85, .87, .88, .73, \text{and} .80\)). This research further indicated good reliability (\(\alpha = .77\)). Principle component factor analysis for frugality loaded on two subfactors, as noted in previous research by Szendrey and Bruce (2011). Items 5-8 pertaining to acquisition frugality accounted for 41.47 % of total variance while usage frugality accounted for 15.95%.

**Thrift mavenism** was measured using the six item, six-point, non-comparative itemized scale rating ranging from 1=definitely disagree to 6=definitely agree. For each participant, the thrift mavenism score was the summation of the items. The scale provided good reliability when developed and used within the Christiansen and Snepenger (2005) study (\(\alpha = .89\)). This research further indicated good reliability (\(\alpha = .92\)) with all six items. All factors loaded on a single factor, accounting for 71.24% of total variance.

**Shopping antipathy** was measured using a five item, six-point, non-comparative itemized scale rating ranging from 1=definitely disagree to 6=definitely agree. For each participant, the shopping antipathy score was the summation of the items. The scale provided good reliability when developed and used within the Urbany et al. (1996) study (\(\alpha = .93\)). For this study the original scale wording was slightly modified to reference shopping in general as opposed to specifically grocery shopping (Appendix). This research scale had a reliability value less than the recommended value of 0.70 with all five items; however, item #4 was dropped and reliability increased significantly (\(\alpha = 0.92\)) for the remaining four items (Cronbach, 1951; Hair et al., 2006). All items loaded on a single factor, accounting for 79.95% of total variance.

**Couponers** were determined to be those in attendance at a “couponing seminar” conducted by “couponing experts.” Attendance was used to confirm interest in “coupon usage.”

5 RESULTS

Hypothesis 1, which compared frugality to coupon proneness, was tested using bivariate regression rather than in the following mentioned multiple regression analysis, to avoid multicollinearity with the tested subfactors of acquisition and usage frugality. Frugality proved to be statistically significant.

Multiple regression analysis was performed to test the overall fit of the quantitative independent variables proposed for coupon proneness. Five variables proved to be significant of the original six (\(F(6,385) = 22.103, p = 0.000, R^2_{\text{adj}} = .245\)). Additionally, each independent variable was evaluated to determine its statistical significance in relationship to the degree of coupon proneness. Categorical variables were evaluated accordingly.

Note: Please contact the author for correlation matrix data.

<table>
<thead>
<tr>
<th>H#: Independent Var. vs. Coupon Proneness</th>
<th>Supporting Test Statistic</th>
<th>Significant Result (+/-)</th>
</tr>
</thead>
<tbody>
<tr>
<td>H1: Frugality (\alpha) (\beta = .381) (mean=39.0, s.d.=5.05)</td>
<td>(t = 8.199) (p = .000)</td>
<td>Yes (+)</td>
</tr>
<tr>
<td>H2: Acquisition Frugality (\beta = .154) (mean=18.8, s.d.=3.45)</td>
<td>(t = 3.187) (p = .002)</td>
<td>Yes (+)</td>
</tr>
<tr>
<td>H3: Usage Frugality (\beta = .197) (mean=20.2, s.d.=2.61)</td>
<td>(t = 3.985) (p = .000)</td>
<td>Yes (+)</td>
</tr>
<tr>
<td>H4: Thrift Maven (\beta = .278) (mean=18.75, s.d.=7.77)</td>
<td>(t = 5.973) (p = .000)</td>
<td>Yes (+)</td>
</tr>
<tr>
<td>H5: Shop Antipathy (\beta = -1.15) (mean=11.88, s.d.=5.31)</td>
<td>(t = -2.577) (p = 0.010)</td>
<td>Yes (-)</td>
</tr>
<tr>
<td>H6: Household Size (\beta = .068) (t = 1.512) (p = .131)</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>H7: Age (\beta = .106) (t = 2.232) (p = .026)</td>
<td>No (^b)</td>
<td></td>
</tr>
<tr>
<td>H8: Gender (t = -6.686) (p = .000)</td>
<td>Yes (Females more)</td>
<td></td>
</tr>
<tr>
<td>H9: Education (t = -2.658) (p = 0.008)</td>
<td>Yes (Less edu., more coupon pr.)</td>
<td></td>
</tr>
<tr>
<td>H10: Social Class (t = .055) (p = .956)</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>H11: Couponer vs. General Population (t = 1.654) (p = .000)</td>
<td>Yes (different)</td>
<td></td>
</tr>
</tbody>
</table>

Note: Please contact the author for correlation matrix.

\(^a\) See comments on H1: Frugality in Results section.
\(^b\) See comments on H7: Age in Conclusions section.

6 CONCLUSIONS

Of the eleven proposed hypotheses tested, eight were proven to be statistically significant. Several results supported previous research with many new “takeaways” noted as follows.

Frugality was proven to be statistically significant in comparison to coupon proneness, therefore challenging the original work of Lastovicka et al. (1999). Additionally, the construct exists as the two factors of acquisition and usage frugality. These separate variables were included in the multiple regression analysis, resulting in a slightly larger standardized beta coefficient for usage frugality over acquisition frugality. Such results imply that coupon usage is more prevalent amongst frugal individuals and more specific to how they use products rather than how they acquire. Such results are interesting in that we typically think of coupons being used during the time of acquisition; however, the decision to use a coupon may relate more so to product usage, such as when considering a repeat purchase.
Coupon proneness is strong amongst “thrift mavens” and those who love to shop. As previously noted, thrift mavens thrive on the thrift shopping experience and find pleasure in educating others on thrifting opportunities. Coupon proneness goes “hand-in-hand” with the interests of thrift mavens. A concern for marketers may be the loss of control in communication because thrift mavens may “dominate” the marketing communication channels through their known expertise and word-of-mouth presence. Staying in “good terms” with thrift mavens is a benefit to marketers.

Demographically, females and individuals with lower education levels are more prone to coupon usage. A combination of enjoying the shopping/saving experience in conjunction with having to save money due to limited resources provides a target market for coupons as promotional tools. Marketers at consignment/resale stores should give consideration to offering coupons, similar to that done by full-price retailers.

Hypothesis 7, which tested age in relationship to coupon proneness, was proposed as a negative relationship based on Baker and Hagedorn (2008). However, the results of this research indicated a positive relationship; therefore, disproving the proposed hypothesis. This relationship should be further tested in future research.

LIMITATIONS AND CONSIDERATIONS:
A convenience sample was utilized for the collection of data in this research. Although the sampling was nonrandomized, the sample size exceeded the required number to ensure a 95% confidence level with a 5% acceptable sampling error. Furthermore, the demographics of the sample were well distributed, providing normally distributed data for the analysis. In general, caution should be taken in the review and application of the findings while suggestions for future research are made.

This research focused on the self-assessment characteristics of coupon behavior rather than actual consumer behavior, as if collected in a shopping environment. While the scales used in this study have good face and predictive validity, participants may have over or understated their past or unknown future redemption practices.

Because materialism is considered an opposite consumer behavior trait to that of frugality (Lastovicka et al., 1999), future coupon research may consider evaluating coupon proneness amongst materialists. Additionally, as tested in the work by Swaminathan and Bawa (2005), specific coupon usage can vary in regard to the types of products the coupons are applied towards. Future research may consider evaluating coupon usage relating to product types.

In closing, the author hopes marketers, researchers, and consumers will benefit from this added knowledge to the study of consumer behavior and welcomes feedback from scholars and practitioners.

ACKNOWLEDGEMENTS
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APPENDIX

Shopping antipathy scale as modified from original Urban et al. (1996).

1) I find shopping frustrating.
2) I find shopping is mostly a pain.
3) I find shopping is mostly a bore in any store.
4) I enjoy most kinds of shopping (r).
5) I find shopping to be boring most of the time.

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Competition and Efficiency of UAE Commercial Banks

Lawrence Tai
College of Business
Zayed University
P.O. Box 4783
Abu Dhabi, UAE
+971 50-281-1054
Lawrence.Tai@zu.ac.ae

ABSTRACT
This paper explores the competition and efficiency of the UAE banking sector by using a sample of UAE national banks that operated between 2003 and 2010. The Lerner index was calculated to provide evidence on the degree of banking competition in the UAE. The findings reveal that the Lerner index was on an increasing path, which can be interpreted as an evidence for the existence of more competition in the UAE banking sector. The DFA approach was employed to calculate the efficiency scores of the sampled banks. Regression results show that larger banks tend to be more efficient than the smaller ones.

Keywords
Competition, efficiency, commercial banks, Lerner index, distribution-free approach (DFA)

1 INTRODUCTION
This paper examines the degree of competition and efficiency of publicly listed national banks in the UAE between 2003 and 2010.

The banking sector is crucial to the development of any economy; it is also one of the major driving forces of economic growth in developing countries. Banks are special financial intermediaries whose operations are unique in financial markets and impact strongly on an economy. Hence, research on competition and efficiency of the banking sector has important policy implications. A higher degree of competition and efficiency in banking markets is expected to provide welfare gains by reducing the prices of financial services and thereby accelerating investment and growth.

The goal of this research is to study the competition and efficiency of commercial banks in the UAE. As commercial banks play a vital role in the financing of an economy, banking competition and efficiency exert an important impact on a country’s economic development. Bank performance has been a key issue particularly in developing countries as commercial banks are the dominant financial institutions in these countries and they represent the major source of financial intermediation. Evaluating their competition and efficiency is crucial to depositors, owners, potential investors, managers, and regulators.

2 LITERATURE REVIEW
A large number of studies have been conducted on measuring competition and efficiency in the banking industry. Two methods that have been applied to estimate the degree of competition for commercial banks are the Lerner index and Panzar and Rosse’s H-statistic. The Lerner index measures the markup of price over marginal cost, indicating the market power of a bank. Studies that have used the Lerner index include Kubo (2006) to examine the level of competition of the Thai banking industry and Pruteanu-Podpiera, Weill, and Schobert (2008) to investigate the degree of competition of the Czech banking industry. The H-statistics is defined as the sum of the factor price elasticities of interest income with respect to borrowed funds, labor, and physical capital. Abbasoglu, Aysan, and Gunes (2007) used the H-statistic to study the level of competition of the Turkish banking sector. Since the H-statistic is a measure of competition for the banking industry as a whole, the Lerner index is used in this study as the research requires individual measures of competition for each bank in the sample through the 2003-2010 period instead of aggregate measures for the full sample.

In the literature, two major approaches have been taken to measure efficiency in the banking industry: parametric and nonparametric. Nonparametric approaches like data envelopment analysis (DEA) consider the whole distance from the frontier as inefficiency. These methods are therefore deterministic as they do not include the possibility of measurement errors in the estimation of the frontier and hence they may overestimate the inefficiencies. DEA approach has been used by Ozkan-Gunay and Tektas (2006) to study the efficiency of the Turkish banking sector, by Chang and Chiu (2006) to examine the efficiency of Taiwan’s banking industry, and by Fitzpatrick and McQuinn (2005) to investigate the efficiency of UK and Irish credit institutions, just to name a few.

Parametric approaches such as the stochastic frontier approach (SFA) and the distribution-free approach (DFA) do not suffer from the above-mentioned drawback. SFA makes
some distributional assumptions to disaggregate the residual from the frontier into an inefficiency term and a random disturbance, which are arbitrary. SFA has been used by Inui, Park and Shin (2008) to study the comparative efficiency of Japanese and Korean banking and by Fitzpatrick and McQuinn (2005) to investigate the efficiency of UK and Irish credit institutions. DFA has been proposed to resolve the major criticism of the SFA, namely its distributional assumptions, by adopting more intuitive assumptions to separate inefficiency from random disturbance. DFA has been used by Matousek, R. and Taci, A. (2004) and by Pruteanu-Podpiera, Weill, and Schobert (2008) to examine the efficiency of the Czech banking industry.

This research is the first attempt to investigate the degree of competition and efficiency of commercial banks in the UAE. The Lerner index is used to measure competition and DFA is employed to measure efficiency.

3 METHODOLOGY

This paper has two objectives. The first objective is to provide evidence on the level of banking competition in the UAE between 2003 and 2010. Using data on output prices and applying the Lerner index to measure competition, this study measures the degree of monopoly power for each bank in the loan market. The second objective is to evaluate the efficiency of the UAE banking sector during the 2003-2010 period. A translog cost function is estimated for all the banks in the sample. Each bank’s efficiency is then computed as the deviation from the most efficient bank’s intercept term.

The Lerner index is calculated to provide evidence on the degree of banking competition in the UAE. The index is defined as the difference between the price and the marginal cost, divided by the price. The Lerner index ranges between 0 and 1. The index is an inverse measure of competition. A greater index means lower competition. In this study, the focus is on the loan market because loans represent the largest share of assets for UAE commercial banks. Accordingly, the price of loans is used and the marginal cost is calculated by using loans as the output.

The price of loans is calculated as interest income divided by net loans. Net loans are total loans minus non-performing loans. The marginal cost function is estimated on the basis of a translog cost function with one output (loans, y) and three input prices (labor, physical capital, and borrowed funds). The price of labor is measured by the ratio of personnel expenses to total assets (w1). The price of physical capital is defined as the expenses for physical capital to fixed assets (w2). The price of borrowed funds is defined as the ratio of interest expense to borrowed funds (w3).

The distribution-free approach (DFA) is used to provide evidence on the level of banking efficiency in the UAE. Using a fixed-effects model, inefficiency is estimated from the value of a bank-specific dummy variable. A translog cost function is estimated for all the banks in the sample. Each bank’s efficiency is then computed as the deviation from the most efficient bank’s intercept term.

The DFA approach is applied and it is assumed that the difference in the actual and predicted cost for a given cross-sectional period is a combination of persistent inefficiency component and a random component (Berger, 1993). It is possible to obtain the persistent inefficiency component by averaging out these differences over time. Following Hunter and Timme (1995), the error term bank i in time t can be expressed as:

$$\varepsilon_{i,t} = \ln(v_{i,t}) + \ln(u_i)$$

where $\ln(v_{i,t})$ is a random error component that varies with time and is distributed with a zero mean over time, and $\ln(u_i)$ is the core efficiency or average efficiency for each bank which is time-independent while random error tends to average out over time. In order to be consistent with this error term specification, the cost function can then be expressed with a residual in the multiplicative form:

$$\text{Cost}_{i,t} = C_i(Q_{i,t}, P_{i,t})v_{i,t}u_i,$$

where $C_i$ is a cost function and $Q_{i,t}$ and $P_{i,t}$ are output and input prices, respectively. This cost function in logarithm is:

$$\ln(Cost_{i,t}) = \ln(C_i(Q_{i,t}, P_{i,t})) + \ln(v_{i,t}) + \ln(u_i).$$

The term $\ln(u_i)$ is assumed to be orthogonal to the regressors in the cost function. The error term $\varepsilon_{i,t}$ can be estimated for each bank for each year. In this way the parameters in the cost function and the random error term $\ln(v_{i,t})$ are allowed to change for each year while $\ln(u_i)$ remains constant over time.

The next step is to average the estimated cost function, error term $\varepsilon_{i,t}$ for each bank over n years in order to obtain an estimate of $\ln(u_i)$, that is $\ln(u_i) = \sum t \varepsilon_{i,t}/n$. For each bank then the percentage efficiency measure can be expressed as:

$$\text{EFF}_i = \exp[\ln(u_{\min}) - \ln(u_i)],$$

where $\ln(u_{\min})$ is the minimum value of $\ln(u_i)$. From this formulation an efficiency value of 1 corresponds to the most efficient bank while all other banks have values between 1 and 0.

4 DATA

The sample consists of all UAE national banks listed in the Dubai Financial Market and the Abu Dhabi Securities Exchange during the 2003-2010 period. All the required data are extracted from the annual reports of the commercial banks.
5 EMPIRICAL FINDINGS
The Lerner index was on an increasing path, which can be interpreted as an evidence for the existence of more competition in the UAE banking sector. Regression results show that larger banks tend to be more efficient than the smaller ones.

6 CONCLUSION
In this study, we used a sample of UAE national banks that operated between 2003 and 2010 to explore the competition and efficiency of the UAE banking sector. The results show that the Lerner index was on an increasing path, which can be interpreted as an evidence for the existence of more competition in the UAE banking sector.

To examine the efficiency of the national banks we used the panel data for all national banks that operated throughout the 2003-2010 period. The DFA approach was employed to calculate the efficiency scores of the commercial banks. Regression results show that larger banks tend to be more efficient than the smaller ones.

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Creating an MBA Capstone Course that Prepares Students for the Contemporary Workplace

Moira Tolan
Division of Business
Mount Saint Mary College
330 Powell Avenue
Newburgh, NY 12550
USA
(845)569-3288
tolan@msmc.edu

ABSTRACT
For twenty years the capstone course of the MBA program at a small, private college had required that students work closely with a faculty mentor on a research paper. These papers tended to focus on specialized topics, usually relating to one organizational function or defining strategies for one particular management issue. Because employers are seeking those who are multifunctional in their scope and who have a grasp of a firm’s external impact, the college has initiated an alternative capstone course that emphasized the performance of business planning activities for local organizations.

Keywords
Management Education, Experiential Education

1 INTRODUCTION
Several years back, the members of the Division of Business at a small, private college in the northeast began to look at revising the capstone course in their MBA program. This initiative was begun primarily in response to the needs of prospective employers. The new course will focus on nurturing generalists; those with the ability to perform in a way that reflects an understanding of the interdependencies among the functional areas of a firm.

2 DIRECTED RESEARCH COURSE
The capstone course that the program had offered exclusively since the program’s inception required that students work independently with a faculty mentor on a topic that was selected by the student and approved by the MBA Coordinator. Upon approval, the student would begin working closely with a faculty mentor of their choice. The expectation was that these papers would represent a thorough investigation into a specific organizational area and that the knowledge obtained would serve to enlighten the existing literature.

The published description of this course is:

Directed Research – This course will help students in the development of a comprehensive research paper, focused upon an issue of importance in the contemporary business world. Students should select and have their research projects approved by the MBA Coordinator before taking the course.

Some papers that have been successfully written during the Directed Research course are entitled,

- “Assuring Successful Generational Succession in Family Owned Companies,”
- “Major League Baseball’s Management of Competitive Balance,”
- “How Economic Conditions Affect the Business Climate in Countries that Confront Emigration or Immigration of Skilled and Educated People,”
- “Managerial Issues in the NY State Welfare System,” and
- “The Rising Cost of Health Care: Is Managed Care the Solution?”

3 FACULTY PARTICIPATION
After approval of the MBA Coordinator, students in Directed Research are to select one mentor and two additional faculty members who provide oversight during the development of the paper. The mentor should have expertise in the academic area that the student has chosen to focus on. Students register for these projects and they are advised to complete them within one year. The trend, however, had become for students to seek extensions up to
the period of three years that they were allowed. When the papers are deemed defensible by the mentor, a defense date is scheduled at which time the three committee members question the student about the topic for about one hour to determine their mastery of the subject matter. Because the faculty has had a direct role in the production of the final project, student success rates are high. If a student is unsuccessful at the defense, the faculty provides suggestions to the student that will enhance the paper and make it acceptable.

4 OUTCOMES

The research projects foster student-faculty relations and anecdotal evidence suggests that reciprocal learning is often a byproduct of the ventures. Advisement about papers is labor intensive to the faculty members who provide guidance about the concepts but who also serve as primary editors of the work. In the end, three leather bound copies of the paper are ordered and one stays in the Division offices, one goes to the college library and one is retained by the student.

As can be witnessed from the sampling of titles, students often select topics that are related to the field that they are employed in or wish to pursue employment in. They are therefore often able to complete the course with a new level of expertise in a subject that can directly benefit them in the workplace. Occasionally, students have focused upon topics that they wish to pursue in future doctoral work. The paper, therefore, has provided many benefits to students over the years.

5 EMPLOYER NEEDS AND MARKET DEMANDS

Faculty members at the college recognize that the Directed Research course might not be adequately preparing students to meet contemporary workplace demands. Employers are demanding a new type of worker – one who is able to grasp the interdependencies of multiple functional areas as well as acknowledge the potential impact that his/her decisions will have on the external world. Employers, both in the for-profit and not-for profit sectors are concerned about the breadth of skills and ethical values that potential hires possess. Many critics of current business educational systems argue that students will not be technically able to perform and, in addition, will not function well in a world that is quite different from that which they have been exposed to in their academic lives. Nahser and Ruhe (2001) assert that the challenge to educators is to “help students and practitioners make sense of an environment generating massive fragmentation of knowledge with facts and trends that present choices, options, problems, situations, and issues; both good and bad” (p. 317).

Boyer (1987) highlighted the gap that exists between the traditional business curricular content and society’s needs for new competencies in its workers and citizens. Problems discussed by Boyer (1987) and the Association of American Colleges (Jeavons, 1991) are twofold; knowledge is compartmentalized by discipline, which prevents students from experiencing the relationships among various modes of knowledge, and subject matter is not applied in any integrated way within academic studies to social issues.

Garvin and Datar, in a recent discussion about their book, *Rethinking the MBA: Business Education at a Crossroads* (Budman, 2010), elaborate on the need for schools to teach integrative thinking, or a multifunctional perspective. These professors from the Harvard Business School highlight the need for business schools to pursue experiential learning or field projects that immerse students in real-world business settings. They argue that this is a difficult skill to teach and acknowledge that business schools still do not know exactly how to do this.

6 EXPERIENTIAL LEARNING

In experiential learning projects, students are paired with agencies or organizations that have specific needs related to the content of a particular course. Students then perform the needed services by using course content. Experiential learning is about creating opportunities for students to apply theory they learn in the classroom to real-world problems and real-world needs. Experiential learning projects must be grounded in academic theory. Clear learning objectives must be present and activities must be carefully constructed to be in line with these objectives. Incorporating experiential learning into the business school curriculum takes creativity and careful planning.

7 DESCRIPTION OF NEW PROGRAM

With a growing literature that emphasizes the benefits of “generalist” rather than “specialist” education in graduate business program and in acknowledgement of the benefits to be gained through experiential learning, the members of the business division developed a new alternative to the Directed Research capstone course.

The new course title and description is as follows:

**Research Seminar in Planning and Implementation of Business Policy**

Integrates the work done through the MBA Program, combining elements from each subject area to help students shape, implement, and evaluate business policy. Conceptual and analytical skills are developed through reading, research and lectures and emphasis is placed on the written and oral application of knowledge. The course requires students to synthesize
all of their learned functional skills (i.e., accounting, finance, marketing, organizational behavior, etc.) and use them to study organizational problems within the context of hands-on-exercises, simulations, business case studies and open discussion forums.

To date the clients who the MBA students have served have been:

- a not-for-profit economic development organization that is responsible for attracting and retaining businesses in the county in which the college is located,
- a not-for-profit organization that was producing a historical documentary about the city that the college is housed in, and
- two not-for-profit research centers that are housed at the college, one that is focused on issues related to aging and the other to adolescents, and
- a large credit union with locations in several counties surrounding the college.

8 BENEFITS OF COURSE

The course forces students to think in ways that they are unaccustomed and the projects that they must complete allow for the integrative thinking that will serve them well as managers. Students are randomly assigned to groups for the strategic planning activity and this usually allows for much diversity of members. In a recent course, one group consisted of an advertising executive, an accountant, a human resources consultant and a pharmaceutical sales representative. Groups often contain members from foreign nations which also allows for disparate thinking. Recipients get plans from groups of students which utilize many perspectives to analyze key organizational issues.

The Directed Research course is still available as a capstone course for those who feel that it might provide more benefit to them than the Seminar course. Those who pursue it are usually motivated to use the paper as a portfolio piece to gain more advanced employment. Students who state the desire to pursue doctoral studies are also advised about the potential benefits of this research project to them. Several students a year choose this option and most are completing the paper within one term.

Most students, however, opt for the Seminar course. The majority of those who have taken it have expressed in course evaluations the great value that they feel the experience will play in furthering their career. The projects have also been enthusiastically supported by those receiving the business planning services and have generated much helpful publicity for the business division of the college. The organizational clients have expressed much gratitude to the college, the business program and the students for the insights that have been derived from the capstone work.

9 CHALLENGES IN COURSE ADMINISTRATION

The MBA Coordinator at the college has been primarily responsible for making those contacts with organizational leaders who wish to access the services of the MBA students. Since each project is unique with regard to specific planning needs, every semester brings with it a new set of challenges that are largely related to the nature of the organization being served.

The continuous screening of candidate organizations must be done so that there are always candidates lined up for future semesters. One criterion for project acceptance has to be the interest level of the organizational leaders in participating in the project. They must be aware of the active role that they have to serve in order for the results to be beneficial. On the attached syllabus (Appendix A) you can see that organizational leaders have been asked to attend at least three classroom sessions – first, when the project is announced, next, for a question and answer session and finally, to view the final business plans.

It is also important that faculty members with different specialties participate in this capstone project because it requires interdisciplinary work. This support also helps the college because of the goodwill that it builds with students. For the first few offerings of the course, five faculty members shared in the compensation for teaching the course. Each one was responsible for hosting an online discussion forum and for requiring discipline specific readings that would help students to complete a part of the business plan.

Because much of the work in the courses has involved business planning for a wide variety of projects, the students are often unfamiliar with the type of enterprise and its activities. Its activities may be quite different from the type of work that they have done in graduate school and unlike anything they have encountered in the workplace. Students, therefore, need to be given an adequate orientation about the organization that they are going to serve. They should be encouraged to be in contact with key members of the organization and welcome to make site visits to learn more about organizational activities.

10 CONCLUSION

The new capstone course has been very well received by students, faculty members and service recipients. Allowing students to select one of the capstone offerings has also helped to eliminate negative feelings that often occur during a dramatic program change. Experiences with the course are helping faculty members to better organize student work schedules and to provide more specific instruction about particular requirements than during the first few sessions. It
appears that this program can serve as a great tool with which to prepare managers for their careers.

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ABSTRACT
This paper proposes that most colleges and universities need to reevaluate the performance evaluation systems that they use for faculty members. Performance evaluation systems that boost faculty morale and enhance productivity can be of great value to institutions of higher education. Properly instituted performance evaluation systems can help these schools to become more flexible in their service offerings and more responsive to consumer preferences.

1. INTRODUCTION
Despite Ernest Boyer’s persuasive arguments during the 1980s that academic institutions “reconsider scholarship,” many small, independent colleges are moving closer to the “publish or perish” model rather than exploring the multiple ways that their faculty members can enhance student learning and college stature. The “gap between the traditional business curricular content and society’s needs for new competencies in its workers and citizens” (Boyer, 1987) provides one example of how those responsible for encouraging new types of teaching and learning have neglected to do so. A carefully constructed performance review system for faculty members can help to nurture talents, benefitting the individual, the academic institution and the society at large.

Faced with competition from many for-profit and online academic programs, colleges and universities should attempt to respond in meaningful ways to their appraisal of faculty members in order to survive and flourish in a new age of education. This paper will highlight some of the reasons that current systems have been so pervasive and some considerations that colleges might make when seeking to develop performance evaluation systems that will enable them to benefit from the multiple and diverse talents that faculty members possess and be more responsive to the needs of a changing society.

Performance evaluation systems should give both evaluators and employees data about employees’ strengths and needs for development. If this data is used to reinforce employees’ strengths and to plan and provide developmental assignments in areas of need, the organization should expect improvements in morale, motivation and productivity. This paper will provide recommendations about how these systems might be instituted more effectively in institutions of higher learning.

2. CURRENT MODELS
Most institutions of higher education tend to assess faculty members on a combination of teaching, research and service. Although the weight of each portion should be related to an institution’s mission and goals, this is difficult to accomplish and Promotion and Tenure Committees often look for proficiency in all areas instead of extraordinary contributions in one and fair to average contributions in the others. It seems likely that an institution could thrive if it advanced faculty members with a specific proficiency in one of the three.

Junior faculty members often struggle when trying to achieve many goals simultaneously including scholarship, research, college service, teaching effectiveness and professional notoriety. The offerings that they make to their institution may not as strong as they might be if their key areas of expertise were nurtured and the criteria for their promotion and continuous tenure were more clearly defined. This, in light of Boyer’s assertion over 20 years ago that “today on campuses across the nation, there is a recognition that the faculty reward system does not match the full range of academic functions and that professors are often caught between competing obligations”. (Boyer, 1990)

Many institutions continue to lump teaching and research together, the thinking being that high quality research will lead to high quality teaching. Dilts, et.al (1994) noted that although research and teaching require knowledge of the subject matter that they require mastery of different media for that knowledge to be presented. There has been no empirical evidence that research and teaching must be positively correlated (Dilts, et.al.,1994)

Riley(2011), in a scathing critique of contemporary higher education refers to a 2005 study in the Journal of Higher Education that suggests an inverse relationship between the amount of time spent in the classroom and a professor’s
salary. In making the point that college educations have been devalued as a result of the typical faculty reward systems, she argues that the system of higher education is much too focused on research and not enough on teaching.

Although service is almost always mentioned as a criteria for promotion, very little has been written about its overall contribution to the organization and its relationship to both teaching and research.

Many institutions of higher education publish vague requirements for continuous promotion and tenure among faculty. These appear to make faculty evaluations at many institutions spurious and in need of greater quality assurance processes.

3. REASONS FOR CURRENT PROGRAMS

Several key factors play a role in the homogenous faculty evaluation systems that exist throughout higher education. These are the reliance on historic models of academic performance evaluation, the failure of academics to constructively evaluate action research, and the overuse of quantitative metrics in evaluation processes.

Reliance on Historic Models

Steven Kerr, in his organizational behavior classic, “On the Folly of Rewarding A, while hoping for B”, highlights the problem with many academic systems:

“Society hopes that professors will not neglect their teaching responsibilities but rewards them almost entirely for research and publications. This is most true at the large and prestigious universities. Clichés such as “good research and good teaching go together” notwithstanding, professors often find that they must choose between teaching and research-oriented activities when allocating their time. Rewards for good teaching are usually limited to outstanding-teacher awards, which are given to only a small percentage of good teachers and usually bestow little money and fleeting prestige. Punishments for poor teaching are also rare.

Rewards for research and publications, on the other hand, and punishments for failure to accomplish these are common. Furthermore, publication-oriented resumes usually will be well received at other universities, whereas teaching credentials, harder to document and quantify are much less transferrable. Consequently it is rational for university professors to concentrate on research, even to the detriment of teaching and at the expense of their students.”

Kerr’s synopsis reminds us of the often subdued truths about academic performance and evaluation. He discusses the failure of academic institutions to deliver what their missions purport because of flaws in their reward systems. DiMaggio and Powell’s (1983) arguments about what they have entitled “institutional isomorphism” provide a logic about why the current performance evaluation systems persist even as management professionals know that they often do not work to enhance the faculty member’s career or to further the organization’s mission.

“Institutional isomorphism, is a phenomena that occurs in organizations of a similar type or in one specific industry. It has been described as a “constraining process that forces one unit in a population to resemble other units that face the same set of environmental conditions (DiMaggio and Powell, 1983).” This isomorphism occurs for several reasons, including cultural expectations from society, governmental mandates, and imitation brought on by uncertainty and diffused through employee migration or consulting firms. Also at work, according to the institutional isomorphism theory are normative pressures that are brought about from the profession itself.

“One mode is the legitimization inherent in the licensing and crediting of educational achievement. The other is the inter-organizational networks that span organizations. Norms developed during education are entered into organizations. Inter-hiring between existing industrial firms also encourages isomorphism. People from the same educational backgrounds will approach problems in much the same way. Socialization on the job reinforces these conformities (Dimaggio and Powell, 1983).”

Neglect of Applied Research

Although the benefits of applied research has often been discussed in academic circles, it appears to play a minimal role in helping faculty to meet the requirements for research that Promotion and Tenure committees use in making their
decisions. Koliba (2010) highlighted the dilemma in the social sciences that Argyris and Schon discussed:

“...social scientists are faced with the fundamental choice that hinges on a dilemma of rigor and relevance. If social scientists tilt toward the rigor of normal science that currently dominates departments of social science in American universities, they risk becoming irrelevant to practitioners’ demands for usable knowledge. If they tilt toward the relevance of action research, they risk falling short of prevailing disciplinary standards to rigor (Argyris and Schon, 1989, 612).”

Focus on Metrics

Academic institutions rely on metrics that are easy to administer and explain, and this has never been more important to them than now, when government and private accrediting bodies seek evidence of performance. Certain elements of performance are easier to quantify than others. It is, for example, easier to evaluate the number of citations received than it is to judge the quality of a service-learning endeavor. A service-learning endeavor may represent an application of academic theory while having the impact of enriching student learning, providing needed services to the community, forwarding the college’s mission and garnishing positive publicity for the college. Most of these outcomes are not able to be measured in a quantitative fashion. These types of inconsistencies in measures lend evaluators to favor those that are more quantitative.

4. INITIAL RECOMMENDATIONS

Models from Private Industry

Academics can learn from systems that have long been applied in private industry. They should seek models that have left little room for arbitrary, subjective decisions.

Well Developed Rubrics

Rubrics should be utilized to examine all areas of interest in the evaluation. Evaluating committees can then make decisions on a point based system. The primary focus of the faculty member may then be in one or two key areas with several areas that are less critical to their success.

Because there is no empirical evidence that research and teaching must be positively correlated (Dilts, 1994), it is probably best to view these activities as being distinct from one another and as benefiting the university in a distinct way.

Well Constructed Student Evaluations

If student evaluations are to be utilized in the evaluations, they should be carefully constructed to measure items that are identified dimensions of quality teaching. Weighted averages should be applied to the items on these questionnaires so that the instructor performance is less likely to be confounded with biasing influences.

Greater Focus on Citizenship

Greater attention should be paid to citizenship on the part of faculty and its linkage to an academic department, the institution, and the community.

Linkages Between HR and Faculty

Typically, performance evaluations of faculty are done by a committee of faculty members with a dean or administrator. Human Resource personnel have greater expertise in setting up performance evaluation systems and should be utilized in the construction and evaluation of faculty members. This type of collaboration may lead to appraisal systems that are unified across divisional areas of college and that are consistent in the goals toward achieving the organization’s mission.

Ethical Safeguards in System

A performance appraisal system must be built to be administered ethically. An academic environment must be be devoid of fear and encourage performance. “All policies must have ethical safeguards, and the persons charged with the responsibility of administering the policies must behave ethically (Dilts, et.al., 1994).

5. CONCLUSION

Colleges and universities have been slow to adopt new models of performance evaluation for faculty members. This paper begins to look at the reasons why and to make initial recommendations about how the process can be modified to better serve faculty members as well as the institutions.

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Keywords
Performance evaluation systems, faculty reward systems
Eurozone Competitiveness: An Analysis of the PIIGS

Theologos Homer Bonitsis
School of Management
New Jersey Institute of Technology
University Heights
Newark, New Jersey 07102
(973) 596-3263
bonitsis@adm.njit.edu

ABSTRACT
This paper presents a descriptive overview of the stylized path of the competitiveness for a subset of eurozone countries. These countries are: Portugal, Italy, Ireland, Greece, and Spain. This subset of countries are frequently referred to in the financial mass media by the acronym PIIGS. The term is meant to be descriptive of a group of euro currency countries that emerged from the Financial Crisis of 2008-2009 with sovereign debt concerns. In general, these countries sovereign debt issues are attributed to a lack of fiscal discipline and a proclivity for external public borrowing to maintain a welfare state.

Keywords
Eurozone, harmonized competitiveness indicator, PIIGS, sovereign debt.

1 INTRODUCTION
This research presents a descriptive general overview of the path of competitiveness for a subset of eurozone nations. The countries are Portugal, Italy, Ireland, Greece, and Spain. These countries are collectively referred to as the PIIGS (P-I-I-G-S) in the financial mass media. The acronym is intended to reflect these countries tendency to issue sovereign debt to finance national budget deficits so as to maintain generous domestic social welfare programs.

As most generalizations, the PIIGS acronym is descriptively wanting. One only needs to examine the Greek and Irish experiences during the recent historical period to confirm this observation. In Greece the public sector could not implement economic structural reforms or instill a tax paying consciousness while maintaining a generous social welfare state. In contrast, Ireland was successful in structural reforms as well as maintaining fiscal discipline. It was Ireland’s attempt to salvage a failing private banking sector, with its overseas financial commitments, that caused its economic malaise.

This study will examine for the historical period 1993-2011 the stylized competitiveness path for Portugal, Italy, Ireland, Greece, and Spain relative to the eurozone’s stalwart economies of Germany and France.

2 DATA AND METHODOLOGY
This section discusses the data and methodology employed in this research. A graphical time series analysis of the inter-country competitiveness of the PIIGS with Germany and France is conducted for the recent historical period 1993.1-2011.8, resulting in 224 monthly observations. The data’s base period observation is the first quarter of 1999. All calculations, graphs, and tables were done using EViews5.

Harmonized competitiveness indicators (HCI) are calculated by the European Central Bank (ECB). The HCI is a comparable inter-euro-country metric that relates cost and price competitiveness. The ECB calculates three variants of the harmonized competitiveness indicator: HCI based on consumer prices, HCI based on GDP deflators, and HCI based on unit labor costs. The metric used in this research is the more commonly used consumer price based HCI; for it is considered to contain better quality data and comparability across euro nations as well as being subject to less revision.

Table 1 gives summary descriptive statistics for each country’s HCI metric for the period under study. These statistics are: mean, median, maximum and minimum values, standard deviation, skewness, and kurtosis. The countries are: Germany (GER), France (FRA), Portugal (PORT), Italy (ITA), Ireland (IRE), Greece (GR), and Spain (SP). The HCI metric is to be interpreted as follows: an increase in a country’s index reflects a decrease in its competitiveness, with 1999Q1=100.

Table 1: HCI Descriptive Statistics

<table>
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<tr>
<th>GER</th>
<th>FRA</th>
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In Table 2 the coefficients of correlation are presented for all countries. The HCI is highly positively correlated between Germany and France; negatively, and much lower, for Germany and the PIIGS; and positively, and somewhat higher, between France and the PIIGS.

### Table 2: HCI Correlations

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3 **THE STYLIZED PATH OF THE HCI METRIC**

All the countries under study adopted the euro in 1999; except for Greece, which entered the common currency area in 2001. Figures 1-5 are graphs of the HCI for each PIIG country and Germany and France.

In general, the graphs suggest that the historical pattern of the HCI metric may be divided into three stages: Stage I, pre-euro stage; Stage II, euro-adoption stage; Stage III, post euro-adoption stage.

**Figure 1: HCI for Portugal, France, Germany**

Stage I was a period in which the PIIGS were at a competitive advantage to both France and Germany, with the latter country being the most competitively disadvantaged. In Stage II, the euro-adoption period, HCI metrics suggest a general competitive convergence across countries. This is an outcome consistent with a robust economic and monetary union. But this stylized pattern did not persist, it gave way to Stage III: the post euro-adoption period in which there seems to be significant divergence in the competitiveness across the PIIGS and France and Germany. More specifically, during Stage III Germany had the most competitive HCI metric, followed by France and then the PIIGS. Both Germany and France had reversed their competitive positions from Stage I. Another Stage III observation is that the HCI gap between the PIIGS and France and Germany widens the most in those countries that have exhibited significant sovereign debt issues: Portugal, Ireland, Greece, and Spain.

**Figure 2: HCI for Italy, France, Germany**

What can these stylized competitiveness patterns be attributed to? One hypothesis is the adjustment costs of unifying East and West Germany in the early 1990s had a dampening affect on German competitiveness. Another contributory hypothesis is that the creation of a common
currency area was detrimental to the PIIGS competitive status. There are two reasons why this may have happened. First, monetary union occurred prior to economic convergence between Germany and France and the PIIGS. Second, some or all PIIG countries may have entered the euro currency area with an over valued national currency, creating a strategic non-competitive trajectory. Even if a PIIG country entered with an equilibrium exchange rate, dynamic changes in the euro exchange rate could have been more reflective of the euro area’s large, price-setter, economies than the small, price-taker, economies. This would make euro exchange rate fluctuations more competitively deleterious for the PIIGS.

**Figure 4: HCI for Greece, France, Germany**

While the above was occurring, a number of PIIG-member countries aggressively grew their welfare states by deficit financing via sovereign debt issuance. The Financial Crisis of 2008-2009, however, limited country access to international capital markets as creditors gradually re-evaluated country risk profiles. The current sovereign risk crisis was a natural byproduct of this liquidity crisis.

**4 SUMMARY AND POLICY IMPLICATIONS**

The explicit objective of this paper was to examine the stylized path of the competitiveness of five euro currency countries, referred collectively by the acronym PIIGS. These countries are: Portugal, Italy, Ireland, Greece, and Spain. The choice metric employed was the harmonized competitiveness indicator (HCI) based on the consumer price index; a statistic calculated by the European Central Bank. The time frame of analysis was for the historical period 1993-2011.

The graphs presented in this paper suggest that the relative competitive positions of the countries under study can be divided into three time periods. Period one: at the start of the historical period France and Germany were at a competitive disadvantage relative to the PIIGS, with Germany having the highest HCI metric. Period two: at around the time the euro is adopted, HCI metrics appear to be converging across countries. Period three: shortly after euro adoption there is a notable competitive divergence; Germany becomes the dominant competitive country, followed by France and the PIIGS.

The above findings suggest that the subset of euro currency countries known as the PIIGS have experienced significant declines in their euro-competitiveness. This is reflected in two post euro-adoption stylized facts: first, the PIIGS have generally increasing higher HCI levels; two, the HCI gap appears to be increasing. This does not bode well for the PIIGS: for these economies need to achieve a strategic competitiveness-enhancing path to resolve their sovereign debt issues. Historically, countries have opted for currency devaluation as a speedy boast to competitiveness. This is not a policy option for the PIIGS; they have given the reigns of monetary policy to the ECB. What then are the policy options to improve their competitiveness and sovereign risk profiles? Strategically these countries could enhance national competitiveness by improving efficiency via human and physical capital investments as well as unfettering market forces. Tactically, the PIIGS have adopted a policy of internal devaluation cum fiscal austerity only for their domestic economies and sovereign risk profiles to deteriorate further: debt restructuring is now needed.

**REFERENCES**


ABSTRACT

This article explores the recent economic history of Europe and the generative motives before the signing of the Treaty of Rome and some of the problems that the European Union created to European citizens. The most severe ones are the uncertainty that this union has generated to Europeans; then, the social chaos, which is increasing every day, the economic and political corruption, which is underrated by the officials, the tremendous debt crisis of its member-nations and their citizens, and lastly, the reduction in its growth (recession) and the enormous unemployment. Europe experienced many difficulties, conflicts, and invasions by barbarians and other neighboring countries. But, at the same time, many good periods with great contributions to the global scene are recorded. Even though it had two world wars, its nations and citizens enjoyed huge growth, autonomy, development, improvement, autarky, progress, and preservation of their indigenous social values. After WWII, some people decided to integrate the entire continent into one union, but their generative motives are not known yet. The current dilemma is that its economic and social policies cannot satisfy the welfare functions for the Europeans, like justice, fairness, allocation, equity, stability, distribution, efficiency, homogeneity, security, sovereignty, independence, self-sufficiency, democracy, and the inherent Christian-value system.

Keywords
Economic Integration, Open Economy Macroeconomics, General: Economic History

1 INTRODUCTION

The intention in this paper is to provide an outline of the history and the socio-political-economic environment lying behind Europe in the detrimental 20th century. “Europe” and “European Union” are nowadays very political words and we will try to see what they have in common. The answer is that Europe has been different things at different times, but European Union has caused similar problems all the times, which have been magnified during the recent global financial crisis and the enormous debt crisis in the Economic and Monetary Union (EMU), the PIIGS nations. Also, the goal of the study is to present the visions of the European Union around its integration and to analyze the severe changes that have taken place in the EU country-members after the 1957 Common Market and the 1992 integration. European history took its unique and unnecessary direction after 1950s because the continent occupies an incomparable position and its people (at least some of them, who are mentioned in its history) had a particular objective, which was to offer some possibilities to all humans to become persons (perfect personalities); but there are so many traps that people with good intention can fall and instead of benefit their countries, they can cause serious problems to them, as it was proved during the current debt crises. Of course, it is very hard to describe truthfully, and impossible to analyze the contribution of so many other generous humans and nations to European history.

Europe is the smallest of the five major continents and it is expanded to the Aegean Sea, the Black Sea, the Caucasus Mountains, and the Ural Mountains. To the east of those borders, Asia starts and Europe ends. Thus, these nations outside of these borders are not Europeans. Europe is not only a matter of numbers and geography, but a concept of civilization, which started in Greece, more than seven thousand years ago and expended to the rest of Europe. Europe’s earliest Neolithic sides have been found in Greece, Chalkidiki (the cave of Petralona). By 5600 B.C., skeletons and pottery was made in this region of North Greece (Macedonia). The areas around the Aegean are those, which gave the first civilization in Europe. The Hellenes came to use “Europe” as a name for their territory to the west of the Aegean as distinct from the older lands in Asia Minor.
recognized a common heritage “Hellenes”, which they did not share with other men. They belonged, as they felt, to “Hellas”. The non-Greeks were “barbarians”. The achievement and importance of Greece comprehended all sides of life. “The Greeks did more for future civilization than any of their predecessors.” All Europe drew interest on the “capital” Greece laid down, and through Europe the rest of the world has benefited from what Greeks offered to human civilization. Alexander, the son of Philip, is one of those historical Greek figures called “Great”. He was a passionate Hellene, who believed Achilles was his ancestor and carried with him on his campaigns a treasured copy of Homer. He had been tutored by Aristotle. Alexander the Great had a staggering record of success, even though that he died at the age of 33 years old. Thus, the history of Europe is the history of the Western civilization (a Greek-Christian civilization). Indisputable, Roman civilization was descended from the earliest Greek (Hellenic) civilization. Today, it has changed drastically because of so many influences by different sub-cultures. The current “European, or Western, civilization originated from the fusion of German (barbarian) culture and Roman (Hellenic-Christian) civilization during the Dark Ages from the 5th to the 10th century A.D.” Of course, history repeats itself. There were even monetary and economic unions in Ancient Greece, i.e., “the Common of Euboeans”, in 2nd century B.C., where they issued a common currency, but they did not last for very long time because of the oppression on their member-states from the wealthy and powerful ones.

From the ancient times, Greeks colonized the then known world and later other Europeans were expansionists (some aggressive), conquering, colonizing, trading, proselytizing (except the Orthodox), and spreading their cultures. Initially this cultural expansion to the West, with the Greek colonies, owed much to the moral and ethical ancient Greek culture, but later, it was complemented with the Christian faith (the Revealed Truth). St. Constantine the Great (324-340 A.D.) changed the world history more than any other emperor. He was the founder of the Byzantine Empire (the Medieval Greek Empire, 324 A.D.-1453 A.D.). Thus, he founded Christian Europe and he continues to protect it... This Christianization gave to the European world a unity and cultural cohesiveness that was the ideological foundation of its civilization. Unfortunately, during the 9th century, barbarians from the West (Franks) occupied Rome and imposed their own “innovations” on this homogeneous Hellenic-Christian civilization. The schism between West and East (Byzantium) actually started during that period and Europe will never recover spiritually. The Muslim conquests (632 A.D. -732 A.D.) caused serious problems to the Western Europe and a great territorial loss for the Byzantine Empire.

In the 14th century, Europe descended into an era of crisis and contraction (occupation) that lasted more than one hundred years and about 400 years for the Balkans. An increasing materialism started and a decreasing spirituality of the Roman Catholic Church, even the “pope himself for a time became a tool of the French king” and the Great Schism between Rome and Constantinople, which took place in 1054 A.D., contributed to the isolation of the Latin church from its other sister churches, the Orthodox Patriarchates of the East. Then, national monarchies started emerging and a new wave of economic expansion and revitalization of European intellectual life began. Commerce and industry expanded in 15th and 16th century, gold and silver poured into Europe from the New World, prices rose, and a worldwide pattern of trade with Europe was going on. Furthermore, in the 14th century, this intellectual and artistic revival of the Renaissance started in Italy from the Greeks, who survived after the fall of Constantinople and moved to the west and spread to northern Europe in the 15th and 16th centuries. It was a revival of classical learning and an artistic flowering without parallel in history. During that period, this confidence of the Western world [the South-Eastern part of Europe was occupied by the Mongolians (Seljuk Turks)] found new outlets beyond the frontiers of Europe. Navigators journeyed the world. Their discoveries, followed unfortunately, by colonization and exploitation, reached the Americas, Africa, Asia and India, and Australia.

Lastly, this unified Roman Catholic Christian faith of Western Europe was challenged by Martin Luther in 1517 A.D. and the Protestant Reformation soon became a revolt against the papal ecclesiastical authority, producing theological variety and denominational atomism and ultimately, assuming the triumph of secularism. The East part of Europe stayed firm to its Traditional Orthodox Christian Faith and even though that the Balkans were under occupation from the barbarians of the East, they survived, due to their strong faith. The net gain of the age of the Reformation went to the rulers of the emerging nation-states, whether Protestant or Catholic, who were already fashioning the absolutism that would dominate the European world from the middle of the 17th to the end of the 18th century. A revolution in science and economics (capitalism and socialism) started and still is going on, today; but from revolution has unfolded to occupation. Crises, also, started from the 17th century, like destructive wars, compounded of religious motives and dynastic ambitions, filled most of the period and brought in civil commotions, revolutions, and two international wars in the 20th century. In summary, according to all historians, “The Greeks are the only people in history who have made four major contributions to human culture and civilization (the spring of Minoan Crete, the summer of fifth-century Athens, the golden autumn of the Alexandrian empire, and the wintry splendour of Byzantium), have so competitive a spirit that they cannot tolerate for long the exceptional brilliance of one man.” The 20th century is also the period of the creation of the European Union. We hope and wish that this Union will not cause the end of the European identity and history before the end of the 21st century. Unfortunately, “contemporary history is vulnerable to all sorts of political pressure”, but we are responsible to write the Truth, which is the duty of men of letters. “Europe” is a relatively modern idea of the earlier concept of “Christendom” because the entire continent was Christian.
and its citizens had a common Christian identity, but for
“European Union”, no one has any idea of what it is and
what its objectives are.

2 EUROPE DIVIDED AND FORCIBLY
INTEGRATED: THEORIES AND PRACTICIES

All these wars among European nations had divided Europe
and many ideas appeared having as their objective a
benevolent integration of all European nations. The failure of
the League of Nations to prevent World War II disillusioned
many persons who had expected much from international
organization and cooperation. On April 25, 1945, in a
conference including representatives of fifty-one nations
convened in San Francisco and drafted a charter for the
permanent structure of the United Nations. In June 1947,
George C. Marshall (1880-1959), the American Secretary
of State, proposed a broad program of American assistance to
help all of Europe recover economically. In July 1947, in
response to Secretary of State Marshall’s invitation,
representatives of sixteen European nations met in Paris to
draw up a joint request to the United States for financial aid
to assist in their economic recovery. In April of 1948, the
U.S. Congress passed the Foreign Assistance Act,
establishing the European Recovery Program or “Marshall
Plan”, and authorized an initial sum of $5.3 billion to be
distributed as loans and grants by the newly created
Economic Cooperation Administration (ECA). The recipient
nations formed the Organization for European Economic
Cooperation (OEEC) to administer the aid in Europe and
pledged themselves to a long-term program of mutual
assistance and cooperation.

Further, a number of structural changes in Europe made a
deep impression on social attitudes. The “Welfare State”,
which provided a wide range of services such as Britain’s
National Health Service (1948), West Germany’s model
cpyension scheme, or France’s massive HLM projects for cheap
housing, removed many of the traditional anxieties about ill
health, unemployment, homelessness, and old age. Rising
wages turned the masses into “consumers”, pressured to
become big spenders by aggressive advertising, social
emulation, and lines of credit by banks. Consumerism
certainty fuelled our market oriented capitalistic system, but
it turned material advancement into the only goal, not the
means to advance personally and spiritually. It threatened to
reduce politics to a debate about the economy and nothing
else. It taught young people that possessions alone brought
fulfillment. Since it put a dazzling supply of desirable, but
unnecessary goods before peoples’ eyes, they buy them
without even paying for them, they just sign their names
(credit cards and out of control borrowing) and then, came
the current debt crisis, which made individuals and nations
bound of the financial institutions (power moved from
governments to banks). This is the social cost because we
forgot the moderation and modesty.

Another problem was the immorality, the “sexual
revolution”, the family planning, the disrespect towards the
elders, and the undermining of all the values of the 1950s,
which led us to today’s crises in all aspects of our life. In a
few years all conventional mores were destroyed and our
young people have serious psychological problems, today. It
eliminated the social shame of extramarital relationships,
children borne without knowing their father, other keeled by
their parents before their birth, homosexuality, divorces,
unmarried cohabitations, same sex marriages, and numerous
other perversions. In most countries it was accompanied by
the liberal laws on obscenity, on toleration, on “liberty”, on
“democracy”, on “human rights”, on abortion, and many
others. The church and the conservatives, after their
marginalization, have no voice any more; liberals, socialists,
globalists, psychologists, and pseudo-scientists know
everything and they are the advisors of the decision makers.
Of course, what they hate most are the fundamental values of
Faith, Country, Family, marriage, education, tradition, and all
the other virtues that led humanity for thousands of years. For
the first time, Christianity in Europe has become a minority
belief and with its ecumenism and globalization will lose its
purpose. Different denominations, heterodox, and allodox
can not be united because what will come out from this
mixture will be a New Babylon, as the world planners have
already dreamed it and their imposed politicians are working
for its creation.

In summary, the two world wars of the 20th century, with
their accompanying horrors, show the weaknesses, the
poverty, and the malice of our leaders, who have accepted
some inferior philosophies of heresies and try to impose them
on peoples and sovereign nations through integrations and
globalization. All these will fail because above their actions
is a Divine Providence, who guides humanity. These pseudo-
leaders did and unfortunately continue to do, much to
undermine the faith, the hope, and the progress of Europeans.
Furthermore, while advances in science, increases in material
wealth and goods, and progresses in technology greatly
improved the material quality of life, but at the same time the
enormous debts and deficits; they also increased the
uncertainties, the financial crises, the unhappiness, the
enormous austerity, and the threats confronting humanity and
they become worse day after day. As a consequence of these
experiences of the 20th and the new 21st century, people and
especially young are completely disoriented, without
traditional values, misinformed, uneducated, ignorant, and
without true models. Of course, every individual in Europe
must be optimistic and work hard to become a true person (as
Christians as they are), independently of what the rest of the
world is doing. The same must hold for a nation, it must work
hard by using its recourses, its civilization, and its peoples to
reach the highest welfare, according to its value system and
independently from this forced integration of Europe.

It seemed that one objective of the European integration
(European Federation) was the “abolition of the division of
Europe into national sovereign states”. They believe that
every European problem will be resolved with the creation of
a European Federation. But, they worry that “no leaders of
undeniable political stature raised a strong voice in favor of a
federated Europe”. Winston Churchill’s speech at Zurich University on September 19, 1946 influenced the shape of postwar Europe. “Europe must unite before war destroys the continent, its glorious civilization, and perhaps much of the rest of the world.” He called for a “United States of Europe” led by France and Germany, but he excluded Britain from his grand European project. [Europe] “is the fountain of Christian faith and Christian ethics”. … “Yet it is from Europe that have sprung that series of frightful nationalistic quarrels,....” “We must build a kind of United States of Europe.” “...my friend President Truman had expressed his interest and sympathy with this great design.” “In this last struggle crimes and massacres have been committed for which there is no parallel since the invasions of the Mongols in the fourteenth century and no equal at any time in human history.” “If at first all the states of Europe are not willing or able to join the union, we must nevertheless proceed to assemble and combine those who will and those who can.”

On May 9, 1950, Robert Schuman, France’s foreign minister, outlined a plan to unite under a single authority the coal and steel industries of Europe’s bitterest enemies, France and Germany. The purpose of the plan, which was developed by Jean Monnet, was to begin building a peaceful, united Europe one step at a time. France, Germany, Italy, and the Benelux countries eventually responded by creating the European Coal and Steel Community in 1952. “Europe will not be made all at once, or according to a single plan. It will be built through concrete achievements which first create a de facto solidarity. The coming together of the nations of Europe requires the elimination of the age-old opposition of France and Germany. Any action taken must in the first place concern these two countries.”

In Rome, on March 25, 1957, the six member countries of the European Coal and Steel Communities (ECSC) signed treaties establishing the European Economic Community (EEC) and the European Atomic Energy Community (EURATOM). These two treaties are often called the “Treaties of Rome” (the ECSC Treaty was signed in Paris on April 18, 1951). And their aim was for building “an ever closer union among the peoples of Europe”. In the preamble of the EEC treaty, “economic and social progress” seems to take precedence over preserving and strengthening “peace and liberty”.

Jean Monnet was the “father of Europe”, who believed that nations should adopt common rules governing their behavior and create common institutions to apply these rules. Actually, with all these innovated ruses, the 20th century has changed the manner of life more for every one than all the eight thousand years of man’s progress put together. For what reason all this rush? What is in their minds that they do not want to make it explicit to the people of their nations? Of course, the answer is obvious; it is something very bad (conspiracy) and they try to cover it, so they can avoid the reaction of their citizens.

Also, De Gaulle believed in EU, but he criticized the supranational vision of Europe as unrealistic and undesirable. He argued instead for a “concert of European States”, where national governments coordinated their policies extensively, but did not give up their rights as sovereign entities to a European “superstate”. Some years later, representatives of the twelve members of the EC signed the Single European Act (SEA) in February 1986 and saw it implemented in July 1987. Of course, the majority of Europeans reject the notion that “Europe” meant the absorption of European nations into a single bureaucratized European “superstate”.

Others believe that the EU would succeed only if each member state was allowed to maintain its own identity. EU must be a “family of nations” and not a federalist vision of dependent states, as some misled leaders believe. Charles De Gaulle and Margaret Thatcher represent this view of Euroskeptics, too. The EU belongs to all its members and not to the Brussels bureaucrats. It must reflect the traditions and aspirations of all its member-nations. A willing and active cooperation among independent sovereign nations is the best way to build a successful EU. To try to suppress nationhood and especially, in small member-nations and concentrate power at the center of a European conglomerate would be highly damaging and would jeopardize the objectives Europe seeks to achieve. European nations must work more closely together, but this does not require power to be centralized in Brussels or decisions to be taken by an appointed value neutral, ignorant of history, and unaware of the indigenous values of the members bureaucracy. EU must be in a way, which preserves the different traditions, parliamentary powers, domestic constitutions, and sense of national pride in one’s own country, especially in countries with many thousands years of history and paideia, because these have been the source of Europe’s vitality through the centuries.

In addition, Jacques Delors was the president of the Commission of the EC, he was elected to the European Parliament, and served as minister of finance in France. He was in favor of federalism and against nationalism. Altiero Spinelli, an Italian Deputy and a member of the European Parliament, was the founder of the European Federalist Movement. His goal was the individual states to cede their sovereignty to common democratic institutions. David Mitrany argued for a transformation of the way people think about international relations, particularly the prevention of war. His “functional alternative” aimed at world, not European unity. Nevertheless, he had a profound effect on European activists and early integration theorists, especially, the neofunctionalists. Ernst B. Haas recognized that functional integration was taking place in Europe, but that functionalism as a theory had failed to explain why decision-makers chose to integrate in some areas and not others.

Further, Karl W. Deutsch helped revolutionize the study of international relations by introducing “scientific and quantitative” methods. Leon Lindberg illustrates early neofunctionalism’s systematic approach to explaining integration, as well as its enthusiasm for a European project that promised to “move beyond the nation-state as a basic
framework for action”. Hoffmann argued that the states of Europe were still self-interested entities with clear interests, despite their willingness to engage in closer cooperation in areas of “low politics”, such as agriculture and trade. The members of the EC stubbornly hung on to the sovereignty that counts – control over foreign policy, national security, and the use of force (“high politics”) – while only reluctantly bargaining away control over important aspects of their economies in exchange for clear material benefits. Thus functionalism as a method of integration reaches its limits very quickly, failing to take Europe “beyond the nation-state”. On the contrary, integration, according to Hoffmann, is “a vindication of the nation-state as the basic unit”.

Federalists, functionalists, and neofunctionalists in the postwar period were largely concerned with the political results of integration, even if some of them paid little attention to the political dimension of the integration process. The European federalists, the idealistic “true believers” in a United States of Europe believe that the most democratic and just way to prevent war and promote prosperity in Europe is to create a European super-state with full federal powers. Most maintained that functional integration had failed to dent national sovereignty. John Pinder has been an outspoken federalist for several decades. He believes in federal institutions for Europe, but he is critical of the federalists for failing to think practically about how to achieve their goal.

3 SUMMARY AND CONCLUDING REMARKS

National governments have become sets of actors in a complex decision-making system. European nations have lost control, completely; they have become dependent states. The supranationalists have done a good work to persuade the naïve and the ignorant followers towards their ultimate objective, “one world, one government”. Political leaderships of the member-states are misguided and misinformed or just imposed by those “experts”. Also, it is very difficult for a normal human being to understand these anti-inter-governmentalists “scholars”. They try to persuade us that European Union is a necessary structure for Europeans. Actually, these supranational institutions have been constructed to satisfy the self-interest of their actors and try to increase their power, hiding behind a legal mask, which has been composed by them, and is emphasizing Community Law and Regulations. This Union is actually a political and a legalistic union imposed undemocratically on Europeans by foreign powers (“dark powers”).

Finally, some philosophical questions arise, here: Why nation-states cease to be wholly sovereign? Why they voluntarily mingle, merge, and mix with other neighbors so as to lose the factual attributes of sovereignty? Why do they not allow referenda for their citizens and take these serious decisions undemocratically? Most of the writings on EU are of a highly technical nature and the advisors of the EU leaders are narrow-minded technocrats. For this reason the EU was led to the erosion of members’ independence in the monetary, fiscal, and political field, which creates a serious dilemma for Europeans. During the current global financial crisis and the European debt crisis, austerity measures from this supranational EU (its ECB and the other international institutions) have destroyed the socio-economic structure and have abolish the public policies. of the member-nations, have deepened the recession, have derailed the investments. Then, the recovery for EU members is nonexistent in the immediate future.

Finally, European history and the recent generative motives of EU should help us, as social scientists (economists) and our students, to understand what the past was, what the present is, and what might be the future of this continent. Of course, they try to create a common European identity or self-consciousness for more than 500 million people from more than 30 different countries; and some ignorant leaders want to open the doors also to anti-Christians non-Europeans. What will be the future of this mixture of nations is impossible to be predicted. With this limited knowledge (due to overspecialization) that scientists have today, it would be very difficult to do any correct analysis and derive an accurate inference for our complex social world. But, social scientists have to protect individual countries and their citizens’ interests. They must care for democracy, and their concern must be for the people, who suffer from the EU restrictions and unfair competition among the EU members and the unreasonable agreements with third-world countries (WTO). They cannot support the corrupted pseudo-leaders. Then, how was it possible for Europe to fall in this trap? I do not want to make any pessimistic predictions, but what has happened to the major European civilizations and historical processes in the past is over by now. The past successes have been removed from the EU and there is no chance of a repeat in the future. Europe became the first experiment of the current inhumane globalization. There will be no new “golden century”, “Cultural era”, “Christian Europe”, and no “new European age”. The most of the decisions in Europe are made today by non-Europeans. A major and fatal mistake for Europe! This current and worse, the future poor secular Europe was once coterminous and synonymous with Christendom and now, it is a post-Christian and neo-pagan (even worse) mixture of lost people. The situation today in Europe is similar to the one that existed 2000 years ago, during the Roman Empire. Consequently, the objective of the EU has been satisfied; it created the “New Roman Empire”. This is a true dilemma!

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Available from the author upon request.
Tending the Garden: Repairing and Maintaining Organizational Trust as a Result of Workplace Turmoil
An Evidence Based Research Synthesis Study

Joanne L. Tritsch
Doctor of Management Candidate
University of Maryland, University College
Adelphia, Maryland 20783
(609) 847-0243
tritsch@gmail.com

ABSTRACT
Trust is important for organizations. A foundation of trust can have a positive influence on efficiency, profits and employee turnover. Workplace turmoil can damage trust. Once damaged, if organizational trust is not repaired, the organization can suffer. The purpose of this research study is to explore the process of repairing damaged organizational trust as a result of workplace turmoil. Based on the results of Evidence Based Research Synthesis (EBRS) methods, a critical analysis will be conducted on the selected literature. Studying the issue of repairing and maintaining organizational trust will help increase understanding about the importance of maintaining trust and make clear the consequences of not repairing broken trust within organizations.

Keywords
Trust, Organizational Trust, Trust Repair, Damaged Trust

INTRODUCTION
Organizational trust is the focus of a growing body of management literature. There is some consensus that organizational trust can be understood as a process involving decisions and choices around trustees evaluating whether trustors will honor their word (Becerra & Gupta, 2003, p. 32; Doney, Cannon & Mullen, 1998, p. 601; Ebert, 2009, p. 65). Scholars view organizational trust through the paradigm of their individual training. In reviewing the origins of trust literature, Becerra and Gupta (2003) characterize psychological trust literature as focused on personality traits, economic trust literature as focused on the transactional calculations, and sociological trust literature as focused on the situation surrounding an individual and an organization (p. 32). Zaheer and Harris write, “it has often been noted… that for sociologists trust is only about the past, whereas for economists it is only about the future” (2006, p. 181).

A foundation of trust can allow organizations to function more smoothly by shortening the time needed to evaluate information. Trust has been shown by some scholars to have a positive impact on efficiency, sales, profits and employee turnover (Davis, Schoorman, Mayer & Tan, 2000, p. 563). The corollary is that damaged trust can cost organizations time, energy and money. Given the growing body of empirical evidence on the importance of trust, it is understandable that Lewicki and Bunker see its repair as ‘critical management competency’ (1996, p. 114).

The overall construct of trust can be viewed by the individual stages of its overall cycle. This cycle includes establishing, challenging and repairing trust, or as Saunders, Skinner, Gillespie and Lewicki write, “the formation, development and maintenance” of trust (2010, p. 421). However, once trust is established, it must be maintained. Without adequate attention, trust can be challenged and damaged by individuals, events and as a result of workplace turmoil.

If organizational trust is not maintained actively, relationships may suffer. McKnight, Cummings and Chervany note that organizational trust “lubricates relationships that form the interlocking components of coordination, which, turn the wheels of commerce” (1998, p. 479). Once trust is damaged, the focus needs to move toward trust repair so that organizational relationships are not severed. Damaged trust can cause participants within relationships to reinterpret both past and future events (Gillespie, 2006). And as Kramer and Lewicki (2010, p. 246) write, when responding to damaged trust, more is needed than a quick fix; trust must be enhanced in order to achieve long term repair.

PURPOSE AND SCOPE OF STUDY
The purpose of this research study is to explore the process of repairing damaged organizational trust as a result of workplace turmoil. The study will concentrate on the unit of analysis of the manager and the worker. The topic of trust between a manager and his organization is beyond the scope of this study. Studying the issue of repairing and maintaining organizational trust will help increase understanding about the importance of maintaining trust and make clear the consequences of not repairing broken trust within organizations.

Numerous databases have been reviewed in order to gather the literature for this study. The literature is drawn from
scholarly databases representing the fields of management, psychology, sociology and economics. The majority of the research selected for this study has been published within the last 12 years in peer-reviewed journals, although some seminal literature dates back much earlier (for example, see Barnard, 1947; Deutsch, 1958; Festinger & Carlsmith, 1959). While the focus of the literature search has been on scholarly peer reviewed articles, some gray literature will be included in the form of additional articles, government white papers and business case studies. For the purposes of this research project, gray literature is the information not published by commercial interests (Weintraub, 2006, p. 1).

CONCEPTUAL ILLUSTRATION
The figure below illustrates the continual cycle of repairing and maintaining organizational trust through the concentric circle of existing trust, turmoil and resultant trust. The illustration shows that new events causing turmoil trigger a process leading to new levels of trust. Consideration must be given to the magnitude of the turmoil because some challenges will render trust beyond repair. The ongoing and iterative process of repairing and maintaining organizational trust is of key importance to this model and to the larger study detailed within this document.

RESEARCH QUESTION
The research question for this study is “what is the evidence on what works to repair and maintain organizational trust?” As documented by the media, the publicity surrounding recent business scandals has damaged trust levels and led to generally lower levels of general confidence (Gallup Organization, 2011; Pew Research Trust, 2011). Repairing and maintaining damaged organizational trust is a topic that managers need to understand more clearly.

As Kramer and Lewicki (2010, p. 250) note, the research on trust repair has been fragmented partially because of the various definitions and partially because of the various research approaches to the topic. Based on the results of Evidence Based Research Synthesis (EBRS) methods, a critical analysis will be conducted on the selected literature.

Four propositions about repairing and maintaining organizational trust will serve as the conduit for the evaluation.

EVIDENCE BASED RESEARCH SYNTHESIS
Evidence Based Research Synthesis (EBRS) has its roots in the medical field and is often associated with clinical trials in the pharmaceutical industry. Presented as an analysis of relevant empirical research similar to systematic research synthesis, EBR is considered to be a method to avoid the limitations of a traditional literature review and its potential subjectivity (Rousseau, Manning, & Denyer, 2008). Cranfield University School of Management in Bedfordshire, UK, Carnegie Mellon’s Tepper School of Business and University of Maryland’s University College are at the forefront of graduate business schools advocating the use of EBR as a recommended research method (SchWeber, 2011). In the field of management, EBR allows qualitative researchers to conduct studies that can be replicated, and it allows practitioners to have confidence in the research conclusions.

To start the EBRS process for this study, a broad library search was conducted starting with the EBSCO databases in the categories of management, psychology and sociology. Relevant parameters included peer-reviewed articles on the topic of trust published between 1999 and 2011. After the three EBSCO databases were queried, the search was expanded to include the same parameters with ProQuest, Emerald and JSTOR databases.

Expanding beyond academic library databases, the same key word search was conducted using Harzing’s Publish or Publish (PoP) website, which uses Google Scholar to generate its results. The combination of search terms “trust repair”, “repairing damaged trust”, “maintaining organizational trust”, “organizational trust” and “individual trust” returned many studies. Specific results range from 0 studies for ‘repairing damaged trust’ from EBSCO’s Sociology database to a total of 25,359 studies for ‘individual trust’ from JSTOR’s database.

This pool of research was then reviewed for duplicates and narrowed according to the individual article’s overall relevance to this study’s research question, “what is the evidence on what works to repair and maintain organizational trust?” and its purpose of exploring the process of maintaining and repairing damaged organizational trust as a result of workplace turmoil. The process of narrowing the initial pool of research articles eliminated articles addressing the topics of financial trusts, living wills and trusts, medical trials and environmental damage. In addition, articles relating to online trust, trust in non-professional relationships and articles about cross-cultural trust were removed. The 81 studies remaining have been published in peer-reviewed academic journals in the fields of management, social sciences, ethics, human resources, accounting/finance and health care.
As noted previously, gray literature is an important element of the EBRS process. Some gray literature was retrieved from the library search. Among this group chosen for inclusion are 7 dissertations and 11 conference proceedings from Academy of Management conferences. The 81 articles represented here cover a range of methodologies including literature reviews, models depicting various trust processes, empirical research and business case studies. Although the final study will include additional articles and studies, and may not include all of the articles from this particular library search, the chart below illustrates the range of characteristics these studies represent.

ELEMENTS OF INCLUSION

The research pool was reviewed to make sure that key literature reviews addressing the topic of trust were included. In addition, seminal literature that falls outside of the study’s date parameters of 1999 to 2011 were added back. This group includes works by Barnard (1947), Deutsch (1958), Doney, Cannon and Mullen (1998), Festinger and Carlsmith (1959), Jones and George, 1998; Lewicki and Bunker (1996), Lewicki, McAllister and Bies (1998), Luhmann (1988), Mayer, Davis and Schoorman (1995), McKnight and Chervany, 1996; McKnight, Cummings & Chervany, 1998; Meyerson, Weick and Kramer (1996), Pearson and Clair (1998), Wicks, Berman and Jones (1999) and Zaheer, McEvily and Perrone (1998).

Table 1: Breakdown of 81 Trust Articles

<table>
<thead>
<tr>
<th>Category</th>
<th>Number</th>
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<tbody>
<tr>
<td>Management/Business</td>
<td>28</td>
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<tr>
<td>Social Sciences</td>
<td>18</td>
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<tr>
<td>Business Ethics</td>
<td>12</td>
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<tr>
<td>Human Resources</td>
<td>10</td>
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<tr>
<td>Accounting/Finance</td>
<td>8</td>
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<tr>
<td>Health Care</td>
<td>5</td>
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<tr>
<td>Journal Articles</td>
<td>63</td>
</tr>
<tr>
<td>Conference Proceedings</td>
<td>11</td>
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<tr>
<td>Dissertations</td>
<td>7</td>
</tr>
<tr>
<td>Literature Reviews/Synthesis</td>
<td>37</td>
</tr>
<tr>
<td>Models</td>
<td>12</td>
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<tr>
<td>Empirical Studies</td>
<td>24</td>
</tr>
<tr>
<td>Case Studies</td>
<td>8</td>
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The tables of contents from key journals published between 1999 and 2011 were also reviewed for material suitable for inclusion. This list includes journals from the Academy of Management, the American Psychological Association, the American Journal of Sociology, the American Sociological Review, the American Economic Review and the Journal of Economic Literature. In addition, attention was given to daily and monthly news media and government databases with an emphasis on information addressing the problems of repairing and maintaining organizational trust.

PROCESS OF EXCLUSION

Once the pool of articles and studies was determined to include as many items as practical, the material was evaluated on several key dimensions. These research rankings helped to determine the final list of articles and studies. The process of this systematic review with replicable selection and rankings is a key element of the EBRS process. The ranking system used for this study is a fairly basic system with six categories; each evaluated on a scale of 0 to 3 where 3 is the highest. Categories include robustness of the theory, implications for practice, methodology and supporting arguments, generalizability of conclusions, level of evidence and overall contribution.

While these categories and the scores within them may appear somewhat arbitrary, the importance of documenting the process cannot be overlooked. Detailing the steps of the research and the choices made regarding the specific articles and studies, and their inclusion in the final pool of research is crucial in order that other researchers can replicate this same pool of research. It is this element that makes EBRS stand apart from a more traditional literature review. When the process is well documented, EBRS allows the researcher to overcome some of the subjectivity of a traditional literature review. This particular study will use the structure of propositions to provide an additional objective look at the selected research.

REPAIRING AND MAINTAINING ORGANIZATIONAL TRUST LITERATURE

Trust is considered by many management theorists to be a foundational element for society, organizations and individuals (Gillespie & Dietz, 2009; Lewicki & Bunker, 1996). Decision making and change initiatives have been shown to be more effective when trust is a part of management’s overall focus (Kramer, 2009, p. 269). Trust has been examined from many perspectives including: culture, field of study, trait-based or skill-based, and by trustee and trustor points of view (Becerra & Gupta, 2003, p. 33). All of these varied perspectives on trust have significant implications for organizations, as well as the managers and the workers within those organizations.

Behnia (2008) analyzes the various components of trust and writes, “trust is broadly defined as one’s willingness to be vulnerable to others on the basis of one’s positive expectations of the other’s intention and competence” (p. 1427). Gillespie and Dietz find that whereas a single event can damage trust, repairing trust is a more complicated process. They find that damaged or lost trust may result in behaviors of “withdrawal, obstructionism and acts of retaliation” (2009, p. 130).

Lewicki and Bunker discover when trust is under stress, people re-evaluate that particular relationship with “a
tendency to privilege negative evidence over positive evidence” (1996, p. 127). Kramer notes loss of trust feeds on itself and “leads to behavior which bolsters the validity of distrust itself” (1999, p. 594). In organizations, maintaining trust and preventing its damage can also prevent the loss of time, energy, and money (Davis, Schoorman, Mayer & Tan, 2000, p. 563; Gillespie & Mann, 2004, p. 588; Zak & Knack, 2001, p. 295). Maintaining organizational trust is an ongoing process. Once established, trust cannot be neglected; it must be actively tended.

Management theorists have recognized the importance of trust maintenance and trust repair and have given their attention to this problem. As Lewicki and Bunker write, “given the prevalence of trust failures and the seriousness of the consequences, knowing how to repair trust is seen as a ‘critical management competency’” (1996, p. 114). Greater understanding of the importance of repairing damaged organizational trust resulting from workplace turmoil can enhance managerial competencies, which in turn, can increase the effectiveness of business operations.

PROPOSITION OVERVIEW
Using Pearson and Clair’s (1998, p. 59) “Reframing Crisis Management” as a prototype, four propositions were crafted that relate to this study’s topic of repairing and maintaining organizational trust as a result of workplace turmoil. The propositions are arranged in logical order to support the study’s argument that a greater understanding of repairing and maintaining damaged organizational trust as a result of workplace turmoil may help managers and workers create more efficient workplaces where trust is created and maintained, and repaired when damaged. The research material chosen through the previously described EBRS parameters will be used to support or refute each proposition as indicated by the research. The intent of this section of the study is to use the evidence from the literature selected through EBRS to evaluate the argument and come to a conclusion that either supports or contradicts the research question posed for this study. The overall proposition objective and the specific propositions are listed below.

Proposition Objective: For those involved in trust theory, this study offers a conceptual framework that strives for comprehensiveness, as well as four propositions grounded in multiple perspectives about repairing damaged organizational trust.

Proposition 1: Individual trust may be related to organizational trust.

Proposition 2: Higher levels of organizational trust may lead to higher levels of organizational efficiency, preventing the loss of time, energy and money.

Proposition 3: Damaged organizational trust may be able to be repaired, but perhaps not restored to its original level.

Proposition 4: Ongoing attention may be required to maintain optimal levels of organizational trust.

EVALUATING THE PROPOSITIONS
Using the research selected through the EBRS process, the study’s propositions will be evaluated sequentially.

Proposition 1: Individual trust may be related to organizational trust. The evidence-based research synthesis conducted for this study supports this first proposition. Zaheer and Harris’ (2006) research shows that for an individual to recognize trust within an organization, they must first have experienced trust on a personal level (p. 185).

The concept of vulnerability runs through many of the trust constructs. As Behnia (2008) states, “trust is broadly defined as one’s willingness to be vulnerable to others on the basis of one’s positive expectations of the other’s intention and competence” (p. 1427). Individuals feel vulnerable to the actions of other people; they are not vulnerable to a corporate entity. Not surprisingly, trust seems to be extended to others and felt on an individual level.

Luhmann (2000) writes that trust is generated through close personal relationships and cannot be assumed in organizations. The theorist writes that trust needs, “friendship networks and patron-client relations” (2000, p. 94). Janowicz-Panjaitan and Noorderhaven (2009) support Luhmann’s idea but go further and qualify their conclusion, “organizational level sharing is much more driven by calculations” (p. 1022). While Paton et al. (2009, p. 31) theorize that organizational trust only exists because there are trusting individuals within organizations.

Zaheer, McEvily and Perrone (1998, p. 156) write “interpersonal trust, in conjunction with inter-organizational trust, plays a unique role in relational exchange, over and above the effects of governance structure.” The trio also summarizes one of the main problems of looking at organizational trust as a separate process from interpersonal trust. “Not clearly specifying how trust translates from the individual to the organization level leads to theoretical confusion about who is trusting whom because it is individuals… rather than the organizations themselves, who trust” (1998, p. 141).

Proposition 2: Higher levels of organizational trust may lead to higher levels of organizational efficiency, preventing the loss of time, energy and money. The evidence-based research synthesis conducted for this study supports this second proposition. McKnight and Chervany (1996, p. 29) see trust as the oil that lubricates organizational relationships and enables commerce. According to Davis, Schoorman, Mayer and Tan (2000, p. 563), the presence of trust allows employees to function within their jobs without questioning their duties or their supervisors.

Gillespie and Mann (2004, p. 588) write that trust in leadership leads to productivity increases in “communication, problem solving, discretionary effort,
organizational citizenship behavior, organizational commitment and the rate of employee turnover.”

Kramer takes a parallel approach and focuses on organizational trust as the currency that allows stakeholders to accept an organization’s messages without wasting time evaluating their credibility (1999, p. 582). In turn, decision making and change initiatives are more effective when trust is a part of management’s overall focus (Kramer, 2009, p. 68).

But there is a caveat. According to Tan and Lim, (2009, p. 50) attempts at both informal and formal communication must be clear in order to facilitate trust. As supported by Longstaff and Yang (2008, p. 2) if the source of the information is not trusted, the message will not be trusted.

**Proposition 3:** Damaged organizational trust may be able to be repaired, but perhaps not restored to its original level. The evidence-based research synthesis conducted for this study supports this third proposition. It may be helpful to restate that people feel damaged organizational trust on a personal level. Gillespie and Dietz (2009, p. 133) find damaged trust can trigger retaliation, while Lewicki and Bunker (1996, p. 127) document damaged trust can result in a level of self-protection that triggers suspicion and avoidance of situations where individuals might feel vulnerable. This finding is similar to Dirk’s (2006, p. 4) and Baumgarnter, Fischbacher, Feierbend, Lutz and Fehr’s (2009, p. 757) observations that damaged trust is perceived as similar to a broken promise. However, Fraser (2010, p. 46) concludes that the earlier in a relationship that trust is harmed, the more damaged a relationship becomes.

To move beyond damage and to start to repair trust, research suggests neutralizing emotions and creating situations where both the trustor and trustee can work toward trust repair (Tomlinson & Mayer, 2009, p. 87; Kramer & Lewicki, 2010, p. 248). The strength of the trust violation determines whether the relationship “shifts to conditional trust or distrust” (Jones & George, 1998, p. 538).

Prescriptions for trust repair draw on crisis response research and psychology. Booth (2000) discusses the importance of fulfilling expectations, Lewicki and Bunker (1996, p. 7) stress the importance of apologies and acceptance of responsibility for the act and its consequences. Gillespie (2006, p. 1) finds that trust violations can cause relationships to be reassessed, and Schweitzer, Hershey and Bradlow (2006, p. 1) conclude “trust harmed by deception never fully recovers, untrustworthy actions combined with deception cause enduring harm.” While apologies can be helpful, trust may not always be repaired to its original level following a damaging event. As Kramer and Lewicki (2010, p. 246) note, to achieve long-term repair for damaged trust, a quick fix is not good enough.

**Proposition 4:** Ongoing attention may be required to maintain optimal levels of organizational trust. The evidence-based research synthesis conducted for this study supports this fourth proposition. The ongoing nature of the trust cycle of forming, developing and maintaining described by Saunders, Skinner, Dietz, Gillespie and Lewicki (2010) implies a continuous cycle. McKnight and Chervany (1996, p. 29) point out that initial trust lays the groundwork for future accomplishment while Hodson (2004, p. 434) recognizes supportive organizational policies and competent management as prerequisites for trust development.

As noted by Meyerson, Weick and Kramer (1996, p. 188), investing the time to establish initial trusting behaviors can reinforce future trusting behaviors. Kramer’s (1999, p. 575) concept of thin and thick trust assumes that trust develops over time. Impersonal trust is thin and fleeting, while personal trust thickens as a result of time and experience.

Leadership plays an important role in trust maintenance. Norman (2006, p. 137) finds that confident leaders instill more trust than those who are less confident of their success. Dirks (2006) observes that leaders are often forced to juggle the act of building trust and then breaking it; meeting one worker’s expectations may mean violating another’s. Reina and Reina (2006, p. 7) identify this process as spinning the truth, breaking trust and damaging work relationships.

**CONCLUDING THE STUDY**

This research study explores the topic of repairing and maintaining damaged organizational trust as a result of workplace turmoil. It argues that a greater understanding of repairing and maintaining damaged organizational trust as a result of workplace turmoil is supported by the evidence gathered to support the four propositions. The concept may help managers and workers create more efficient workplaces when trust is created and maintained, and repaired when damaged. The specific research question to be answered is “what is the evidence on what works to repair and maintain organizational trust?” The use of EBRs allows the evidence to be gathered that may help to answer that question by providing insight from the research for both scholars and practitioners. It is the author’s intent that both the topic and the methodology will make a solid contribution to the literature on repairing damaged organizational trust. There is a need for ongoing research on this topic. The topic could be expanded to include the issues of trust and culture, trust and change and trust and emotion. Further research may provide additional insights to add to the current insights about repairing and maintaining organizational trust. Table 2 summarizes the research study’s highlights.
Table 2: Research Study Highlights

Title: Tending the Garden: Repairing Damaged Organizational Trust as a Result of Workplace Turmoil

Area of Research: Trust, Trust Formation, Trust Maintenance, Trust Repair

Research Question: What is the evidence on what works to repair organizational trust?

Key Terms to Use: Individual Trust, Organizational Trust, Trust Repair, Repairing Damaged Trust, Maintaining Organizational Trust


Key Literature Reviews to Include: Ebert (2009), Gillespie & Dietz (2009), Kim, Dirks & Cooper (2009), Kramer (1999), Kramer & Lewicki (2010), Lewicki, 2006; Mollering (2004), Schoorman, Mayer & Davis (2007)


Key Supplementary Databases to Include: Google Scholar, Harzing’s Publish or Perish. University of Phoenix Library Databases to act as a backup and supplement to UMUC Library; different subscriptions can supplement search material. All searches will be duplicated.


Propositions to be Explored: 1) Individual trust may be related to organizational trust; 2) Higher levels of organizational trust may lead to higher levels of organizational efficiency, preventing the loss of time, energy and money; 3) Damaged organizational trust may be able to be repaired, but perhaps not restored to its original level; 4) Ongoing attention may be required to maintain optimal levels of organizational trust.

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The Theory, Practice and Conundrums of Evidence-Based Research: A Working Illustration of a Literature Synthesis

Diana Watts, PhD
Faculty
Trinity Washington University
University of Maryland, University College
Adelphi, Maryland 20783 USA
(240) 601-3094
dwatts@faculty.umuc.edu

James V.M.L. Holzer
Doctoral Candidate
Doctor of Management Program
University of MD, University College
Adelphi, Maryland 20783 USA
(661) 435-3998
ho_l_zerj@hotmail.com

Joanne L. Tritsch
Doctoral Candidate
Doctor of Management Program
University of MD, University College
Adelphi, Maryland 20783 USA
(609) 847-0243
tritsch@gmail.com

ABSTRACT
Evidence-Based Research (EBR) is a research methodology that is receiving increasing attention from management scholars and practitioners. While its roots can be traced back to pharmaceutical and medical trials, EBR offers the academic researcher a transparent methodology that avoids the limitations of a traditional literature review and its potential subjectivity. The purpose of this study is to explore the theory and the practice of EBR. There are three parts to this research paper. The first part of the paper includes a history of the methodology and a discussion of some of its strengths and weaknesses. The second part of the paper details an actual study establishing the parameters to examine the use of EBR in the field of management. The paper concludes with a look at some of the controversy surrounding the use of EBR and a recommendation for future research.

Keywords
Evidence-based research, Evidence-based management, Literature synthesis, Research methodology

INTRODUCTION
In the seminal literature synthesis on Evidence-Based Research (EBR), Reay, Berta and Khon (2009) identify Peter Drucker, writing in 1955 to be “the first to systematically lay out the central tenants of management science and the application of systematic methodology to the job of managing in the business enterprise” (p. 10). Since 1955, the management field has expanded with volumes of literature being written about the organization and management of the business enterprise. Many theories, models and concepts have been proposed, but there is limited agreement among the inferences to be concluded. One response to this growing body of theory is to argue that a clearer assessment of the conceptual robustness or application of these theories is needed. To this end, evidence-based research (this one label will be used throughout this paper)1, proposes a methodology to evaluate existing research.

The formal process of evidence-based research can be traced to the Cochrane Collaboration and the late 1970s, when the first essay on the benefits of gathering medical evidence was published. Founded in 1993, the Cochrane Collaboration is a repository for over 4,000 systematic reviews primarily in the medical field (Hansen & Rieper, 2009). For social science research, a spinoff of the Cochrane Collaboration, the Campbell Collection is focused on “improving decision-making through systematic reviews on the effects of interventions within the areas of education, crime and justice and social welfare” (Campbell Collaboration, 2011).

Hansen and Rieper (2009) document the history of the research method in their Evaluation article, “The Evidence Movement.” The method’s origins are firmly rooted in medical science. Examples of evidence-based methods to test the efficacy of medical treatments are documented in the Bible, in Leonardo da Vinci’s Notebooks, and in historical accounts of treating cholera during post-revolutionary Paris (Fink, p. 19). Essentially evidence is accumulated in order to inform the treatment. It is important to note that even today the evaluations of existing research are primarily focused on the areas of health, social welfare and education. More recently, attention has turned to the potential use evidence-based research methods in the field of management. Reay, Berta and Khon (2009) find that while there are numerous articles “based on opinion and anecdotal information” (p. 5) addressing the need for the methodology in management research; there are fewer studies about its actual effectiveness.

Perhaps because the application of the methodology outside of the medical field is relatively new, as documented by Hansen and Rieper (2009), one of the larger concerns about the method is that variation in the practice of the different methods is quite large (p. 141). Among the key differences is an orientation to either the hierarchy or the typology of evidence. Hierarchical evaluation of the evidence results

1 Evidence-Based Research, Evidence-Based Research Synthesis, and

Literature Synthesis are all related terms covering a topic that ties into the practice of Evidence-Based Management.
ranks the internal validity, where typological evaluation stresses the type of study best suited for answering the research question (p. 143). In addition, there is considerable variation due to the final research question, the amount of existing research available on the topic and the final aim of the research (Hansen & Rieper, 2009, p. 157).

There are several purposes for conducting evidence-based research. As Rousseau, Manning, and Denyer (2008) write, “the motives for undertaking a research synthesis include scientific discovery and explanation, improved management practice guidelines, and formulating public policy” (p. 475). One of the key challenges with Evidence Based Research (EBR) is to design a transparent study that draws from a broad enough range of literature so that the conclusions can be accepted by theorists and be considered as evidence to support those conclusions. In addition to extensive documentation, evaluation of the quality of the research elements is an important step. Reay, Berta, and Khon (2009) advocate a six-level ranking system based upon the research quality. The six levels range from a level one for an article based on informed opinion to a level six based on a more detailed meta-analysis (2009, p. 8).

Transparency, replicability and objectivity are all important elements that set EBR apart from more traditional, subjective literature reviews (Tranfield, Denyer & Smart, 2003; Rousseau, Manning & Denyer, 2008). Along with the quality of the study, other characteristics can be evaluated in order to develop a ranking system for the articles selected for the final study. However, as Hansen and Rieper (2009) note, “the spreading of the idea of systematic reviews has not led to methodological homogenization. On the contrary… the idea of systematic reviews has become further developed and translated into national and local professional contexts” (p. 160). While randomized controlled trials are considered the gold standard in the medical and pharmaceutical field, meta-analysis comes close to holding that position in other areas (Hansen & Rieper, 2009). The challenge may be how to transplant the methodology into the field of organizational management.

**METHODOLOGY OF EVIDENCE-BASED RESEARCH SYNTHESIS**

As noted, Evidence Based Research (EBR) has its roots in the field of medical science and is often associated with clinical trials in the medical and pharmaceutical industries. The roots of the methodology are based on randomized experimental trials in tightly controlled environments. This assumption of field consistency also implies that the data sets are comparable. Presented as an analysis of relevant empirical research, similar to systematic research synthesis, EBR is considered a method that avoids the limitations of a traditional literature review and its potential subjectivity (Slavin, 1985; Tranfield, Denyer & Smart, 2003; Rousseau, Manning & Denyer, 2008). Cranfield University School of Management in Bedfordshire, UK, Carnegie Mellon’s Tepper School of Business and University of Maryland’s University College are at the forefront of graduate business schools advocating the use of EBR as a recommended research method (SchWeber, 2011). In the field of management, EBRS allows researchers to conduct studies that can offer a degree of transparency, and it provides practitioners increased insight into the robustness of research conclusions.

**AN ILLUSTRATION**

To gain further insight into the actual application of EBR, a brief illustrative example will be presented that examines the process of determining the parameters for an evidence-based research project. The process selected for this study will be that of Hansen and Rieper (2009) who outline four steps. The first step is deciding upon the research question. The second step is systematically searching the literature. The third step is critically evaluating the literature found in the search. And, the final step is composing the summary of the results. For this particular illustration, the first two steps of the methodology are detailed. In order to increase methodological transparency, Reay, Berta and Khon (2009) stress the importance of clear documentation throughout the process and advocate that fellow researchers verify the choices (p. 5).

**PURPOSE & SCOPE OF STUDY**

The purpose of this study is to explore the theory and the practice of EBR. The study will concentrate on establishing study parameters to examine the use of EBR in the field of management. The level of analysis is both on the theory and on the practice of the EBR methodology. For our purposes here, the topic of evidence-based research applications in the fields of health, psychology, sociology and education is beyond the scope of this study. Examining the theory and the practice of evidence-based research as it is currently applied in the field of management will increase our understanding of the significance of this emerging research strategy and increase the possible application of theory to the field.

**METHODOLOGY OF STUDY**

To establish the parameters for this illustrative application of EBR, databases representing the fields of management, economics, and research were identified. EBSCO and ABI/ProQuest databases were the primary sources. The research selected for this study has been published after 1979, the date of Andy Cochrane’s first essay on the topic of evidence-based research (Cochrane Collection, 2011). The resultant pool of 66 scholarly articles was then refined based on the exclusion and inclusion criterion outlined in the following sections.

Within the selected parameters, the majority of the articles chosen have appeared in scholarly, peer-reviewed journals within the past 12 years. While the focus of the literature search has been on scholarly peer reviewed articles, some gray literature was added back in the form of additional articles, government white papers and business case studies.
For the purposes of this research project, gray literature is the information not published by commercial interests (Weintraub, 2006, p. 1). The research question for this study is “what does the management literature reveal about the theory and the application of evidence based research?”

The table below separates out the management journals into eight specific categories.

Table 1: Focus and Number of Articles Published

<table>
<thead>
<tr>
<th>Journal Focus</th>
<th>No. of Articles</th>
</tr>
</thead>
<tbody>
<tr>
<td>General Management (AOM Journals 17)</td>
<td>25</td>
</tr>
<tr>
<td>Research Methods</td>
<td>8</td>
</tr>
<tr>
<td>Information &amp; Knowledge Management</td>
<td>8</td>
</tr>
<tr>
<td>Finance &amp; Market Development</td>
<td>7</td>
</tr>
<tr>
<td>Org Behavior/HR Administration</td>
<td>6</td>
</tr>
<tr>
<td>Strategy &amp; Policy</td>
<td>5</td>
</tr>
<tr>
<td>Management Education &amp; Library Science</td>
<td>5</td>
</tr>
<tr>
<td>Innovation &amp; Change</td>
<td>2</td>
</tr>
<tr>
<td>Total</td>
<td>66</td>
</tr>
</tbody>
</table>

After the selection of the relevant journals, the next decision was the inclusion of the actual article. The primary criterion for selection for further analysis included the limiting factor that articles were published after 1979 and related to the topics of Evidence-Based Research, Evidence-Based Research Synthesis, and Literature Synthesis. Following the initial search of identified databases and selected journals, each article abstract was studied to ensure that all relevant articles were included due to the diverse terminology and concepts associated with Evidence-Based Research. Using the criterion outlined above, further analysis of the alignment with the topic was performed on the abstracts, introductions, and conclusions. Consequently, in this stage articles that referenced Evidence-Based Research, Evidence-Based Research Synthesis, and Literature Synthesis were selected for further analysis.

A secondary check of articles excluded was conducted through the supplementary technique employing a keyword search. However, it is important to note that this keyword check was employed only as a supplemental measure as the list of keywords is not exhaustive, and many articles may have been missed where Evidence-Based Research is not mentioned directly. Accordingly, the primary method for inclusion was based on the content of the article and its alignment with the topic. This pool of articles was further analyzed for common themes and research directions. The resultant studies were then analyzed by journal category.

The journals, Academy of Management Learning & Education, Academy of Management Journal, Organization Management Journal, and The Academy of Management Review, were the most prominent journals in this study. Overall, there were 49 journals representing the following areas: Approximately 34% deal with general management issues (17 articles are from the AOM Journals), 11% are centered on research methods and information and knowledge management issues respectively, 10% deal with finance and market development, 8% are focused on organizational behavior and HR administration, 7% deal with strategy, policy, management education and library science, and the remaining 3% deal with innovation and change.

There has been a substantial increase in the number of articles on the topic in the period included for analysis, with a sharp and sustained increase beginning in 2006 (see Figure 1). The number of evidence based management articles has risen in particular over the last few years; the number of human resource evidence based management articles has also steadily increased since 2007. The number of articles that are focused on policy appears to fluctuate as it has had several peaks, most recently in 2010. (See Figure 2).

Figure 1: Articles by Year Included in this Study

![Figure 1: Articles by Year Included in this Study](image1)

Figure 2: Article Topic Focus by Year

![Figure 2: Article Topic Focus by Year](image2)
At this point, the study has effectively completed the first two steps of the evidence based research process as outlined by Hansen and Rieper (2009, p. 143). The research question is “what does the management literature reveal about the theory and application of evidence based research?” A systematic search has been made of the literature and that process has been documented on the preceding pages. The quantitative information about the selected articles has been gathered and documented. The next step would be to gather the qualitative information about the selected articles. There are several tools that could be used to help with this analysis. While the computer programs MSWord and Wordstat can help identify themes, there is also old-fashioned human analysis that needs to be completed.

Once the themes or key elements of the articles are identified, the results need to be compared and analyzed from a qualitative point of view. Key to this analysis is the degree to which the original research question was supported, the types of new questions and insights that were raised and a further refinement of the original research direction (hypothesis).

As a result, managers will be better positioned to evaluate working methodologies they are asked to implement and may do so in a more systematic manner, thereby learning from their own activities. It is this reflective practitioner stance that can be argued is the larger “purpose” for management. In addition, evidence-based research’s purpose is to produce actionable evidence that can be applied to management problems by manager practitioners. Briner, Denyer, and Rousseau (2009) stress that Evidence Based Management is the research outcome, and is “fundamentally a process of informed practitioner judgment (p. 30). Following this rigorous process, management practitioners are able to act upon information that is unbiased and based on the review of available evidence.

CONCLUDING THE STUDY
While this study has initiated the process, more work is needed. This particular study needs to expand beyond its preliminary parameters as they were outlined and proceed to more in-depth analysis. As Reay, Berta and Khon (2009) note there are many articles that discuss the need for evidence-based research and its importance to management practitioners. However, there are not as many articles that back up this advice with quantitative information. The next stage of this research project would develop a more detailed quantitative analysis.

As this research study has shown, there are varying techniques that fall under the evidence based research umbrella. This research study explores the theory and the application of evidence based research. Evidence-Based Research, Evidence-Based Research Synthesis, and Literature Synthesis are all related terms covering a topic that ties into the practice of Evidence-Based Management. The purpose of the study is to explore the process of evidence based research. Its argument is that a greater understanding of the theory and application of evidence based research will help practitioners better understand the process and apply it to the practice of management.

CONUNDRUMS OF EVIDENCE BASED RESEARCH
The theory and practice of evidence-based research is not without controversy. Silk, Bush and Andrews (2010) warn about the hierarchy of evidence as a way to stifle the creativity necessary for academic research (p. 105). The authors advocate “a messier, less structured approach that uses quality as a final judgment, not as criteria for inclusion (p. 109). They write that under such a rigid methodology, opposing information can be overlooked and “other viewpoints are curtailed by restriction of contrary ideas” (Silk, Bush & Andrews, 2010, p. 107).

Boell and Cecez-Kecmanovic (2010) adopt a less critical point of view, but they remain concerned about the linear approach of systematic reviews. They find that “this is especially problematic in social sciences research and the humanities, where research questions typically are less rigid and may evolve over the course of the research (Boell & Cecez-Kecmanovic, 2010, p. 131). Even though they are on the whole more positive about evidence based research, Hansen and Rieper (2009) still caution that those who engage in the process not only “assess and summarize existing knowledge, but they also take part in making priorities and managing streams of knowledge” (p. 160).

While there are limitations with any form of research, the documentation that is an integral part of evidence-based research helps all researchers hone their craft. For this research method to gain increased popularity in the field of management, more evidence is need.

REFERENCES AND SUGGESTED READINGS


ABSTRACT

A new direction is being taken by many companies seeking growth. As growth becomes more difficult to achieve in a number of industries, especially for major pharmaceutical companies in the $20 billion-plus sales level, companies are rethinking how they define markets. Growth is now a strategic imperative on par with profitability. Top line growth, especially organic growth, increasingly drives shareholder value; future growth accounts for as much as 54 percent of a stock’s total value (McGovern, et al 2004). For the pharmaceutical industry, used to double digit increases in revenue, 2007 was a bump in the road. US sales of both branded and generic drugs will grow about 4.5 percent next year, the slowest growth rate since 1963 (Whalen 2007).

For example, General Electric recently announced in an annual report that it expects to get as much as 60 percent of its revenue growth from emerging markets (Filho, et al 2003). In recent interview David Brennan, CEO of AstraZeneca, stated that AstraZeneca got 20 percent of its sales revenue in 2006 from developing economies (Cossack 2007).

A relatively new segment has emerged that aims at this growing low income population: Medicaid Managed Care. This article examines this relatively new development and the implications of marketing healthcare to poor. Specifically, can a company earn a profit marketing healthcare to the poor? What are the consequences, both positive and negative, when profit has to be earned to the healthcare received by the poor?

INTRODUCTION TO MARKETING TO THE POOR:

Before focusing on marketing healthcare to the poor, it is interesting to explore why this development has arisen. The leading advocate for marketing to the poor segment is C.K. Prahalad. Professor Prahalad published a book in 2004 that characterized lower income markets as a “fortune at the bottom of the pyramid” (Prahalad 2004a). Dr. Prahalad sized this market segment consisting of approximately 5 billion people earning or living on less that $2 a day. This market is not interested in convenience willing to make many frequent trips to retail outlets. Instead of economy-sized packages, single serve packages suit this segment better. For example, 60 percent of all shampoo sold in India is of the single serve variety priced at one cent a piece (Prahalad 2004b).

According to Professor Prahalad, marketing to the poor concentrates the mind forcing one to rethink costs, the meaning of quality, scale of operations, and the use for capital (Prahalad 2004b). For example, Millicom International Cellular SA, a Luxembourg-based wireless provider that targets poorer markets across the globe, tested selling seconds instead of rounded minutes charging for only the exact duration of the call; in Paraguay calls per user increased 47 percent. After introducing e-pin and per-second billing in Paraguay in 2005, Millicom saw subscribers rise 84 percent and revenue rise 91 percent within a year (Childress 2007). In fact, Millicom prefers to recruit from industries that understand distribution in poorer markets like Seagram and Diageo PLC (Childress 2007). Such consumer end pricing focus brings to mind pioneers such as Lee Iacocca with the Ford Mustang in the early 1960s and Eckered Pfeiffer of Compaq and the first personal computer’s priced under $200 in the early 1990s.

Wal-Mart has become the biggest private employer in Mexico, the biggest single retailer throughout Latin America and presently accounts for half of Mexico’s supermarket sales. Wal-mart largest consumers living on incomes of $4000 a year (Lyons 2007).

The Latin America arm of Interpublic Group’s McCann World group in 2005 conducted research of 15 of its major advertising clients. The research asked the question: where did they see the biggest marketing opportunities? The answer: markets with low incomes (Regalado 2007).
McCann began research in Spring 2007 where its staffers will spend weeks living with 100 low income families in a half dozen developing countries; the aim of the research is to understand how low income consumers are influenced by brands, the impacts of celebrities and to learn innovative ways to influence what these consumers buy (Regalado 2007).

Banks are another sector that are targeting low income markets. KeyBank of Cleveland found that competition for more well-off segments has stalled and competition intensified. Instead of trying to take market share from competitors, KeyBank had defined new segments such as “unbanked” and “underbanked”; according to the bank, this is a $11 billion market (Carrns 2007). The terms bear a resemblance to healthcare segments such as “uninsured” and “underinsured”.

KeyBank’s strategy is to start with basic checks cashing and then try to get the segment to migrate up to more traditional bank products like checking accounts and home mortgages; to date, the progress has been slow (Carrns 2007). The bank provides its check cashing services at lower prices than traditional neighborhood check cashing outlets; to date, KeyBank has limited its service to checking accounts and home mortgages; to date, the progress has been slow (Carrns 2007). The bank provides its check cashing services at lower prices than traditional neighborhood check cashing outlets; to date, KeyBank has limited its service to checking accounts and home mortgages; to date, the progress has been slow (Carrns 2007). The bank provides its check cashing services at lower prices than traditional neighborhood check cashing outlets; to date, KeyBank has limited its service to checking accounts and home mortgages; to date, the progress has been slow (Carrns 2007). The bank provides its check cashing services at lower prices than traditional neighborhood check cashing outlets; to date, KeyBank has limited its service to checking accounts and home mortgages; to date, the progress has been slow (Carrns 2007).

Interestingly, the average check cashed for $750, much larger than expected, indicating this segment may have more income than through (Carrns 2007).

SIZE OF MARKET:
Emerging markets are a bright spot for the drug industry (Whalen 2007). The top seven emerging markets will grow at a rate of 12 percent in 2008 according to drug industry marketing research firm, IMS; these emerging markets will make up about 12 percent for global sales but will contribute 24 percent of sales growth in 20089 Whalen 2007). In contrast, the pharmaceutical industry’s top seven markets, including the US, Europe and Japan, for the first time will contribute less than 50 percent of global sales growth; in 2006, they accounted for up to 60 percent of growth (Whalen 2007).

Merck’s portion of drug sales coming from emerging markets is forecasted at $2 billion by 2010, double the number in 2005 (Hookway & Zamiskie 2007).

Despite low incomes, when aggregated, low income consumers represent a sizable market. The twenty biggest emerging economies include about 700 million households with total income close to $2 trillion (Anderson & Billou 2007). In Brazil, low income groups make up 87 percent of the population and account for 53 percent of income, about $240 billion; that compares with about $200 billion for higher income segments which make up just 13 percent of the Brazilian population (Regalado 2007). China’s poorest 285 million people are worth $690 billion in purchasing power; India’s poorest 170 million people worth $400 billion in purchasing power (Anderson & Billou 2007). Migrant workers worldwide sent home and estimated $300 billion (referred to as “remittances”) in 2006 (DeParle 2007). One million Overseas Filipino Workers sent home $17 billion in 2006, 1/7 of Philippines gross nation product (DeParle 2007). In the US, the aggregate working poor represent about 40 million households earning $30,000 a year with income of $650 billion in 2004 (Grow & Epstein 2007).

MEDICAID/MEDICAID MANAGED CARE:
Accepting Dr. Prahalad’s premise that global growth is based on the 4 to 5 billion people living in poverty, what does this mean for healthcare? A new type of Medicaid managed care health plan has emerged; for profit, publicly traded health insurers (Draper, et al 2004). The big four in this group are : Amerigroup; WellCare; Centene; and Molina.

Managed Care covers a wide range of arrangements for financing and providing healthcare; a general definition of managed care denotes healthcare financing arrangements that attempt to control healthcare cost by adjusting and influencing the behavior of healthcare providers through medical protocols and financial incentives that restrict enrolled members or covered lives’ access to healthcare cost by adjusting and influencing the behavior of healthcare providers through medical protocols and financial incentives that restrict enrolled members or covered lives’ access to healthcare providers and that attempt to integrate the delivery and financing of healthcare (Davies & Jost 1997).

Managed Care covers a wide range of arrangements for financing and providing healthcare; a general definition of managed care denotes healthcare financing arrangements that attempt to control healthcare cost by adjusting and influencing the behavior of healthcare providers through medical protocols and financial incentives that restrict enrolled member’s or covered lives’ access to healthcare providers and that attempt to integrate the delivery and financing of healthcare (Davies & Jost 1997).

Medicaid is now the health insurer for about 20 percent of the US population; thanks to recent coverage expansions, it has become the country’s largest health insurance program, surpassing Medicare, mostly for retirees, in 2002 (Mendoza, et al 2005). About 40 states have care Medicaid, with
about 2/3 of all Medicaid population in some form managed care (Freudenheim 2003 : Sipkoff 2004). Medicaid has become the largest portion of state budgets at 22 percent; more is spent by states on Medicaid than on education and cost are growing at 8 percent a year (McLean 2007).

HOW CAN HEALTHCARE BE DELIVERED TO POOR PEOPLE?
Before examining the four noted for profit Medicaid managed organizations, it is necessary to understand how healthcare can be delivered to low income people. As noted earlier, a wireless company focuses on distribution to provide access to its products and services. Unilever distributes its products in Bangkok through street vendors who earn $200 a month (Ball 2007).

In Bangladesh, a forces of 70,000 housewives work for Bangladesh Rural Advancement Committee (BRAC). They make daily household visits to villages where they seek out those who can be seen to cough excessively, a sign of tuberculosis. These potential patients are coaxed to agree to be tested. Those that commit to treatment last of six months; if they stop prematurely, the tuberculosis can return in more virulent drug-resistant form. To get a commitment from tuberculosis-suffer, the street distributor asks for a $3 deposit for the patient. The patient gets the $3 back, a large sum for a person in Bangladesh, if they stay to treatment end (Sengupta 2007).

The dedication rate for tuberculosis in Bangladesh is up to 70 percent in 2006; the cure rate in Bangladesh for tuberculosis is 89 percent; of 22 countries where tuberculosis is still a major disease, only four other countries have reached 89 percent (Sengupta 2006).

For each person cured, the BRAC distributor earns $2.50; the sale of medicines at wholesale prices brings in an additional $5 months (Sengupta 2006).

THE BIG FOUR
Enter the Big Four: Amerigroup; Wellcare; Centene; and Molina. One of the main strategies for these managed care health insurers is merger and acquisition. They operate similar to tyco by acquiring other Medicaid plans or the Medicaid membership of plans leaving the market. For example, Centene entered New Jersey when it acquired University Health Plans in 2002. Amerigroup did the same in Miami. Molina expanded in Seattle by picking up Aetna’s members when Aetna exited that market (Draper, et al 2004; McLean 2007).

In the past, many physicians and hospitals were not supporters of Medicaid due to the program’s low reimbursement and constant pressure to lower prices. Medicaid programs have to serve anyone who meets the program’s eligibility requirement, despite the fact that Medicaid is funded by federal and state budgets that have not kept pace with growing enrollments and coverage expansion beyond single mothers and children (Hall 2006). The result has been constant churn in membership.

Medicaid members have little incentive to use a healthcare system efficiently; hence, they tend to overuse very expensive venues like emergency rooms where cost can average 6 to 10 times more than the cost were a primary care doctor visited (Hall 2006). Medicaid patients have many non-healthcare related issues that complicate their healthcare status (Hall 2006). Hence, it is not unexpected that many plans and providers due to suffering significant losses would have little incentive to contract with Medicaid. Most of the plans that left Medicaid were provider-sponsored plans, that is physicians and hospitals. The four companies highlighted in this article are for profit, publically traded corporations.

The four companies here account for 22 percent of Medicaid managed care markets, up form 14 percent in 1999; they enroll five million Medicaid patients worth $9 billion in annual premiums, and have combined market capitalization for $ 7 billion (McLean 2007). A more detailed breakdown of operating metrics for these companies follows: Emerging markets may offer an opportunity for the drug industry. The top seven emerging markets will grow at a rate of 12 percent in 2008 according to drug industry market research firm, IMS; these emerging markets will make up about 12 percent of global sales but will contribute 24 percent of sales growth in 2008 (Whalen 2007). In contrast, the drug industry’s top seven markets today, including the US, Europe and Japan. For the first time will contribute less than 50 percent of global sales growth in 2006, they accounted for up to 60 percent growth (Whalen 2007). Despite low incomes, when aggregated , low income consumers represent a sizable market. The 20 biggest emerging economies include about 700 million households with total income close to $2 trillion (Anderson & Billiou 2007).

MEDICAID AND MANAGED CARE:
Accepting Dr.Prahallad’s premise that a substantial part of growth might be based on low income consumers, what does this mean for healthcare, especially healthcare for the poor in the US? A new type of Medicaid managed care plan has emerged; for-profit, publicly traded health insurers such as Amerigroup, Centene; Molina; and WellCare (Draper, et al).

Medicaid is now the health insurer for about 20 percent of the US population; thanks to recent
coverage expansions, it has become the country’s largest health insurance programs, surpassing Medicare in 2002 (Medonca, et al 2005). About 40 states have Medicaid Managed Care, with about 2/3 of all Medicaid population in same form of managed care (Freudenheim 2003; Sipkoff 2004). Medicaid has become the largest portion of a state’s budget at 22 percent; more is spent by states on Medicaid than on education and cost are growing at 8 percent a year (McLean 2007).

In the past, many doctors and hospitals were not supporters of Medicaid due to the programs’ low reimbursement and constant pressure on prices. Medicaid programs have to serve anyone who meets the programs’ eligibility requirements, despite the fact that Medicaid is funded by federal and state budgets that have not kept pace with growing enrollments and coverage expansion beyond single mother and children (Hall 2006). Medicaid enrollees have little incentive to use healthcare efficiently; hence, they tend to overuse every expensive venues like emergency rooms where costs can average 6 to 10 times more than the cost were primary care doctor visited (Hall 2006). Medicaid patients have many non-healthcare related issues that complicate their healthcare status (Hall 2006). Hence, it is not unexpected that many health plans and providers would have little incentive to contract with Medicaid. Most of the plans that left Medicaid were providersponsored plans, that is, physicians and hospital. Into the breach has stepped the for-profit Medicaid Managed care plans; Amerigroup, Centene; Molina; and WellCare.

These four companies account for 22 percent of Medicaid managed care markets, up from 14 percent in 1999; they enroll five million Medicaid patients worth $9 billion in annual premiums, and have combined markets capitalization for 47 billion (McLean 2007). According to financial information for the year 2006, WellCare seems to have performed the best of the four with the highest Enterprise Value, Enterprise Value to Sales ration pricing, and the most productive employee force (Finance.Yahoo.com 2007; Company Reptors/ 10-Ks 2006).

Arguably the key metric for managed care plans is the: Medical Loss Ratio. This ratio is analogous to gross margin. For every premium dollar paid into healthplan, how much is paid back to the healthplan still collect a capitated premium and does not have to provide health services (Freudenheim 2003). In New Jersey, hospitals have documented that Medicaid Managed Care plans reject claims by hospitals treating the poor three times as much as other managed care plans (Freudenheim 2003). WellCare I sunder investigation by numerous regulators. It is alleged that WellCare inflated the amount it spent on mental healthcare in order to keep money it should have refunded to Florida’s Medicaid program (Francis & Tesoriero 2007).

The most alarming controversy centers on Amerigroup. In 2002, a former Amerigroup employee filed a whistleblower lawsuit alleging that the company’s Illinois plan discriminated against pregnant women and other termed. “unhealthies” by discouraging them form enrolling its healthplan (McLean 2007). In 2002 and 2003, Amerigroup’s medical loss ration was astounding 50 percent, compared to the average of 85 percent for all managed care plans (McLean 2007). In October 2006, a Chicago jury found Amerigroup liable under the False Claims Act. The judge who heard the case characterized Amerigroup’s conduct as “egregious and calculated”. He further opined the Amerigroup “pilfered money from Medicaid coffers to pad its own pockets.” (McLean 2007).
THE ISSUE:
The poor are unfortunately adding to the enrollments of state Medicaid programs. One approach to stem the increasing spiral in healthcare cost for Medicaid is the for-profit Medicaid Managed Care plans. These companies only recently arrived on the healthcare in the late 1990s. They have grown rapidly now accounting for more than one-fifth of all Medicaid patients. They have also exhibited impressive financial performance.

The downside to these plans is that they be making profit at the expense of their poor constituents. Their pricing and their medical loss ration are at a high level which would seem to be incompatible with the higher cost that is associated with a vulnerable market segment. There may be a budding rationale for serving low income consumers and making profit at the same time in on-healthcare setting, as Dr. Prahalad suggest. But more scrutiny is needed before on can conclude that for-profit Medicaid Managed Care is the answer to healthcare for the poor. The purpose of this research would be to examine this issue.

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Abstract
This article is devoted to the empirical analysis of some tendencies of the spatial development of the Russian banking sector took place last decade (2001–2010). On the basis of the official statistical data (Bank of Russia) the dynamics of a number of indicators is determined. The indicators characterize the extent and forms of market competition between commercial banks all over the country and in federal districts. The main result of the authors’ empirical analyses is that Russian banking space is both heterogeneous and polarized enough. Special attention was paid by the authors to the geographical migration of the aggregated banking resources (assets) and products.

Keywords
Banking system, branch network, spatial development.

Introduction
The importance of spatial development of national economies has gradually increased last decades. The main features of spatial development of contemporary Russian economy are concentration of economic activities (including banking) in large agglomerations and hydrocarbon-rich provinces, the economic growth acceleration in seaside regions in the west and south of the country, and significant depopulation of northern and eastern regions. Russia’s Eastern path is now behind due to the high transport costs (long distances), unfavorable climate conditions, weak industrial, transport and social infrastructures. Trade liberalization of post-soviet Russian economy has led to aggravating of existing interregional discrepancies in socio-economic development especially under condition of stable oil export accompanied by boosted oil prices. And economic crises of 1998 and 2008 years have only sharpen these discrepancies.

Talking on a spatial dimension of Russia’s banking system in our investigation we will mostly use the division of the country into 7 Federal okrugs (districts), FOs. While regions are the real agents of fiscal, structural and social policy, all the FOs have neither own budgets, nor representative authorities. They have been introduced as an intermediate body of administration and control, alleviating interaction between the federal center and all the regions to enforce the ‘vertical of power’ for effective transferring of decisions made by federal power to the regional level.1

The Russian banking system
The Russian banking system passed through the stages of its development, including its establishments, a period of a rapid growth, several acute crises and the recovery. The banking crises were inseparable components both of the 1998 and 2008 financial and economic crises. The growth of the national banking system was mostly predetermined by the market demand for the various banking services not relevant to soviet centralized banking practice.

The consolidated assets of the all the Russia’s banks were equal to 32.9% of its GDP at the end of 2000 and is now close to 75-80% level. This ratio of banking system assets to GDP is still growing despite of the 2008 crisis and expected to be about 150% by the end of 2015. However, it is not quite as much as in the UK with banking assets over 300% of its GDP. The level of total capitalization of the banks relatively to GDP volume was only 3.5% at the very beginning of 2000 and has increased to current 11.8% (2010). There are 1,145 credit organizations (including 1,032 banks) operating now on the Russian market (while the highest number of credit institutions the post-soviet Russian banking system had in 1995 – about 2450 banks or twice more than now). Nonetheless, the Russia’s banking system still has the third-largest number of banks in the world, behind the USA with the biggest banking system – about 7,100 banks and 82,000

1 Hereinafter in this paper: CFO – Central FO, NWFO – Northern-Western FO, SFO – South FO, VFO – Volga (Privolzhsky) FO, UFO – Ural FO, Sib FO – Siberian FO, FEFO – Far-Eastern FO.
branches (2009), and Germany – about 2,400. No other national economy or finance in the world doesn’t allow itself have more than 1,000 banks.

The three main determinants of the number of banks are the size of territory, population and GDP – these factors explain about 70% of the number variations. Given those international standards, the optimal number of banks for current Russia was estimated by the experts at the Russian Centre for Macroeconomic Analysis and Short-Term Forecasting as of only 180-220 institutions (despite of the country’s huge territory). And the rest 1,000 banks might be viewed as the historical heritage of economic liberalization which took place at the very beginning of 1990-s. Decreasing of number of Russian banks might be achieved neither by M&A-s or by some administrative methods (by means of increasing of the minimal size of bank capital or limiting of the bank license issue). Some of the small banks will transform into the non-bank credit organizations, and the others will become the branches of the bigger banks. The most remarkable feature of the Russia’s banking system is that it has high level of concentration. Assets of the 50 largest banks account for more than 80% of total assets of national banking system that consequently means that the smallest 1,000 ones hold together less than 20% of the system’s assets (see Table 1).

Table 1. Concentration indicators of the Russian banking system, 2010.

<table>
<thead>
<tr>
<th>The share in, %</th>
<th>Banks</th>
<th>Branch Network</th>
<th>Assets</th>
<th>Credit Portfolio</th>
<th>Private Deposits</th>
<th>Services for Corporate Sector</th>
<th>Capital</th>
</tr>
</thead>
<tbody>
<tr>
<td>Top 10</td>
<td>36</td>
<td>64</td>
<td>47</td>
<td>64</td>
<td>35</td>
<td>35</td>
<td></td>
</tr>
<tr>
<td>Top 20</td>
<td>46</td>
<td>768</td>
<td>65</td>
<td>75</td>
<td>53</td>
<td>54</td>
<td></td>
</tr>
<tr>
<td>Top 50</td>
<td>60</td>
<td>80</td>
<td>77</td>
<td>82</td>
<td>65</td>
<td>65</td>
<td></td>
</tr>
<tr>
<td>Top 200</td>
<td>77</td>
<td>94</td>
<td>91</td>
<td>92</td>
<td>84</td>
<td>83</td>
<td></td>
</tr>
</tbody>
</table>

However, the Russian banking sector is tiny compared to that of the EU, the US, Canada, Japan and other developed economies where the banking is the central to the operation of the economy and with the larger proportion of the population that have bank accounts and make widespread use of the banking services. Russian banking system explicitly demonstrates the growth of its capital concentration last decade: while the mean size of the bank capital has increased in 66 times, the mean size of assets – 36 times. The number of banks which capital is over than 300mln rubles has grown from 29 to 339 (or from 2.0% to 30.6% of the total number of banks).

The main result of the authors’ empirical analyses is that Russian Banking space is both heterogeneous and polarized enough. Special attention was paid by the author to the migration of the aggregated banking resources (assets) and products’ (deposits and credits) geographical centers as the centers of mass (or centroids). Empirically, migrations of centers of corporate and consumer credits had last decade different directions, and that corporate credits are less distant from assets location than the consumer credits which are located closer to population. In addition to the above mentioned measures of the Russia’s banking concentration it is also over concentrated or polarized in spatial. Given the shorting list of Russian banks the share of the banks located (registered) in Central FO has grown up to 58% from 54% last decade.

The Branch Network in Russia

It was about 3,800 bank branches in Russia ten years ago. The number has remarkably decreased by the year of 2004 to 3,219 and then increased again to 3,513 before the crisis (2008-Q3). Now there are 2,886 full scale branches (a quarter of which are branches of the Sberbank - the country’s largest bank, mostly owned by the Central Bank of Russia, CBR). Development of multiregional branch network in accordance with organizational structure of the bank management strategy is a prerogative of the biggest federal banks, such as Rosbank, Bank of Moscow or UralSib. Those banks open at first their new branches in cities with population more than one million. Later they go to the towns of 200,000 citizens. The structural units of branch system in Russia are territorial centers (‘upravlenie’), branches (‘filial’), different internal structural divisions or sale outlets (additional offices (sub-offices, SOs), operational cash-desks (OCD), credit-cash offices (CCOs) and operational offices (OOs). Table 3 reflects the branch network structure of some of the retail banks leading in market penetration into Russian regions.

Table 3. Branch Networks of Russian Banks, 2011.

<table>
<thead>
<tr>
<th>Bank</th>
<th>RosBank</th>
<th>MDM-Bank</th>
<th>Alfa-Bank</th>
<th>Bank of Moscow</th>
<th>Vozrozhdenie</th>
</tr>
</thead>
<tbody>
<tr>
<td>Territorial Centres</td>
<td>3</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Representative Offices</td>
<td>-</td>
<td>-</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Branches</td>
<td>35</td>
<td>35</td>
<td>11</td>
<td>48</td>
<td>54</td>
</tr>
<tr>
<td>SOs</td>
<td>420</td>
<td>290</td>
<td>131</td>
<td>311</td>
<td>77</td>
</tr>
<tr>
<td>OCDs</td>
<td>29</td>
<td>15</td>
<td>23</td>
<td>10</td>
<td>38</td>
</tr>
<tr>
<td>CCO’s</td>
<td>23</td>
<td>-</td>
<td>203</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>OOs</td>
<td>111</td>
<td>24</td>
<td>58</td>
<td>20</td>
<td>2</td>
</tr>
</tbody>
</table>

Source: Completed on Central Bank of Russia data (www.cbr.ru/credit/CO_Sites.asp), as of March 01, 2011.

As for regional banks their branch network enhancing is determined both by the existence of reliable and specific clients (consumers) and by their headquarters’ geographical location. Additional offices (sub-offices) and operational cash-desks are usually to be open in places of certain corporate client location or activity. In case of retail services regional banks prefer to move in neighboring regions for exploitation of local bank image

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2 All the Eurozone countries operate 6,400 banks in total. (www.ecb.int)
and recognizable regional brand. The enhancing of the branch network allows create profitable retail banking. And another additional incentive for some non-prospective banks to enhance their branch network is to sell itself later to foreign buyers. Without a wide retail network many regional banks are far to be attractive enough for foreign banks.

In most of Russian regions external banks take more than half of local markets, especially in case of corporate credits. As for the number of local bank branches it has gradually decreased from 866 to 493 during Jan. 2005 – Feb.2011 period. At the same time the number of the external banks’ branches (branches of the banks located out of the region) has grown from 2372 to 2837 (October 2008) and then decreased to 2393 by March of 2011. So, when the number of local bank branches decreased by 43.1%, the number of the external ones has finally increased only by 0.9%. Very informative might by also the interregional comparisons of changes took place in banking branch structure of the Federal okrugs during the short period – 13 months - of this year (Table 4).

Table 4. The changing presence of Banks in FOs, January 01, 2010- February 01, 2011.

<table>
<thead>
<tr>
<th>FO</th>
<th>Changes in the number of</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Banks</td>
<td>Branches</td>
<td>Local Banks’ Branches</td>
<td>Alien Banks’ Branches</td>
</tr>
<tr>
<td>RF</td>
<td>-4.35%</td>
<td>-9.19%</td>
<td>-17.97%</td>
<td>-7.14%</td>
</tr>
<tr>
<td>CFO</td>
<td>-2.17%</td>
<td>-13.42%</td>
<td>-25.16%</td>
<td>-9.93%</td>
</tr>
<tr>
<td>NWFO</td>
<td>-5.33%</td>
<td>-13.92%</td>
<td>-13.79%</td>
<td>-13.93%</td>
</tr>
<tr>
<td>SFO</td>
<td>-9.65%</td>
<td>-2.05%</td>
<td>-6.00%</td>
<td>-1.03%</td>
</tr>
<tr>
<td>VFO</td>
<td>-5.60%</td>
<td>-10.03%</td>
<td>-21.97%</td>
<td>-7.24%</td>
</tr>
<tr>
<td>UFO</td>
<td>-5.56%</td>
<td>-0.30%</td>
<td>-6.67%</td>
<td>3.23%</td>
</tr>
<tr>
<td>SibFO</td>
<td>-9.52%</td>
<td>-9.02%</td>
<td>-26.32%</td>
<td>-7.20%</td>
</tr>
<tr>
<td>FEFO</td>
<td>-6.90%</td>
<td>-16.00%</td>
<td>-47.83%</td>
<td>-11.18%</td>
</tr>
</tbody>
</table>

During the last decade the Russian banking system demonstrates gradual changes both in spatial (geographical, regional) and network (structural) dimensions. The existence of more than 1,000 banks on the national market makes their presence on the regional markets very heterogeneous and competitive. And the character of the presence can be of various types. The general tendency is an increasing of the branches-to-bank ratios in all the Federal Okrugs as the combined result of simultaneous processes of decreasing in number of banks and enlarging of big banks’ branch network system (Fig. 2). One of the specific features of the spatial distribution of branches is that Central FO has almost equal number of banks and branches while the three ‘Asian’ okrugs have in average 5-7 branches for one bank. Moreover, if the former ratio remains practically constant, the latter ratios are permanently increasing. And other feature is that the economic crisis of 2008 had no influence on this branch-to-bank ratio.

Fig. 2. Branches-to-Bank Ratio, 2001-2010.

Next picture demonstrates the growth of bank competition on the regional markets (Fig. 3). The picture allows make some important conclusions. The banking space in Russia becomes more and more ‘overlapped’ by different banks and branches despite of the decreasing total numbers both of the banks and the branches. The highest share of branches established by the ‘domestic’ or home banks for the FOs ha s Ural FO. Meanwhile the UFO’s eastern neighbor, Siberian FO, has the lowest share of this kind of branches. This sharp territorial contrast in branch ‘domestification’ might be explained by the fact that UFO consist of gas&oil rich regions that try to keep strong position on local market of banking.

Fig. 3. The Share of Local Banks’ Branches, 2001-2010.

The reasons for expanding branches outside of Moscow

Having consolidated their foothold on the Moscow financial market during the 1990-s, major Russian banks and other leading credit institutions have switched their commercial interests on Russian regions as their ‘next targets for

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3 It should be noted that being out of the region under investigation it might belong to the same Federal Okrug. So to receive more reliable estimations on the level of external banks’ penetration into the local bank markets it needs more detailed statistics.
conquest. Russian banks are boosting their regional activities either by opening new regional offices or consolidating their positions in areas where they already have branch networks. The acquisition of regional network is usually profitable only if the bank to be absorbed is bought entirely including all its clients and managers. New branch networks covering different regions are usually in addition to existing distribution network of the banks headquartered in Moscow city or Moscow region. Those banks elaborate and follow strategy to expand further into the regions and go deeper into customer services with the introduction of a new retail concept based on the latest banking techniques, including the integration of on- and off-line banking services as well as providing multi-channel solutions to customers. This kind of innovations is to meet western standards of banking with the aim of making new outlets and services the same as those provided by global banking giants.

The leading Russian banks such as Sberbank, Rosbank, Alfa Bank, UralSib and others have now a significant presence in most of the 82 regions, explicitly reflected in their balance sheets. As the biggest credit institution in Russia and CIS, Sberbank is accounting for 27% of the aggregate Russian banking assets and 26% of banking capital. Sberbank is also the biggest borrower of deposits on the internal money market and the key lender to the national economy. As of 1 June 2010 Sberbank accounted for 48% of retail deposits, 33% of consumer credits and 30% of corporate credits in Russia. The bank has the largest countrywide branch network with 18 territorial divisions (as the regional head offices) and more than 19,100 retail outlets with about 245,600 employees. Elsewhere, Sberbank operates representative offices (subsidiary banks) in Kazakhstan and Ukraine contemplating Belarus and targets 5% share of these markets. Sberbank is closely engaged into international activities through direct settlement agreements, correspondent accounts with over 220 leading credit institutions of the world, trade finance operations and membership in a number of international financial organizations.

Sberbank’s official web-site, www.cbrf.ru. According to The Banker magazine, as of July 1st, 2010, Sberbank was ranked 43th in the world in terms of Tier I capital.

RosBank is the largest private bank in Russia in terms of branch network, it operates 38 branches and more than 600 outlets, covering over 70 Russia’s regions. The bank has intentions to extend its regional networks to all major Russian regions for promoting full range of highly competitive products for all customer groups, including low- and middle-class clients. The bank already demonstrates significant regional presence: more than 70% of its existing branches are located outside both the Moscow city and region, in regions such as Buryatia, Krasnoyarsk, Dudnik and Krasnogorsk in Moscow Oblast. The share of the Rosbank’s regional assets accounts for 7% of the bank’s working assets.

Alfa Bank has more than 300 outlets in Russia and the CIS, and continues the consolidation of its position in such key regional economic centers as St. Petersburg, Yekaterinburg, Nizhny Novgorod and Samara. Its regional network is controlling a quarter of the bank’s gross assets, accounted for about 40% of the bank’s loan portfolio, one-third of its deposit and funding base. The Bank’s CIS branch network offers a full range of banking services to corporate and retail clients. Alfa-Bank’s has wholly owned subsidiaries in Kazakhstan, the Netherlands (Amsterdam Trade Bank N. V.) and the United States.

The further development of the banking branch network in Russia will strongly depend on its current condition, on the domestic banking policy (both of the Central Bank and the biggest commercial banks) with respect to the regional markets as well as the exogenous factors (the world oil and other natural resources price levels, forthcoming accession into the WTO and so on). In any case the wide ensemble of the different parameters will affect the level of bank branches and outlets penetration into the Russian regions and former soviet republics. The Russian banking network is the key sector, determining not only profits of the multi-branch retail banks but the steady positive socio-economic growth of the regions. The ongoing opening of the Russia’s regional markets forms some scenarios of its banking system developments, including the development of branch networks.

Meanwhile, M&A in Russian banking sector is, unfortunately, both a rare event and sluggish process. M&A are insignificant on the regional market both by their number and volume, comparing to the mega-acquisition of Rosbank by Societe Generale Group. The main problem in enhancing of branch network is the searching of needed office spaces on appropriable prices. And the other problem is the qualified personnel.

\footnote{Kenneth C., Moscow banks eye Russian regions, The Russia Journal Weekly, 2003, Jan. 31.}
\footnote{Sberbank’s official web-site, www.cbrf.ru. According to The Banker magazine, as of July 1st, 2010, Sberbank was ranked 43th in the world in terms of Tier I capital.}
\footnote{Kenneth C., op. cit.}

Ramon Vasconcellos MA, MBA
Professor, Barstow Community College
2700 Barstow Road
Barstow, CA, 92311
(760)252-2411, ext. 7329
United States of America
ryfin@aol.com; Rhistorian@aol.com

Grace Nicklaus
International Business Major, Finance Minor
California State University, San Bernardino
5500 University Parkway
San Bernardino, CA, 92407
(760)701-0060
G4nick@yahoo.com

ABSTRACT
This paper examines the socio-economic impact of Ecuador’s adoption of the United States Dollar as their official medium of exchange, and its impact on U.S/Ecuadorian trade agreements. The areas of financial services, import-export, and exchange rate fluctuations are studied as a means of assessing their influence on Ecuador’s public and private sectors subsequent to the agreement. Particularly, the research explores how globalization, regarding intercontinental currency adoption, has both stymied and expanded regional economies. Supporting data include –but are not limited to- testimonials from trade representatives and World Bank statistics, along with Ecuadorian trade and industrial figures.

Keywords
Dollarization; Value at Risk (VAR); Pegged Currency Systems; Balance of Payments; Tariff Rate Quotas (TRQs); Great Recession; International Monetary Fund (IMF); Gross Domestic Product (GDP); Transfer Pricing

INTRODUCTION
According to the Office of the United States Trade Representative, Ecuador serves as the 40th largest goods provider to the United States with $12.9 billion exported to the U.S. in 2010; the trade deficit with Ecuador was $2 billion that year. Further, U.S. trade in 2010 increased by 41.3% over 2009, with a resounding 331% escalation from 1993.1 In 2010, U.S. imports amounted to $869 million in agricultural goods such as bananas and plantains, cut flowers, and cocoa beans. Ecuadorian imports from the U.S. accounted for 26% of her imports- consisted of paper, chemical products, electrical and transportation equipment, and fertilizers. At the same time, mining and manufacturing received the most foreign direct investment (FDI) from the U.S. accounting for $1.3 billion in 2009.2

DOLLARIZATION
Adoption of the U.S. dollar in 2000 contributed to the expansion of trade between the two countries for dollarization (the process whereby a foreign country adopts the U.S. dollar as its official medium of exchange) resulted in abandonment of the Sucre, which had contributed to spiraling inflation and a banking crisis during the late 1990. In turn, greater price stability and increased purchasing power improved most Ecuadorians’ standard of living, in addition to attracting foreign capital.

For example, the economy had contracted at a rate of -7.3% in 1999, but grew by 2.3% and 5.6% in 2000 and 2001, respectively.3 After posting moderate gains throughout the last decade, growth slowed to a 3.6% rate for GDP in 2010, with the forecast for 2011 estimated to be 5.1%. Given dollarization, per capita income increased from $1,324 in 2000 to $4,013 in 2010,4 with the poverty level declining from 51% to 33% for the same period. 5

1 Office of the United States Trade Representative, pg. 2; http://www/ustr.gov/countries-regions/americ/111
could
2 Ibid
3 The Effect of Dollarization in Ecuador;
http://www.mindspring.com/tbgray/dollar.htm
4 U.S. Department of State-Bureau of Western Hemisphere Affairs
http://www.state.gov/r/oi/bgs/35761.htm
5 Office of the United States Trade Representative, pg. 8
Throughout the first five years of the new millennium, Ecuador’s economic growth averaged 4.9% per annum as oil production expanded, along with increased consumer demand and exports. The same period witnessed Real Gross Domestic Product expanding at a 2.1% rate for the oil sector with the opening of a new oil pipeline in 2004, Oleoducto de Crudos Pesados (OCP). Other major pipelines have augmented growth as well: Sistema Oleoducto Trans-Ecuatoriano (SOTE), located in the Amazon region of the country extending to the Pacific, and Oleoducto Trans-Andino (OTA), running from the Amazon to Columbia’s Pacific port of Tumaco.

**ECONOMIC GROWTH AND INFLATION**

Prior to the adoption of Dollarization, Ecuador and the United States had agreed to a Bilateral Investment Treaty (BIT) signed in August of 1993. The BIT gave the U.S. Most-Favored-Nation (MFN) status requiring that any expropriation be carried out specifically for “public purpose, in a non-discriminatory manner, and upon payment of prompt, adequate and effective compensation.” For the most part, U.S. companies have been protected under the BIT agreement. However, the judicial system has sometimes acted contrary to the treaty. In the case of Occidental Petroleum, the government accused the oil company of selling part of its operating contract to EnCana, a Canadian subsidiary, without approval. As a result, the U.S. froze talks of a free trade agreement which was under review in 2006 between Ecuador and the United States.

Yet, the cost of a developing economy has been accelerating inflation. Although inflation had dropped precipitously after dollarization, consumer prices did rise from 2007-2009. Ivan Gachet, Diego Maldonado, and Wilson Perez have defined the causes of a recent spike in the Consumer Price Index through the application of Value at Risk (VAR) modeling. A Value at Risk (VAR) model identifies relationships between economic variables by assessing risks associated with portfolios. Gachet et al modified the formula to include variables causing changes to inflation in assessing empirical relationships among data. As a result, the SVAR (Structural Value at Risk model) was applied in measuring aggregate sources of inflation.

Drawing from SVAR modeling techniques, which identified CPI changes related to the money supply and wages in the U.S., lending practices in Switzerland, and oil shocks to industrialized countries, Gachet et al concluded only 7.75% of inflation resulted from government policy emanating from Quito. International commodity prices and exchange rate fluctuations, however, accounted for 62.04% and 18.49%, respectively, of Ecuador’s 2008 first quarter inflation.

Consequently, research in the area of U.S. macroeconomic shocks on international commodity prices and changes in the valuation of the United States Dollar (USD) evidence reverberations felt by our trading partners. Messrs. Kyongwook Choi, Shawkat Hammoudeh, and Won Joong Kim have cited oil prices, changes in U.S. output, the real exchange rate, and the U.S. consumer price index as having contributed to global supply side shocks. For example, a weaker dollar often leads to more expensive oil imports and higher domestic prices for global commodities. As mentioned, Ecuador maintains sufficient oil and gas resources for domestic consumption. Nevertheless, that country’s non-fuel commodity prices have increased, partly because of the overall weakness in the USD. Dollarization, while allowing for cheaper Ecuadorian exports, has, in part, ignited recent inflation.

**PEGGING: BENEFITS & COSTS**

Pegging is tying one nation’s currency to another or a portfolio of currencies. The practice has distinct advantages and disadvantages. One benefit is the economic stability often created in the absence of a depreciated currency. Political constancy is another factor given that the government could, perhaps, gain some measure of acceptability with its constituents. Speculation and/or “front running,” as is common under floating currency systems, are reduced. Liquidity requirements for currency and capital markets are sometimes unnecessary since the pegged currency will often suffice as collateral reserve.

Still, disadvantages often arise. A country might have to adopt austerity measures similar to that of the peg country, which could serve to undermine its public sector. Currency
boards may have to intervene to preserve the initial target exchange rate; in doing so, reserves may be required.12

Conditions requiring the adoption of a peg as the official medium of exchange are set by the International Monetary Fund (IMF). If a country has little or no involvement in international capital markets, pegging is advised. Significant levels of trade with the pegged country and a desire to adopt its monetary policies is another condition.13 Flexible labor markets and fiscal policies are also prerequisites. Excessive monetary growth and significant holdings of international reserves of the peg country are viewed by the IMF as sufficient reason for pegging, too.

**IMPROVEMENTS IN THE STANDARD OF LIVING**

On balance, the Ecuadorian economy has experienced significant improvements in its standard of living, while witnessing declining innovations in certain industries. As discussed, inflation, with the exception of 2008, has been tamed. Since 2004, Chinese, Taiwanese, U.S. and Latin American imports are “flooding” the shopping centers giving consumers broader choices. The Central Bank of Ecuador reported that leisure and tourism industries increased from 27.6% to 31.2%14 between 2000-2003 and, barring the Great Recession, continue to grow throughout 2011. However farmers, small scale merchants, and manufacturers had difficulty accessing credit from 2000-2004 with agriculture and forestry production declining to 8.8% from 10.6%.15

In 2004 Luis Rosero, director of the Research Center of the University of Guayaquil, commented that the beneficiaries had been those entrepreneurs in the service sector. According to Rosero, “[Dollarization] does not generate wealth from exports… it is reducing industry and increasing imported goods.”16 Furthermore, Rosero opined that exports would improve if productivity rises and aggregate industrial overhead costs decline. At the time, unemployment hovered around 11.9% with few dollars circulating in the hinterland. However, in light of the Great Recession, unemployment declined to 8.3% in second quarter 2009 and 6.4% for the same period in 2011. Politically, dollarization moderated the influence of the Central Bank given what had been loose monetary policy promoting the circulation of the Sucre. Also, the economy had undergone a banking crisis prior to 2000 making calls for economic reforms essential. Some policy makers have concluded that adoption of the U.S. dollar has resulted in increased consumer purchasing power quelling, albeit, perhaps, temporarily, calls for labor reforms.

In Ecuador, the Balance of Payments, an accounting system measuring trade and financial transactions between a country and its competitors, registered an $817 million Current Account deficit in first quarter 2009,17 although improving in 2010. Remittances, those payments made by subsidiaries of Multi-National Corporations (MNC’s), have shown marked decreases to Ecuadorian companies due to the financial crisis; $555 million remittances were received in first quarter 2009 - an annual decrease of 27%. In the second and subsequent quarters, remittances were $610 million, indicative of a recovery underway.18

Aside from the economic gains which have accrued from dollarization and trade agreements with the U.S., the government has increased social spending from 5.4% of GDP in 2006 to 8.3% in 2008. Also, cash transfer payments to the poorest households and spending on homeowner assistance measured a $474 million increase for the same period.19 As a result, the Correa government has seen percentage rates of those living below the poverty line decreasing from 2009-11. Citing the dollar as a complete failure20 in 2007, President Correa agreed to maintain dollarization, but stated his government would renege on pledges to repay debt to the IMF.21 Consequently, spending for public service programs in education and healthcare has increased, with payments on debt service dropping to 15% of GDP. One academic remarked how “dollarization was a failure in the sense that it widened the gap between the rich and the poor,” yet maintained that “the cost of leaving behind the dollar as the local currency would be very high.”22

12 Ibid, pg. 97
13 Ibid
14 The Effect of Dollarization in Ecuador, pg. 3
15 Ibid
16 Ibid
18 Ibid
20 Ibid
22 Ibid
**TRADE BARRIERS**

Tariff Rate Quotas, taxes imposed on agricultural imports in order to protect domestic producers, have been affixed to certain agricultural products as a means of protecting Ecuadorian farming communities. Under the Andean Price Band System (APBS), an agreement on tariff schedules adopted by those members of the Andean Group - Bolivia, Columbia, Ecuador, Peru and Venezuela - Ecuador maintains tariffs on 153 agricultural goods. The country did commit to eliminating TRQ’s as part of the Uruguayan Round in 1996; however, enforcement has been lax in order to protect local producers. Goods subject to TRQ’s include wheat, corn, sorghum, barley, soybean meal, powdered milk, and frozen turkeys and chickens.

Non-agricultural goods are also subject to special taxes and import restrictions. For example, consumption taxes are assessed on imported and domestic spirits. In 2006, a Food and Nutrition Security Law prohibited the importation and trade in food products containing organisms derived from biotechnology: soybean meal and cooking oil. Still, imports of such products did continue as the country sought guidance as to how to enforce the regulations.

Investment barriers have eroded significantly between 2004 and 2009. Foreign investors are allowed 100 percent ownership in many investment sectors, with few controls or limits on the transfer of capital goods. However, investment in petroleum has significant controls requiring foreigner’s contract with state oil companies. Ivanhoe Energy, a Canadian based petroleum exploration firm, has drilled wells in the Pungarayacu region of Amazon. These wells were first put into operation by Petroecuador in the 1980s followed by Ivanhoe’s continued exploration of the region. The firm applies Heavy-to-Light (HTL) oil upgrading technology in its extraction of crude; in July 2010, the company reported that its Pungaraycu well had been successfully dug. However, “cementing and completion problems” had rendered another well inoperable with no oil recovered.

Impediments to capital formation, however, continuously hinder investment. Some oil companies have had disputes with the government over value-added-tax refunds. An amendment to a hydrocarbons law which increased the amount of revenue accruing to the government has resulted in the bankruptcy of at least one U.S. oil firm. Underpayment to U.S. investors in the electricity sector emanates from government subsidization of local providers, and a reluctance to cut off those customers who refuse to pay their utility bills. Also, the expropriation of properties by government often involves a lengthy period of time before investors are adequately compensated.

U.S. industries with the most exposure to Ecuadorian markets, having an aggregate value in excess of $30 billion USD in exports in 2008, were a conglomerate of heavy machinery, industrial supplies, and iron and steel. Civilian aircraft accounted for $38.6 million in 2008, a substantial increase over 2007 of 753%; excavating machinery generated $142.6 million in 2008. Other industries showed significant gains prior to the financial crisis, with iron and steel mill products up 298.6% in 2008 and special purpose vehicle exports registering $60.5 million.

**CONCLUSION**

Adoption of the USD has definitely augmented trade growth between the United States and Ecuador; in the case of the former, the U.S. imports significant amounts of agricultural goods. Ecuador, in turn, has enhanced her standard of living through economic stabilization and the promotion of local industry. Although uncertainties still exist concerning capital formation and the growth of undeveloped markets, Ecuador offers niche opportunities in franchises and infrastructure development. Further, in spite of challenges presented due to the global financial crisis, dollarization has developed an attraction for U.S. products and services and continues drawing foreign capital to Ecuador.

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29 Ibid


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A SEARCH FOR STOCK PRICE VALUES IN AN INDUSTRY

Raja R Vatti
St. Johns University
Jamaica, NY 11439
718/990-6338
vattir@stjohns.edu

ABSTRACT

 Portfolio analysts use macro, technical and fundamental tools for selecting equities with a very high appreciation potential. Macro analysis involves a careful observation of the global economic trends. Technical analysis studies repeated patterns and trends in the past behavior of each stock price in order to predict the price level of a stock in the immediate future. The fundamental approach for the stock selection consists of analyzing the past financial performance trends of each company in order to pick some undervalued companies. The emphasis of the current study is to utilize a new fundamental mechanism to uncover some publicly traded companies in the precision instrument industry which have a reasonable price appreciation potential. Application of a multivariate statistical technique is proposed here to select companies for a portfolio. Selected companies in the industry chosen are grouped first by looking at the similarities in the financial fundamentals. At the end of the segmentation, the companies within a group tend to be more similar than the companies outside the group. At least one undervalued company within each group would then be identified. The usefulness of the proposed method would be tested by observing the price behavior of the selected stocks in the immediate future.

INTRODUCTION

In the fundamental analysis, investment analysts analyze all the information available on the economy, industries, and companies in order to identify the companies with good price appreciation potential. Some make decisions subjectively, and there are others who base their decisions on a detailed analysis of the data.

In the past forty five years, there was significant research to establish the value of a company’s reported financial information in the investment analysis. Ball and Brown in 1968 were among the first who investigated the value of the accounting data in explaining the security price fluctuations. They provided some evidence of the relationship between security prices and reported accounting information. In the Accounting Review of July 1986, Senyo Tse also demonstrated the extent of the relationship and the changing trends in the coefficient of determination using some cross-sectional models with approximately 420 firms in the sample. There were many other regression models that utilized financial information in establishing beta values, systematic risks, yield spreads, earnings, etc. In addition to the regression analysis, there were many applications of the other multivariate statistical analysis.

Discriminant analysis was used in identifying troubled companies and there were factor analytic models for establishing potential stock returns. Several time series models were also developed to forecast earnings and prices.

The accounting numbers and ratios that were frequently analyzed dealt with a company’s sales, earnings, dividends, debts, cash flows, equity, liquidity and assets.

CURRENT RESEARCH

The purpose of the current research is to establish the applicability of the multivariate statistical grouping methods in the context of portfolio analysis. Conventional wisdom is that all the companies within an industry tend to behave similarly for the changes in the local and global economic environment. It is widely assumed that the observed differences among the companies in an
industry are due to the perceived operating efficiencies or deficiencies.

By selecting a sample of companies in the precision instrument industry, we want to investigate whether further segmentation in the chosen industry could be performed by utilizing financial performance measures of the companies. The intention here is to form a handful of groups of companies within the chosen industry. The companies within each group exhibit closeness in performance ratios such as price to sales, earnings yield, cash flow yield, book value yield, net income margins, debt to equity and return on equity.

The companies that are closest with the minimum squared Euclidean distance with respect to these financial variables would be placed together in a group. The firms in a group would be similar in performance, and would be different from the other firms in the other groups. An attempt then would be made to identify one or more undervalued companies from a group which shows a high similarity.

James Farrel, in the May/June 1975 Financial Analysts Journal, published one similar application of the cluster analysis. He analyzes monthly price changes of several companies in several industries, and he forms clusters based on the similar price behavior during 1961-1969. The current analysis differs from the analysis of Farrel's since his analysis is restricted to the price behavior over several years. The plan here is to analyze several measures in a given year, and we want to explore the feasibility and practicality of observing similar companies in the portfolio analysis. One or more undervalued companies in a very high similarity group or groups will then be identified.

**DATA**

Financial performance data for the year 2010 was collected for the precision instrument industry from the Value Line Investment Survey reports. For each company selected in the industry, the variables included for the analysis are:

- Price to Sales per share
- Cash flow per share to price
- Earnings per Share to price
- Book Value per Share to price
- Net Income Margin
- Debt to Equity
- Return on Equity

**ANALYSIS**

Using the performance variables for the chosen companies in the precision instrument industry, the companies are classified into several similar groups using squared Euclidean distance as the criterion for the closeness of the companies. The procedure used is the Ward’s hierarchical clustering. This method would minimize variation within each group while maximizing the variation between the groups. The similarity measure for each group is noted, and one or more undervalued companies are selected from the groups with a very high similarity. Actual price appreciation of the identified stock during the first six months of 2011 would be compared against the other companies in the same group.

**RESULTS**

<table>
<thead>
<tr>
<th>Group</th>
<th>Similarity</th>
<th>Companies</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>90.86</td>
<td>Newport, Woodward</td>
</tr>
<tr>
<td>2</td>
<td>88.00</td>
<td>Analogic, Coherent, FEI</td>
</tr>
<tr>
<td>3</td>
<td>86.00</td>
<td>Perkin Elmer, Rofino-Sinar,</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ThermoFisher</td>
</tr>
<tr>
<td>4</td>
<td>81.93</td>
<td>Badger Meter</td>
</tr>
<tr>
<td></td>
<td></td>
<td>National Instr, Bruker</td>
</tr>
<tr>
<td>Group</td>
<td>Similarity</td>
<td>Companies</td>
</tr>
<tr>
<td>-------</td>
<td>------------</td>
<td>-----------</td>
</tr>
<tr>
<td>5</td>
<td>78.43</td>
<td>MTS Systems, Veeco Instruments</td>
</tr>
<tr>
<td>6</td>
<td>76.95</td>
<td>Agilent Tech, Mettler-Toledo, Water Corp</td>
</tr>
<tr>
<td>7</td>
<td>72.40</td>
<td>Faro Tech, II-VI, Cognex, KLA-Tancor</td>
</tr>
<tr>
<td>8</td>
<td>65.23</td>
<td>Checkpoint Sys, OSI sys, Orbotech</td>
</tr>
</tbody>
</table>

If we have to select one stock from the precision instrument industry with an outstanding value for the 2011, one has to concentrate on the first two groups which have very high similarity measures that are close to 100. From these two groups, FEI Company from the second group stands out with a sound balance sheet with a low debt to equity ratio, lower price to earnings and price to sales ratios, and higher net income margin than the other companies in the group. Coherent is a close second without any debt.

Woodward Corp in group 1, Cognex from Group 7 appear to be good values also.

The Price performance of the selected companies from this analysis was observed during the first half of 2011 and the results are shown in Table 2.

### Table 2

<table>
<thead>
<tr>
<th>Group</th>
<th>Company</th>
<th>Price Increase of ½ of 2011</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Woodward</td>
<td>34.1%</td>
</tr>
<tr>
<td>2</td>
<td>FEI Company</td>
<td>81.9%</td>
</tr>
<tr>
<td></td>
<td>Coherent</td>
<td>72.7%</td>
</tr>
</tbody>
</table>

As the analysis predicted, FEI Company has achieved a better price increase among the companies in the industry.

**CONCLUSIONS AND FUTURE RESEARCH**

- Multivariate Statistical segmentation methods could be successfully applied in the portfolio selection utilizing fundamental data.
- Careful study and interpretation of the results from the approach could uncover new insights and stock values.
- It is important to note that the present results are valid for the precision instrument industry in 2010 and 2011, and that the results are obtained with one method of segmentation.
- In future, the approach should be tried with the other industries and the other grouping schemes before generalization.

**REFERENCES**


The Impact of Euro Crisis on Gold

Raja R. Vatti
St.Johns University
Jamaica, NY 11439
718/990-6338
vattir@stjohns.edu

ABSTRACT

It is widely believed that the gold price in dollars and the dollar value in Euros are negatively correlated. For a casual observer, the steady climb of gold price and the consistent erosion of dollar value against the Euro during the past few years is enough proof of this negative correlation. There is some published research to support this relationship, even though the research is not extensive enough. The world gold council announced in 2004 that a study with the weekly data on gold price and some individual country currencies in Europe from 1971 to 2002 revealed a strong negative correlation between a chosen country dollar exchange rate and the dollar gold price. Using nonlinear regression models, and using the daily and weekly data on dollar gold price and dollar value in Euros during 2006 and 2007, the present author also demonstrated that the dollar value in Euros has a strong negative impact on the dollar gold price. The current study investigates whether this relationship is intact during the current Euro crisis which is mainly up to now the Greek sovereign debt crisis. Portugal, Spain and Italy also may soon face similar debt problems. It is expected that the fear of consequences of the euro crisis may result in gold price movements that are different from the past because gold now could be perceived as better reserve currency than the dollar or Euro. Previous relationships may not be relevant in the current world economic and fiscal environment.

INTRODUCTION

Gold price has been climbing steadily during the past few years, and there is very little published research with detailed investigation and search for its reasons. It has been widely believed for many years that holding gold is a good hedge against inflation. Even in ancient times, Gold was perceived as a valuable commodity with a lasting value giving its holder unshakable sense of security and comfort in times of personal, national economic and political crises. It is possible that the special place of gold as a source of wealth is due to its unusual luster, chemical properties, scarcity, high liquidity, and marketability. Gold is held not only by individuals but also by the national governments as a backup for the currencies used for circulation. It is also true that there is a great demand for gold jewelry in countries like India, and naturally, when there is more demand than supply, the commodity’s value and price increase.

A new source of demand for gold arose after 1971 when the major countries of the world allowed their currencies to float after the collapse of the Breton Woods system in 1971, and it offered some great new investment opportunities for the International traders. The fluctuations in major currencies increased the probabilities for large gains and losses in currency trading. The tremendous increase in risks due to volatility in currency exchange rates made the investors look for means to reduce the inherent risks that are involved. The currency traders discovered that one way hedging is to invest simultaneously in gold contracts.

At least until now, the dollar is perceived as the main trading currency in the world, and therefore it appears to be reasonable to assume that the gold investments
and the dollar value fluctuations could somehow be related because the traders attempt to protect themselves from the anticipated dollar value erosions by simultaneous investments in gold. Despite the logical intuitive presumption of a close association between the world’s premium currency and the dollar gold price, the published research about their relationship did not materialize until the release of a report of the World Gold Council in 2004. The Gold Council released the results of a statistical research conducted by three academic professionals in the United Kingdom which might have been supported by the World Gold Council.

**Euro and Euro Crisis**

With the establishment of the Euro as a common currency for the European Union, the Euro has been competing with the dollar to become the world’s premium currency. In December 2009, the Euro union had to confront severe debt problems with its members which threatened the survival of the union. Greece, Portugal, Ireland and Spain required immediate attention to ensure economic stability in Europe. The situation in Greece reached a crisis level with its 300 billion Euro sovereign debt and its declining revenues. On May 2, 2010, the Euro union and the International Monetary Fund agreed on a loan of 110 billion Euros to Greece. Subsequently, they approved loans of 85 billion Euros for Ireland and 78 billion Euros for Portugal.

In May 2011, the Greek crisis resurfaced again with the deep concerns about refinancing its public debt. According to one estimate, 70% of Greek government bonds are held externally in other countries. The default would have serious effects in the world. On July 21, 2011, the European leaders agreed on a bailout plan for Greece. This may not be the end of problems for Greece, and there may be similar problems for other members of the European Union. Our interest here is to study the impact of the Euro crisis on the interrelationship between the dollar, Euro and gold.

**PREVIOUS RESEARCH**

In 2004, the World Gold council released the results of a research conducted by Forrest Capic, Terence Mills, and Geoffrey Wood. Their research established for the first time the quantitative relationship between gold price and the currency exchange rates of a few currencies against the US dollar.

Their key finding is that the US dollar gold price moves in opposition to the US dollar price in major currencies. They also concluded that the relationships were stable even when the total study period was broken into smaller variable time periods.

**CURRENT RESEARCH**

The objective of the current investigation is to establish first the type and the strength of the relationship between gold price in dollars and the dollar value in Euros prior to the Euro crisis. The study then evaluates the consequences of the economic problems in the Euro zone on the behavior of gold price. After the Euro crisis, if the gold achieved its own recognition as the premium asset to hold by getting away from its dependence on the fluctuations of dollar and Euro values, the results of the analysis should be able to show it. Instead of analyzing weekly data as in the Gold Council study, the present study analyzes daily data before the Euro crisis and during the Euro crisis. The main interest here is to establish whether the fluctuations in Euro and dollar values have influence on Gold price during the Euro crisis. The data and reported research before the Euro crisis revealed the significant negative impact of the dollar value in Euros on the gold price.

**DATA**

The daily London gold price and the daily Euro exchange rates from the US Federal Reserve Bank releases were collected. The daily data during the years 2006 and 2007 are gathered to represent the period prior to the Euro crisis. The data for the first four months of 2010 are used to represent the period of Euro crisis. The data for May, June and July of 2011 are used to study the impact of the phase of Greek debt refinancing difficulties.

**ANALYSIS**

A scatter diagram between gold dollar price and value of a dollar in Euros revealed visually that an
exponential functional relationship between the two variables may be appropriate. Therefore, the following exponential functional relationship is fitted:

\[ Y = AB^x \]

\[ Y = \text{Gold dollar price} \]
\[ X = \text{Value of dollar in Euros} \]

This nonlinear equation was linearized as follows:

\[ \ln Y = \ln A + (\ln B)x \]

The correlation analysis between \( \ln Y \) and \( X \) is also performed. The regression analysis and correlation analysis were conducted on daily and weekly data.

**RESULTS**

2006-2007 (A period prior to Euro Crisis)

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
<th>SE</th>
<th>t</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>7.98</td>
<td>0.037</td>
<td>215.59</td>
<td>0.000</td>
</tr>
<tr>
<td>Dollar Value</td>
<td>-1.98</td>
<td>0.0479</td>
<td>-41.38</td>
<td>0.000</td>
</tr>
</tbody>
</table>

Dependent Variable = \( \ln \) of gold price
Independent Variable = Dollar value in Euros
Adjusted \( R^2 = 79.4\% \)

January 2010 – April 2010 (First period of Euro crisis)

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
<th>SE</th>
<th>t</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>6.91</td>
<td>0.1020</td>
<td>67.71</td>
<td>0.000</td>
</tr>
<tr>
<td>Dollar Value</td>
<td>0.157</td>
<td>0.1398</td>
<td>1.12</td>
<td>0.266</td>
</tr>
</tbody>
</table>

Dependent variable = \( \ln \) of Gold price
Independent Variable = Dollar value in Euros
Adjusted \( R^2 = 0.3\% \)

**CONCLUSIONS**

Prior to Euro Crisis, increase in dollar value in Euros has significant negative impact on gold price and a decrease in Dollar value has significant positive impact. Adjusted \( R^2 \) of the regression model is 79.4% which indicated dollar value could be the major influence of gold price.

During the Euro crisis, the relationship between Gold price and dollar seemed to have disappeared, and the Gold price seemed to exhibit independent behavior and unique importance in the perception of investors. Adjusted \( R^2 \) now is a mere 0.3% which is close to zero. This uncoupling effect is evident during the second phase of the Greek crisis also in the months May, June and July of 2011.

It is not clear whether the uncoupling effect between the gold price and the dollar value is temporary or permanent.

**FUTURE RESEARCH**

It is important to analyze different time segments in the future to understand better the changing relationship between gold price and the other currencies. The search for the other influencing factors of gold price should also be continued.
ABSTRACT
The production and consumption of medicines are increasing and so is the impact of disposed medicines on the environment. The discovery of medicines in our drinking water has stimulated research recently. A wide range of medicines are found in the aquatic environment that can cause potential harm to biological life forms including humans. To investigate how consumers dispose unused and expired medicines into the environment as contaminants, first a model of how medicines enter the water system was developed followed by a survey of 60 consumers primarily living in the Eastern Pennsylvania region. Based on the data analysis 75% of the consumers did not know how to dispose medicines properly. Appropriately educating consumers is important to solve the medicine disposal problem. When asked who should educate the public the respondents ranked physician as the most important source followed by pharmacists, pharmaceutical companies, Food and Drug Administration (FDA) and Environmental Protection Agency (EPA). The study has significant implications to consumer health, environment and public policy.

INTRODUCTION
Inappropriate disposal of medicines could get into our drinking water and affect thousands of people and our environment. A recent analysis of the drinking water in the Philadelphia area indicated that there were 17 different medications found in the water. The objectives of this study were to: (1) develop a model to show how medicines get into the drinking water, (2) identify the reasons why there are left over medicines, (3) what happens to the left over medicines, (4) do people know how to dispose medicines properly and (5) where do consumers like to get the information to dispose medicines properly.

METHODOLOGY
Based on literature review and exploratory research with consumers and pharmacists the model of how medicines get into the drinking water was developed. Then an online survey was developed using “survey monkey” survey software. The online survey was submitted for IRB review and the approval was obtained. Sixty consumers were contacted via email to participate in the study. Fifty one participated, a response rate of 85 percent. The participants were 57 percent women and 43 percent men. About 60 percent had college education and 33% had high school education. About 30% of the respondents were in the age group of 18 to 24, 14% between 25-34, 12% between 35 to 44, 24% between 45 to 54, 12% between 55 to 64, 4% between 65-74 and 4% above 75 years old.

RESULTS
The results showed that the common reasons for leftover prescription medicines were non-compliance, switched to another drug, health improved before finishing the drug and product expiration. Non-compliance was the primary reason for the leftover medicines. Surprisingly about 75% of the consumers do not know how to properly dispose medicines. About 25% of the consumers knew how to dispose the drugs properly and their primary source of information was pharmacists (38%) and family members (26%). Across several classes of drugs about 40% of the consumers saved the drugs for later use, 20% disposed in trash, 4% flushed in the toilet and 3% returned it to the pharmacy. About 30% did not indicate what they did with the drug. It is important to note that no one who participated in the study shared the medicines with others. When asked who should educate the public the respondents ranked physician as the most important source followed by pharmacists, pharmaceutical companies, Food and Drug Administration (FDA) and Environmental Protection Agency (EPA).

DISCUSSION
Educating the consumers is important to solve the medicine disposal problem and protect the environment. Health care professionals such as physicians and pharmacists should take an active role in educating the consumers. Organizations such as FDA and EPA should also create public awareness as well. The study has significant implications to consumer health, environment and public policy.

CONCLUSION
Appropriate disposal of medicines not only keeps us in a healthy environment, but it also controls survival of other aquatic species. Drinking water is a rare resource that needs to be protected. If consumers in US lack knowledge on medicine disposal, imagine how serious an issue it would be in developing countries globally.

REFERENCES: Provided upon request.
Knowledge Based Diasporas Networks and the National Innovation System in India.

Isaac Vellangany
isaacv@rci.rutgers.edu
732-932-9171 x 203

Edmund Tavernier
etavernier@aesop.rutgers.edu
732-932-9171 x

Environment and Business Economics
Rutgers University
55 Dudley Road
New Brunswick, NJ, 08901

Abstract

Scientists who have emigrated for several reasons are recoverable assets who can play a part in developing opportunities at home. However, recovery requires the opening of diverse and creative conduits; opening of their economies and fostering domestic investment in innovation and in R&D. In order to promote the productive use of these recoverable assets, it is necessary to create complementary policy that would foster the link between those who are overseas and the home country by facilitating remittances, knowledge exchange and other development related processes through Diasporas links. This link is no longer constrained by time and space. It is a virtual intellectual Diasporas. The emergence of information revolution has conquered the barriers of distance, space and time, opening up a whole realm of opportunities and challenges. This article examines how Indian born entrepreneurs, engineers and scientists through their network positively contributing to the development of information technology industries in their home countries.

Key words: BPO, Diaspora, IT-ITES, Knowledge creation and circulation, migration, remittances.

Introduction

When the world in 2000 was scrambling to solve the Y2K problem, Indian software programmers and software engineers saw ‘manna’ falling from the sky. Then on, the country saw its fortunes rising in the world stage as an important economic power and a center for Research and Development in biotechnology, pharmaceuticals, software development and a locus of Knowledge Process Offshoring (KPO). To cease this opportunity, the Government of India unleashed the liberalization process, removing barriers gradually to spur competition. The India economy sustained its economic growth an average of over 8% per annum and the percapita income continued to grow, reducing the number of people living below poverty line below 30 percent in 2011.

Companies are increasingly locating their advanced research and development (R&D) operations in India to draw on the nation’s highly trained scientists, engineers, and managers. The Organization for Economic Development and Cooperation (OECD) places India in 8th place in as the largest R&D investor worldwide. To sustain this transformation, Indian policymakers increasingly recognize the need for continuing economic reforms, new public investments in the nation’s infrastructure, and new policy initiatives and institutions to encourage innovation, expand the skills and knowledge base of its population, and facilitate entrepreneurship. One such policy initiative that Indian government is undertaking is to harness the talents form its diasporas spread across the globe.

Mobility of human capital

Historically trade has been an engine of growth. Free trade in goods and services is considered to be mutually beneficial. Trade theoretic literature is abound discussing various effects of trade in goods and services as well as factors of production (labor and capital) on product prices, factor prices and economic welfare of countries engaged in trade with or without factor mobility. But policymakers have differences of opinions and policy recommendations with regard to factor movements across countries. In particular, cross-border migration of labor is more restricted than mobility of capital. Our focus will be on human migration across borders that generates
various chain effects in the country of origin by way of reverse brain drain and dynamic spillover effects on its human capital through brain circulation and knowledge creation. But, more importantly, there are global effects on efficiency of knowledge creation, business expansion and research and development (R&D) activities. Globalization, trade liberalization and deregulation have paved the way for more interactions among people across borders. Despite general restrictive immigration policies, movement of high-skilled workers has intensified in recent times, as economic activity has become more globalized and the opportunities for work and study abroad have also increased. Growing global interconnectedness through Information and communications Technology (ICT), coupled with the existence of Diasporas network has caused greater mobility of factors of production. This is reflected in the increasing number of workers leaving their country of origin in search of better opportunity abroad. Migration trends can be driven both by circumstances that force people to leave their country of birth or attractiveness and opportunities to enhance professional in the destination country. The causes thus operate on both the demand side, “pull factors” and the supply side, “push factors”. This movement of workers has steadily increased over a period of time, from 70 million in 1960 to more than 325 million in 2008 (DHS, 2009).

Immigration and remittances

The three countries that accounts for largest emigration to the USA are Mexico, China and India. Indian population in the U.S has grown steadily over a period of time, from 12, 296 people in 1960 to an estimated 2,765,815 in 2010 (World Bank, 2011). The flow of migrants, at the very least can influence international trade through demand channels, since migrants have preferences in favor of products made in the country of birth, assuming trade related costs are at a minimum level (Bandyopadhyay et al., 2006). The proliferation of work on migration and development has extensively dealt with remittances (OECD, 2005; World Bank, 2007), International Organization for Migration, (2010). The sheer magnitude of financial flows from migrants back to their homelands warrants such a preoccupation in development literature. Remittances received by the developing countries rose to $305 billion in 2008 from $31.2 billion in 1990. More than half that increase was accounted for by India, China and Mexico. India alone received $55.06 billion in 2010 compared to $2.1 billion in 1990. The data excludes financial flows that take place through unofficial channels like hawala, which can be more than 50% of the official channels (World Bank, 2003). The global remittances now constitute 90% of Foreign Direct Investment, (FDI) surpassing official capital flow and other private flows (World Bank, 2005; Adams, 2006; Acosta et.al. 2006; Ratha, 2005).

At the household level, remittances can lead to high standard of living, improved health and education, which in turn can induce multiplier effect into the overall economy (Lowell, 2001). It can also smooth income fluctuation, providing safety net when the immigrant decides to return home under unavoidable circumstances. Figure below summarizes remittances

flow to top six countries.

Source: Migration and Remittances Factbook: 2011

While the static effects of brain drain was initially considered to be tremendous loss of financial resources and human capital to the country of origin (home country), the dynamic gains of tangible and intangible gains and positive externalities that may over compensate these losses. Now it is well documented that remittances by immigrants to their respective country of origin has provided a big boost and contributed to its economic welfare. But the dynamic beneficial effects of these immigrants do not stop here. There have been various reverse flows of brain and human capital, entrepreneurial and managerial talents, setting up of startups, technological and managerial collaborations in joint ventures (JVs) and creation of new generations of skilled human resources through proliferation of institutions generating pool of skilled workforce in the STEM field (science, technology viz., IT, engineering and mathematics) to be used in call centers (IT-BPO sectors) in home country or to be sent to overseas temporarily or permanently. It is this new process of brain circulation, knowledge creation and technological capabilities that is the key to our understanding of these cumulative, long-lasting dynamic effects of so-called brain drain on home countries.

Information technology and trade

Defying traditional linear models of economic growth, Indian economy has leap-frogged from dependence on agriculture to services in a short span of time. Indian IT industry is one of world’s success stories. Success is measured not on the size, but the speed with which the industry has been growing. It has grown from $150 million in 1991-92 to an astonishing $64 billion in 2008, contributing 5.5% towards GDP in 2008, registering an annual growth rate of 28% per annum. Table below summarizes the growth rate of IT –ITES from 2001-02 to 2008-09.

**Table1: IT –ITES industry Revenue growth trends**

<table>
<thead>
<tr>
<th>Year/Sourc e</th>
<th>01-02</th>
<th>05-06</th>
<th>08-09</th>
<th>CAGR</th>
</tr>
</thead>
<tbody>
<tr>
<td>IT-ITES Export</td>
<td>7.6</td>
<td>23.6</td>
<td>46.3</td>
<td>28.6</td>
</tr>
<tr>
<td>Domestic</td>
<td>2.6</td>
<td>6.7</td>
<td>12.4</td>
<td>22.3</td>
</tr>
<tr>
<td>Total</td>
<td>10.2</td>
<td>30.3</td>
<td>26.9</td>
<td>26.9</td>
</tr>
</tbody>
</table>

Unlike China, whose strength and concentration is in the manufacturing of IT products, Indian IT industry is almost entirely concentrated in software, software and business services and other services that are software enable, such as Business process outsourcing (BPO) and Knowledge process outsourcing (KPO). In a simple term, China provides manufacturing labor force worldwide in manufacturing, whereas India provides front and backend office management.

In terms of technology enabled and embedded exports, India leads the pack as indicated in (table 2) below, holding to its number one position for over a decade. Among all the developing countries, India has become the leading exporter of IT-related services. The service exports are entirely composed of data streams, lacking any physical goods, leading to a new wave of globalization. More and more, MNCs are delegating global management responsibility for divisions and functions to their Indian subsidiaries (Seth, 2006).

**Table: 2 India has become the largest IT service exporter in the World (US $ billions)**

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>India</td>
<td>6.3</td>
<td>22.0</td>
<td>29.2</td>
<td>37.0</td>
<td>48.3</td>
</tr>
<tr>
<td>USA</td>
<td>5.6</td>
<td>7.3</td>
<td>10.3</td>
<td>12.7</td>
<td>12.6</td>
</tr>
<tr>
<td>China</td>
<td>0.4</td>
<td>1.8</td>
<td>3.0</td>
<td>4.3</td>
<td>6.3</td>
</tr>
</tbody>
</table>

Source: Balance of Payments statistics Year Book 2009, IMF and reserve Bank of India

Behind every success story, there is an incubator. For India, the incubators were the economic liberalization, the Y2K and the existence of Knowledge Diaspora Network (KDN). At times, the Indian Diasporas were vilified as Never Return Indians (NRIs), left behind their social cost of education for the nation to bear, ‘the brain drain”. However, the success story of some the immigrants in their country of residence has changed and attracted several studies of their contribution to their country of origin. In the past several years, some socio-economic scholars argued that a paradigm shift has occurred from brain drain to brain circulation (Meyer, 2001; Miller and Scott, 2007; Saxenian, 2006; Teferra, 2005; Zhang, 2003). Diaspora contributions to development and measures to maximize their potential are also increasingly addressed through the migration and development literature. John and Sedeca (2004), for instance, provide a most useful summary of diasporas related...
Diaspora network and knowledge transfer

The diasporas can play an important role in facilitating infusion of dynamism in high-tech industries and thereby play a positive role in enhancing development endeavor already in progress in home countries. High-tech experts from diasporas can serve as conduit between foreign technology and markets and local entrepreneurs which in turn is expected to build and strengthen local technological capabilities. Increasingly the Indian diasporas in the United States and the United Kingdom has been playing an important role in knowledge creation through providing foreign investment, entrepreneurial stimulus to launch start-ups, and establishing new export linkages. For the diasporas to play a key role in India’s development, the Government of India can create a favorable policy environment for doing business in India and thereby to facilitate this process by reducing government regulatory bureaucracy that hinder to attract some of these new immigrant entrepreneurs from the Silicon Valley. In the mid 1980s, late Prime Minister Rajiv Gandhi attempted to usher a new era in modernizing Indian technology and telecommunications by inviting several high-tech brains (Sam Pitroda, for example, in telecommunications) from the Indian diasporas to play key roles in advising and upgrading local technology and technological capabilities. The diasporas of Taiwan, Israel, Chile, Ireland, mainland China and South Korea are few examples of success and we can draw few lessons from these successful cases for India. The success of the Indian immigrant community in the knowledge-intensive sectors (particularly in Silicon Valley, California) of the United States is well documented and widely recognized. The rise of IT and ITES in Bangalore, Hyderabad, Pune, Chennai, Mumbai, New Delhi, Kolkata and Bhubaneswar and their linkages with Indian immigrant brains (high-skilled scientists, engineers and IT-related personnel) clearly show the positive impacts of brain circulation. The challenge is how to use these channels to enhance knowledge creation and technological capabilities to improve India’s international competitiveness and innovation capacity. Promoting and developing a venture capital industry in India for financing local technology firms will be a critical step and move to the right direction. Some countries are successful in raising additional funds through issuing diasporas bonds. The potential of diasporas as portfolio investors needs further studies. Attempts must be make to reduce such investment risks.

R&D Expenditure

India’s dismal performance in R&D expenditure can be seen from Gross Expenditure on Research and Development (GERD). When we look at the trends in R&D expenditure, India fall far behind the comparator countries. And the overall innovation and research intensity has virtually stagnated since 1991. Korea’s Gross expenditure on Research and Development (GERD) was 3.21% in 2008 compared to India’s 0.88, which is more or less the same in 1991. Graph below shows figures for other countries. The main source of financing R&D comes from government grants and loans at concessional interest rate and tax incentives for committing financial and other resources for R&D. Government grants at times misallocated for sectors where the R&D intensity is very low, a misplaced priority.

![GERD as % of GDP: 1991 - 2008](image)

Source: KAM 2011

Knowledge economy Index: 2011
Figure 4 below shows India’s position in relation to Brazil, China, Korea and Taiwan comparative position of knowledge economy Index (KEI) from World Bank (2011). For India to maintain its position in KAM ranking, it needs to continue implement policy changes that would positively affect the economic and institution regimes.

Source: The Knowledge Assessment Methodology (KAM) website
Conclusion

India has this unique opportunity to grow the economy through expanding the information and communications technology sector to transform itself into a knowledge based economy. However, to achieve this goal India needs to invest heavily in STEM fields, focusing on quality rather than quantity. The national innovation eco-system needs to expand its horizon to other sectors of the economy, not focusing exclusively on few sectors like pharmaceutical, biotech and IT industry. It is an imperative for government of India to create complementarities and removing the missing markets in terms of incentives and information by enforcing contact laws and private rights. Such policy would contribute increased participation from MNCs and the diasporas to contribute and to reap benefit from the home land.

References (abbreviated)


ABSTRACT
Crowdsourcing has applicability to several business situations in a range of companies and industries. One of the first places it was used was in development of open source software such as Linux, an early example of using crowdsourcing for true collaboration. Not all crowdsourcing involves collaboration. Instead crowdsourcing encompasses any activity where input is solicited from a group of people, denoted as the crowd. Although not yet a widespread business tool, crowdsourcing has some clear applications and some businesses have found ways to apply it to specific activities in their value chain. This paper explores the suitability of crowdsourcing to business activities, emphasizing applications that have been successfully implemented by the Fortune 500 including customer generated ideas and design, distribution of tasks best suited to humans, and expert level collaboration. It also makes recommendations about how and when a business should try crowdsourcing and when it might not make economic sense.

Keywords
Crowdsourcing, collaboration, knowledge management

1 INTRODUCTION
Crowdsourcing is being used for specific applications in about 8% of the United State Fortune 500 based on research of publicly announced initiatives by September 8, 2011. Given the level of buzz about crowdsourcing as represented by over 10 million results when entered as a search term on google, the level of implementation is low. Crowdsourcing is still an amorphous activity that is not well understood by most businesses but has proven to help some and not be useful for others.

2 TYPES OF CROWDSOURCING INITIATIVES
The term, crowdsourcing, originally came from the flipped contraction of outsourcing from the crowd and made its appearance soon after the turn of the 21st century. Such true crowdsourcing is best represented by Amazon’s Mechanical Turk system which allows individuals or corporations to post work required on the Mechanical Turk website. People peruse the list of work and sign up to complete tasks for compensation. The tasks themselves are called Human Intelligence Tasks (HITs) and generally involve activities that are not easy to automate sufficiently such as labeling images, assessing search results, categorizing data files, providing information on local entities, or assigning keywords unassociated with number of times the word appears in a document. Such work is not collaborative. Instead, it involves distributing work which has one or more of the following characteristics: (1) it can be done by anyone/anywhere; (2) it requires human judgment that is widely available; or (3) it can benefit from local, distributed knowledge of a place. At the other extreme, there are freelance crowdsourcing sites where work is posted that requires specialized skills or talents on which the crowd can bid. In this paper, we focus not on pure crowdsourcing businesses like these. Instead, a search was made for information on crowdsourcing initiatives within the Fortune 500 and those were examined for general applicability to businesses in a variety of industries.

From this review, it was found that crowdsourcing can be used to support a variety of prevalent business activities. These include:

- Solicitation of customer feedback and product or service ideas
- Issuing research or design challenges to take advantage of scarce expertise
- Access to creative talent at less cost than through established service firms
- Collaboration and sharing particularly in the medical research area
- Brand promotion through customer interaction
- Outsourcing of work that is repetitious or requires a large group of people

Soliciting customer feedback and ideas through crowdsourcing is supported by several companies including Coca-Cola, Dell, Kraft Foods, and McDonald’s. The main purpose seems to be to build their brand by interacting with customers in a fun and creative way but the results can sometimes lead to new products or product modifications. Dell reports on their website IdeaStorm used for this purpose that there have been a total of 16,067 ideas, 467 (3%) of which have been implemented. The site puts a human face on the interaction by showing pictures of the moderators and sometimes leading to new products or product modifications. Other companies that have an open on-line suggestion box include Campbell’s with their Ideas for Innovation website, Sara Lee, Southwest Airlines, and Starbucks. Best Buy interacts with their tech savvy customers in many ways and has even solicited input for social media job descriptions for which they accepted applications. Nike launched idNation
which allows users to create personalized designs. Design customization was not new but they adding crowdsourcing features to the customized design capability so that designers could share their creations, interact with others and potentially evolve their design, and also to receive compensation if their design was purchased by others. Customer interaction via crowdsourcing is really a form of on-going information gathering and is being supported by on-line tools that give the user capabilities to post, comment, link, tag, vote and filter contributions.

Several companies (Avery Dennison, Boeing, Cisco, Colgate, Dow Chemical, Eli Lilly, General Electric, General Mills, Kraft, IBM, Levi Strauss, Medtronic, Pfizer, Procter & Gamble) have issued challenges to help them with specific research and development issues for which external ideas might be useful. These challenges have a set timeframe and are usually supported by monetary prizes. GE topped the group with a $200 million reward for proposals on smart grid technology but many are much less lucrative. It should be noted that GE’s contest was won by organizations, not individuals, so the result was more equivalent to a request for proposal than an actual crowdsourcing challenge with the exception that individuals were allowed to submit proposals, as well as to comment and contribute to the ideas of others. Support for crowdsourcing challenges is available through companies such as InnoCentive and Ideaconnection. These companies not only host the challenge platform and provide the supporting systems and software but they also provide services in support of managing, soliciting help from experts, and assessing solutions.

Some challenges involve promotional needs – new logos, commercials, etc. In those cases, the experts being sought in the crowd are creative freelancers. Among the companies who have used crowdsourcing for advertising campaigns include General Mills, Harley-Davidson, JC Penney, and Kraft. Some used the services of Victor & Spoils, a company that has built its business on crowdsourcing promotional projects to “creatives”.

For some companies, collaboration is essential. Becton Dickinson is supporting an open system for molecular testing which allows various medical companies and organization to share data and results in order to address rapidly developing diseases. Eli Little was a founding member of CDD, a crowdsourcing company to support collaborative drug discovery in which Pfizer also participates. Microsoft is also trying to collaborate to make Windows 8 more open using a blog to address issues associated with its design and development.

Coca-Cola appears to be promoting their brand by supporting a crowdsourcing company in another industry. Specifically, they have invested in Music Dealers, a company founded in 2009 to support independent music writers. Qualcomm also has an interest in a crowdsourcing company, Waze, through Qualcomm Ventures.

Companies can also promote their brand by being philanthropists. A popular use of crowdsourcing is to gain input on the types of projects or the groups to which a company should donate. Companies who do this include American Express with Partners in Preservation and Home Depot. The PepsiCo Refresh project actually highlights non-profits discovered through crowdsourcing in its advertising.

Apple does not appear to directly use crowdsourcing but its products support crowdsourcing especially when loaded with applications that upload information on distributed conditions such as automobile traffic. Google also has some applications that are crowdsourced. In particular, it uses crowdsourcing to gather map data. Yahoo uses crowdsourcing to obtain responses to questions posted in Yahoo! Answers and to create applications using Yahoo! Pipes. Some technology companies, such as Xerox, use crowdsourcing for customer testing of technology research projects, allowing them to test much more fully and in a real user context.

Crowds can be specific groups of people. Several companies such as Allstate (using spigit), AT&T (using spigit) Pitney Bowes (using idea central) , Best Buy (Idea X), JC Penney (using spigit), Medtronic (using SharePoint) have implemented crowdsourcing tools to support idea generation and collaboration within their company. In some cases, the systems works like an open idea drop box. In others, there is more interactivity and employees are asked to help address specific challenges. Best Buy uses internal crowdsourcing to be more responsive to customers. Hundreds of employees, called the Twelpforce, are connected with customers through Twitter to respond in real-time to issues and question. Crowdsourcing also helps in the distribution of work to review, edit, translate, tag, or test.

Finally, the crowd could be sourced without even knowing it. Tools and software exist that analyze tweets or other online posts to forecast information useful to a business. Companies like Comcast (@ComcastCares) use it to monitor issues with their service.

All of the activities that fall under the crowdsourcing banner have the following things in common – they are open to a wider group of people than those employed within a company or within a functional group. They are open and allow others to build on or at least read what others are proposing or saying. Finally, they are interactive and dynamic.

3 SUCCESS FACTORS

Some are skeptical of the use of crowdsourcing in general, pointing to the lack of verity in the produced work and the fact that inaccurate data or faulty observations can be added. (Roman, 2009; Greengard, 2011) They believe that little will come of any crowdsourcing effort that would not have been completed more simply through standard methods. To counteract these criticisms, a review of the initiatives of both
Fortune 500 companies and those of government was conducted. In the analysis of data collected, the most successful crowdsourcing initiatives appear to have at least several of the following characteristics (verification of which if being substantiated through an ongoing data collection project):

The initiative is promoted.

A crowdsourcing initiative will not be successful if it does not enter into the consciousness of the people who could provide effective input. Thus it must be promoted. This means it must be advertised and if experts are needed, they should be encouraged to participate. A study that supported this premise at least within an enterprise found that it was important to not only make it known that the crowdsourcing initiative existed, but that it was easy to be a participant and there was value in participating not only for the owner of the initiative but also for participants. (Stewart et al, 2009)

The interaction is moderated.

Although crowdsourcing is supported by technology, it is essentially a human endeavor. Therefore the most significant success factors relate to people and process. Most critical to crowdsourcing success is the belief by participants that their efforts were considered and that results came from the initiatives, even if their own input was not directly used. To measure this factor, a study is being done that looks at level of outside participation as compared to feedback. Providing effective feedback and interactivity on a crowdsourcing site requires moderators who are knowledge workers adept at working in a social network environment, crowdsourcing tools that make linking and feedback easy to provide, as well as a change in business processes to allow time for the input to be given and assessed. The moderator should not respond to everything but should provide feedback to the community about how the input is being used and what still needs to be done. The moderator can also help arbitrate disputes that may come up between contributors, especially if the activity is collaborative. Implementing moderation is not an easy task. User generated content can be spam so on-line tool are required so that moderators are not overwhelmed. In addition, the rating of content by trusted users, a form of crowdsourcing itself, can help the moderator.

The presentation of crowdsourcing input is organized.

This feature is critical not only to allow the business to make sense of what was contributed, but also for the participants. A barrier to participation is too much information that can not be followed, making participation too much work. To help organize, there should be search capabilities, linkages between related posts so minimize repetition and to stratify the inputs. Creating linkages and categories is a crowdsourcing task that can be enabled through participants annotating the posts with tags. Tags should be at the individual post level even in a discussion so that they are specific and relevant. Moderators can step in to correct or make additional connections based on the perspective of the initiative owner.

Contributions should be assessed.

There are features that help the best ideas (as identified by the participants) be easily noticed. This of course can also be done by the moderator through feedback but even the moderator would benefit from a crowd based assessment. Typically, assessment of crowdsourced inputs is performed through giving participants voting capabilities. Of course voting can be manipulated and may be influenced by the mob, an aggressive group in the crowd that has a particular agenda. Such a situation can be mitigated through moderation and management (see below). More complicated voting schemes can be employed to filter results. For example, voting can be on many levels such as usefulness, relevance, and accuracy. Combined scores incorporating the various criteria can also be calculated using analytic methods such as scoring or the analytical hierarchy process (AHP).

Participation is rewarded.

There should be some reward or motivational factor offered for participating. This might be recognition, non-monetary award or monetary reward. One of the key issues associated with effectively promoting a crowdsourcing initiative is discovering some way to motivate useful participation. When you consider the example of Linux development, motivation for most was not altruism. According to a study done by professor Josh Lerner and Mark Schnakerman, much of the crowdsourcing work on open source software is done by interested parties employed at software development corporations. They are motivated by an interest in influencing the direction of the open systems so that they the open source software will interoperate well with the software they develop. (Lerner & Schnakerman, 2010) In a more general application, awards might be given to the most effective participants. Although monetary awards might be enticing, even more effective might be inclusion and collaboration in the idea implementation or a share in the ultimate profits that might result.

The interaction is managed.

In some cases, participation should be limited. Although no one knows where the next best idea or contribution will come from, participation by the uninformed or by those without expertise might actually slow the process down. Coordination costs should not exceed results value and efficiency benefits.

For example, if we look at the editable wiki for used for ExpertNet, a US federal government sponsored challenge to collaborate on defining the requirements for a government-wide software tool and process to elicit expert public participation you can see some of the dangers of unmediated editing. On February 11th, 2011, if you looked at Step 3 of the Wiki which is on Facilitating Structured Responses, the
responses are not structured themselves. One participant put in a powerpoint presentation and most others put in links to the tools they were selling. Such background material might be useful and could be posted in the associated discussion forums or in a specific background references list. However, participants should be discouraged from putting in information that is out of context or not integrated with the rest of the material in a module, section or other component of the final product.

On Wikipedia, as another example, there have been issues of editing wars where authors keep replacing each others contribution. If participants are truly collaborating on development of something, it might be best not to give everyone the ability to change the current manifestation of the results. One way to deal with editing decisions is to give users different levels of rights which they earn over time. Of course, in the end or at summarization stages, there should be an editor-in-chief who makes sure the final result is of high quality. Changes could also go through an approval process. Several versions of the document could exist simultaneously until unapproved changes have been approved. While a part of the document or other resource is undergoing revision approval, no further revisions to that part should be made until the approval is completed.

Depending upon the goals of the crowdsourcing project, different characteristics might be emphasized, but all are important for success. Technology is a supporter of crowdsourcing. Without an Internet or intranet and software that supports some level of collaboration, there would be no crowdsourcing. Crowdsourcing depends on technology to allow access to distributed groups of people who might be inspired to provide the next great idea. In order for good ideas to be contributed, a business needs to make available the technology and promote and reward its use and to provide feedback through one or more moderators. To then be able to cull the best contributions from what may become an overwhelming set of inputs, a business needs to ensure that there is some sort of organization to the input, that the process is managed and that there is some way to assess the contributions and all of these functions can also be crowdsourced.

Crowdsourcing can support the completion of large amounts of work in a cost effective manner. Amazon showed this can be done in a global setting by developing Mechanical Turk, a platform that allows work to be posted that requires human intelligence for people to bid on and complete. In the US government, the US Patent Office has successfully piloted for three years a peer discovery and review process to facilitate the approval of patents. One of the most time consuming aspects of deciding whether a patent should be issued, is the research into related ideas also known as prior art. By making this work available for the public to help perform, quality is improved and the process has been somewhat accelerated. (Allen, 2009)

Best Buy is an example of a company that has worked not only in allowing customer’s to generate ideas, but in actually analyzing the inputs they receive.

Promotion is important. However, promotion needs to be continuous and needs to be accompanied by reward for participation. Many people might be interested in participating due to good promotion but if it is too difficult to participate or it is not rewarding, then participation drops off to levels similar to when promotion was never done.

4 WHEN SHOULD BUSINESSES CONSIDER CROWDSOURCING

Businesses must be concerned with return on investment. Costs include not only investment in the tools but also annual expenses for support of its use ranging from tens of thousands to several million dollars. To make the investment worthwhile, employees must be convinced that crowdsourcing is an outlet to help them get their jobs done. They need to learn how to work with the crowd, which may sometimes by unruly. They need to see the potential benefits in productivity and creativity in order not to see interaction with the crowd as nothing more than an additional hurdle to completing their work.

To begin introducing crowdsourcing, a business should identify areas in which they have trouble obtaining input or would benefit from wider involvement, expertise, or perspective. Once such activities are identified, a crowdsourcing tool or service can be introduced. Although many sufficient crowdsourcing tools exist including blogs, idea generation tools, and wikis, some modifications to these tools would be beneficial. It should be easier to link between inputs especially if the goal is to collaboratively create a final output. Crowdsourcing users should be able to build on each other’s ideas and work. Specifically, a wiki like tool is better than a blog or commenting tool for motivating contributions, specifically if the purpose is to support collaboration or fully developed ideas. Once implemented and a process put in place for managing, assessing and using the input, the crowdsourcing initiative should be promoted in a timely manner so that there is enough time for contributions, assessment and feedback. Unless the purpose is purely to promote the company and interact with current or prospective customers, a company should start by asking specific questions or requesting specific research or work.

Crowdsourcing should not be applied to every aspect of the business. Tasks that can benefit from crowdsourcing require diverse expertise, creativity, and varying experiences or they require a workforce much larger than the company support. It should not be applied to any activity that requires a very quick turnaround.

Overall, crowdsourcing could be used at any stage of a project or move through them all. Specifically, it can be
used to generate and prioritize ideas, plan for implementation of selected ideas, support implementation, design and development, and support promotion of the final product. Alternatively, it can be used as an on-going platform for customer interactivity and data collection. Costs include those of the technology or service and the cost of the people needed to moderate, manage and assess the initiative. Cost savings might result from needing fewer specialized people on staff. Benefits can include brand awareness, new ideas, customer feedback, productivity, and more thoroughly vetted solutions to problems.

5 CONCLUSIONS
Crowdsourcing can be an extremely useful resource for business. More research is needed to provide more than anecdotal evidence but many examples can be found of successful crowdsourcing initiative. Crowdsourcing promotes participation and has the potential to bring together wide areas of expertise to allow for real collaboration. For many start up companies, there is also the opportunity to provide services for people with scarce skills and expertise to find interesting challenges in which they can employ their abilities.

Investment required to implement crowdsourcing in business is relatively low. The software applications to support crowdsourcing are inexpensive and scale well although some modifications to the tools to encourage collaboration and linkage are recommended. New companies are being formed that support many of the key aspects of crowdsourcing including not only the software platform but services related to managing and assessing the input.

The major investment needed to maximize the success of crowdsourcing is in developing knowledge workers who are trained to fully leverage the wealth of information they might gain by initiating a crowdsourcing project. These knowledge workers need to be comfortable in interacting using social media, and dealing with rapid change. They must be able to analyze and synthesize diverse contributions effectively. Such jobs could be very attractive to the best and brightest social networkers who have learned to effectively keep tabs on their friends, colleagues, local issues and global issues through a variety of rapidly changing information resources and social networking tools.

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Integrating Ethical Decision Making in Multiple Business Courses

Jan Welker, PhD (corresponding author)
Associate Professor
SUNY Institute of Technology
109 Seymour Rd.
Utica, NY 13502
931/879-4130
welkerj@sunyit.edu

Lisa Berardino, PhD
Associate Professor
SUNY Institute of Technology
109 Seymour Rd.
Utica, NY 13502
315/792-7534
lisa.berardino@sunyit.edu

ABSTRACT:
This paper responds to recent criticisms that colleges, in preparing decision makers for organizations, have contributed to recent cases of executives being rewarded for bad behavior. It also responds by promoting the integration of ethical principles in multiple courses to raise a student’s level of awareness of the factors involved in ethical decision making.

Paper highlights include relevant ethics models to encourage professors who are reluctant to overtly address ethics in classroom or online courses and to equip those not schooled in philosophy with some basic principles to raise ethical awareness among students. The following assumptions are made to guide the approach toward teaching ethics: (1) no professor should impose his/her values onto students; (2) students exhibit different levels of social development; (3) students are not learning ethics from traditional sources; (4) evidence of the importance of teaching ethics continues to mount, thus calling for curriculum action.

Keywords: teaching ethics, ethical decision making

1. DEFINITIONS

Ethics is a “code of behavior that restricts self interest for the greater long term good of society” (Sharp, 2006, p. xv). Ethics and morality are interchangeable and overlap (Sucher, 2008). Both involve judgments about what is good and bad or right and wrong; both pertain to the study of human conduct, relationships and values (Fuqua & Newman, 2006). The code is an amalgamation of intellect, reasoning, experience, education, relationships, values and culture (Longest & Darr, 2008).

Ethical decision making is complex as a result of conflicts among individual differences, how people and businesses think about ethical decisions and how organizations manage resources and employees (Trevino & Youngblood, 1990). It is a process in which a moral base is used to determine whether a moral issue is right or wrong (Carlson et al., 2002).

A moral issue is present when a person’s willful actions may harm or benefit others (Jones, 1991).

A moral base is the set of rules that develop during moral development that function as a platform for distinguishing right from wrong (Carlson et al., 2002). This article summarizes how the development takes place. Sucher (2008) adds that the moral base is the foundation for moral reasoning related to accepted behavioral norms, boundaries and expectations.

2. MODELS FOR DESIGNING COURSE WORK ON ETHICAL DECISION MAKING


3. RECOMMENDATIONS

Twenty recommendations are provided below for professors based on the ethical principles and models presented in the paper and the personal experience of the authors of this paper. The objectives of the recommendations include helping students discover and expand awareness of personal and environmental factors involved in ethical decision making; define and reflect on the personal and professional foundation of ethical values from which they are currently operating compared to other factors to consider in reframing their foundation; come to terms with a definition of their own moral code and how it can be translated into action, and move student thinking from what one ‘can’ do to aligning what one ‘ought’ to do with what one ‘will’ do.

Use decision making as the key element to locate the best place to integrate ethics into learning exercises (Bennett-Woods, 2005). Basically, use ethics as the viewpoint for examining decision making in any course work (DiMeglio, 2009).
Bennett-Woods (2005, p. 160, 161) also suggests using ethics as a platform “to stimulate students to reflect deeply on personal and professional moral and ethical foundations, develop confidence in their ability to analyze and defend positions, grasp content in ethical theories and principles and perform formal analysis resulting in the decision making process”. She further suggests using the basic eight step management problem solving model (gather information, state the problem, identify the ethical issue, select ethical principles to analyze the issue, conduct the analysis and prepare justification or make counterarguments, determine competitive behavioral options, evaluate the options and select the best action/behavior).

Porter and Schick (2003) use Bloom’s Taxonomy to suggest how ethics can be addressed in coursework. First, ethics should be integrated into course planning. Second, educators must enable both cognitive (knowledge, application, synthesis) and affective (awareness, conceptualizing and valuing precepts) competencies for graduates to be successful in the field. Third, educators should distinguish among ethical domains of decision making as personal, professional, clinical, organizational and social.

Raise ethics to the level of value placed on interpersonal communication and computer skills (Tanyel et al., 1999). Encourage students to reflect on their own values and understand how actions relate to values. According to Schonsheck (2009), value clarification helps students realize that they acquire values uncritically by passively absorbing beliefs. Assist students in comparing such unexamined values using the models mentioned above.

Just as Fuqua & Newman (2006) make the following recommendation for businesses, the content is applicable to business schools, professors and students. Fully integrate moral issues into the usual organizational structure; emphasize that moral development applies to individuals as well as organizations and moral issues are fundamental to human organizational structures. Emphasize that it is not possible to separate an individual’s moral character from the person as a whole. Stating one set of values and living another is a contradiction well worth examination.

Another recommendation by Fuqua & Newman (2006) speaks to the heart of the title of this article. They suggest facilitating meaningful moral discourse as a routine process. Examples include discussing the parties harmed or benefited by a decision; the level of honesty in communications; the difference between the desired code of conduct versus the code exhibited in actual behavior; and the influencing formal/informal and spoken/unspoken factors. Just having the discussion is in itself a learning experience.

While one may debate Detert et al. (2008) who assert that ethical decisions cannot be validated by tests in the same manner as skills and knowledge from textbooks and lectures, the authors of this article have learned that ethics can be validated in essays, discussions and case analysis compared to the near impossibility to do so in multiple choice, true-false and fill in the blank assignments. Use real events and stories from the press, literature and student’s own experience in the home, work or school to create opportunities to reflect on personal ethical events that harmed or benefited an individual, group, organization or society. Integrate ethical decision making in critical thinking, case analysis, group discussions, interviews with people who have experienced ethical dilemmas, community service projects and writing assignments. For example, Sharp (2006) recommends the case method to identify the moral issue, consider alternatives available and the criteria and consequences for evaluating the alternative behaviors, exchange ideas and reach consensus. The byproducts are skills and confidence in the safety of a course setting related to confrontation, problem analysis and making difficult moral decisions.

Link personal ethical behavior to organizational ethical behavior. For example, expectations for leaders and professors have increased due to public and catastrophic moral failures of recent years. Teach students to observe what is being emphasized and the message being conveyed (Fuqua & Newman, 2006). An example is the questionable behavior of Atlanta teachers modifying student work when teacher success is tied to student achievement scores (The Washington Post, July 24, 2011).

Include ethical decision making in learning assessment in meeting business school accreditation standards to demonstrate that integrity and social responsibility matter as much as profitability, survival and personal or organizational advancement.

Use the Kohlberg et al. model to demonstrate the
moral development process and its impact on judgment and to move students from stage two (What is in it for me?) to the more advanced stages.

Use the Morrison model to apply ethics to daily decisions in areas such as data integrity, honest communications, careful use of resources and use of management tools to influence others, measure performance and take corrective actions in both personal and professional life.

Use the Jones model to link moral issues to moral behavior and the concept of moral intensity. Focus on the characteristics of the moral issue to examine how they influence what one ‘can’ do versus ‘ought’ to do.

Use the Robin et al. model to examine how the perceived importance of the characteristics of an ethical issue (PIE) influences decision behavior that differs across individuals and differs for the same individual across time.

Use the Haines et al. model to examine the sub process of the personal internal state of the decision maker related to moral obligation that resides between moral judgment and moral intent to act.

Coordinate use of ethical decision making material with other faculty so that courses later in a program of study build upon rather than simply repeat ethical principles or exercises already addressed elsewhere.

Be more direct in teaching transparency and what it means to be an honest business leader (DiMegilo, 2009). For example, do not make ethics courses elective that allows achievement of a degree without pondering right and wrong in a systematic way. In other words, do not make moral integrity optional.

Ethical situations are gray and complex with no obvious solutions that enable everyone to win (McDonald & Norsworthy, 2000). Fandray (2005, p.82) advocates telling students “if they think of the world as black and white, they should stay as far away from black as one can get. The difficulty is that a person is tempted to nose himself into the gray to see how far away from white he can get. That is the pressure that comes with opportunity, greed and money”. He further encourages rewarding people who understand the difference between right and wrong and advocates that every organization should have a code of ethics that not only tells a person how to behave in specific situations but gives him clear ideas of how the organization (or school) expects them to deal with ethical dilemmas that can’t be anticipated.

Do not be alarmed in an attempt to raise ethical awareness if students assume a victim attitude or assign blame to support past ethical decisions. Establish and sustain emphasis on decisions they have made and not decisions others have made that harmed or benefitted them.

Expect to encounter the private-public paradox in which students will assert that moral integrity is a private matter (Fuqua & Newman, 2006). The counter is moral systems in which one lives, works and plays are both private (personal) and public (groups, organizations and society as a whole).

Use the reference list at the end of this article to glean content for lectures and exercises or construct grading rubrics for assignments.

4. CONCLUSION

Lessons learned in this paper include the fact that any course in which decision making occurs is an opportunity to introduce ethical awareness; decision making is a moral behavior and moral behavior is preceded by moral intention to act. Moral intention is a result of moral judgment and moral judgment is impacted by personal, professional and situational circumstances. However, circumstances alone do not dictate behavior. It is one’s perception of the circumstances merged with the values in one’s own ethical core that influences a chosen behavior.

5. REFERENCES


LEADERSHIP: WHAT IF IT WAS ALL ABOUT THE LEADER?

Kendrick Williams
BADM-Undergraduate
Fayetteville State University
1200 Murchison Road
Last line, including country
(214) 907-8327
kwilli68@broncos.uncfsu.edu

Yvette Essounga-Njan, Ph.D.
Department of Management
Fayetteville State University
1200 Murchison Road, SBE Room 388
Fayetteville, NC 28301
(910) 672-1764
yessoung@uncfsu.edu

ABSTRACT
This review explores a different angle of the art of leadership. It does not detract from the extant literature on leadership. However, the discussion expounds upon the theories that already exist and put a new turn on those theories. Leadership is often confused with management. There are individuals who would still believe because they are managers, they are essentially leaders as well. As commonly argued, it is possible for a manager to be a leader but the reverse is not always true. This review will discuss the differences between management and leadership, exploring the reasons for such differences. In addition, this discussion is making the case that leadership, despite the style exercised, is contingent upon the person exercising leadership.

Keywords
Leadership style, Leader, Manager, Personality of Leader

1 INTRODUCTION
Organizations are groups of people identified by shared interests or purposes. Those shared interests may be power, wealth, or reputation. Whatever the interests may be, there are goals organizations need to reach. These goals lead to strategies that will eventually contribute in accomplishing the said goals. In turn, these strategies cannot be implemented by just anyone. There needs to be someone with the knowledge and experience capable of accomplishing these goals. Often, managers are those working with others, towards accomplishing organization goals. In effect, there are managers at every level with the mission to implement strategies leading to the accomplishment of organizational goals.

Understandably, managers receive a sizeable amount of training to ensure that they have the necessary tools to be successful. However, some tools cannot be obtained by training only. These tools or skills are developed over time through growth and most importantly, experience. Over time, managers work with many diverse employees in many different organizational environments. Doing this enables managers to figure out the way to turn the wheels that run an organization. The managers who succeed in figuring it out develop themselves into becoming leaders. Leadership is what drives organizations and helps organizations accomplish their goals.

This discussion by no means implies that leadership cannot be learned. There are many tools available that individuals could use to develop leadership qualities. The key topic at hand is to discuss the notion that being a manager does not imply that an individual is a leader and vice-versa. Furthermore, management may not always be equated with leadership.

2 PURPOSE OF THE REVIEW
This discussion argues that even though leaders may be trained, the essence of leadership resides with the person exercising this quality. Thus, some managers will, with time and experience, succeed in developing into leaders. However, some, even with time and experience, may never be able to exert influence over other people, inspiring and motivating them, and directing subordinates’ activities to help achieve group or organizational goals (Jones & George, 2009), rising to the level of leadership.

3 RESEARCH QUESTION
Given that not all managers are capable of turning into leaders, despite exerting efforts that may be targeted towards that goal, could it be that leadership is first and foremost about the person exercising leadership, and not about the leadership style one may seek to acquire or develop?

4 VALUE OF THE REVIEW
Military leaders define leadership as the process of providing purpose, direction, and motivation to accomplish the mission. In The Leadership Secrets of Colin Powell, Colin Powell defined leadership as the art of accomplishing more than the science of management says is possible. A discussion of this nature would benefit an organization such as the Military, where leadership is of critical nature. Other stakeholders who would find value in this discussion include organizations at all levels, as well as those who are lead in those organizations.

The literature is replete with research centering on leadership (Cherif, Ofori, & Stefurak, 2010; Olumide, 2010; Usman & Danish, 2010), a topic whose pertinence is felt with increased acuteness in times of economic troubles...
(Essounga-Njan & Morgan-Thomas, 2009) as those prevailing in the current environment in the United States and the world at large.

5 IMPLICATIONS
If as Olumide (2010) suggests, leadership is not hereditary, then if someone is a good leader, it does not mean that his or her children will be good leaders. Scientifically, animals and people evolve the way that they do because of adaptive genes that replicate what their ancestors have done over time. Leadership is not adaptive in this manner. Leaders have the ability to adapt to situations whereas managers may not always succeed in doing so. Understanding why one person succeeds in adapting when another does not will advance the understanding of leadership, a phenomenon of timeless interest as individuals around the world grapple with economies that do not seem to yield the returns to which populations were accustomed in times past.

Leaders inherit qualities that made other leaders successful. They understand how those qualities made those leaders successful. Leaders must define success in their own way and determine leadership styles that best suits them. Colin Powell’s second leadership principle is, “Define the new game, and expect everyone to play it” (2002). Leader’s success does not define people; people define a leader’s success. In the full version of this paper, we are expounding on the notion, concurred in the literature, that leadership is a complex phenomenon, albeit one whose interest has never been as salient as it is today, with understandable reasons. We are also looking at the makeup of real leaders in order to add to the existing body of work on leadership.

REFERENCES
ABSTRACT
A takeover success prediction model attempts to use information that is publicly available at the time of the announcement in order to predict the probability that a takeover attempt will succeed. We perform a thorough study using machine learning techniques to predict takeover success. Specifically, we model takeover success prediction as a binary classification problem, which has been widely studied in the machine learning community. Motivated by the recent advance in machine learning, we empirically evaluate and analyze many state-of-the-art classifiers, including logistic regression, neural network, support vector machines with different kernels, decision trees, random forest, and Adaboost. The experiments validate the effectiveness of the application of machine learning in takeover success prediction, and we found that the support vector machine with linear kernel and the Adaboost with stump weak classifiers perform the best for the task. The result is consistent with the general observations of these two approaches.

KEYWORDS
Takeover, Machine learning

1 INTRODUCTION
A takeover can be defined as the acquisition or control of one company by another or occasionally by an individual or group of investors. Takeovers are usually established by purchasing shares at a premium over existing prices. They can be financed in several ways, including a cash payment or using shares of the acquiring company. It can be complete or partial and may or may not involve merging the operations of the acquired and acquiring firms.

Approximately ten percent of the announced takeover attempts fail. Either the acquiring company withdraws or the target company rebuffs the offer. A takeover success prediction model attempts to use information that is publicly available at the time of the announcement in order to predict the probability that the takeover attempt will succeed. Such a model can help investors predict the outcome of a takeover attempt.

The purpose of this paper is to compare the predictive performance of several machine learning algorithms for takeover success prediction, including the traditional logistic regression model, neural networks, support vector machines with different kernels, decision trees, random forest, and Adaboost. Logistic regression is the most commonly used technique in the literature. Branch et. al. (2008) used the neural networks model to predict the takeover success and their result outperformed the traditional logistic regression model. Compared with classical models such as the logistic regression and neural networks, modern machine learning methods such as support vector machines and Adaboost often achieve better performance in terms of accuracy as well as generalization ability.

Logistic Regression, invented in the 19th century for the description of the growth of populations and the course of chemical reactions, predicts the probability of an occurrence of an event by fitting data to a logistic curve. The logistic function used in this prediction method is useful in that it can take any value from negative infinity to positive infinity as input.

There are two types of logistic regression. Simple logistic regression is used when the data consists of only one attribute, or independent variable, and one target variable, or dependent variable. This method is comparable to linear regression, except that with simple logistic regression, the variable is nominal and not some measurement. Multiple logistic regression is used when there is more than one independent variable to be analyzed. Logistic regression is different from linear regression in the sense that, unlike linear regression, the target variable itself isn’t predicted. Instead, the algorithm predicts the probability of obtaining a certain value for the target variable.

The structure of the neural networks algorithm is derived from biological neural networks in neuroscience. It is consisted of a group of artificial neurons that are used to model potentially complex relationships between inputs and outputs or to even find patterns within a dataset. These networks, sometimes called artificial neural networks, learn by example, so it is configured for a specific application through a learning process.

Neural networks have three groups of units. The input group, or layer, represents raw data that is put into the network.
This input layer is connected to what is called a hidden layer, which is then connected to either another hidden layer or finally the output layer. The weights between the input and hidden units determine when each hidden unit is active.

Feed-forward networks allow signals to travel only from input to output, not the other way around. Therefore, there is no case where the output of a layer can affect that same layer. These types of networks are generally used in pattern recognition. Feedback networks are generally more complicated than feed-forward, but are more powerful. Also known as interactive or recurrent, these networks allow signals to travel in both directions and uses loops in the network.

The neural network used in this analysis was the Multilayer Perceptron. It is consisted of multiple layers of nodes in a directed graph with each layer fully connected to the next layer. It uses backpropagation to classify instances. The network can be built by hand, created by an algorithm, or both. It can also be monitored and modified during training time.

Support vector machines (SVM) treat the classification problem as finding the separation hyper plane with the maximum margin in the high dimensional kernel space. The kernel space is mapped from the original relatively low dimensional feature space implicitly through a kernel function. It has been shown that the maximum margin strategy effectively reduces error bound of the Bayesian classification error.

In this analysis, four different kernels were used for Support Vector Machines. The linear kernel is the simplest kernel and generally performs well for data that is linearly separable. With Polynomial kernels, a kernel function of a number order can be used to transform vectors that are linearly dependent on that number of dimensions, into linearly independent vectors. The Radial Basis Function (RBF) is a function where only the distance from the origin determines the value of the function. A sigmoid function is similar to the logistic function, created to generate some non-linearity between the input and output of the function.

The goal of a decision tree model is to predict the value of the target variable based on several input variables. The nodes of a decision tree describe different attributes of the data. The branches that come from each node tell the possible values for that corresponding attribute. The terminal nodes at the bottom of a tree say the predicted value of the target variable.

Decision trees are of two main types: classification and regression. Regression tree analysis is when the predicted outcome is a real number. Examples of this include median income and height. Classification tree analysis is when the predicted outcome is a possible class outcome of the target variable. In our case, we are using classification tree analysis, with the possible outcomes being whether or not the takeover attempt was successful.

One type of Decision Tree is the J48 Algorithm. In this case, in order to classify a new item, it needs to create a decision tree based on the attribute values of the training data. Whenever it encounters a set of items it identifies the attribute that discriminates the various instances most clearly. This feature that is able to tell us most about the data is said to have the highest information gain. Among the possible values of this feature, if there is any value for which the data instances falling within its category have the same value for the target variable, then the algorithm terminates that branch and assigns to it the target value that is obtained. If this is not the case, the algorithm looks for another attribute that gives the highest information gain. The algorithm continues in this manner until either there is a clear decision of what combination of attributes gives a particular target value or all attributes have been used. If the algorithm runs out of attributes, or cannot deduce a clear result from what is available, the target value is based on the majority of the items that would be under that specific branch.

Another Decision Tree used in this analysis is the fast learner REPTree. It builds a decision regression tree using information gain and reduces it using error-pruning. It only sorts values for numeric attributes once and missing values are dealt with by splitting corresponding instances into pieces.

The Decision Stump algorithm builds binary decision “stumps” for classification problems. It is essentially a decision tree with one node. This algorithm makes a prediction based on the value of just one feature in the data. For nominal features, a stump is usually built either with a leaf for each possible feature value or with two leaves, one corresponding to a chosen category and the other to all remaining categories. This could even work with missing values, with those being considered as a separate category. For continuous features, a threshold is normally established and one leaf will be for values less than the threshold and one leaf will be for values greater.

The Decision Stump is commonly used with a boosting algorithm, such as Adaboost. The Adaboost, originally proposed by Freund and Schapire (1997), used an additive model to combine sets of weak classifiers to achieve strong discriminative power. It has shown that the method is robust to overfitting and also very flexible in feature selection.

The Random Forest algorithm, developed by Leo Breiman and Adele Cutler, is considered an ensemble classifier, in the
sense that it typically consists of several decision trees and uses them to come to a consensus for a prediction.

2 DATA
We used the dataset in Branch et. al. (2008). The dataset was a sample of both successful and failed takeover attempts for the 1991-2004 period using Securities Data Company's database. The final sample includes 1196 takeover offers with 146 failed takeovers and 1050 successful takeovers. There were ten variables available to predict takeover success: target size, target leverage, target book-to-market ratio, target resistance, arbitrage spread, deal structure, termination fees for the target, termination fees for the acquirer, poison pills and bid premium. The variables used in testing the prediction algorithms were the target size, post price, transaction size bid premium, and debt to asset ratio, in addition to the binary variables corresponding to attitude, stock swap options, and collar.

3 EXPERIMENT RESULTS
The software package Weka was used to implement the multiple prediction algorithms. Weka, standing for Waikato Environment for Knowledge Analysis, is a collection of machine learning algorithms for data mining purposes. Weka was able to import the data and determine the different parameters for each algorithm. For a fair evaluation and to avoid randomness, we used ten-fold cross validation in the experiments. Specifically, the dataset was divided into 10 equal subsets. Then, in each run, one subset was chosen as the testing set and the remaining is used for the training set. We then recorded the average performance over the 10 runs. We evaluated the accuracy for the positive samples and negative samples separately, as well as the prediction rate over the entire dataset. In our study, we evaluated the SVM with several different kernels including the radial basis function, linear and polynomial, and sigmoid kernel. For Adaboost, used the standard decision stumps as weak classifiers, i.e., binary thresholding. We used 100 weak classifiers.

The results are summarized in Table 1. From the table, we see that the Support Vector Machines with linear kernel achieves the best performance, followed by Adaboost, which validate our motivation. While the positive examples performed just as well with the SVM with linear kernel as other algorithms, the major difference came when predicting the negative examples. The SVM with polynomial kernel performed exceptionally well in the positive examples but particularly poor in the negative examples. With only a few exceptions, this algorithm classified nearly all examples as a success.

4. CONCLUSIONS AND FUTURE WORK
In this paper, we perform a thorough study using machine learning techniques to predict takeover success. Specifically, we model takeover success prediction as a binary classification problem, which has been widely studied in the machine learning community. Motivated by the recent advance in machine learning, we empirically evaluate and analyze many state-of-the-art classifiers, including logistic regression, neural network, support vector machines with different kernels, decision trees, random forest, and Adaboost. We found that support vector machines with linear kernel and the Adaboost with stump weak classifiers perform the best for the task.

Table 1.
Comparison of different machine learning models for takeover success prediction.

<table>
<thead>
<tr>
<th>Algorithm</th>
<th>Positive</th>
<th>Negative</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Logistic Regression</td>
<td>.9707</td>
<td>.5036</td>
<td>.9102</td>
</tr>
<tr>
<td>Neural Networks</td>
<td>.9674</td>
<td>.5182</td>
<td>.9092</td>
</tr>
<tr>
<td>SVM – RBF Kernel</td>
<td>.9631</td>
<td>.5255</td>
<td>.9064</td>
</tr>
<tr>
<td>SVM – Linear Kernel</td>
<td>.9707</td>
<td>.5474</td>
<td>.9159</td>
</tr>
<tr>
<td>SVM – Polynomial Kernel</td>
<td>.9967</td>
<td>.1241</td>
<td>.8837</td>
</tr>
<tr>
<td>SVM – Sigmoid Kernel</td>
<td>.9631</td>
<td>.2554</td>
<td>.8715</td>
</tr>
<tr>
<td>REPTree</td>
<td>.9739</td>
<td>.4964</td>
<td>.9121</td>
</tr>
<tr>
<td>Decision Tree (J48)</td>
<td>.9783</td>
<td>.4672</td>
<td>.9121</td>
</tr>
<tr>
<td>Random Forest</td>
<td>.9739</td>
<td>.4745</td>
<td>.9093</td>
</tr>
<tr>
<td>AdaBoost (Decision Stump)</td>
<td>.9739</td>
<td>.5036</td>
<td>.9130</td>
</tr>
</tbody>
</table>

Future studies include analyzing the effect that other factors of the takeover attempts have over the success rate. Depending on availability of data, these factors can include date of attempt as well as countries of origin of the companies involved. The probability of takeover success may be lower or higher based on the strength of the economy at the time of the attempt, and that strength varies based on countries as well as time periods.

REFERENCES


ABSTRACT
This paper examines the effects of English proficiency on earnings for foreign-born immigrants. The analysis demonstrates the importance of English proficiency on earnings for foreign-born immigrants. In particular, the importance of English proficiency by comparing men and women is explored, which differs from most literature that focuses on men only. Using ordered probit techniques, this research shows that English fluency increases with educational attainment, length of stay in the U.S. and receiving U.S. citizenship. Specifically, the way in which the lengths of duration in the U.S. influence the English proficiency's impacts on earnings is explored by applying the non-parametric method, along with constructing an interaction dummy variable. Complementarities between English proficiency and other forms of human capital have been found as well, with particular attention paid to educational attainment. Furthermore, the quantile regression approach is adopted to examine the effects of English proficiency's effects across the entire earnings distribution. The relative importance of English proficiency is greater at the upper tier of the earnings distribution for immigrants as a whole. A similar pattern remains for both gender groups, although slight differences exist for either group.

Keywords
English proficiency, earnings, immigrants, human capital

1 INTRODUCTION
The Immigration and Nationality Act Amendments of 1965 and the Immigration Act of 1990 have contributed to increased immigration from abroad, due to their abolishing of the national-origin quota system and raising the annual cap on immigration. The statistics from the U.S. Census Bureau tell that the foreign-born population of the United States has been increasing in size and proportion in the total population during the recent four decades: from 9.6 million or 4.7 percent in 1970, to 14.1 million or 6.2 percent in 1980, 19.8 million or 7.9 percent in 1990, and 31.1 million or 11.1 percent in 2000. At the same time, there have been significant changes in the constitution of the foreign-born population in the U.S. since 1970. From 1850 to 1960, European countries and Canada were the leading countries of birth among the foreign-born population. However, according to the report from 2000 U.S. Census Bureau, between 1970 and 2000, the share of immigrants from European countries dropped sharply from 62 percent to 15 percent; while the share of immigrants from Latin America and Asia rose dramatically from 19 percent to 51 percent and 9 percent to 25 percent, respectively. In particular, in the year of 2000, the foreign-born population was dominated by the young and middle-aged (25-44).

Assimilation into U.S. society has been a goal for most immigrants. Becoming fluent in English is an important aspect of the assimilation experience. Proficiency in English is expected to not only help them become assimilated into American culture, but also bring them great economic returns. Previous studies have established the key result that language proficiency contributes to earnings for immigrants. However, most studies have been limited to male immigrants only. A comparable analysis for female immigrants is needed to enrich the literature by displaying a complete picture. At the same time, very limited studies in the context of the United States are based on data collected after 2000.

This research adds new insights to the analysis of English proficiency’s influences on earnings of the foreign-born immigrants in the United States, using data from the 2001 American Community Survey (ACS). The contribution of this paper is three-fold. First, I explore the importance of English proficiency on earnings by comparing male and female immigrants, which differs from most literature that focuses on male immigrants only. Second, I examine the determinants of English proficiency among immigrants by using an ordered probit model, and demonstrate the complementarities between English proficiency and other forms of human capital by sample division and constructing dummy/interaction dummy variables. Third, the effects of English proficiency across the entire earnings distribution are assessed by adopting the quantile regression approach. The effect of English proficiency is found to be greater at the upper tier of the earnings distribution.
The remainder of this research is structured as follows. The data to be analyzed, drawn from the 2001 American Community Survey (ACS), are discussed in Section 2. Section 3 presents the empirical methods and results. Section 4 concludes the article.

2 DATA
The data for this study come from the 2001 American Community Survey (ACS) sample in the Integrated Public Use Microsample Series USA (IPUMS USA) database. The 2001 dataset is compiled from a 0.4% sample of the population enumerated in the census, which includes abundant information on immigrants. In this study, the population of interest is the foreign-born immigrants of prime labor force age (aged 25 to 60).

Measurement
The key dependent variable “earnings” is defined as the total wage and salary income of the immigrant in 2000. The variable is log transformed in order to reduce skewness. For independent variables, this research includes some demographic variables that have been commonly incorporated in the study of this area, such as Chiswick and Miller (2002). For example, factors such as educational attainment, labor market experiences, duration in the United States, birthplaces, gender, ethnicity, marital status, U.S. citizenship and English proficiency are controlled. English proficiency is the variable of primary interest, in which the degree of proficiency is defined as the self-reported ability to speak English. In the 2001 ACS survey, respondents were first asked whether they spoke only English at home. Those who spoke a language other than English at home were required to report how well they spoke English. The answers could be speaking only English, speaking very well, speaking well, not speaking well and not at all. To reduce the number of thresholds, English-language proficiency is in fewer categories with several forms for different purposes. Specifically, it is transformed into three dummy variables (proficient, intermediate and poor) that divide the whole sample into four categories, with “fluent” being the benchmark group. Alternatively, a variable “English” is constructed to denote English proficiency in its ordinal scale (fluent>proficient>intermediate>poor). In addition, the five-category answers were combined into two categories: being fluent in English (speaking only English, speaking very well or speaking well) and being non-fluent in English (not speaking well or not at all).

Other key variables for this analysis are constructed and explained as below.

Dependent Variable
Earnings (LNWAGE): The natural logarithm of the sum of pre-tax wage and salary income received as an employee in 2000.

Explanatory Variables
Education(ED): Respondent’s educational attainment, as measured by the highest year of school or degree completed. It is reported in categories rather than specific years from the survey and some categories just provide the intervals of education levels. For such categories being unable to convey the accurate years of education, midpoints are assigned and reasonable guesses are applied for each range as the value of years of education. For other categories with more accurate information, the corresponding values are assigned.

Experience (EX): This refers to the total potential labor market experience (as the survey provides no direct measure), and the number of years that an individual is assumed to be working after his/her school completion. It is computed as age minus years of education minus 6 (i.e. = AGE-ED-6 or zero, whichever is bigger). Its quadratic specification (EXSQ) is also used.

Years since Migration (YSM): Length of stay in the United States since migration. It is calculated by the year of survey (2001) minus the year of migration.

Marital Status (MARRIED): This is a binary variable that separates individuals who are never married/single (equal to 0) from all other marital statuses (married, spouse present; married absent; separated; divorced; widowed).

Ethnicity (BLACK): This is a binary variable, which is set to one if the individual is Black and set to zero for all other ethnic groups (White; Hispanics; Asian).

Citizenship (CITIZEN): This is a dichotomous variable, which is equal to one if the individual is awarded U.S. citizenship, and is equal to zero for those who have not yet become U.S. citizens.

Birthplace: A number of non-English speaking (where English is neither the official nor the dominant languages) countries or regions of birth are analyzed to control the unmeasured differences of immigrants with different countries/areas of origin, such as differences in the culture and background of immigrant groups: East Asia; Southeast Asia; South Asia; Other Asia; Eastern and Southern Europe; Western Europe; Northern Europe; Africa; Central and South America; Middle East; Oceania.

Sample Descriptive Statistics
Because the outcome variable of interest is earnings, the sample is further restricted to the individuals who were strongly attached to the labor force with positive earnings in the year of 2000 to minimize the problem of sample selection bias. The sample analyzed consists of 51,398 observations. The mean age of the sample population is about 40 years old. On average they have been in the United States for 17 years, with 47.2% of them being awarded U.S. citizenship, and only 8.5% of them migrating from English-speaking countries. Thirty-seven percent of the sample is Hispanic with a further 29.8% being Asian and 7.9% Black. For immigrants with greater English proficiency, the average education level is higher and the average age at arrival is...
younger. More than 20% of the foreign-born immigrants are not fluent in English and have average hourly earnings of $12.20. The equivalent figure for those who are fluent in English is $22.5, which might indicate that immigrants are suffering from their English deficiency economically. In particular, there seems to be a gross positive relationship between earnings and English fluency among the immigrants: their hourly earnings increase with greater English proficiency. This correlation also applies for subsamples divided by genders. The penalty for being deficient in English seems to be greater for male immigrants than female immigrants.

3 EMPIRICAL METHODS AND RESULTS
The empirical analysis begins with estimations that relate the natural logarithm of hourly earnings in 2000 for foreign-born U.S. immigrants (ages 25 to 60) to a set of explanatory variables, with particular interest in English-language proficiency. The data are then disaggregated by gender, and earnings equations are estimated for each subsample for comparison.

**Importance of English Proficiency**

Table 1. Estimates of Earnings Equations (Selected)

<table>
<thead>
<tr>
<th>Variable</th>
<th>All</th>
<th>All</th>
<th>Male</th>
<th>Female</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG_FLUENT</td>
<td>0.177*</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PROFICIENT</td>
<td>-0.155*</td>
<td>-0.159*</td>
<td>-0.145*</td>
<td></td>
</tr>
<tr>
<td>INTERMEDIATE</td>
<td>-0.258*</td>
<td>-0.278*</td>
<td>-0.226*</td>
<td></td>
</tr>
<tr>
<td>POOR</td>
<td>-0.249*</td>
<td>-0.288*</td>
<td>-0.186*</td>
<td></td>
</tr>
<tr>
<td>OBS.</td>
<td>51,398</td>
<td>51,398</td>
<td>28,441</td>
<td>22,957</td>
</tr>
</tbody>
</table>

Dependent Variable: Log Earnings; significant at 5% level.

Column 1 tells that other things being equal, those who speak fluent English will significantly earn on average 17.7% more than those who are not fluent. When a more detailed measure of English language fluency is provided, the results from column 2 show a general trend of increasing penalties for immigrants with weaker English skills. All else held constant, those who are proficient in English will earn 15.5% less than those who speak fluent English; however, those who are intermediate and poor in English earn 25.8% and 24.9% less than those who are fluent, respectively.

Columns 3 and 4 present the estimates for men and women separately, with the detailed measure of English fluency controlled. The results indicate that male immigrants suffer increasing penalties with decreasing levels of English skills. Among the male immigrants, those who are proficient, intermediate and poor in English will earn 15.9%, 27.8% and 28.8% less than their counterparts with English fluency, respectively, all others being equal. However, female immigrants who speak intermediate English suffer the greatest earnings penalty. Among the female immigrants, all else being equal, those with intermediate level of English skills earn 22.6% less than those speaking fluent English, while those who are proficient and poor in English earn 14.5% and 18.6%, respectively, less than the fluent group. This might indicate that women with poor English skills are dominant in the jobs that do not require English proficiency at all. At the same time, the magnitudes of coefficients reveal that male immigrants may benefit more from well-spoken English than female immigrants, as the male group has greater magnitudes than the female group.

**Determinants of English Proficiency & Relationship between English Proficiency and Other Human Capital**

The former discussion has established a positive link between earnings and English proficiency and is a preliminary demonstration of the importance of English proficiency. Due to this correlation, the determinants of English proficiency will be examined. The self-reported English-language proficiency of foreign-born immigrants can be considered ordered responses. A variable “English” is constructed to denote English proficiency in its ordinal scale, that is, respectively, no English at all (English=0), intermediate (English=1), proficient (English=2), fluent (English=3). An ordered probit model is well-suited for the naturally ordered categorical data.

The results show that the latent English proficiency variable increases with levels of education, attainment of U.S. citizenship, and years since migration. Their coefficients are highly statistically significant. All else held constant, an additional year of duration in the U.S. will increase the probability of being fluent in English by 4.5%.

At the same time, being awarded U.S. citizenship and being Black can also boost the probability of becoming fluent in English by 9.18% and 33.1%, respectively, other things being equal. A reason for Blacks’ sizable positive effect on becoming fluent in English is that most Black immigrants in the sample population are from English-speaking countries and thus are more acculturated into U.S. society. The probability of being able to speak fluent English decreases for immigrants if they are from countries or areas where English is neither the official nor the dominant language.

Immigrants from Central and South America (Latin America) and East Asia are least likely to become fluent in English. All else held equal, being from Latin America and East Asia will significantly decrease the probability of being fluent in English by as high as 68.51% and 62.15% , respectively. At the same time, coming from Africa, the Middle East, Oceania, Europe and other parts of Asia will significantly decrease the probability of being fluent as well. In addition, the threshold parameters appear to be significantly different from each other, indicating the four categories of English proficiency should not be merged into three. When the full sample is separated by gender, it is apparent that male and female immigrants have a similar pattern to the full sample in the coefficients’ significance and magnitudes. The threshold parameters remain
significantly different from each other in both groups. The only striking difference is that for female immigrants, the latent English proficiency variable decreases when they are getting married.

To further show that longer duration in the U.S. contributes to immigrants’ English proficiency, Table 2 uses a non-parametric way to show how the sectional increasing in the U.S. duration affects earnings and how lengths of duration in the U.S. affect earnings through influencing English-language proficiency. Duration in the U.S. is divided into 8 categories by constructing seven dummy variables (YSM 1-YSM 7) that correspond to eight categories of the duration from the cross-tabulation (i.e., YSM 1: 5-10 years; YSM 2: 11-15 years; YSM 3: 16-20 years; YSM 4: 21-25 years; YSM 5: 26-30 years; YSM 6: 31-35 years; YSM 7: over 35 years), with duration from zero to five years being the base group. Estimates from Table 2 reveal the general trend that the longer sectional duration in the U.S., the higher the economic returns. However, this momentum begins to go down for those who have stayed in the U.S. for more than 35 years.

To compare how lengths of duration in the U.S. influence the English proficiency’s impacts on earnings, a dummy variable (YSM 20) is constructed referring to duration that is greater than 20 years. Moreover, an interaction dummy variable “YSM 20_ENG” (i.e. the interaction of duration that is greater than 20 years with being fluent in English) is constructed to show whether English proficiency is more important economically for those who have stayed in the U.S. for a shorter time. The results indicate that English proficiency matters more economically for those who have been in the U.S. for less than 20 years than those who have been in the U.S. for more than 20 years. Other things being equal, among the immigrants who are fluent in English, those who have been in the U.S. for less than 20 years earn 6.5% more than those who have been in the U.S. for more than 20 years.

Table 2. Estimates of Influence of Duration in U.S. on English Proficiency’s Impacts on Earnings (Selected)

<table>
<thead>
<tr>
<th>Variable</th>
<th>All</th>
<th>Male</th>
<th>Female</th>
</tr>
</thead>
<tbody>
<tr>
<td>PROF_ED</td>
<td>-0.039*</td>
<td>-0.037*</td>
<td>-0.040*</td>
</tr>
<tr>
<td>INTER_ED</td>
<td>-0.061*</td>
<td>-0.058*</td>
<td>-0.063*</td>
</tr>
<tr>
<td>POOR_ED</td>
<td>-0.068*</td>
<td>-0.063*</td>
<td>-0.073*</td>
</tr>
</tbody>
</table>

Dependent Variable: Log Earnings; significant at 5% level.

Compared with immigrants fluent in English, an additional year of education is associated with 6.8%, 6.1% and 3.9% lower earnings, respectively, for immigrants with poor, intermediate and proficient English skills. Estimates from column 2 and 3 tell that such earnings gaps are wider for female immigrants than male immigrants. Among the female immigrants, an additional year of education is associated with 7.3%, 6.3% and 4% lower earnings, respectively, for those with poor, intermediate and proficient English skills than those fluent in English; while among the male immigrants, an additional year of education is associated with 6.3%, 5.8% and 3.7% lower earnings, respectively, for those with poor, intermediate and proficient English skills than those fluent in English. A Chow test is applied to see whether the earnings determinants have the same effects between male and female immigrants, and the alternative hypothesis is accepted.

Table 3. Estimates of Earnings Equations (Selected)

<table>
<thead>
<tr>
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<tr>
<td>POOR_ED</td>
<td>-0.068*</td>
<td>-0.063*</td>
<td>-0.073*</td>
</tr>
</tbody>
</table>

In order to explore the relationship between English proficiency and other human capital, the sample is divided into those with English fluency (speaking only English or speaking it very well) and those with English deficiency (speaking English not well or do not speak English at all).

The coefficient of education is 7.24% for the foreign-born immigrants who are fluent in English, but is only 2.14% for those who are not fluent in English. This indicates a significant degree of complementarity between English proficiency and education in the U.S. labor market. The economic incentive for immigrants with higher educational attainment to improve English-language proficiency is greater than those with less education. In addition, a complementary relationship between English proficiency and duration in the U.S., marriage and citizenship is found. Immigrants with fluency in English receive greater economic returns from having or having more of such characteristics.

To further explore the complementary relationship between English-language proficiency and educational attainment among the foreign-born immigrants and see how years of education impacts earnings among immigrants with different level of English proficiency, interaction dummy variables are constructed by interacting English proficiency with education. The regression results are presented in Table 3.

Heterogeneous Effects of English Proficiency across Earnings Distributions

So far, the regressions provide the average effects of
English-language proficiency on earnings, which remain constant. However, they only provide a partial view of the relationship. The effects of English-language proficiency might be heterogeneous across earnings distributions. Immigrants in the lower tier of the earnings distribution may be affected differently by English-language proficiency from those who are in the upper tier. Exploring the potentially different impacts that English-language proficiency may have on immigrants with diverse income levels helps policymakers to make better resource allocation decisions, such as who should be given the priority to the English language training provided by the government, the rich or the poor (Wang and Wang 2009).

Quantile regressions have been conducted for the whole sample, male and female sample, respectively, with effects at 25th, 50th, 75th percentiles.

The results show that English proficiency has heterogeneous effects on earnings throughout the entire earnings distribution, which differ considerably from the OLS coefficients. The economic penalty for being deficient in English is generally greater for immigrants at the upper tier of earnings distribution and for each level of English proficiency (proficient, intermediate, and poor). Specifically, among immigrants who are proficient in English, those at the 0.75 of earnings distribution quantile earn 16.9% less than their fluent counterparts, while 16.6% less for those at the 0.5 quantile and 14.4% less for those at the 0.25 quantile.

Among immigrants who are intermediate in English, those at the 0.75 and 0.50 of earnings distribution quantile suffer a similar loss of earnings of around 27.5% and such loss of earnings is only 23.5% for those at the 0.25 quantile. Among immigrants who are poor in English, those at the 0.75 of earnings distribution quantile earn 29.1% less than their fluent counterparts, while 27.4% less for those at the 0.5 quantile and 22.3% less for those at the 0.25 quantile. In other words, the reward for English proficiency is greater for immigrants at the upper earnings distribution. The possible reason might be that fluency in English is more needed for the higher-ranking (higher earnings in general) jobs; while lower-ranking occupations, such as the goods production and assembly lines, are unlikely to be as affected by English proficiency.

A similar pattern remains for both gender groups, although slight differences exist for either group. Male immigrants who are intermediate in English follow the above pattern exactly. Those at the 0.75, 0.50 and 0.25 earnings distribution quantile suffer earnings penalties for 28.1%, 27.6% and 25%, respectively, compared with their fluent counterparts. Among male immigrants who are proficient in English, those at the 0.75 and 0.5 of earnings distribution quantile earn 15.4% less than their fluent counterparts, while 13.7% less for those at the 0.25 quantile. However, the earnings disadvantage is the greatest for men at the 0.50 quantile who are poor in English (-30.6%), compared to men with the highest level of proficiency, which is followed by those at the 0.75 and 0.25 quantile (-29.5% and -26.7%, respectively).

On the other hand, female immigrants who are poor in English follow the pattern of the whole sample exactly. Those at the 0.75, 0.50 and 0.25 earnings distribution quantile suffer earnings penalties for 23.8%, 23.1% and 16.4% respectively, compared with their fluent counterparts. However, among women who are proficient and intermediate in English, the earnings disadvantage is the greatest for those at the 0.50 quantile, compared to women fluent in English (-17.5% and 26.7%, respectively), which is followed by those at the 0.75 and 0.25 quantile (-15.9% and -14%, respectively, for proficient group; -24.6% and -20.9%, respectively, for intermediate group). The possible reason might be that most women are employed in the middle-ranking jobs (such as administrative assistant jobs with middle-ranking payments) that require English proficiency.

4 CONCLUSIONS

This paper demonstrates the importance of English proficiency on earnings for immigrants, indicating that male immigrants suffer increasing penalties with decreasing levels of English skills, and female immigrants who speak intermediate English suffer the greatest earnings penalty. Second, education levels, attainment of U.S. citizenship and duration in the U.S. are important determinants of English proficiency. In particular, an additional year of education’s positive impact on earnings is greater with higher English proficiency for both gender groups. Third, the reward to English proficiency is greater for immigrants at the upper earnings distribution. A similar pattern remains for both gender groups, although slight differences exist for either group.

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Language Skills on Earnings”, Discussion paper.
A Theory on Political Stability and Provincial Size

M. Kadir Doğan
Department of Economics
Ankara University
Faculty of Political Sciences
Cebeci, Ankara, 06590, Turkey
+90(312) 595-12662
doganmk@politics.ankara.edu.tr

ABSTRACT
This paper analyzes the relation between political stability and the size of provinces. We study a model in which the signal to the electorate about the politician's decision is noisier in more highly populated provinces. The model implies that both the equilibrium reelection probabilities of politicians and political stability are lower in highly populated provinces.

Keywords
Political stability, size of electorate, political agency, elections, asymmetric information

INTRODUCTION
After a politician is elected, he has the authority to choose his policies for a certain time interval. In doing so, he may ignore his campaign promises and instead choose policies that serve his own interests. At the same time, the electorate may not observe all the policies instituted by the politician. As a consequence of the power and information superiority of the politician, political moral hazard arises. In such a setting, the next election is the only device for electorate to control the politician. If the electorate employs a retrospective voting rule, the threat of losing office can provide incentives to the politician to act in the interests of the electorate regardless of any personal objectives.

The purpose of this paper is to investigate the relation between political stability and size of the electorate by using the reelection probabilities of politicians. The central idea of this paper can be stated as follows. The electorate reelects the politician and allows him to stay in office if and only if the electorate is satisfied by the outcome the politician's policies. In more highly populated provinces, the signal of the electorate about the policies of the politician is noisier. Consequently, in these provinces, the politicians are less able to justify their policies, and so they are voted out of offices more frequently.

In our model, there is an elected politician in each province who can use the budget of the province to increase social welfare or to enrich himself. The politician spends a portion of the budget to increase social welfare. Budgets of the provinces are proportional to their population size: the greater the population size, the larger is the budget. The welfare of the electorate stochastically depends on the rate of budget that is spent for increasing social welfare. If the politician spends more to increase social welfare, it is more likely to have higher welfare. If the politicians who control the provinces spend at the same rate, then the amount that is spent to increase social welfare is greater in more highly populated provinces. By considering the fact that it is more difficult to manage a higher level of spending, we assume that the uncertainty in welfare is grater in the more highly populated provinces.

The electorate observes the welfare, but cannot observe how the politician uses the budget. Therefore, the level of welfare is a signal for the electorate about the policy of the politician. In more highly populated provinces, the greater uncertainty in welfare implies a noisier signal for the electorate. We assume that the electorate can coordinate a decision rule as to whether to reelect the politician. A representative voter adopts a simple retrospective voting rule: reelect the politician if and only if the welfare is more than a cut-off level.

We analyzed two variants of the model. First, we assume that the voter is unable to commit to a strategy. In this case, any spending rate for increasing welfare up to a threshold value can be sustained in equilibrium. Second, we assume that the voter is able to commit to a strategy. In such case, there exists a unique equilibrium. Given the equilibrium cut-off level of the voter and the policy of the politician, depending on the realization of welfare, the politician is reelected with some probability. By analyzing the effect of the size of the province to the equilibrium reelection probability of the politician, we find that the reelection probability of the politician decreases in size of the province that he controls. Political stability therefore decreases in the size of provinces.

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1 See Hinich and Munger (1994) and Bender and Lott (1996) for a review of the literature on the role of ideology and the failure by the legislator to act in the interests of his constituents in legislative voting.
This paper represents the first investigation of the effect of province (electorate) size on the reelection probabilities of the politicians and political stability. Our model is closely related to models on public control of the politicians with asymmetric information. For instance in Ferejohn (1986), Persson, Roland and Tabellini (1997), and Persson and Tabellini (2000), the politician chooses a policy that affects the utility of the electorate together with a random variable.\footnote{See Alesina and Spolare (2003) for a general discussion on the size of nations.} He observes the random variable before choosing his policy, but the electorate cannot observe it and adopts a retrospective cut-off voting rule. Consequently, in equilibrium, if the realized value of the random variable is in some interval, the politician sets his policy to satisfy the required cut-off utility. Otherwise, the politician behaves opportunistically and is voted out of the office. In other words, the politician certainly knows the result of the next election immediately after he sets his policy. Banks and Sundaram (1993, 1998) discussed a model in which the politician and the opponents differ according to their competency and the politician acts before uncertainty is resolved. They show the existence of equilibrium where the politician is reelected if and only if the outcome of the policies is greater than a cut-off level. Similar to Banks and Sundaram (1993, 1998) the politician acts before uncertainty is resolved in our model. The politician’s information superiority to the electorate is restricted only to the knowledge about his policy. Consequently, in equilibrium, the politician is not sure about the result of the next election until the uncertainty is resolved.

The outline of the paper is as follows. Section 2 describes the model. In section 3, we derive the equilibrium and describe the implications of the model, and section 4 concludes. All of the proofs are available upon request from the author.

MODEL

We assume that there is an elected politician who has the power to use the budget in every province. The budget of a province is formed by the payment from the central government and taxes received from the residents of the province. The payments of the central government are proportional to the populations of the provinces and the tax rates are determined by the central government.

Let \( \tau \) represent the sum of the payment received from the central government for one person and the tax collected from a resident. The budget of a province with population size \( N \) is simply \( N \tau \). The higher is the population size, the larger is the budget. The politician can utilize the budget to increase social welfare or to enrich himself. He spends some portion of the budget to increase social welfare and retains the rest for his own use. Let \( \lambda \in [0,1] \) be the rate of the budget that is spent for increasing social welfare. The politician’s policy is to choose \( \lambda \) and his payoff for the current period is \( N \tau (1-\lambda) \). We assume that the politician and his opponents are identical in terms of ability and preferences. Also, there exists at least one opponent for the politician in every election.

We assume that the electorate can coordinate on the decision whether to reelect the politician. Thus, a representative voter decides whether to reelect the politician. Let \( \theta \in \mathbb{R} \) represent the welfare of the voter. The welfare of the voter stochastically depends on the politician’s policy as follows.

\[
\theta = \lambda + \epsilon
\]

where \( \epsilon \) is a random variable. If the politician spends more to increase the social welfare, then having higher welfare is more likely. If the politicians who control the provinces choose the same policy, then the amount that is spent to increase social welfare is greater in more highly populated provinces. By considering that it is more difficult to manage higher level of spending, we assume that the uncertainty in welfare is greater in more highly populated provinces. Therefore, the distribution of \( \epsilon \) is assumed to be as follows.

\[
\epsilon \sim \text{Normal}(0,N\sigma^2)
\]

\( \epsilon \) is normally distributed with mean zero and variance \( N\sigma^2 \), where \( \sigma \) is constant. Let \( f_\epsilon(\epsilon) \) and \( F_\epsilon(\epsilon) \) denote the probability density function and cumulative distribution function of the normal distribution, with mean zero and variance \( \sigma^2 \), respectively.

The timing and information structure of the events are as follows.

1. The politician selects the rate of the budget to spend for increasing social welfare. The voter is unable to observe this policy.
2. The welfare of the voter is realized.
3. Election is held and the voter reelects the politician or his opponent.

The welfare of the voter acts as a signal about the politician’s policy. Since the uncertainty in welfare is greater in more highly populated provinces, the signal of the voter about the politician’s policy is noisier there.

Lacking the ability to observe the politician’s policy, the voter’s decision rule whether or not to reelect the politician depends on her welfare. At the end of the period, if the welfare of the voter is high enough, then she reelects the politician. Otherwise, she removes the politician from the office and elects his opponent. Let \( \theta' \) be the threshold welfare in the voter’s decision rule that is required for the reelection of the politician. The voter’s decision rule can be represented as “reelect the politician if and only if \( \theta \geq \theta' \).”
An important factor to note here is the voter's ability to commit to a decision rule. If the voter is able to commit to a decision rule, then the politician may behave less opportunistically under the voter's "credible threat" of removing him from the office. In the next section, we will analyze both the case of the voter being able to commit to a decision rule and the case of the voter being unable to commit to a decision rule.

Given the decision rule of the voter, the politician has a reelection probability that depends on his policy. Let \( a_{N}(\lambda | \theta) \) be the reelection probability of the politician who controls a province with population size \( N \) when he choose policy \( \lambda \).

\[
a_{N}(\lambda | \theta) = 1 - F_{N}(\theta - \lambda)
\]

\( a_{N}(\lambda | \theta) \) is equal to the probability of having the welfare more than the threshold value. First, note that given the decision rule of voter, the reelection probability of the politician is increasing with his policy. Second, the reelection probability of the politician also depends on the population size of the province since it affects the uncertainty in the welfare.

For simplicity, we assume that politicians have an expected value of staying in office that is proportional to the budget of the province. For a politician who controls a province with population size \( N \), the expected value of staying in office is equal to \( Nrv \), where \( v \) is a constant parameter. The higher the \( v \), the more valuable it is to stay in office. The expected value of leaving office is normalized to zero. This assumption implies that the politician's policy and the voter's decision rule determine the politician's current period payoff and reelection probability, but the expected value of staying in or leaving office is independent of them.

Let \( \delta \) represent the common discount factor of the politicians and \( U_{N}(\lambda | \theta) \) denote the expected payoff of a politician who controls a province with population size \( N \) if he chooses policy \( \lambda \) and the threshold welfare in the voter's decision rule is \( \theta \). \( U_{N}(\lambda | \theta) \) can be written as follows.

\[
U_{N}(\lambda | \theta) = \eta N (1 - \lambda) + \delta \nu (1 - F_{N}(\theta - \lambda))
\]

The expected payoff of the politician consists of two components: The current period's payoff and the discounted value of the expected payoff from the future. The politician's policy determines both the current period's payoff and his reelection probability. As the policy of the politician increases, the current period's payoff decreases, but the expected payoff from the future increases due to the increase in his reelection probability.

Our equilibrium concept is the subgame perfect equilibrium (SPE) in pure strategies. The assumption of having an exogenous value of staying in office implies that the equilibrium strategies of the players are history-independent. Thus, we restrict our attention to the history-independent strategies of the players. The politician's strategy is to choose policy \( \lambda \in [0, 1] \) and his associated payoff is \( U_{N}(\lambda | \theta) \).

The voter's strategy is to choose a threshold welfare \( \theta \in \mathbb{R} \) and to reelect the politician if and only if \( \theta > \theta^{*} \). The voter's associated payoff is her welfare \( \theta \).

**EQUILIBRIUM**

The ability of the voter to commit to a strategy whether or not to reelect the politician is crucial in this game. The game in which the voter is able to commit to a strategy is called the "commitment game," while the game in which the voter is unable to commit to a strategy is called the "no commitment game." We analyze the commitment game, followed by the no commitment game.

**The Commitment Game**

We assume that the voter is able to commit to a strategy: She chooses a strategy at the beginning of the period and votes accordingly at the end of the period. Since she is able to commit, losing the office in the case of welfare realizes less than the threshold becomes a credible threat for the politician. Thus, the politician selects his policy by considering the voter's strategy to be credible.

**Proposition 1** There exist two bounds, \( v^{l} < v^{h} \). If \( v \leq v^{l} \), then in any SPE, the politician's policy is \( \lambda = 0 \), and if \( v \geq v^{h} \), then in any SPE, the politician's policy is \( \lambda = 1 \).

If \( v \leq v^{l} \), then the expected value of staying in office is too low in order to offer any incentive to the politician to spend some portion of the budget for increasing social welfare. For any strategy of the voter and for any \( \lambda \in [0, 1] \), the positive effect of a marginal increase in \( \lambda \) to the expected future payoff of the politician due to increase in his reelection probability, is less than the negative effect of it to his current period payoff. Thus, the politician behaves opportunistically for any decision rule of the voter and chooses \( \lambda = 0 \) in any SPE.

If \( v \geq v^{h} \), then the expected value of staying in office is high enough so that the voter can induce the politician to spend the entire budget on increasing social welfare. In any SPE, the politician chooses \( \lambda = 1 \) to maximize his reelection probability. The values of the bounds \( v \) and \( v \) are relegated to the proof of the proposition in the Appendix.

In the rest of this paper, to focus on the equilibria with politician's interior policy, we restrict our attention to the values of parameter \( v \) in the interval \( (v^{l}, v^{h}) \).

To simplify the notation, we define the function \( g_{N}(\epsilon) \) as follows.

\[
g_{N}(\epsilon) = \begin{cases} f_{N}(\epsilon) & \text{if } \epsilon \geq 0 \\ 0 & \text{otherwise} \end{cases}
\]

\( g_{N}(\epsilon) \) is simply equal to the probability density function of \( \epsilon \) in a province with population size \( N \) if \( \epsilon \) is non-negative, and equals zero if \( \epsilon \) is negative. Note that \( g_{N}(\epsilon) \) is decreasing if \( \epsilon \geq 0 \), and invertible. Also, let \( h_{N} \) denote the following point on the inverse of \( g_{N}(\cdot) \).
Proposition 2 If the voter is able to commit, then there exists a unique SPE. In this equilibrium, the politician chooses \( \lambda = \theta + h_N \), the voter reelects the politician if and only if \( \theta \geq \theta^* \), and consequently, the politician is reelected with probability \( F_N(h_N) \).

The equilibrium threshold value for welfare, \( \theta^* \), is in the interval \((h_N, 1-h_N)\). The characterization of \( \theta^* \) is omitted to the proof of the proposition 2. The politician's equilibrium policy is greater than \( \theta^* \) and it is in the interval \((0,1)\). The equilibrium reelection probability of the politician is \( F_N(h_N) \).

The No Commitment Game

Proposition 3 If the voter is unable to commit, then any policy of the politician, such that \( \lambda \leq \theta^* + h_N \), can be supported in an SPE.

For any \( \theta^* \in [h_N, 0] \), if the voter chooses the threshold \( \theta^* \), then the politician's best response is to choose the policy \( \lambda = \theta^* + h_N \). If the politician selects the policy \( \lambda = \theta^* + h_N \), then a (weakly) optimal strategy of the voter is to set the threshold \( \theta^* \). Hence, any policy of the politician, such that \( \lambda \leq \theta^* + h_N \), can be supported in an equilibrium.

Note that since the politician and his opponents are identical in terms of their ability and preferences, given the politician's strategy, any strategy of the voter is weakly optimal. Therefore, if the voter is unable to commit, removing the politician from office if the realized welfare is lower than a threshold does not present a credible threat to the politician. Consequently, there exist equilibria where the politician chooses lower policies than the equilibrium policy of the commitment game. The highest policy of the politician that can be sustained in equilibrium is identical to the equilibrium policy of the commitment game.

Henceforth, we assume that the voter can commit to a strategy. Consequently, as proposition 2 implies, there exists a unique equilibrium in which the politician's policy is \( \lambda = \theta^* + h_N \) and he is reelected with probability \( F_N(h_N) \). We are now able to compare the reelection probabilities of the politicians and comment on the political stability among provinces.

Proposition 4 The politicians are replaced more frequently in more highly populated provinces.

In the proof, we show that the reelection probability of a politician is negatively associated with the population size of the province he controls. Therefore, we expect politicians to be replaced more frequently and thus lower political stability in the more highly populated provinces.

For instance, assume that there are two provinces with population sizes \( N_L \) and \( N_H \), where \( N_L < N_H \). Figure 1 illustrates the distribution of the noise \( \varepsilon \) in these provinces. The curve with the greater variance belongs to the noise in the highly populated province. Proposition 2 implies that in equilibrium, the politician who controls the province with population size \( N_L \) is reelected with probability \( F_{N_L}(h_{N_L}) \), while the politician who controls the province with population \( N_H \) is reelected with probability \( F_{N_H}(h_{N_H}) \). By definition of \( h_N \), it is the positive \( \varepsilon \) that solves \( f_N(\varepsilon)^*(1/(\delta v)) \).

Accordingly, \( h_{N_L} \) and \( h_{N_H} \) are labeled in figure 1. \( F_N(h_{N_L}) \) is equal to the area \( A_{N_L} \), and \( F_N(h_{N_H}) \) is equal to the area \( A_{N_H} \). That is, the equilibrium reelection probabilities of the politicians in the provinces with low and high population sizes are equal to areas \( A_{N_L} \) and \( A_{N_H} \), respectively. In proposition 4, we prove that \( A_{N_L} > A_{N_H} \). Therefore, the politician who controls the province with low population size has a greater reelection probability than the politician who controls the province with a high population size. Consequently, we expect the politicians to be replaced more frequently in the highly populated provinces.

CONCLUSION

This paper analyzes the relation between the size of provinces (electorate) and the political stability by using the reelection probabilities of politicians. The central idea of this paper can be stated as follows. The electorate reelects the politician and allows him to stay in office if and only if the electorate is satisfied by the outcome the politician's policies. In more highly populated provinces, the signal of the electorate about the policies of the politician is noisier. Consequently, in these provinces, since the politicians are less able to justify their policies, they are voted out of the offices more frequently.

We presented a model on the public control of the politician in which the electorate's signal about the politician's decisions is noisier in more highly populated provinces. The...
model implies that the reelection probability of a politician is decreasing in the size of the province he controls. Therefore, reelection probability of a politician and political stability are decreasing in the size of the province.

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Antecedents and Consequences of Website Credibility: Examining the Roles of Online Retailing Ethics

Yam B. Limbu, Ph. D.  
Marketing Department  
Montclair State University  
1 Normal Avenue  
Montclair, NJ 07043  
Tel: 973-655-3361  
limbuy@mail.montclair.edu

Archana Kumar, Ph. D.  
Marketing Department  
Montclair State University  
1 Normal Avenue  
Montclair, NJ 07043  
Tel: 973-655-3001  
kumara@mail.montclair.edu

ABSTRACT
This study examines the impact of certain ethical dimensions on website credibility and its effect on attitude and behavior towards an online retailer. Results show that fulfillment and nondeception are related positively to website credibility. However, security and privacy concerns are not significant predictors of website credibility. Website credibility is significantly related to attitude toward website, which eventually influences purchase intent, revisit intent, and positive word-of-mouth.

Keywords  
Website credibility, online ethics, attitude toward site, behavioral intention

1 INTRODUCTION
Website credibility can be defined as the perceived trustworthiness, believability, quality, and expertise of a website (Dutta-Bergman, 2004). Credibility of an online retailer's website has been deemed to be critical to the success of online retailers (Choi and Rifen, 2002). Despite the existence of sizable literature on website service quality, little is known about how consumers evaluate the credibility of an online retailer’s website. Studies that explore the relationship between ethical factors associated to online retailing and website credibility are rare. Although it is critical that online retailers understand how consumers perceive and evaluate the ethical dimensions of their websites (Anderson and Srinivasan, 2003), empirical studies have yet to explore the effect of online retailers’ fulfillment and nondeception on website credibility. The current study attempts to fill this gap by empirically examining the effects of four ethical factors associated to online retailers’ websites -- privacy, security, fulfillment, and nondeception -- on website credibility and its subsequent impacts on consumer attitudes and behavioral intentions.

2 RESEARCH FRAMEWORK AND HYPOTHESIS

In order to hypothesize the relationship between ethical factors, website credibility, attitudes, and behavioral intentions, this study draws on the social exchange theory. The social exchange theory suggests that an individual or a party offers a benefit to another, creating an obligation of the other individual or party to give back by providing some benefit (Blau, 1964). In an online retailing context, in exchange to the ethical practices followed by the retailer, consumers in return rate the website to be credible in their minds leading to positive attitudinal and behavioral intentions. Online customers need to exchange personal information beyond that required to complete a traditional transaction (Belanger et al., 2002). During such exchanges, customers get a chance to evaluate the retailer’s website and their ethical standpoints. This evaluation may influence perceptions of the retailer’s website credibility. Based on the social exchange theory, the following are hypothesized.

Relationship between Internet Retailer’s Ethics and Website Credibility

H1a: As consumers perceive an online retailer to fulfill a transaction, it will lead to an increased credibility toward the website.

H1b: As consumers perceive an online retailer to employ non-deceptive tactics during a transaction, it will lead to an increased credibility toward the website.

H1c: As consumers perceive an online retailer’s website to be secure, it will lead to an increased credibility toward the website.

H1d: As consumers perceive an online retailer’s website to offer privacy policy, it will lead to an increased credibility toward the website.

Relationship between Website Credibility and Attitude toward Websites

H2: As consumer perception of credibility toward an online retailer’s website increases, it will lead to a positive attitude toward the website.
Relationship between Attitudes toward Websites and Behavioral Intentions

H3a: Positive attitude toward a retailer’s website leads to an increase in the intention to purchase from that website.
H3b: Positive attitude toward a retailer’s website leads to a higher level of positive word-of-mouth communication.
H3c: Positive attitude toward a retailer’s website leads to an increase in the intention to revisit the website.

3 METHOD

Questionnaires were administered to 320 participants, who were undergraduate and graduate students enrolled at a mid-size university located in the United States. The respondents were approached via email using a link to an online questionnaire created through an online professional survey developer. The email message described the research purpose and invited each student to participate in an e-questionnaire by accessing it through an attached link. Participants were asked to respond to the questionnaire based on their latest online purchase made within the last three months. Follow up emails were sent to the participants who did not respond to the first email solicitation. The vast majority of participants (96%) fulfilled the requirements of having completed an online purchase within the past three months. Out of the 282 completed questionnaires 14 were excluded due to either not fulfilling the online purchase requirement or not having completed the questionnaire. The final sample consisted of 143 males and 125 females. Study participants ranged in ages from 23 to 49 years. The average age of the respondents was 25.8, indicating that the majority of them were undergraduate students. The three major groups represented in the sample were Caucasian (41%) followed by African American (24%) and Hispanics (20%).

All items were measured using existing scales on a 5-point Likert scale. To assess participants’ perceptions of a website’s trustworthiness and believability, a website credibility measure was adapted from Rains and Karmikel (2009), Dutta-Bergman (2004), and Lee and Nass (2004). It included five items “Believable”, “Trustworthy”, “Accurate”, “Complete” and “Biased”. The item “I perceive the site to be biased (reverse item)” was dropped due to poor loading. In line with previous studies, the current study demonstrated an acceptable factor loadings ranged from .671 to .831, with an adequate construct reliability (coefficient alpha = .839), above the recommended level of .7 (Bagozzi and Yi, 1988). The consumer word-of-mouth (WOM) was assessed with Wolfinbarger and Gilly’s (2003) three-item scale. The factor loadings for this measure were deemed to be acceptable ranging from .725 to .887, with an adequate construct reliability (coefficient alpha = .833). Consumers’ attitude toward the site was measured using a five-item scale adapted from Chen and Wells (1999). The factor loadings for this three-item scale ranged from .645 to .825. The reliability of the measure was satisfactory (coefficient alpha = .851).

Measurement items for revisit intention and purchase intention were adapted from Yoo and Donthu (2001). The factor loadings for these two-item scales were satisfactory ranged from .705 to .866. Reliability for revisit intention was .788 and purchase intention was .756. Measurement items for fulfillment and non-deception were adapted from Roman (2007). The factor loadings for these three-item scales ranged from .572 to .907. Reliability for fulfillment was .766 and non-deception was .875. Four-item security and three-item privacy measures were adapted from Roman (2007). The factor loadings for these measures ranged from .572 to .891 and a coefficient alpha was .740 for security and .871 for privacy.

4 RESULTS

The hypothesized relationships were estimated using structural equation modeling that follows the two-stage analytic technique: a measurement model followed by a structural model. The construct validity and reliability of the measurement model were assessed with the use of confirmatory factor analysis. The goodness-of-fit indices for the measurement model are: χ²(304)=604.551; p<.00; goodness-of-fit index (GFI)=.92; adjusted goodness-of-fit index (AGFI)=.90; root mean square error of approximation (RMSEA)=.061; Tucker-Lewis index (TLI or NNFI)=.95; normed fit index (NFI)=.94; and comparative fit index (CFI)=.96. The RMSEA (.061) indicates acceptable fit, which is below and close to the cut off value of .08 suggested by MacCallum et al. (1996). The values of TLI or NNFI and CFI are close to or above the cutoff value of .95 (Hu and Bentler, 1999). GFI is higher than .90 recommended by Hair et al. (2005). Although the chi-square test is significant, the normed chi-square value (χ²/df) is 1.989, which is far below the cut off value 3 recommended by Fornell and Larcker (1981). Overall, the measurement model is acceptable.

All standardized regression weights (loading estimates) are significant and higher than .5 and thus supporting convergent validity (Gerbing and Anderson, 1988). All average variance extracted (AVE) estimates are higher than or close to recommended level of .5 and construct reliabilities are higher than recommended level of .6 (Bagozzi and Yi, 1988; Fornell and Larcker, 1981). Thus, the loadings, AVE, and construct reliabilities together provide initial support for the convergent validity of the measurement model. Since all AVE estimates are larger than the corresponding squared interconstruct correlation estimates (SIC), the discriminant validity is demonstrated (Fornell and Larcker, 1981).
The fit indices for the hypothesized structural model are acceptable showing a good fit between the data and the model: \( \chi^2 \) (324) = 676.145; \( p < .00 \); GFI = .91; AGFI = .89; RMSEA = .064; TLI = .94; NFI = .91; CFI = .94; and normed chi-square = 2.087. The values of fit indices were close to or above recommended levels. Hypotheses 1a to 1d predicted that retailer’s ethics would be significant predictors of website credibility. Fulfillment (\( t = 2.364, p < .05 \)) and nondeception (\( t = 2.796, p < .01 \)) impacted website credibility, but security and privacy had little effect on website credibility, thus supporting Hypotheses 1a and 1b but rejecting Hypotheses 1c and 1d.

As hypothesized in Hypothesis 2, website credibility is positively associated to attitude toward website (\( t = 12.54, p < .01 \)). Providing supports for Hypothesis 3a-3c, attitude toward website demonstrated strong positive associations with purchase intent (\( t = 9.88, p < .01 \)), revisit (\( t = 12.016, p < .01 \)), and positive WOM (\( t = 11.99, p < .01 \)). Thus, Hypotheses 3a-3c were supported.

5 DISCUSSION AND IMPLICATIONS
This study investigated the ethical determinants of website credibility and its attitudinal and behavioral outcomes. Interestingly, fulfillment and non-deception are related positively to website credibility that ultimately influences consumers’ attitude and behavior toward a retailer’s website. It appears that consumer’s perception of online retailers’ deceptive practice and failure to fulfill their needs are major threats to the credibility of a retail site. To cope with this situation, online retailers should not engage in creating an impression or belief among consumers that is literally false or possibly misleading. They should not exaggerate the benefits and characteristics of their offerings with the intent to persuade the consumers to purchase the website’s offerings. To fulfill their needs, online marketers should ensure precise and prompt delivery of products and services. Concerns relating to late deliveries can be overcome by providing information on product availability, stockouts, order status or tracking information, and reasons for the delays. In addition, the inclusion of accurate product representation may be extremely important in determining how credible the website is perceived by consumers.

Contrary to the majority of previous studies (Metzger, 2006; Rifon et al., 2005; Rains and Karmikel, 2009), security and privacy concerns were not significant predictors of website credibility. This finding is consistent with a number of studies (e.g., Belanger at al., 2002; Wolfinbarger and Gilly, 2003; Yang and Jun, 2002) which reported little or no impact of privacy and security features on predicting website quality. It is unclear what underlie such little effect of privacy and security. One possible explanation of this finding could be the age of the sample. Prior research shows that consumers’ perceptions as regards to privacy concerns vary across age groups and younger population is less concerned about online privacy issues (Campbell, 1997; Pew Research Center, 2000). The concerns about privacy and security may be overshadowed by other emerging concerns such website attributes, non-fulfillment, deception, and customer service (Wolfinbarger and Gilly, 2003; George, 2004). Consumers may judge security and privacy based on elements such as the professional look and feel of the website, as well as functionality of a website, and company reputation (Wolfinbarger and Gilly, 2003). Thus, security and privacy features may be considered less important site attributes than other site attributes such as pleasure features, convenience, ease of use, and cosmetics (Belanger et al., 2002).

Another possible explanation is that consumers may not notice a website’s privacy and security statements and policies. Fogg (2003) argues that the website element will have no impact on the credibility assessment of the site if it is not noticed by the visitors. For example, if a user does not notice a website’s privacy policy, it will have no impact on how the user assesses the credibility of the site. From a practical perspective, privacy and security statements provided by online retailers are difficult to notice or comprehend because they are written in small fonts using technical language.

Findings also reveal that credibility of a retailer’s website is positively related to consumers’ attitude toward the website, which ultimately influences consumer’s purchase intent, revisit intent, and positive word-of-mouth. With the rapid growth of online retailers and competition and because of the ease with which customers can switch from one online store to another, it has become increasingly important for online retailers to maintain and improve consumers’ attitudes and behavioral intentions in regard to their websites. Thus, one way they can do this is by enhancing consumer’s perceived website credibility with the presentation of believable, trustworthy, accurate, complete, and unbiased information.

6 LIMITATION/FUTURE RESEARCH
There are some limitations to this study. Although the use of student sample appears to be acceptable in the online shopping content, student samples are generally criticized for not being sufficiently representative of the breadth of the population. Thus, future research should replicate these findings using different samples. Another interesting avenue for future research would be to explore the direct relationships between ethics associated to retailers’ websites and consumers’ attitudinal and behavior responses.
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Recent trends in corporate governance practices in the fashion industry in the United States

DK Malhotra, PhD
Philadelphia University
School of Business Administration
4201 Henry Avenue
Philadelphia, PA 19144
1-215-951-2813
malhotrad@philau.edu

Nioka Wyatt, MBA
School of Business Administration
4201 Henry Avenue
Philadelphia, PA 19144
1-215-951-5377
wyattn@philau.edu

Natalie W. Nixon, PhD
School of Business Administration
4201 Henry Avenue
Philadelphia, PA 19144
1-215-951-2787
nixonn@philau.edu

ABSTRACT

In the past ten years, a number of high profile corporate scandals have occurred revealing poor corporate governance standards, and other lapses in business ethics, including greed, lying, breaches of trust, conflicts of interest, a lack of transparency, insider dealings and fraud by directors and others (Thomas, 2005). Since the Enron and WorldCom debacle led to the Sarbanes-Oxley Act (SOX) of 2002, and the financial failure on Wall Street in 2008 initiated the passing of the Dodd-Frank bill in 2010, companies have taken measures to improve corporate governance by creating transparency, audit committees, and board committees. The fashion industry is not exempt from such complications and noteworthy news around Ralph Lauren’s executive compensation, Nike’s code of conduct violations, Joseph Abboud’s licensing nightmare and Yves Saint Laurent’s legal coup over Christian Loubiton point to the specificity of legal snags for fashion firms. Executives who serve on the Board of Directors have a fiduciary responsibility to its internal and external stakeholders that invest in the company. In this paper, we use the data between the years 2003 to 2008, to examine recent trends in various aspects of corporate governance in the fashion and apparel industry. Specifically, we include board issues, audit committees, poison pills, and executive compensation as tools to evaluate the quality of corporate governance among fashion firms.

Keywords
Corporate Governance, Trends, Fashion and Retail Firms, DODD-FRANK, SOX

1 INTRODUCTION

The concept of running a corporation is that a governor should benefit all shareholders and create value for them. Fashion firms must deal with a plethora of legal issues including intellectual property infringement, conduct violation and executive compensation. The unique characteristics of the fashion industry and its increasing complexity have meant that more directors serving on boards at fashion firms need to be knowledgeable about the law so that transparency, fairness of standards and awareness about intellectual property issues can be continuously maintained (Jimenez & Kolsun, 2010). Ideally, fashion firms should have directors serving on corporate conduct, compensation and audit committees in order to ensure transparency.

In fact, transparency is the greatest challenge in corporate governance of fashion firms and the one that is a theme in the issues we address in this paper. For example, the issue of executive compensation is different for a start-up company which is smaller in size and may have more limited resources, than a large, global fashion brand. Compensation is also treated differently for those fashion firms that are private versus those that are publicly held. Additionally, press reports have recently highlighted the total compensation of Ralph Lauren, the founder, chairman and chief executive officer of Polo Ralph Lauren Corp. In 2010, increases in his stock options were responsible for a 7% boost to his overall compensation to just over $29 million (Karr, 2011). While his base salary remained unchanged at $1.25 million, details of the compensation document highlight the fortuitousness of sound legal counsel for Ralph Lauren, given that his is an industry fraught with disparity in compensation between the executive ranks and the common worker. The point is that such a high compensation could be called into question, and thus transparency which only comes from sound legal guidance and oversight committees is essential (Heide, 2011; Traub, 2011).

There are three major characteristics unique to the fashion industry which makes the issues around corporate governance particularly interesting. These include its 1) global nature, 2) the legacy of a “mom-and-pop” family business culture in some firms, and 3) the challenges of scaling up (Heide, 2011; Traub, 2011). First, apparel fashion firms are part of a complex international value chain and supply chain, where public policies and laws spanning multiple countries must be adhered to in order for the execution of manufacturing, sourcing, branding and retail
initiatives to succeed. Second, many fashion firms—both large and established ones as well as small and emerging ones—started as family-run businesses, where documentation of procedures and allowances was not necessarily objective, formalized or consistently maintained. As a result, a lack of clarity exists in such cases, such that when an external legal advisor attempts to assist with a problem there is very little recourse. Additionally, the cost of setting up and managing all of the legal protocol is expensive for the smaller and less-financially endowed fashion firms. Third, there are issues around strategy and execution for fashion firms when they are ready to scale up. For example, one of the most popular ways that fashion firms expand internationally is through licensing. Licensing must be carefully managed in order to avoid dilution of brand value and to vet laws around ownership of licenses to avoid loss of brand control in the manufacturing country.

In this paper we have surveyed a number of fashion and apparel firms to identify the most common types of oversight committees and develop models of boundaries that fashion firms use to establish transparency in corporate governance.

2 LITERATURE REVIEW

Previous scandals in the fashion industry at Nike Inc., Gap Inc., Wal-Mart, and Levi’s have prompted the industry to adopt models of corporate practices to sustain the organizational structure of the company. Studies on corporate governance have focused on board of directors, executive compensation, audit-related issues, takeover defenses and corporate social responsibility. When the Sarbanes-Oxley Act (SOX) went into effect, it prompted corporations to standardize and update their procedures for documentation compliance. Although the SOX is a key focus for many organizations, private, public and nonprofit organizations are expanding their risk management efforts into areas such as holistic risk assessments, company-level governance programs and executive risk management training (Meiselman, 2007). While SOX was implemented because of Enron, WorldCom, Tyco and other financial scandals, the DODD-FRANK Act was enacted into legislation because of the financial meltdown in 2008. The fairly new Dodd-Frank Wall Street Reform and Consumer Protection Act (“Dodd-Frank Act”) was signed into law in July 2010 and is the latest doctrine supported by President Barack Obama. The purpose of the bill is to protect consumer’s rights, highlight rules for executive compensation, and whistle blowing. As an extension of SOX, DODD-FRANK will result in changes to the regulatory framework, operations and supervision of the financial services industry. A few of these changes include the new Financial Stability Oversight Council, the new Consumer Financial Protection Bureau, and a new mechanism for seizing and liquidating large financial companies on the verge of failure, to a host of other changes (Wilmarth, 2011).

Meiselman (2007) reported that one of the methods that senior management will implement is to identify formal training programs for internal audit committees. Meiselman (2007) also stated that the newly issued Committee of Sponsoring Organizations (COSO) Internal Control over Financial Reporting will conduct a comprehensive fraud risk assessment to identify the various ways that fraud and misconduct can occur. Initially, COSO was for small public companies; however, larger and non-profit organizations will adopt the principles of COSO by creating online self-study programs and integrated framework presentations at board meetings and formal classroom training.

When corporate fraud occurs, enforcement can come from multiple sources, including the Securities Exchange Commission (SEC), state and federal prosecutors, and class-action lawsuits by private plaintiffs. Several titles of SOX strengthen the SEC’s ability to obtain meaningful remedies, expand its authorities and add new criminal sanctions to the SEC’s enforcement arsenal including (Marden and Edwards, 2005):

- The Corporate Responsibility Act (Title MI)
- The Corporate and Criminal Fraud Accountability Act (Title VIII)
- The White-Collar Crime Penalty Enhancement Act of 2002 (Title IX)
- The Corporate Fraud Responsibility Act (Title III)

Nakano (2007) has posited trends in the ethical enigma of corporate governance. Arguments were actually put forward for the need to create an ethical organizational culture in America from the mid-1990s onwards. These arguments began when people started to realize that even though business ethics systems had been created at most major companies, these systems did not necessarily function sufficiently within those organizations.

Shortridge and Yu (2011) define control systems as a group of principles and processes that result in an environment which encourages executives, managers, and employees to focus on value creation for company owners and other stakeholders. The researchers find that high-quality corporate governance helps assure shareholders that executives make choices to maximize owners’ interests when creating management control systems. The audit committee is responsible for providing oversight of the financial reporting process and internal controls, and managing the relationship with the external auditor. In a recent study by Zheng and Cullinan (2010), they found that the size and independence of audit committees is associated with positive outcomes, such as financial reporting quality.

The Shortridge-Yu study reports that the three main themes necessary for developing good corporate governance and management control systems include: (1) the independence of the board, (2) the attentiveness of the board
and (3) the quality of the audit committee. Further, for management control systems to work efficiently, it’s necessary for the board of directors to be actively involved in establishing the tone and culture of the organization through strong corporate governance practices.

On the other hand, Zhao (2006) notes that anti-takeover provisions such as classified boards, poison pills1, and golden parachutes2 insulate managers from external market control while reducing shareholders’ chances of receiving valuable takeover offers and introducing more efficient management teams. An agency relationship exists between the two parties whenever one party (the principal) delegates decision making authority to another (the agent). Zhao also studied the agency theory which focuses on the effectiveness of the control mechanisms that align the interests of principals and agents.

One of the challenges of implementing corporate governance is moving from silo to holistic programs. Integrating sustainable governance structures begins with the support and leadership of upper management. The type of leadership should conform to what would make organizations more responsive to society’s requirements (Shahin and Zairi, 2007). According to Wilson (2000), new rules of corporate conduct should include legitimacy, governance, ethics, equity, environment, employment and public/private sector relationships.

Due to the number of allegations against fashion companies accused of engaging in child labor and sweatshops, Wilson’s rules could support not only corporate governance structures, but could also infuse a model for holistic corporate sustainability practices at fashion companies. Over the past few years, companies such as Nike have implemented activities of Corporate Social Responsibility (CSR) and Codes of Conduct that serve as guidelines for factories and employees to follow. Studies reveal that major retailers no longer own manufacturing facilities but contract with multiple suppliers, usually in less developed countries (LDCs), and often play them against each other to achieve the best price, highest quality, and quickest delivery (Lim and Phillips, 2007). As the supply chain is extended through multiple resources, selecting the appropriate leadership, authority structure, partnerships and codes of conduct are integral to corporate governance structures.

The first significant CSR critique of Nike’s suppliers appeared in a 1992 Harper’s Monthly article by Jeff Ballinger, the country Program Director for the Asian-American Free Labor Institute in Indonesia (Ballinger, 1992). Nike had to face labor activists accusing them of contributing to child labor. As a result, a series of code of conduct directives were developed to facilitate CSR and to highlight their fiduciary responsibility to stakeholders. Recognizing the need for public relations management, Nike distributed its initial Codes of Conduct Memorandum of Understanding in 1992 (Lim and Phillips, 2007).

Miles et al. (2006) argue that strategic conversations and collaboration with stakeholders are a fundamental mechanism for better shaping and integrating CSR in the companies’ strategic intent. The researchers discussed a three stage module of postures3 that could create consistency in outlining factors of change for managers and researchers in analyzing the current situation of firms and helping firms to further develop CSR. CSR is seen as a tool to protect reputational value. In the risk management posture, firms start to develop the first technologies to measure and control environmental and societal issues. While technology serves as a driver for CSR, audit programs, codes of conduct, measurement systems and CSR-specific policies are also key trends in corporate governance (Castello and Lozano, 2009).

Our research highlights recent trends in corporate governance practices in the fashion industry in the United States which includes a series of models and illustrations.

We extend previous studies on corporate governance by analyzing the recent trends in various aspects of governance in the fashion and retail industry using data between the years 2003 to 2008.

3 MODEL

Based on previous studies and Dodd-Frank, we can postulate that effective corporate governance is driven by the board of directors, audit committees, and takeover defenses.

Figure 1 illustrates the four boundaries enclosing corporate governance.

Previous studies on corporate governance consider the corporate board as the single most important variable that can distinguish good governance from bad governance. All other variables of corporate governance such as disclosure and transparency, financial reporting, takeover defenses, and executive compensation are to some extent dependent on the board of directors and the composition of the board.

To analyze the most important pillar of corporate governance, the board of directors, we have focused on board composition, board compensation, board governance,

1 A poison pill is when a targeted company in a hostile takeover attempts to make its stock look less attractive in order to discourage the takeover.

2 A clause in a contract stating that if the company is acquired, the employee will receive large benefits such as: stock options, bonus or severance pay

3 The postures studied in Castello and Lozano’s research were: risk management, integrated posture and citizenship posture.
and board structure and size. We have also examined how many boards the CEO and other board members serve, separation of CEO and chairman, and board attendance. Boards of Directors are typically comprised of directors which are internal and external to the company. Internal directors are officers and employees of the corporation whereas the external directors are often officers from other corporations or professionals such as attorneys and bankers. External directors are often chosen for their particular business expertise. Boards have used committees to handle specific duties and committees have assumed increasing importance especially the audit, compensation and nominating/governance committees. Figure 2 presents the variables that play a role in determining the board quality in influencing corporate governance.

Failure of corporate governance is often blamed on lack of transparency and failure to disclose information. Therefore, SOX and Dodd Frank require that members of the audit committee must be independent members of the board and at least one of the audit committee members must be a financial expert. It is critical to analyze how the audit committee is chosen. Figure 3 describes the factors that determine the quality of the audit committee.

As reported in previous studies, shareholders have been critical of takeover defenses. Hostile takeovers are often initiated to eradicate poorly performing organizations. Ironically, if one of the first goals of a hostile takeover bid is to purge the firm of ineffective executives, it is most often the case that some of those very same executives are members of the board vested with powers to actually derail the takeover. Are they likely to put the interests of shareholders ahead of their own? Roosenboom (2005) finds that supermajority management stock ownership and takeover defenses decrease the IPO firm value. Figure 4 shows the variables that influence takeover defense.

4 DATA & EMPIRICAL ANALYSIS
In this paper, we evaluate trends in corporate governance on the basis of the data on the four walls (or boundaries) of governance collected by Institutional Shareholder Services (ISS). ISS collects data from SEC EDGAR filings (i.e. Proxy Statement, 10K, 8K, Guideline Press Releases and Company web sites). We have compiled data on the four broad drivers of corporate governance—board of directors, audit committee, takeover defenses, and executive and director compensation between December 31, 2003 to December 31, 2008.

Corporate governance begins with the establishment of a governance committee. The governance committee ensures that the company has appropriate checks and balances to avoid many of the pitfalls of doing business today. Does the company have a governance committee? If yes, who handles it? Good governance requires that the functions of a governance committee should be handled by the nominating committee or the governance committee.

There has been an explosion in the adoption of governance committees. In 2003, 58.49% of the firms did not have a governance committee. In 2008, there was a marked difference in the corporate culture on this issue with 70.33% of the firms reporting that they did have a governance committee and that it had met in the last year.

The corporate board is the first and most important pillar of effective governance. Independence of the board members is the most critical aspect of effective corporate governance. Directors with ties to management may be less willing and less able to effectively evaluate and scrutinize company strategy and performance. Furthermore, boards, without adequate independence from management, may have inherent conflicts of interest.

The first step toward board independence is the nomination of directors on the board. Director independence and improved corporate governance can be ensured if directors are nominated by a committee that consists of independent external directors. The percentage of firms that use nominating committees consisting solely of independent external directors had gone up by slightly less than three folds from about 26% in 2003 to 72% in 2008. Also, in 2003, 43% of the firms did not have a nominating committee, but in 2008 this percentage declined to 15.31%. Similarly, the percentage of firms with insiders on the nominating committee has gone down significantly in 2008.

An empirical examination of board composition shows that the quality of governance is embedded in representation of external directors on the board. We analyze the representation of outside directors on the board based on the following criteria:

- A majority of independent external directors (50% < \( IO \leq 66.7\% \))
- A supermajority of independent external directors (66.7% < \( IO \leq 75\% \))
- A supermajority of independent external directors (75% < \( IO \leq 90\% \))
- A supermajority of independent external directors (\( IO > 90\% \))

Our analysis shows that the majority of firms in the fashion and retail industry ranging from 69% in 2003 to 96% in 2008 have more than 50% of their directors serving as external directors. The percentage of outside directors increased significantly from 69.14% in 2003 to 79.99% in 2004. However, there is a significant drop in the percentage of firms that have more than 50% outside directors in 2005 and the percentage continues to decline in 2006, 2007. In 2008, there is a huge increase in the percentage of retail firms that have more than 50% of their directors as outside directors. There is a significant increase in the supermajority
of independent outsiders (more than 90%) that served on corporate boards from 2.64% in 2003 to 7.17% in 2008.

Executive compensation is another important issue relating to governance in fashion firms. Therefore, the board committee that determines the executive compensation should consist of independent directors. There has been a significant improvement in this area. More than 86% of the firms have a committee that consists of independent external directors to decide on the executive compensation.

The board structure committee reviews how the board is elected. Are they elected annually or in a classified manner? A firm that has a classified board is one in which directors are divided into 3 classes, with each class serving a three year term. Each class is on a different re-election cycle. Annually-elected boards are comprised entirely of members who serve one year terms and each member stands for election each year. It is more difficult to change the control of a company with a classified board because only a minority of directors is elected each year. Usually, annual election boards receive better governance grades in comparison to the classified method of electing board members.

The annual election of board members, an indicator of good governance, has been gaining popularity since 2003. In the year 2003, 50.95% of the fashion companies surveyed had board members annually elected and 49.05% members were elected through a classified process. This number increased slightly in 2008 with 55.02% of the companies following annual election of board members. This is consistent with the reporting of The Wall Street Journal that shareholders are pressuring boards of directors to declassify board elections and move towards annually elected boards. 5

The board size represents the number of directors serving on the board. Boards that become too large may find it difficult to effectively conduct the business of the board. On the other hand, if the board is too small, they may lack the necessary skills to fulfill all the responsibilities. More than 70 percent of the firms in our sample have maintained a board size in the range of 6 to 12 board members. The size of boards is getting slightly bigger with 31.30% of the firms reporting a board size between 9 and 12 in 2008 in contrast to 28.27% of the firms in 2003. There is also a small increase in the percentage of firms with a board size between 13 and 15. The percentage of firms with a board size less than 8 (considered too small) and a board size of more than 15 (considered too large) is on the decline.

In an effective governance environment, shareholders should have the right to vote to make changes (expand or contract the size of the board) in the board. More than 95 percent of firms do not require shareholder approval to make changes in the board size. The percentage of firms that required shareholder approvals to make changes in board size has gone down significantly from 3.03 percent in 2005 to 2.87 percent in 2008.

A review of director compensation shows that the percentage of firms paying directors in cash has gone up and payment of directors’ fees in stock has gone down from 2003 to 2008.

Similarly, fashion firms that conduct an annual review of directors performance has also gone up significantly from 2005 and at the same time, percentage of firms that do not engage in any disclosure as to whether the company conducts performance reviews has doubled since 2005.

Another important aspect of corporate governance relates to the role of internal and external auditors. Audit variables include evaluation along the following lines:

- Audit Committee
- Audit Fees
- Auditor Rotation
- Auditor Ratification

Independence is fundamental to the reliability of the auditors’ reports. These reports will not be credible, and investors and creditors will have little confidence in them, if auditors are not independent in both fact and appearance. To be credible, the auditor’s opinion must be based on an objective and disinterested assessment of whether the financial statements are presented fairly and in conformity with generally accepted accounting principles.

About 94% of the retail and fashion firms in 2008 had an audit nominating committee represented solely by independent outsiders. This is a significant improvement since 2003 when only 64.15% of the firms had committee comprised solely of independent outsiders. Therefore, companies are realizing the significance of independent audit committees in corporate governance.

In order to maintain the independence of the auditors, consulting fees should be less than the audit fees. Are shareholders permitted to ratify the selection of auditors? The entire audit committee should consist of financial experts who understand the financial issues. In 2008, more than 99% of the firms are maintaining independence of the auditors by paying less than 50% of the total fees for non-audit related issues. Also, more than 80% of the firms have auditors that have been ratified at the most recent annual meeting in comparison to 66.23% in 2005.

According to Black’s Law Dictionary, a corporate charter is the document issued by the state which grants the corporation legal existence and the right to conduct business. Corporate bylaws are a kind of operating manual for the corporation and vary from business to business. Bylaws are

the specific rules the board of directors adopt when the corporation is first formed and cover provisions regarding the time and place of the annual shareholders’ meeting as well as the duties of the board of directors and its committees. Bylaws are binding on the directors, officers and shareholders and do not have to be filed with any governmental office. (Cheeseman) One method to evaluate an effective governance record is to examine the adoption of poison pills and whether bylaws give power to management to amend the charter without shareholder approval. In 2005, 74.02% of the firms did not have a poison pill in place and this percentage has gone up to 82.77% in 2008. Therefore, shareholder activism is forcing management to get rid of poison pills. Investors and shareholders view tiered boards and poison pills as formidable defenses against corporate takeover maneuvers. Additional roadblocks to hostile takeovers include the prevalent practice among U.S. firms to stagger the elections of board members. Since shareholders are forcing management to move away from classified boards and adopt more annually-elected boards, it is now easier for disgruntled shareholders to get rid of takeover defenses and wrest control of firms. However, in those cases, where poison has been adopted, the percentage of firms in which poison pill was approved by shareholders is still low at 0.47%.

Companies usually protect against hostile takeovers by issuing dual class shares that have super voting power. These shares are tightly held by a controlling family or a group of investors. The risk is that these shares can be used to prevent hostile takeovers by an outsider or even by other disgruntled shareholders of the firm and may weaken governance in the firm. More than 90 percent of the retail firms do not have dual class capital structure in place and there has been a marginal increase in the percentage of firms that do not have a dual class capital structure, a sign of small improvement in corporate governance. Another tool that is used by the board to prevent hostile takeover is by issuing blank check preferred stocks. In a blank check preferred stock, the board has the authority to determine voting, dividend, conversion, and other rights. It can also be used to meet special financial needs of a firm. In 2008, about 90 percent of the firms show blank check provisions in place. Therefore, the board has the authority to issue this special class of shares without any approval from shareholders. In fact, this percentage has marginally gone up since 2005.

5. SUMMARY AND CONCLUSIONS

Fashion and retail firms continue to target board-related issues so as to advance their governance quotient. A significant majority of firms (96%) in our sample have outside directors (more than 50%) on their board and this is a considerable improvement over the previous year percentage of around 71%. With regard to the election of the board, there is only a slight change towards annual board elections instead of classified board elections. Similarly, board compensation in the form of cash payment has gone up slightly. Furthermore, with regard to takeover defenses also, the results are mixed for the fashion industry firms. While the percentage of firms that do not have a poison pill has gone up, blank check preferred stock authorization percentage is still very high and is slightly gone up. When fashion and retail firms integrate corporate governance structures, this process will increase transparency and improve the quality of communication throughout the company. In turn, shareholders and others that have a fiduciary role in the company can experience rewarding results.

5 ACKNOWLEDGEMENTS

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6 REFERENCES

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6 The Wall Street Journal, June 2005
Federal Reserve’s Plan to Transfer Wealth
Subhendu Das, CCSI, West Hills, California, USA

ABSTRACT

The paper shows, with publicly available numeric data and their graphs, the high correlation of the federal funds rate (FFR) with recessions, GDP variations, and unemployment rate. The evidence from these graphs and the analysis of existing literature show how by arbitrarily changing the FFR, the Federal Reserve can control the entire economy. We explain, using the law of conservation, how the Federal Reserve can transfer wealth from the bottom fifth to the upper economic classes and expand the poverty and misery in the society. This research demonstrates that the poverty is the result of manmade design of the economy and is not a natural phenomenon. Finally we explain the design and implementation of an alternative to the Federal Reserve Bank, called the moneyless economy, which eliminates permanently the deficit, debt, taxation, unemployment, and poverty from the world.

Keywords
GDP, Macroeconomic Time Series, Wealth, Employment data, Funds

1 INTRODUCTION

Assume that the total material wealth of a nation is equivalent to a pot of gold. That is, this gold represents all the automobiles, airplanes, missiles, roads, bridges etc., or in other words this is the GDP, the gross domestic product. Similarly assume that the total money available is a bag of dollar bills. This is the equivalent of the largest monetary aggregate (M3) or the total money in the economy. This bag of money has an one to one relationship with this pot of gold. This bag of money can buy that pot of gold.

By the law of conservation (LOC) this pot of gold cannot grow. This law says that the mass and energy cannot be created or destroyed; it can only be transformed from one form to another form. This bag of money cannot grow either, because this is equivalent to that pot of gold and is attached to it by the LOC.

We all know that the Fed can print another bag of money, out of thin air. It is a private bank and only it can print money without any restrictions, transparency, and accountability to anyone. Money is free for the Fed and it can give it to anyone it chooses, as we point out later.

This extra bag doubles the price of the pot of gold causing inflation. If this money is allocated only to the top fifth of the population then their share of the pot of gold will increase, changing the wealth distribution. According to the LOC, since the gold cannot increase, the share of the bottom fifth will then naturally decrease causing transfer of wealth. This transfer of wealth happens not only because the money share decreases for the bottom fifth, the price of gold also increases, and thus reducing their purchasing power.

According to the LOC there cannot exist a win-win situation. When someone wins, someone else must lose. In every win-win situation, a detailed analysis will always show that there is a third party who will be the loser. Thus the LOC says that the transfer of wealth must happen when someone becomes richer.

Printing money is not the only way to transfer wealth, the profiting and the interest charging, are also ways of transferring wealth. We explain this phenomenon in details in this paper. The capitalism is precisely designed to make that transfer happen. Wealth transfer happens only when you make money without contributing to the pot of gold or to the GDP. Thus stock market gain is a way to transfer wealth. In fact the entire financial system is a means to transfer wealth. That is because the financial system can redistribute the quantity money.

At the heart of capitalism is the central bank, which is The Federal Reserve Bank in USA, and commonly known as The Fed. The main purpose of the capitalism, is to transfer wealth, as clearly stated by the US President Abraham Lincoln (1861-1865) - “Corporations have been enthroned, an era of corruption will follow, and the money power of the country will endeavor to prolong its reign by working upon the prejudices of the people, until the wealth is aggregated in a few hands, and the republic is destroyed (Grint, 2005).” Milton Friedman, the Nobel laureate in economics, said that the US recession of 1930s was created by the central bank (Skarica, 2011). We show that the recession is the most powerful mechanism for the bulk transfer of wealth. Our recent experience of economic crash in 2008, and the analysis of our public data shows that the above conclusions by Lincoln and by Milton are very legitimate and real even in our present times.

The rest of the paper is organized in the following way. In Section 2 we describe how we modified the raw data to make it suitable for comparison. In Section 3 we describe, using a block diagram, how the economy can be controlled by the Fed. Then in Sections 4 through 6 we show how the FFR plays the key role in controlling the GDP, unemployment, and the income of the bottom fifth of the population. In Section 7 we discuss how the lack of transparency of the Fed prevents evaluation of inflation. Finally we describe the moneyless economy to remove poverty from the world.
2 NOTES ON DATA PROCESSING

We have normalized all the data elements between -1 and +1 by dividing the raw data by the maximum of the absolute value of the raw data. We then replaced this raw data by this normalized data. Mathematically speaking this means:

\[ mx = \max_i |d_i|, \quad d_i = \frac{d_i}{mx}, \quad i = 1..N, \quad N = \text{length of data} \]

This approach helps to compare the characteristics of the graph rather than the magnitude of the data. This approach also allowed us to plot multiple graphs on same y-scale. We believe this normalization helped us to identify the correlation by visual inspection of the graphs.

We have also used the correlation (Taghizadeh, 2000) as a measure to determine the relationship between two time functions. The following correlation formula was used:

\[ \text{cor} = \frac{\sum_{i=1}^{N} f_i g_i}{\left(\sum_{i=1}^{N} f_i^2\right)^{1/2} \left(\sum_{i=1}^{N} g_i^2\right)^{1/2}} \]

In the formula \( \{f_i\} \) and \( \{g_i\} \) are two time series data arrays. The above formula shows that the absolute value of the correlation number, cor, cannot be greater than 1. It is also clear that if \( f \) and \( g \) are same then the correlation number will be 1. Thus closer the value to one better is the similarity between the two time functions.

In addition, we have also used simple linear operations on the data. These are like introducing delay or lag, scaling, reflection, shifting left or right etc. This helps to mathematically show the correlation of the variables. We have avoided more than one delay operation over the entire time period to keep it simple at the cost of achieving lower correlation values.

It is always possible to manipulate data in many different ways. For example, we could consider the fund rate data as an input function to a set of simultaneous difference equations, similar to vector auto regression (VAR), with multiple state variables representing various economic parameters. Then we could combine these state variables using another set of simultaneous algebraic equations to produce unemployment data for example. You can see such an approach in the paper (Bernanke, 1992). Kalman Filtering is another such powerful approach. In this paper, however, we wanted to directly show the raw data and their effects on the human toll using only graphical means.

3 FEDERAL RESERVE BANK

The Federal Reserve Bank (The Fed or the central bank of USA) is a very secretive organization. This secrecy is in its DNA right from the day it was formed in 1913. It is a private bank, not controlled by US government, as former Fed chairman says (Greenspan, 2009). The Fed also does not want to be transparent (King, 2010), a long held complaints from many economists.

All the banks are required by law to maintain a reserve deposit amount at the central bank. As of 2004, the total required reserve amount at Fed was down to $11.0 billion (TheFed, 2005, p. 32) from $46.1 billion in 2000. The Fed does not pay any interest for this deposit amount (Hubbard, 2002, p. 436). At the end of each day, the banks having low reserves borrow money from the banks with higher reserves. The banks charge interest for this exchange. This interest rate is known as the federal funds rate (FFR).

The FFR is an independent input (exogenous) variable to the economic system. The target value of this FFR is decided by the Federal Open Market Committee (FOMC) of the Fed. The minutes of FOMC (FOMC, 2010) confirms that. In the paper (Bernanke, 1992) the authors claim “In all cases we obtain plausible results which suggest that the Fed was purposefully manipulating the funds rate during the pre-1979 period – an observation that is consistent with what the Fed claims to have been doing.” Thus we can see that the capitalism, at its core, was never a free market economy, the FFR is not a market variable; it is set by the Fed.

The Fed controls how much money each bank can give as loans to their customers by controlling the reserve amount at the Fed. This is done by a parameter called reserve ratio, a single number, and decided arbitrarily by the Fed and it is not restricted by market condition. This reserve ratio is normally not changed. The total money that a bank can lend is controlled by a factor called money multiplier, which essentially is the reciprocal of the reserve ratio. This money multiplier is a parameter of the control system that can be used to fine tune the shocks in the economy. The Fed also sets the primary interest rate for the banks by FFR, which is controlled on a daily basis.

![Fig. 1- FFR control policy](image_url)
The paper (Modeste, 2002) explains how FFR controls the entire economy by giving the straightforward Keynesian logic – “an increase in the federal funds rate is expected to lead an increase in short-term interest rates as the cost of funds to lenders increases. With businesses and consumers responding to the higher interest rate by reducing their expenditures, economic activity is expected to fall, thereby, leading to an increase in the unemployment rate.”

The financial system has been designed by the Fed, like a simple single input single output (SISO) control system as shown in Figure 1. So, it can be easily controlled by only one input variable, the FFR. Its output is the unemployment rate from the economy. This simplicity at the top of the pyramid generates enormous power for the Fed.

The inner loop tracks the target FFR by open market operation for trading of government securities, which controls the reserve. This operation, guided by the FOMC, generates the actual FFR. When the actual FFR becomes equal to or very close to the target FFR the open market operation can stop. This inner loop defines the FFR and therefore the Reserve amount. The Reserve in turn will define the money supply to the economy. The money supply controls the unemployment rate. The unemployment rate produced by the economy is compared with the target unemployment in the outer loop. The error in this outer loop is used to set the target FFR.

The government mandate for the Fed has few major flaws. The Fed is not required to maintain full employment (Bernanke, 2010). The law now says that the Fed will maintain maximum possible employment. This maximum number has not been defined either. The average salary of the bottom fifth has also not been defined. The Fed is also not mandated by the government to follow the free market economy.

Hidden among all these jargons has the most important power of the Fed - the ability to print money. It is the only bank that can print money, as much as it wants, whenever it wants, give it to anybody it wants, and is not accountable to anyone, not even the government.

4 FUNDS RATE, GDP, AND RECESSIONS

The Figure 2 shows the GDP graph from 1929 to 2009, and the data was taken from (NEA, 2010). The GDP graph is superimposed on the recession bands. The width of the bands defines the length of the recession period. This data was collected from (NBER, 2010). We can see that the growth rate goes negative before every recession period. The graph matches with many books and publications, for example (Desjardins, 2008).

The Federal Funds Rate data is taken from the Fed database (Fed, 2010). In Figure 3 we have plotted the normalized data of FFR and GDP variations. The GDP data was shifted left by two years to make the peaks match. We have also scaled the data using the following relation 0.8*(1-gdp) to graphically highlight the correlation. A delay or lag of 2 years in the GDP data produced a correlation of 0.8306.

Since we know from Section 3 that the funds rate is the driver, we can see from Figure 3 how it causes the GDP variations. Every time the funds rate goes high, the GDP goes low; this in turn causes the recession to begin as we can see from Figure 2.

The Figure 4 is another way to show the relationship of the funds rate and the recessions. Here we superimpose the variations in the FFR over the recession bands. The graphs show that every recession is created at the peak of the FFR values. The Fed keeps on increasing the funds rate until the recession begins as shown by the control system diagram in Figure 1. In (Dimitrov, 2006) the authors presented a graph similar to Figure 4 and confirm that the funds rate shows onset of two recessions during 1979-82. In (Belonga, n.d) the authors comment that the conventional wisdom is that funds rate goes up before recession and goes down after, with data between 1985 and 2009. Bernanke (1992) was the first to show graphs like Figure 4.
The Figure 4 shows the underlying control method of FFR by the Fed. Using FFR the Fed can create the recessions whenever they want and they can also control the duration of the recessions. The graph also indicates that a sustained increase of funds rate will eventually cause the recession. During 80-82 it was necessary to increase the funds rate to a high value to cause the recession. On the other hand a small increase in FFR caused a long recession during 08-09 period. There are other non-financial dynamic characteristics in the economy that determine when the recession will start with respect to the FFR and how long the recession will continue. The built in inertia of the economy changes over time as the technology changes.

5 FUNDS RATE AND UNEMPLOYMENT

In this section we show with the data and their graphs that the central bank is systematically controlling the unemployment rate. The unemployment data is taken from Bureau of labor statistics of the US department of labor (DOL, 2010). The details of this data are given in the document (DOL, 2009).

We found that a left shift of three years for the unemployment data is ideal for these graphs, which gives a correlation coefficient of 0.92701. It is seen from the graphs, that a second and different delay after 1988 will give even better synchronization and hence higher correlation. The structure of the two graphs in Figure 5 is sufficient however, to show how the funds rate is affecting the unemployment and is serving the control mechanism of the central bank as shown in Figure 1. Again, it is quite surprising that this relationship, in Figure 5, was never explicitly pointed out, as far as we know, by any publications.

The Fed can destroy an economy very quickly and create large unemployment and transfer huge amount of wealth. But it cannot reverse the process to build the economy again within that same period. That is because the Fed is not involved in GDP creation. It can only supply the money and money alone cannot make the product. Lot of engineering, organizational effort, confidence, and moral are required for building the economy back. Thus the recession process and the subsequent destruction of economy can cause severe suffering for the people. It is very much like destroying a city by earthquake or a bomb, in a very short time like in minutes, but it takes years to rebuild the city.

It is ironic that the recession is not measured using the unemployment data. Instead it uses GDP. The government does not include the Wall Street gains in the GDP computation. The sales of stocks and bonds at the Wall Street are not counted in the GDP (Case, 1999, p. 135). Thus the Wall Street does not reflect unemployment or the GDP. Yet our government seems to feel very happy when the Wall Street is happy, ignoring the concern of millions of unemployed citizens.

Probably (Bernanke, 1992) was the first to suggest that the FFR as an exogenous variable. The paper (Balke, 1994) says that, using data before 1979, and using vector auto regression (VAR) method, it has been shown that the funds rate has “important predictive content for unemployment”. The paper (Thorbecke, 2000 ) explains that the Fed can control unemployment by manipulating federal funds rate. As the funds rate increases other interest rates also increase and thus the nations’ spending decrease. As spending declines employment declines as well. Thus when the Fed seeks to increase unemployment it increases the target funds rate. However, Thorbecke does not provide any numeric validation. The paper (Modeste, 2002) uses mathematical models to show that “there is a long run relationship between the federal funds rate and the unemployment rate”. Our results show, directly from the data, a very high correlation (0.92701) with consistency over the entire data length. The similarity in their co-movement is quite visible in the graphs of Figure 5.

6 TRANSFER OF WEALTH

We have taken the income data from US Census Bureau (USCB, 2010). The Figure 6 shows the income of the bottom fifth of the population. The graph clearly shows that their income is consistently going downwards since 1976. The graph occasionally went up for short period of time, like in 1967, ’73, ’94 etc. But it has an overall downward trend and every recession has a visible downward impact on the income. The next graph, Figure 7, shows the income of the top fifth of the population. It is clear that despite the recessions their income is growing persistently over all the years. Thus there is a truth in the statement that the rich is getting richer and the poor is getting poorer.

The above graphs confirm that the economic objective of the central bank is to transfer wealth from the poor to the rich.
This is achieved by doing all of the following things: (a) profiting, (b) interest charging, (c) printing money, and (d) creating unemployment. All of them essentially increase the bag of dollar bills without increasing the pot of gold. The LOC then helps to transfer the wealth.

To clarify, let us examine how profiting transfers wealth. Consider a company that manufactures writing pens at a total cost of $5 per pen. Now assume that the company sells it at $15 per pen making a profit of $10 per pen. Thus the cost of the pen for the CEO of the company is $5 but for you and me it is $15. Therefore every pen is taking away an extra $10 from all of us. This process of profiting helps to take money away from the people and to accumulate to the hands of a very small group of people creating inflation and transfer of wealth. The interest charging process is essentially the same activity also.

Inflation happens whenever money is accumulated in the hands of a smaller group. That is because they can pay more for the goods raising its price. Since the bag of dollar bills is tied one to one with the pot of gold by the LOC, money accumulation means gold accumulation i.e. transfer of wealth.

Because of unemployment, during a recession, a poor woman can become homeless very soon. And another rich person will become the new owner of that home thus transferring the wealth. The wealth cannot be destroyed according to the LOC, it can only be transferred. Large number of banks and businesses were forced to fail by the policies of the central banks, during the two great recessions of 1930s and 2008. Millions of people were made unemployed and homeless. And exactly the same amount (Bates, 2003) of wealth was transferred to the rest of the population by LOC. Thus recession is the best way to bulk transfer of wealth over a short period. Profiting and interest charging transfer wealth slowly and over longer time frame.

The recession is another way to keep the salary of bottom fifth at low rate. More you beat them with unemployment more vulnerable they will become and will be forced to work with lower salary. Thus wealth can be created with lower cost thus increasing profit. Note that the people at the bottom fifth really produce the wealth. In this sense the bottom fifth should be paid the highest salary in the hierarchy of the economic food chain.

The recessions are not natural laws of capitalism. Dr. Larry Bates, a banker and economists says (Bates, 2003) these recessions are precisely controlled, monitored, and can be predicted. We have explained that theory by Figure 1. The company (ECRI, 2004) has mastered the prediction method of business cycles. Many world governments consult ECRI to create their indices for predications of their recessions. ECRI can do so with an accuracy of two weeks.

Printing money is a very secret way to transfer wealth. US President (1801-1809) Thomas Jefferson wrote (Ritholtz, 2009, p. 15): ".. if the American people allow private banks to control the issuance of their currency, first by inflation and then by deflation, the banks and corporations that will grow up around them will deprive the people of all their property until their children will wake up homeless on the continent their fathers conquered." We can see form our graphs that this is happening exactly, recession after recession, in the United States, even after so many years.

We should understand that, inflation by printing money, as it is, cannot be bad. It becomes bad only when the excess money is allocated to a smaller group instead of the entire population thus forcing transfer of wealth to happen. When the money goes to the entire population, inflation happens but the purchasing power does not reduce, because it does not violate the LOC.

7 INFLATION AND TRANSPARENCY

It is said that the Fed has the dual policy to control both inflation and unemployment in an optimal way that is good for the economy. In reality that is not the case, as we have shown with the data. Its only objective is to transfer wealth to a very small number of people. In the process it makes people unemployed, creates inflation, and makes businesses including banks to fail.

Inflation is a process of increasing money supply (Hubbard, 2002, p. 744), violating the LOC. This process helps to transfer wealth, by increasing the share of the pot of gold. Keynes (Keynes, 1920, p. 235-236), a father of economic theories, says – “By a continuing process of inflation, governments can confiscate, secretly and unobserved, an important part of the wealth of their citizens. By this method they not only confiscate, but they confiscate arbitrarily; and while the process impoverishes many, it actually enriches some. ... The process engages all the hidden forces of economic law on the side of destruction and it does it in a manner which not one man in a million is able to diagnose”. We should recognize that profiting and interests charging are also inflation in disguise.

How much money the Fed is printing is never known and will never be known. It is the only body that can print money and allocate to anyone it wishes. The Bloomberg news claims (Pittman, 2009) in a law suit against the Fed, that the Fed spent $12.8 trillion as the bailout money. The GDP during 2008 was $14.2 trillion. Thus we have a very high
hidden inflation. If you do not know the amount of money present in the economy then you cannot compute the real inflation. All the inflation data presented by the government are therefore fictitious. All our theories on economics, like Phillips curve, supply-demand, etc., will be wrong too.

In the absence of transparency, as seen by the Fed’s refusal to provide information to Bloomberg, no free market economy can exist. Roger (Garrison, 2009) writes – “Of all the losses suffered during the current recession [of 2008], one of the most notable (and well deserved) is the loss in reputation suffered by today’s macroeconomics textbooks”. This is indeed true as we have also pointed out earlier that the Fed controls the FFR completely independently, destroying the concept of free market theory. If the Fed violates it then why do you think other banks and the CEOs will not do the same?

In the following section we will see if this problem of transferring wealth by capitalism can be solved.

8 MONEYLESS ECONOMY

There is a group of researchers on moneyless economy, like in (Nicolas, 2007), which proposes economic policies without consideration of monetary aggregates. But our subject in this section is different. In the paper Ross (Starr, ND) discusses a moneyless economy, without any price attached to any product or labor, and shows how an existing style market can be implemented. In this section we present a moneyless economy (MLE), similar to Ross, but with a different philosophy.

It is well known that the money is free for the Fed. It is a private bank and only it can print money without any restrictions, at anytime, and by any amount. Since the money is free for the Fed, it should be free for everybody. We should not have to pay it back; there should not therefore be any debt or deficit. Thus the Fed has artificially created the taxation, periodic payment, interest rate etc. At the core of capitalism then we really have a free or MLE now.

Let us examine the status of money today. We are all dealing with electronic money these days. Our employment checks are deposited electronically by our employers in our banks. We buy things using our credit cards. We pay the bills using our computers. Thus the money is just a number in some database on some computers. That number goes up and down and controls our life styles. Now we ask do we need that number to control us.

Instead of trusting that number on a computer why not we all trust ourselves and work for free? We go to our work places and work just like we are doing it now. The only difference is that we do not get paid. The computer number changes to 40 hours. Government tracks this number. We all become dedicated servant for the society, for the people, for the government, and finally for the god for 40 hours per week every week. Note that this means only meaningful work for the society will be required. In return we get everything we want for free.

We go to a store and buy everything we want, but there is no need to pay, because there is no money. If we want to live in a big house, we hire a contractor; he builds it free for us. If we want to travel; we book the flight, and travel free, stay in a hotel free. Everything will be free because everybody is working free. You can enjoy any kind of life style you want. MLE is thus not socialism. People will still have to work otherwise there will be no food or shelter.

Buddha and Gandhi have established a method of austerity and the self control of mind, body, and soul to reduce the need for money. This is a solution at the individual level. Milton Friedman has proposed the elimination of the central bank. US president Jefferson proposed printing money by the government. Both Friedman and Jefferson essentially said the same thing; and their approach gives a global solution to our poverty. But our approach of MLE is more profound and provides cleaner solution to all our problems.

This MLE will eliminate environmental pollution and the wars. It will eventually kill the pollution of our souls by removing greed, corruption, violence, cheating, and lying. MLE will eliminate poverty from the world permanently. The MLE will allow us to create products that we really need and nothing, like cigarettes, can be imposed on us by the investors. There will be no investment banking system. In fact the whole financial system including the central banks will not be required any more. We will have more people working for real benefits of the society.

It may appear that the MLE model ignores the value of education. Many people who introduced technology, like Thomas Edison, Benjamin Franklin, Wright Brothers, Bill Gates, and Steve Jobs etc. were not formally educated. Thus education is not necessary to create a new technology.

In a MLE only those people who love education and knowledge will pursue such activities. The concept of hard and easy work will be replaced by love for work. There will be always people who will aspire for knowledge and will go for anything it takes to achieve that wisdom, the history of mankind demonstrates that.

In MLE, since you get free whatever you want, there is no need for a merit evaluation system. You cannot and should not compare two different persons or two different jobs. It will be like comparing apples and oranges.

9 CONCLUSIONS

In this paper we have shown, (using the law of conservation, public data, and the publications of previous researchers), how the Fed manipulates the economy using the single variable, the federal funds rate, to create recessions and unemployment, thereby transferring wealth and accumulating it in few hands. This concept highlights that
the poverty is created by the central banks and is not a natural phenomenon. We have proposed to implement the moneyless economy to eliminate poverty. However we have not been able to show how to counter the force of money power to make that transition happen. That is, we haven’t answered the question of the Nobel Laureate Milton Friedman in economics asked - “One unsolved economic problem of the day is how to get rid of the Federal Reserve”.

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ABSTRACT
The accounting curriculum (in fact business colleges in general) often are accused of operating in silos. As a result, it is claimed that students fail to see the connections among the assignments in their separate course work and the necessity to have an integrated understanding to function effectively in the real-world. One response to the above criticism is to use deferred income taxes as one means to help students bridge the gap between their Intermediate Accounting classes and their Corporate Income Tax course. As a bonus, students also should: 1.) better understand the difficult topic of deferred income taxes, 2.) better understand Schedule M-1 on the corporate tax return, and 3.) gain experience in documentation via the preparation of accounting workpapers.

Keywords
Deferred Income Tax, Intermediate Accounting, Corporate Income Tax Course

1 INTRODUCTION
To help overcome the tendency of students to view each course in isolation, the following illustration shows how the topic of deferred income taxes can help students integrate Intermediate Accounting and Corporate Income Tax courses. Students also should better understand the difficult topic of deferred income taxes, better understand Schedule M-1 on the corporate tax return, and gain experience in documentation via the preparation of accounting workpapers.

2 DATA FOR THE ILLUSTRATION
The information is limited to three temporary differences and one permanent difference. The list of differences easily can be expanded by the instructor to include as many as deemed appropriate.

3. ACCOUNTING WORKPAPERS
Students frequently present their answers to accounting and tax assignments in the form of a typed word document, a spreadsheet, or hand-written on a piece of notebook paper. Requiring students to present their answers using an accounting workpaper format similar to that shown in Table 2 should be more acceptable in the workplace and will help the students understand some of the complexities of accounting for income taxes.

The Deferred Income Tax Workpaper (Table 1) uses the "balance sheet approach" to determine (in the last column to
the right on the bottom half of the table) the $10,500 to be debited to the Deferred Income Tax—Current Asset account and the $1,750 to be credited to the Deferred Income Tax—Long-Term Liability account as part of the income tax journal entry for 20X9. Note the “Book vs. Tax Difference at 12/31/X9” column on the Deferred Income Tax Workpaper is designed to tie into the deferred tax account balances on the 20X9 balance sheet.

Deferred Income Tax Workpaper (Table 1)

<table>
<thead>
<tr>
<th>Balance Sheet</th>
<th>20X9 Book Value</th>
<th>20X9 Tax Basis</th>
<th>Book vs. Tax Difference at 12/31/20X9</th>
</tr>
</thead>
<tbody>
<tr>
<td>Current:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Accts. Rec.</td>
<td>$225,000</td>
<td>340,000</td>
<td>($115,000)</td>
</tr>
<tr>
<td>Trading Portfolio</td>
<td>46,000</td>
<td>28,000</td>
<td>18,000</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(97,000)</td>
<td>x 35%</td>
</tr>
<tr>
<td>Bal. Sheet</td>
<td>$33,950</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Long-Term:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Truck</td>
<td>85,000</td>
<td>61,000</td>
<td>24,000</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(97,000)</td>
<td>x 35%</td>
</tr>
<tr>
<td>Bal. Sheet</td>
<td>$8,400</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Book vs. Tax Difference at 12/31/20X9</th>
<th>Assumed Difference at 12/31/20X8</th>
<th>Change During 20X9</th>
<th>Change times 35% tax rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>($115,000)</td>
<td>($75,000)</td>
<td>(40,000)*</td>
<td>($14,000)</td>
</tr>
<tr>
<td>18,000</td>
<td>8,000</td>
<td>10,000</td>
<td>3,500</td>
</tr>
<tr>
<td>(97,000)</td>
<td></td>
<td>30,000</td>
<td>$10,500**</td>
</tr>
<tr>
<td></td>
<td>x 35%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>$33,950</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>24,000</td>
<td>19,000</td>
<td>5,000</td>
<td>$1,750***</td>
</tr>
<tr>
<td></td>
<td>x 35%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>$8,400</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* $40,000 amount in parentheses indicates taxable income will be higher than book income for 20X9
** $10,500 amount in parentheses indicates debit to the Deferred Income Tax—Current Asset account
*** $1,750 amount should be credited to the Deferred Income Tax—Long-Term Liability account

The instructor has the option to supplement Table 1 with an illustration of the “income statement approach” to determine the 20X9 entries to the deferred income tax accounts. The income statement approach would multiply the temporary differences shown above between the 20X9 income statement amount and the 20X9 tax return amount by the statutory income tax rate to get the 20X9 entries to the deferred income tax accounts.

The Tax Accrual Workpaper (Table 2) provides the calculation supporting the $323,015 credit to Income Tax Payable in the 20X9 income tax journal entry. The design of this workpaper also allows a direct calculation of the $314,265 debit to Income Tax Expense. (With a permanent difference existing for 20X9, simply multiplying the $900,000 book income before tax times the 35% income tax rate would yield an incorrect amount for Income Tax Expense).

Tax Accrual Workpaper (Table 2)

<table>
<thead>
<tr>
<th>Book Income Before Taxes for 20X9</th>
<th>$900,000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Permanent Difference:</td>
<td></td>
</tr>
<tr>
<td>Special Dividend Deduction (70% of Dividends Received from Trading Securities)</td>
<td>(2,100)</td>
</tr>
<tr>
<td>Basis for Directly Calculating Income Tax Exp. (35% x $897,900 = $314,265)</td>
<td>$897,900</td>
</tr>
<tr>
<td>Temporary Differences:</td>
<td></td>
</tr>
<tr>
<td>Excess of Estimated Bad Debts Expense vs. Accts. Receivable Direct Write-off for 20X9</td>
<td>40,000</td>
</tr>
<tr>
<td>Unrealized Gain on Marking to Market the Trading Portfolio on December 31, 20X9</td>
<td>(10,000)</td>
</tr>
<tr>
<td>Excess of MACRS Depreciation vs. Straight-Line Depreciation for 20X9</td>
<td>(5,000)</td>
</tr>
<tr>
<td>Taxable Income</td>
<td>$922,900</td>
</tr>
<tr>
<td>Statutory Income Tax Rate</td>
<td>x .35</td>
</tr>
<tr>
<td>Income Tax Payable</td>
<td>$323,015</td>
</tr>
</tbody>
</table>

4. JOURNAL ENTRY FOR INCOME TAXES

The Deferred Income Tax Workpaper (Table 1) provides the dollar amounts for the Deferred Income Tax accounts in the 20X9 income tax journal entry below. The Tax Accrual Workpaper (Table 2) provides the dollar amount for Income Taxes Payable and proves the “plug” to Income Tax Expense is correct.

Income Tax Journal Entry For 20X9

<table>
<thead>
<tr>
<th>Debit</th>
<th>Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Income Tax Expense (“Plug”—also directly calculated in Table 2)</td>
<td>314,265</td>
</tr>
<tr>
<td>Deferred Income Tax—Current Asset (from Table 1)</td>
<td>10,500</td>
</tr>
<tr>
<td>Deferred Income Tax Payable—Long-Term Liability (from Table 1)</td>
<td>1,750</td>
</tr>
<tr>
<td>Income Tax Payable (from Table 2)</td>
<td>$323,015</td>
</tr>
</tbody>
</table>

The $10,500 debit is to a Current Deferred Income Tax Asset account because both Accounts Receivable and the Trading Portfolio are classified as current accounts on the Balance Sheet. The $1,750 credit is to a Long-Term
Deferred Income Tax Liability account because Trucks are classified as a non-current account on the Balance Sheet.

5. SCHEDULE M-1 ON CORPORATE TAX RETURN

Using the previously illustrated accounting workpapers (Table 2) and above income tax journal entry developed in the Intermediate Accounting course, students can see the integration of deferred income taxes into the Corporate Income Tax course by requiring students to complete Schedule M-1 (Table 3) of the Corporate Income Tax Form 1120. (For companies with more than $10 million in assets, Schedule M-3 would be completed instead of Schedule M-1.)

Schedule M-1 (Table 3)

<table>
<thead>
<tr>
<th>Schedule M-1</th>
<th>Reconciliation of Income (Loss) per Books With Income per Return</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Net Income (loss) per books</td>
<td>$508,120</td>
</tr>
<tr>
<td>2. Federal income tax per books</td>
<td>$714,200</td>
</tr>
<tr>
<td>3. Excess of capital losses over capital gains</td>
<td></td>
</tr>
<tr>
<td>4. Income subject to tax not recorded on books this year (before)</td>
<td></td>
</tr>
<tr>
<td>5. Expenses recorded on books this year not deducted on the return (before)</td>
<td></td>
</tr>
<tr>
<td>a. Depreciation</td>
<td>$</td>
</tr>
<tr>
<td>b. Charitable contributions</td>
<td>$</td>
</tr>
<tr>
<td>c. Travel and entertainment</td>
<td>$</td>
</tr>
<tr>
<td>6. Add Lines 1 through 5</td>
<td>$494,000</td>
</tr>
<tr>
<td>7. Income recorded on books this year not included on this return (before)</td>
<td>$</td>
</tr>
<tr>
<td>a. Tax-exempt interest</td>
<td>$</td>
</tr>
<tr>
<td>b. Unrealized gain-trading portfolio</td>
<td>$10,000</td>
</tr>
<tr>
<td>8. Deductions on return not charged against book income this year (before)</td>
<td></td>
</tr>
<tr>
<td>a. Depreciation</td>
<td>$5,000</td>
</tr>
<tr>
<td>b. Charitable contributors</td>
<td>$</td>
</tr>
<tr>
<td>9. Add Lines 7 and 8</td>
<td>$5,000</td>
</tr>
<tr>
<td>10. Income before Federal Income Tax</td>
<td>$922,900</td>
</tr>
</tbody>
</table>

The $925,000 “Income” on line 10 of Schedule M-1 would be the Taxable Income Before Special Deductions. Subtracting the $2,100 ($3,000 x 70%) permanent difference created by the Special Dividend Deduction for the Trading Portfolio Dividends from the $925,000 would equal the $922,900 Taxable Income shown on the Tax Accrual Workpaper (Table 2).

EXTENSIONS

Deferred Income Taxes can provide more than just an example of a topic that helps students appreciate the integration between Intermediate Accounting and Corporate Income Tax courses. The illustration can be enhanced by requiring preparation of the complete Corporate 1120 Tax Return. The Auditing course could be added to the deferred income tax example by requiring students to turn the accountant’s worksheets used in the illustration into audit workpapers and/or requiring students to draft the Income Tax Note Disclosure—including determination of the effective tax rate for 20X9. Other extensions could include requiring students to research the topic of deferred income taxes in the accounting and tax literature. Requiring students to provide a written synopsis of their research findings adds communication to the skills list that can be enhanced.
A Comparison of Gender with a Focus on Women’s Struggle for Equality  
Primary Track: Organizational Behavior  
* indicates corresponding author

<table>
<thead>
<tr>
<th>*Jennifer Riker</th>
<th>Jessica Cohan</th>
<th>Catherine Chiarelli</th>
<th>Michael Assortato</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prime Finance</td>
<td>Oncology Sales</td>
<td>Planning</td>
<td>Account Executive</td>
</tr>
<tr>
<td>Citi</td>
<td>Pfizer</td>
<td>Bed Bath &amp; Beyond</td>
<td>Myriad</td>
</tr>
<tr>
<td>390 Greenwich Street</td>
<td>235 E 42nd Street</td>
<td>110 Bi-County Blvd</td>
<td>320 Wakara Way</td>
</tr>
<tr>
<td>New York, NY 10013</td>
<td>New York, NY 10017</td>
<td>Farmingdale, NY 11735</td>
<td>Salt Lake City, UT 84108</td>
</tr>
<tr>
<td>(631) 383-1205</td>
<td>(631) 678-2214</td>
<td>(631) 258-3015</td>
<td>(516) 532-0353</td>
</tr>
<tr>
<td><a href="mailto:JRiker12@yahoo.com">JRiker12@yahoo.com</a></td>
<td><a href="mailto:JessicaCohan@hotmail.com">JessicaCohan@hotmail.com</a></td>
<td><a href="mailto:Chiarca@aol.com">Chiarca@aol.com</a></td>
<td><a href="mailto:Massorta@myriad.com">Massorta@myriad.com</a></td>
</tr>
</tbody>
</table>

Dowling College  
Oakdale, NY 11769  

Dowling College  
Oakdale, NY 11769  

Dowling College  
Oakdale, NY 11769  

Dowling College  
Oakdale, NY 11769  

(574)
A Comparison of Gender with a Focus on Women’s Struggle for Equality

ABSTRACT
The purpose of this paper is to examine the causes of gender differences in today’s world. While we recognize that almost all progressive countries claim to practice gender equality, there are some areas of disparity. Generous strides have been made in several areas to ensure gender equality; however, there are still improvements to be made. This paper examines first and foremost, why there is a difference in the behavior of men and women. After identifying these root causes we will then examine both the political and corporate world to take a look at these differences in practice. Finally we will offer some suggestions for women to be mindful of in the future to aid in their journey to the top.

KEY WORDS
Gender differences, leadership, women in politics, glass ceiling.

1. INTRODUCTION
One topic that has been widely discussed over the last decade has been the advancement of women. Women were first granted the same rights as men with the passage of the equal rights amendment. This proved to be a monumental step in American history but, since this time there has been a disparity between women and men. In this paper we look to identify first and foremost, why men and women are so different and how it affects their perceptions and attitudes in the workplace. After identifying some of the fundamental differences we will then turn our attention to the political arena. Here we wish to discuss the different political roles that women across the world hold and why a progressive country, such as the United States, has not yet had a woman leader. After exploring the political world we will then examine the corporate world. We know at the most basic level that women and men are treated differently in the workplace but, here we will see some examples of women and how they were able to achieve what they have achieved. Finally we will conclude with ways in which women can enhance their advancement both socially and in the workplace.

2. BEGINNING OF GENDER DIFFERENCES
The root causes that have created gender inequality within corporate America must be understood before we can make assumptions as to why a gender gap exists. Novations Group, a talent development firm with 30 years experience working to help organizations realize the full potential of their employees, recently compiled a study looking at whether or not women are being underrepresented at high level positions. The findings of their research suggest that women are still being overlooked for leadership roles within the organization and that women consistently rate their own contributions in the workplace lower than men rate theirs. Socialized modesty, reluctance to showcase their skills, and different work styles were found as the three main reasons women have been held back from advancing (Poole 2010). Leadership development programs encourage personnel to showcase their abilities by providing an opportunity to discuss career development with high level management and gain exposure to levels not easily accessible. By having these conversations with management, both women and men are forced to talk about their accomplishments. This can be a positive thing for women by breaking the habit of a woman who is socialized to maintain a modest approach. For this reason, and since women are often reluctant to showcase their abilities, management is more prone to give an inaccurate assessment of women’s skills. To further the problem, women have been known to take their modesty to such an extreme as to give credit for their own accomplishments to other coworkers. The third cause is the difference between gender work styles. Women typically demonstrate less aggressive tendencies in the way they handle issues at work, a major contrast from the ego focused nature of men. Words of strength such as bravado, dominant, focused, ego-driven and intelligent have all been associated with male leadership. Why these words? We must understand whether or not men and women are biologically designed to behave differently and if these designs give one gender an edge. It is clear there are different hormonal influences that cause the attitudes and behaviors between men and women to vary. We know that, much like the human body, the human brain has clear differences between genders, which can be seen through behaviors. The only way to come to a conclusion naïve to societal influences is to investigate young children. Michael Lewis, a child psychologist, observed one-year-old girls and boys looking to see how they reacted to separation from their mother by an obstacle or barrier. When put in this situation the boys reacted by trying to knock down the barrier, while the girls passively stood there crying for help (York 2008). This supports our earlier discussion that men and women have different ways of approaching the same issue. The attempts of the male children to break down the barriers placed in front of them supports the strong association made between men and their problem solving approaches. The fact that the girls did not engage in handling the obstacle illustrates their passive approach. Both male and female behavioral traits with regard to work styles may not be socially influenced but rather innate traits. Studies have also been conducted to show that women handle problem-solving tasks with both hemispheres of their brain while men are known to use just one side of their brain (York 2008). This fact may lend reasoning as to why women are more empathetic in their approach to decision making. Additional studies were performed to evaluate the ways in which men and women communicate and if the sex-specific areas of the brain are responsible for the results. Children were once
again evaluated to eliminate societal bias. “While male infants are more interested in objects than in people, female infants respond more readily to the human voice than males do as infants. Women seem to have an enhanced awareness of emotionally relevant details, visual cues, verbal nuances, and hidden meanings” (Nadeau 1997). This information gives clear evidence as to why employees feel like women managers and leaders have a focus and connection with the people and are more concerned with making people happy. Meanwhile, male leaders generally focus on getting results and the people are a means to achieving those results. Maybe women chose not to take on leadership roles because they cannot see themselves encompassing those characteristics. This potential fear of possibly becoming someone they are not could be a secondary factor that has kept women in non-executive roles. Irving Wladawsky-Berger lends additional support through his discussion of gender based differences. He makes the point that many studies have shown that the female brain is clearly geared toward empathy and the male brain is wired up to building systems and understanding (Wladawsky-Berger 2009).

We live in a results orientated world and in order to achieve these results it is believed that more male oriented qualities need to be demonstrated in a leader. The fact that women use both halves of their brain to problem solve may lead people to believe they are passive, however, the decisions and solutions created by females may lead to better decisions overall. Organizations are beginning to understand the role and importance of employing both genders with diverse strengths in high level positions to solidify their companies. It has been noted that a financial system, with more women at all levels, from top executive roles down to desk level positions, would be an extremely healthier system than the current system. It has even been suggested that our most recent financial crisis may have been avoided if there was more of a female influence to counter-balancing the male behaviors that led Wall Street down that dark spiral (Wladawsky-Berger 2009).

3. WOMEN IN THE POLITICAL ARENA
As we have just discussed, companies are beginning to realize the benefits of integrating women into the higher levels of their organizations. We have even begun to see the acceptance of women in political systems. Around the world, countries have been successful in selecting women as leaders. Sweden and India have elected women, while the United States has not had that fortune. Only recently have women in the U.S. started to break the glass ceiling in the political world. Women have achieved 16 percent of Senate and House seats in the United States and the Speaker of the House is female. It is a small but strong presence but the question remains; what is prohibiting a woman from becoming president of the United States of America?

According to the article, “Exploring the Gender Gap in Support for a Woman for President,” women leaders are vulnerable to several prejudices. To some degree prejudice explains why there is a great disparity between men and women in high ranking political roles and may be one of the challenges women come across when trying to obtain such roles. The role congruity theory points out that woman in leadership roles are subject to prejudice because the stereotypes of females and the stereotypes of leaders are not congruent with one other. If more women candidates possessed nontraditional female traits then those of leadership and those of women, stereotyping would be lessened (Hoyt and Simon 2008). There is also gender stereotyping in the voting process which stems from what traits voters viewed as “presidential traits.” Research shows that male gender traits are more often affiliated with leadership than female gender traits. Females are often viewed to be compassionate, personable and nurturing. Male leaders are thought to possess qualities of dominance, aggressiveness and self-confidence, the same qualities which are thought to be needed to be an effective leader (Hoyt and Simon 2008).

Empirical findings suggest that men and women are perceived to be politically different by their characteristics, beliefs and policy expertise. Voters view men as being more assertive and having more expertise in foreign policy, therefore making them better at handling war, deploying troops and making national security decisions. According to a study by Brown University, war, foreign policy and national security were viewed as male issues. Interestingly enough, even though many people believe men may be more capable in dealing with an issue such as foreign policy, the last two people to hold the U.S. Secretary of State position were women, Condoleezza Rice and Hillary Clinton. Other issues perceived better suited for a male leader are the economy, crime and war. On the other hand, the public believes women are better able to handle issues relating to health care, education and inequality. Could this be the reason that the Democratic Party chose Obama over Clinton in the most recent Democratic primary? One can make this assumption that since we live in a post 9/11 environment where war, national security and foreign policy are often considered the most pressing issues; these stereotypes lead to the election of a male as opposed to a female democratic candidate (Lawless 2004).

Indira Gandhi, Margaret Thatcher and Isabel Peron are three women who have held the highest ranks in their countries, India, Great Britain, and Argentina respectively. Between 1960 and 2009, 71 women from 52 countries have held the title of a national leader. Among those leaders 40 were prime ministers and 31 were presidents. More female leaders are prime ministers as opposed to presidents. It has been found that women have a better chance of ruling in a parliamentary system when compared to a presidential system. A prime minister can be appointed by the party who is ruling in Parliament at the time of nomination. These leaders are not elected by the public; instead prime ministers are elected by a group of their peers. We have the presidential system which relies on voting by the public which is inherently subject to gender stereotyping. The roles of a prime minister and president are different in regards to their authority, autonomy, and leadership traits. A prime minister shares
authority with other party and cabinet members. In a parliamentary system, cooperation and collaboration, traits deemed to be female, are fundamental. The president is elected independently from legislature and is required to lead in a swift and decisive manner, traits deemed to be male. A prime minister can also be forced out of office at any time while a president has fixed terms. Presidents in the parliamentary system function as a head of state but do not have the same power as presidents in a presidential system (Krook and Jalalzai 2010). Some countries have both a prime minister and a president in a dual executive system. Leaders in these roles have different levels of power and each focus on specific areas. Women who lead in these types of systems generally have less power. Ireland is a parliamentary republic country that uses both a president and prime minister. Mary McAleese, the current president of Ireland doesn’t have the same authority as the country’s Prime Minister. She is considered a figurehead of the nation (Krook and Jalalzai 2010).

4. WOMEN IN THE CORPORATE ARENA

The male to female ratio in top executive positions today is still an unbalanced number. For every ten men in an executive role there is one woman. This is surprising since women currently comprise almost half of the western countries workforce (Helping Women Get to the Top 2005). The main reason for this disparity is the “glass ceiling”. A glass ceiling is “an invisible, yet quite impenetrable, barrier serves to prevent all but a disproportionately few women from reaching the highest ranks of the corporate hierarchy, regardless of their achievement and merits” (Insch, McIntyre and Napier 2007). In other words, qualified individuals, particularly women, are able to see what lies ahead but, are stopped on a lower rung of the corporate ladder due to some form of discrimination. All minorities have experienced discrimination including the disabled, African Americans, Asians, elderly, and women. Women, however, have been most noted for making cracks in the glass. There are numerous reasons for women running into the glass ceiling, the first and most prominent reason is the stereotypes of women as leaders and the second is that women struggle to find an appropriate balance between work and family. By analyzing these two concepts one can gain a much better understanding of why the previously mentioned ratio still remains so high.

The first reason women struggle with the glass ceiling is because they have spent so much time trying to overcome stereotypes. This is not their own fault but rather the fault of their colleagues, bosses and society. There seems to be a clear benefit to hiring a woman as a CEO. Companies such as Kraft Foods, Avon and PepsiCo have proven that the differences women provide can greatly increase business. Personality traits and leadership styles are just two areas that differentiate men and women. Men and women may both be effective in a role, but how they approach a situation or task will vary. Male leaders have been found to operate in a direct, results-driven fashion capitalizing on independent employee’s strengths and upholding corporate culture. Women on the other hand work in more of an ethically driven, emotionally sensitive, teamwork orientated environment. While a growing number of companies say they would hire a female for a CEO or top executive position based on these traits, a study showing how CEOs and corporate boards view upper management countered that claim. Male CEO’s scored better from their bosses when they were aggressive and forceful and scored worse when they were being empathetic and cooperating. Female CEO’s scored lower for showing the same level of assertiveness and scored better when they were cooperative (Sharpe 2000). This tells us that a double standard still exists and strong stereotypes still need to be broken down. The only way for this to happen is for the decision makers to move away from the old “boys club” mindset and into a new “level playing field” way of thinking.

The second biggest struggle that women striving for executive positions face is the myth that they voluntarily jump off the corporate ladder with the intention of never returning. Immediately after college, a woman may dive deep into her career, striving to make a name for herself. She will eventually get married and want to have a family. She must decide how much she is willing to sacrifice for a family environment at home; a decision that men rarely face. Time spent away from work to raise children and care for family can have two effects. First, a woman may realize that she is destined to stay home, quit her job and live off of her partner’s salary or second, she may raise her family and return to work with the same ambition as before, striving to continue the climb up the corporate ladder (Helping Women Get to the Top 2005). It is unfair for executives to assume that a female employee will go one way or the other. It is most often that time taken off to tend to other life aspects would fall mid-career and extended loss of time hinders women in the area of tenure. A study of American graduate managers illustrated women who returned to work after three or more years off lost on average 37% of their earning power (Helping Women Get to the Top 2005). This is a re-entry struggle that women face. It leads women to feel that by re-entering the workplace they are starting from square one. A feeling of dissatisfaction can fall over these talented women and the passion that they once brought to the table may wane.

For the few women who do make it to the top, whether it be CEO or Chairman, it doesn’t mean that fairness and equality reign supreme. Irene Rosenfeld, Chairman and CEO of Kraft Foods has proven herself time and again as a strong leader of the global powerhouse since taking the position in 2006. She has most recently been noted in the media as the driving force behind the February 2010 acquisition of Cadbury, bringing the total value of the Kraft Foods name to an impressive $52 billion (Kraft Foods). Her compensation reflects her contribution to the company at $16.7 million in 2009. Others though aren’t so lucky and still struggle with what they see as negative inequity. For example, PepsiCo’s Indra Nooyi runs a $105 billion market cap company and still only makes half of what her male counterparts at
McDonald’s make, $10.7 million and $20 million, respectively (Humphries 2010).

There is clearly an inequality that still exists in the world today. If women are performing the same job, and exerting the same amount of effort, they should be given the same amount of opportunity that their male counterparts are given. As we can see through the previous various examples, this is not the case. As much as equality makes sense in theory, a disparity still exists between what is being said about gender equality and what actually exists. This does not mean that gender inequality will remain forever; in fact we have identified some tools that women can use to better their position in the workforce.

5. WOMEN IN THE FUTURE

One of the most important tools that women can use to increase their likelihood of climbing the corporate ladder is networking. It is important for women to expand their social circles and increase their visibility. It has been suggested that women are often concerned with the amount of time that needs to be dedicated or lack of self-confidence and the willingness to put oneself out there (Hampton, Cooper and McGowan 2009). Putting these concerns aside, networking can have several advantages which will aid in a woman’s race to the top. The website www.womenonbusiness.com offers some possible solutions to increase the effectiveness of networking. The first step in establishing a network is to do so in a way that is comfortable. Relationships can be both formal and informal. Formal networking relationships can be made during large scale events ranging from industry-wide to company sponsored. Informal networks, more difficult to identify, are more casual in nature. These are groups of people with a common interest who come together with the intent of sharing both information and favors (Wierzgac 2005). No matter the relationship it’s important to make sure that you are being yourself, especially those who are new to it (Clarke 2009). It may be best to start out small. Book clubs are a great way to facilitate discussion about a common topic. Here the basics of networking, establishing contacts, can be learned. When forming contacts it’s important to consider the amount of time that the other person is willing to dedicate to the relationship. You don’t want to network with someone who does not have the time to cultivate a new relationship. In order to get the most out of the new contact it’s important to find people who are willing and able to develop a reciprocal relationship where both parties can benefit (Women Who Excel: The Mentee 2010). The second tip for networking is to establish relationships in one group before moving to another. One doesn’t want to be spread too thin among networks. It’s better to have three solid relationships than ten acquaintances. Be sure to select a member for your network who is willing to dedicate a fair amount of time to the relationship (Clarke 2009). If you went to your first book club meeting on Tuesday and then decided that you were going to attend a large scale networking event the next evening you may be spreading yourself too thin. Just as you require time from your contacts they also require time from you, and with too much going on it may difficult to develop a lasting relationship. The third and final tip for networking is to set goals. Like anything in life there needs to be something to work towards. How many people do you want to add to your network this month? How many networking events do you want to attend (Clarke 2009)? These goals will have you constantly evaluating your strategy for creating a meaningful network.

Along with networking it has also been suggested that women look for ways to increase their visibility at work. Working hard is important but, working on the right projects is equally important. An employee could be the hardest working person in her department but her efforts may not be noticed. When it comes time for a promotion she may be passed up because the right people aren’t aware of her efforts. Traditionally, women have been more humble about their accomplishments. Growing up, girls are told it is impolite to brag about their accomplishments, however, it’s a totally different game in the workplace. Here it is important for women to stand up and take credit for their hard work. Because men are more willing to assume credit for their accomplishments they are increasing their visibility to senior management, and therefore, visibility for opportunity (Senior 2010). The fear of failure also deters women from stepping up to the plate. Girls were taught to be risk adverse, which has caused a strong fear of failure. Due to this fear, women are often reluctant to take on riskier projects even though they have greater visibility. “We need to encourage young women to take on leadership roles in all areas of endeavor, so they can learn to fail, pick themselves up, dust off their egos, and try again” (Peters 2005). Though there is not as much research on the area of visibility in the workplace it is an important aspect to consider. Visibility, networking and mentoring go hand and hand. Often justification for promotion is not based on what you know, but who you know and more importantly who knows you. Not only is it important to increase the size of your social network, but it is also important to take on the right projects at work. These projects will get you exposure to more people who you can include in your network.

6. CONCLUSION

As we have seen the differences between men and women are more than the most obvious differences. There are innate biological and psychological factors that play a role in how both men and women make decisions. These differences in decision making abilities have left the public to believe that women are less effective leaders. There are real-world examples of women being thought of as inferior in both the political and corporate world, even though the justification for the stereotypes is often invalid. By actively looking to increase their visibility in the workplace and by increasing the amount of networking that they engage in, women can begin to show the world that the skills they posses make them just as effective as a leader as are men.

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Available upon request.
PHARMA’S GLOBALIZATION OF CHINA:
AstraZeneca Case Study

Jarrod Longcor, MBA*
Rib-X Pharmaceuticals
5 Mansfield Grove #245
East Haven, CT 06512
203.435.4203
jlongcor@comcast.net

Tim Masturzo, MBA
Biogen Idec
7660 North Goodrich Square
New Albany, OH 43054
614.506.4343
tmasturzo@insight.rr.com

Kelly Matty, MBA
Genentech
29336 Buckthorn Pl
Westlake, OH 44154
440.773.8506
kjmatty@roadrunner.com

ABSTRACT
China is the world’s most populous country and has one of the fastest growing economies. The pharmaceutical market in China has experienced explosive growth over the past few decades. This growth has been predominately fueled by China’s increasing wealth and an accelerating global demand for cheap, effective medicines. China has been able to offer multi-national companies the benefits of both providing inexpensive labor as well as an abundant patient population. Most foreign companies entered China initially because of a desire to cut costs. However, due to changes in the regulatory process, enforcement of intellectual property rights and tariffs has made China more attractive than ever. Because of these changes, China’s total pharmaceutical market increased from $3.4 billion to ~$40.6 billion from 1998 to 2010. With an average growth rate around 17%, large multi-national pharmaceutical companies are rushing to penetrate this expanding market. In this paper we evaluate AstraZeneca’s challenges and opportunities in penetrating China.

BUILDING A PHARMACEUTICAL BUSINESS IN CHINA: ASTRAZENECA CASE STUDY

INTRODUCTION
AstraZeneca is known as one of the world’s leading innovative global pharmaceutical companies. The company currently operates in over 100 countries and has leading product positions in six core disease markets: gastrointestinal, cardiovascular, neuroscience, respiratory, oncology and infection disease. AstraZeneca is committed to using the best science and technology to discover, develop and commercialize innovative, patent protected prescription medicines that make a meaningful difference to patient health around the world. In 2010, AstraZeneca booked total sales of $33.3 billion.1 It has its headquarters in London, with 61,000 employees worldwide.

The company was formed in 1999 when Astra Pharmaceuticals merged with Zeneca Pharmaceuticals globally. The merger was aimed at improving the combined companies' ability to penetrate the global market place, broaden the product portfolio, improve research and development activities and improve the financial position of both organizations.2 When the merger occurred AstraZeneca was focused on penetrating the established pharmaceutical markets as opposed to emerging markets, such as China. Prior to the merger, Zeneca had established initial collaborations within China. While there was a significant reorganization, the relationships already established were maintained following the merger.

In 2001, at the behest of a board member AstraZeneca began to evaluate and expand its interest in China and other emerging markets. Over the next ten years, the pharmaceutical industry would experience a number of competitive and pricing pressures in the large established pharmaceutical markets. These pressures forced all large multi-national pharmaceutical companies to evaluate which markets would hold the greatest future potential growth. As discussed above, until 2001 when China entered the World Trade Organization and began establishing and enforcing intellectual property rights, China was viewed with great concern and skepticism by pharmaceutical companies developing innovative products. Today, the CEO of AstraZeneca, David Brennan, has a vision for AstraZeneca to be the leading pharmaceutical company in China. This case study looks at the strategies AstraZeneca has leveraged to go from a minimal presence to one of the leading multi-national pharmaceutical companies based on market share in China.3

OPPORTUNITIES
The prospects for multi-national pharmaceutical companies in China are more promising now than they have ever been. As growth has slowed in established markets including US, Europe, and Japan, companies have been forced to look to new markets for future growth. China offers significant opportunity to achieve this desired growth. The country has experienced an impressive 16.7% compound annual growth rate (CAGR) in pharmaceutical sales for the last few decades.4 China's pharmaceutical market (ethical and OTC) is currently approaching $40bn (~$19bn in ethical drugs), giving it by far the largest market share in terms of sales in Asia Pacific, and making
Three key factors make China such an attractive market for pharmaceutical companies. First is China’s rapidly expanding middle class and the country’s rising gross domestic product. As the economy continues to modernize there will be increasing demand for advanced health care options. Additionally, as the population becomes more affluent, it is likely that there will be increases in “lifestyle” diseases such as heart disease, diabetes, obesity, etc. Secondly, while previously much of the wealth of the country was located in just a few large cities, pockets of wealth have migrated into more rural areas. This migration of wealth will offer pharmaceutical companies the opportunity to expand their reach to the approximately 1.3 billion Chinese people.

The third factor is China’s entry into the World Trade Organization in 2001. This historic event initiated the transformation of China’s regulations and distribution networks to become more in-line with the rest of the world. The key regulatory changes came with the enhanced protection of intellectual property rights. Since joining the WTO, China has been obligated to recognize foreign and international patents and protect the rights of the patentee. Additionally, in accordance with TRIPS, China has extended the length of validity of certain patents to 20 years. Joining the WTO also reduced several tariffs on pharmaceutical products, provided transparency and alignment of the pharmaceutical regulatory approval process and forced China to allow foreign companies to participate in the drug distribution process within China.

CHALLENGES

Despite the attractiveness and opportunities presented by the Chinese market, many multi-national companies continue to have concerns about operating in China. There are significant deterrents to entering the market. While the intellectual property rights situation has improved greatly, there remain significant concerns. Despite government crackdowns and other measures, counterfeiting remains a problem. China’s State Drug Administration (SDA) makes information available regarding foreign pharmaceutical companies applying for Chinese patent protection to Chinese firms in order to ensure that the products seeking protection are not similar to drugs already produced in China. This system leaves foreign drugs vulnerable to replication. Counterfeiting and piracy often goes undetected, and if detected, punishment is many cases is minimal or non-existent.

An additional challenge China faces is based on the size of its country and distribution of the population. Currently many of the multi-national pharmaceutical companies have focused their efforts on the largest cities with the most affluent people. However, the greatest percentage of the Chinese population is located outside the three primary regions that have been the focus of international pharmaceutical companies. Therefore this increases the complexity of working in China. These complexities are the result of decades of the Chinese government trying to make each province self-sufficient. These efforts have resulted in issues that include the inadequate state of transport infrastructure (despite progress in the past few years) made worse by monopolistic practices; a fragmented and chaotic distribution system; and local protectionism.

Compounding these difficulties are the general lack of professional third-party distribution channels, pricing issues, cash flow and accounts receivable problems, the high cost of building and maintaining distribution networks, and the usual petty bureaucratic interference frequently encountered in China’s commercial environment.

Yet another challenge facing companies desiring entrance into China is the limitation in the experience and education of certain doctors. In particular, doctors in the smaller cities and rural regions of China tend to be trained in traditional Chinese medicine as opposed to Western style evidence based medicine. Doctors with this training present a challenge, as they are often unlikely to want to prescribe a pharmaceutical product versus a traditional Chinese herbal solution.

As mentioned previously poor drug quality leading to fatality continues to be a concern in China. Although most incidents have happened within China between November 2007 and May 2008, 95 Americans died from heparin believed to have been "deliberately contaminated" in China. Melamine-laced milk powder sickened over 294,000 babies (and killed at least six) in China and led to dozens of product recalls across the globe. In January 2009, counterfeit diabetes drugs led to two deaths and the hospitalization of nine others in the Chinese province of Xinjiang. Examples like this make it extremely difficult for companies to rely on the existing manufacturing infrastructure and regulations and upholding drug quality.

STRATEGIES FOR SUCCESS

Currently AstraZeneca is one of the largest multinational pharmaceutical companies in the prescription market in China. Its headquarters are located in Shanghai with 23 branch offices in major cities across China, as well as one office in Hong Kong Special Administrative Region. It has over 3,500 employees working in manufacturing, sales, clinical research and new product development. As of 2001, AstraZeneca only had two small joint ventures in China. Astra had established a joint venture with the Wuxi province in China in 1993 and Zeneca had established a joint venture in 1994 with the China Pharmaceutical Foreign Trade Company called the Zeneca Sinopharm Development Consulting Company. While these early forays into China did give the organization some understanding of the culture and connections within the Chinese government, especially in the Wuxi province, AstraZeneca’s China strategy has been extremely successful to date.
**Infrastructure**

Unlike many multi-national pharmaceutical companies, when AstraZeneca first began working in China it was not primarily focused on reducing costs. AstraZeneca began in 2001 building a manufacturing facility in the Wuxi province where it had well-established ties. The company initially invested $134 million which represented the single largest manufacturing investment in Asia for AstraZeneca. It was AstraZeneca’s goal to use this facility to produce products specifically for the Chinese market. AstraZeneca was embarking on a strategy that the CEO, David Brennan, referred to as “In China for China”.

Following China’s ascension to the WTO, AstraZeneca began to expand its operations. In late 2002, AstraZeneca decided to move beyond just manufacturing and launched its Clinical Research Unit - East Asia (ACRU - EA) in Shanghai, the first clinical research center established by a multinational pharmaceutical company in China, spanning mainland China, Hong Kong, Taiwan, and Korea. Because of the regulatory requirements in China that all pharmaceutical drugs must be tested on a minimum of 100 Chinese subjects, AstraZeneca opened this clinical research unit. By having its own site in China, AstraZeneca was now in a position to accelerate the timelines to product launches. While initially the company was hesitant to test its new innovative products, AstraZeneca was able to rapidly launch several legacy brands.

As China became more open to foreign businesses and began to enforce elements of the WTO policies, AstraZeneca continued to increase its investment in China. They expanded the investment in the Wuxi manufacturing site. Established multiple collaborations with academic institutions, worked with the central and local governments, and recently opened its first research and discovery center in China. The AstraZeneca Innovation Centre China (ICC) is located in Shanghai and is responsible for drug discovery efforts related to cancer. Traditionally companies were hesitant to locate research and discovery operation due to concerns over abilities to patent and potential infringement. This step marked a change to AstraZeneca’s strategy in China. The company was no longer focusing on “In China for China” but rather “In China for Global”.

The “In China for Global” strategy was also being established through the increased efforts of the Wuxi manufacturing facility. AstraZeneca had continued to expand this facility and was now producing some of its active pharmaceutical ingredients (API) at this site. AstraZeneca now has the stated goal of supplying 80% of its manufacturing needs from China.

**Partnerships**

While the investment in infrastructure has been important in AstraZeneca’s strategy in China, these investments would not have been enough to make AstraZeneca the number one or two pharmaceutical company in China. One of AstraZeneca’s key strategies has been partnering with both the local and central government on two key points. First, by establishing collaborations with academic institutions like the clinical research center at Peking University as well as committing to research and discovery in China as with the AstraZeneca Innovation Center, AstraZeneca is supporting the national governments stated goal of increasing its innovation capabilities. While AstraZeneca benefits from having the capability to more rapidly develop drugs in China, the company also trains university personnel, establishes audit systems and upgrades equipment.

Secondly, AstraZeneca has partnered with the regional governments in providing public health support. AstraZeneca has sponsored an initiative to promote medical training. AstraZeneca has donated over $4 million dollars to the public health initiative as well as having created specific websites to help doctors that are in the hardest to reach areas of China.

AstraZeneca has also been willing to partner with local companies. Initially these partnerships were solely focused on distribution but more recently, AstraZeneca has been willing to partner with local manufacturing companies. As the company’s desire to source products from China has increased AstraZeneca has shown a willingness to leverage local companies.

**Human Resources**

One of the largest challenges facing companies in China is employee retention. While in some markets human resources are not a critical piece of the strategy, in China they are. Getting and keeping high quality and highly trained people is quite difficult in China. As such, AstraZeneca has established a very comprehensive human resource strategy with the emphasis on retaining its employees. In fact, AstraZeneca estimates that it spends up to $3 million per employee per year for training and development. The company has established tailored training programs including the creation of its own business school in China. Each employee has a performance review every six months to ensure that they are on track as well as to identify any new opportunities for the employee.

By investing heavily in the employee base, AstraZeneca has been able to keep a lot of the key talent. This has allowed the company to have a more consistent team both at the management level as well as at the sales force level which has allowed important relationships to develop between reps and physicians. It has also resulted in greater trust in the local management team and allowed less of a centralized management approach. This means that the China business unit does not have to implement the exact same processes as the business unit in India. This flexibility allows the team to be more responsive to its local market.

**Market**

AstraZeneca’s strategy of investing heavily in infrastructure, personnel, and public and private collaborations, has been pivotal in leading to their global
success. However, one could argue the single largest reason for AstraZeneca’s success in China has been their approach to the market. Unlike many of the other multinational pharmaceutical companies in China, AstraZeneca has not focused the majority of its sales force efforts on the largest (tier one) cities. Rather, AstraZeneca has decided to focus on the smaller second tier cities. In 2003, a majority of the hospital market could be targeted by focusing on just a few key cities in China. However, as affluence has spread, so has the need to focus beyond these cities. AstraZeneca has long since established itself in these smaller cities and has been able to capitalize on the increasing demand for better health care. By taking this approach ahead of the competition, AstraZeneca has been able to create strong relationships with the local hospitals and doctors which in China are extremely important.

In order to execute this strategy of segmenting these different cities, AstraZeneca has needed a clearer understanding of where to focus. Through market research and forecasting AstraZeneca was able to identify approximately 200 cities out of 700 potential cities to focus on. Their analytics showed them which cities were likely to experience growth more rapidly, which hospitals and which doctors were most likely to be responsive.

Another important element to AstraZeneca’s marketing efforts has been its segmentation of the patient population. Because China is so large and diverse, different regions of the country experience different rates of disease. AstraZeneca has leveraged that understanding when promoting drugs. They focus their sale force efforts on drugs that are most needed in that region or province rather than just promoting all of the products available.

These segmentation strategies have been important because they have allowed AstraZeneca to focus on each province essentially as its own country. This is important in two ways. First, the lack of well-established national distribution networks makes it difficult to move products from one province to another. Second, it has allowed AstraZeneca to work closely with the local jurisdictions which is important when considering patent infringement or other legal activities.

The impact of AstraZeneca’s segmentation strategy has been significant and has led to increased revenue from China. In fact, the company has been able to take provinces that were very low performers and turn them into revenue-generating areas. One of the drawbacks to this strategy has required that AstraZeneca establish 23 branch/regional offices around China and the need to create a much larger sales force.

**Products**

Similar to its competitors when AstraZeneca first initiated sales in China it focused on launching its mature or off-patent products. This strategy has been successful in China because both patients and clinicians tend to be loyal to products and brands. Therefore, once a product has become established even if there may be a cheaper generic alternative available, doctors and patients are more likely to remain loyal and continue to use the original branded product. AstraZeneca more recently has launched several of its on-patent products that are vital to their long-term success. In addition, they are looking for opportunities to acquire rights to branded generic products for the Chinese market.

**Reimbursement**

Another important element in AstraZeneca’s success has been the drive to get products listed on the National Essential Drug List. Recently, four of AstraZeneca’s drugs were added to the list which will provide significantly greater access to patients. This is partly because AstraZeneca has taken a China specific approach to promoting the same products differently to different prescribing doctors.

**CONCLUSION**

Success in China depends on a company’s ability to manage the challenges faced in this unique market and to capitalize on the opportunities that it presents. AstraZeneca has taken a multi-pronged strategy in breaking the code of China’s pharmaceutical market. In an effort to understand the market and gain experience, AstraZeneca has established a collaborative partnership with the local and national governments as well as local business. Over time, they have expanded their partnering strategy to include academic institutions while creating a mutually beneficial outcome for both the Chinese government and AstraZeneca. The company also focused on its new employees. AstraZeneca recognized early in globalization process that success was going to be highly dependent on its ability to execute its strategies in this complex environment and having high quality, committed employees could have a significant impact.

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*corresponding author
The U.S. – China Corporate Alliances: A Digest of Current Research and Research Propositions

Shuai Ping
Shanghai University
20 Chengzhong Rd
JiaDing District
Shanghai, China 201800
86-21-6998-0028
sharonshuai@gmail.com

Alexei V. Matveev
Department of Business
City University of New York
2800 Victory Blvd.
Staten Island, NY 10314
(718) 982-2955
alexei.matveev@csi.cuny.edu

ABSTRACT
While the issues of the U.S. – China corporate alliances have been investigated extensively, the relationship between providers and suppliers remains primarily price-oriented. In addition, the true causes and internal issues of supplier management in China are not transparent for the U.S. partners and for the growing domestic corporate alliances market in China. This paper will offer a synopsis of current research on U.S. – China corporate alliances and outline critical research propositions on supplier management aimed at better understanding and optimization of international and domestic supplier management.

Keywords
Corporate alliances, the United States, China

1 INTRODUCTION
The corporate alliances or the inter-organizational voluntary cooperative arrangements are formed to minimize business costs and reduce risks (Gulati & Singh, 1998). While contract alliances are suited for repetitive market transactions, flexible contracts, and cooperative relations, property rights alliance are best for joint business development, cross-shareholdings, and new joint ventures. The corporate alliance spectrum demonstrates a changing alliance structure, ranging from the repetitive market transactions (contract alliances) to new joint ventures (property rights alliances) (Figure 1). Thus, the property rights issues diminish to the left of the alliance spectrum (general market transaction) and intensify to the right of the alliance spectrum (business entity). The alliance-type behavior of corporations at the two ends of the alliance spectrum is minimal or non-existing.

Figure 1.

2 RESEARCH ON U.S.-CHINA CORPORATE ALLIANCES
In the past two decades, corporate alliance research has focused on supplier alliance management and successful examples of U.S. – Japan alliances (Bensaou, 1999; Dyer & Ouchi, 1993; Helper & Sako, 1995; Zhang, 2001). Some critical findings of this research are the reduction of the number of suppliers by the U.S. companies by 50 percent during this period, maintaining positive communication, extending contract duration, and joint problem solving (Asmus & Griffin, 1993; Helper & Sako, 1995).

While the supply chain management in the U.S. has increasingly evolved into different levels of supplier alliances, many problems still do exist, in particular in the issues of trust between alliance partners. The issues of trust, personnel management, and face-to-face contact with business partners play very important role in supplier management (Dyer & Ouchi, 1993).

Although, recent economic and cultural development in China elevated interest about the GuanXi and supplier management in China, the studies on the Chinese supply chain management still remain limited. Some demanding research questions of the long-term supplier management include the direction of origin for international alliances (the U.S. vs. China), the economic, cultural and institutional differences between the U.S. and China, and cross-cultural learning and knowledge transfer between the U.S. and China on corporate alliances. As the corporate alliance level in China is lower than in the U.S. primarily because of lower knowledge, trust, controllability, and different communication practices, a bi-directional learning on these issues will be beneficial to both the U.S. and Chinese corporations.

3 RESEARCH PROPOSITIONS
Trust and control are two basic elements that influence confidence level in business alliances (Gulati & Singh, 1998). While social trust deals with legislation, credit management, and ethical guidelines, private trust builds on personal characteristics and develops gradually.
Past research shows that Chinese enterprises exhibit lower social trust and higher personal trust relatively to the United States because of cultural differences and institutional constraints (Fukuyama, 1995, 2001; Huang, 2009).

3.1 Trust

Trust between the upstream and downstream firms will promote the process of business alliances formation. Higher private trust and less developed institutional and business environments in China stimulate shadow relationships and personal GuanXi, which is more uncertain than business GuanXi (Xin, 1996)

3.2 Communication

Communication between corporations and their suppliers will strengthen along the alliance spectrum moving from general market transaction to the business entity. In addition to product exchanges, a critical factor of a strong supply chain is information exchange between corporations and suppliers.

Since the supply chain information is transmitted from consumers to the downstream firms and then to the suppliers, higher number of information terminals demands faster speed and rigorous requirements for communication between corporations and suppliers (Asmus & Griffin, 1993). An observable distance exists in information transmission between corporations and suppliers in the U.S. and Chinese alliances.

3.3 Knowledge

In upstream and downstream enterprises content knowledge of intermediate products will promote the inter-alliance relationship along the alliance spectrum moving from general market transaction to the business entity. The value of corporate alliance is determined by content knowledge of intermediate products (Grant & Baden-Fuller, 1995). While significant difference in content knowledge exists in U.S. – Sino corporate alliances, content knowledge is significantly lower in Chinese corporations.

3.4 Inter-corporate interdependence

The interdependence between corporations and suppliers stimulates the process of corporate alliance. Enterprises and the knowledge content of intermediate products will also affect the interdependence of both parties to the transaction. The interdependence between corporations is the inner-factor to decide the corporation alliance governance structure. Namely, the more difficulty the both parties find suitable alternatives, the higher the interdependence is; the lower the inter-alternative is, the stronger the demand of alliance is.

3.5 Level of cooperation

Compared to the U.S. companies, the cooperation level between enterprises and suppliers in China is concentrated on the lower stages of the alliance or the market transaction stage on the alliance spectrum. As a result, the Chinese corporate alliances are usually non-equity alliances.

4 CONCLUSION

The discussion will target how issues of trust, communication, content knowledge, inter-corporate interdependence, and level of cooperation affect the value and strength of corporate alliances. For example, as content knowledge of Chinese corporations is generally low, the business is focused more on product imitation rather than on business innovation.

Coupled with the characteristics of a buyer's market, the GuanXi in China maintains the general market transaction position on the alliance spectrum. This paper and presentation will further address the above propositions and outline some realized benefits of bi-directional learning and further research.

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Continued Business Operation During a Disaster and the Removal Of Information Security

Thomas Virgona, PhD
Department of Nursing
Adelphi University
1 South Street
Garden City, New York 11530
516-877-4516
tvirgona@adelphi.edu

ABSTRACT
The expected outcome of this research will be a better understanding of issues facing information security during such disasters. As Gray and Altmann wrote in 2001, information in the world is useful only if we can find it when we need it. Today, the focus of many governments has shifted to terrorism. Modern disasters are complex enough to require the utmost flexibility in their management.

While the financial services industry as a whole made great strides in recovery and continuity planning regarding data and data systems, the attack on September 11, 2001 revealed inconsistency in the level of disaster recovery preparedness at individual companies. Business continuity and disaster recovery have become a higher priority for financial services firms in the years since September 11, 2001. Terrorist threats pushed up global institutions' projected IT spending on operational recovery. The research has indicated that one of the major shortcomings in the Disaster Recovery (DR) or Continuity of Business (COB) design was the reliance on humans to ensure that company's information infrastructure was restored to an operational status. Subsequently, when people could not be located, or in some cases, entire DR/COB departments were killed, restoration of these services failed. This study has demonstrated a strong link between people and the recovery of technology. Disaster recovery plans, at best, can be described as inadequate. Specifically, documentation on September 11 was either ignored or useless. As a result, staff required to restore production application relied heavily on their personal relationships with business contacts, DBAs and management.

Information security is critical in large firms and is often very cumbersome. The reality is that during a crisis, “brut-force” measures require some policies to be circumvented, such as 48 hours between a change approval and the implementation, no direct database updates via SQL tools and password management. All agreed that information policies can’t be stopped during a crisis, but they need to be relaxed. Due to the human elements and personal relationships, firms need to realize that information system will be changes in an un-controlled manner during a disaster. How these changes conflict with existing information security and change control policies presents an issue for firms.

Keywords
September 11 2001, Information Security, Disaster Recovery

INTRODUCTION
The underlying issue of this research is that on September 11, 2001, the terrorist attacks that struck downtown Manhattan rendered Wall Street area financial services unable to provide critical information services. This research will investigate the role information security played during the recovery efforts following the tragic events following that day. It is important to remember that many of the system failures and outages that occurred on that fateful day are not public knowledge and are treated as confidential information.

Social scientists generally agree on what disasters are and how they are distinguished from other social phenomena (Kreps, and Kroll-Smith/Gunter in Quarantelli 1998). For this study of September 11, 2001, the Porfiriev definition is sufficient (in Quarantelli 1998). A disaster is a condition destabilizing the social system that manifests itself in a malfunctioning or disruption of connections and communications of a social unit, partial or total destruction, making it necessary to take extraordinary or emergency countermeasures to reestablish stability (Kreps, and Kroll-Smith/Gunter in Quarantelli 1998).

One of the most visible disruptions was that the New York Stock Exchange (NYSE) ceased all operations for four business days. Although not a direct target of the attack, the dependency on other financial systems (e.g., inter-bank payments and the Federal Reserve Bank) made normal business operations impossible. However, at the core of the issue was the disruption of inter-bank payment systems (Lacker 2003). On that Wednesday (9/12/2001), Richard A. Grasso, chairman of the New York Stock Exchange, vowed that U.S. stock trading would resume no
later than Monday (9/17/2001) (Blustein and Day 2001). The decision to shut down the NYSE and when to return to operation was a difficult one, fraught with risk. There was a risk of bringing the markets back too soon if too few participants were functioning again. Also poor liquidity could hamper trading and exacerbate the expected price declines. Moreover, physical conditions in Lower Manhattan were unpleasant and potentially harmful. Conversely, the symbolic value of a return to normalcy was very attractive.

From an economic and operational perspective, the banking system was in relatively healthy condition on September 11, 2001. From a geographical perspective, it was a true disaster. The facilities of the New York Board of Trade in Four World Trade Center were destroyed. Several firms, including the Federal Reserve Bank itself, were forced to relocate to disaster recovery sites. Regional stock exchanges, the NASDAQ Stock Market, the Chicago Board of Trade, the Bond Market Association and the Chicago Mercantile Exchange all closed as well. European markets remained officially open but from a “human” perspective, traders found it difficult to do much business. Connections to the Bank of New York (BoNY) were lost for part of the week and as a result the bank did not know what securities and cash it had received, and it was unable to transmit settlement instructions (Costa 2001).

On the Federal Reserve’s Fedwire Funds Transfer System, payments are initiated by the sender of funds, but the major banks’ inability to send funds transfer payment instructions following the September 11, 2001 attacks meant funds accumulated in that bank’s account. At one point during the week after September 11, BoNY publicly reported to be overdue on $100 billion in payments (Beckett and Sapsford 2001). The Moscow International Currency Exchange (MICEX), which used BoNY as a business partner, suspended trading due to BoNY’s problems.

The events of September 11, 2001 literally struck at the heart of America’s financial information center. What impact will September 11, 2001 have on Information Systems and Technology, specifically disaster recovery planning and the role of information security? Scholars believe these “human” factors present one of the most unpredictable areas for disaster recovery researchers (Sikich 2003). How will humans react to unfolding events? Sikich also puts forth the definition of human factors in the context of business continuity (Sikich 2003). Information security questions that are now relevant include:

- How well do you know your workforce?
- What is the extent of background checks that are part of the screening process?
- Can someone, either overtly, clandestinely, or unwittingly, be compromised into creating an exposure that puts the firm at risk?
- How can you implement checks and balances so that critical information is not subject to compromise?

Control of information has always been dictated by technology. Frederick Ferre stated that the definition of technology is the practical implementations of intelligence (Ferre 1988). There is a tendency to forget that sermons used to couple news, real estate transactions and other mundane matters (Eisenstein 1979). The Sunday paper has replaced church going as an information source. Until Gutenberg, the church had censured ideas more than texts. In the big cities, newspapers succeeded in reaching the general population, whose cultural and educational level was low (Martin 1994). The printing press was such a major technological advancement that Sir Francis Bacon said it was one of the three inventions (printing, gunpowder, and the compass) that changed the state of the whole world (Eisenstein 1979).

The expected outcome of this research will be a better understanding of issues facing information security during such disasters. As Gray and Altmann wrote in 2001, information in the world is useful only if we can find it when we need it.

Today, the focus of many governments has shifted to terrorism. Modern disasters are complex enough to require the utmost flexibility in their management. From the 1970s onwards, disaster research stressed non-military models of civil protection, such as the incident command system (ICS). Civil protection later emerged as demand increased under the duress of more serious, civilian disasters such as earthquakes, hurricanes, floods, and transportation crashes (Blanchard 1984). The ICS is different from the traditional command-and-control model derived from the direction of troops during combat, as it relies on information sharing and collaboration among task forces (Irwin, 1989). Decision making is a major problem in disasters. Other areas for concern during disasters include bureaucratic politics/procedures, groupthink and misperception (McEntire 2004).

From a pragmatic point of view, the traditional System Development Life Cycle is one of the most critical methodologies in information technology. Disaster recovery is dependent on the SDLC for ensuring disaster recovery planning is integrated throughout the technology development process: the requirements for the system’s recovery are defined in the analysis phase, the system is designed to provide service during a disaster within the specified timeframes and testing the recovery capabilities is part of the creation of the project, thus ensuring continued use during a disaster.

Despite the evolution and advances in information systems and technology, it is an almost universal finding in studies
investigating human information behavior that people choose other people as their preferred source of information (Johnson 2004). Studies of academic researchers in both the sciences and the humanities have revealed the importance of consulting with colleagues at different stages of their research (Johnson 2004). Professionals, such as engineers, nurses, physicians and dentists rely on co-workers and knowledgeable colleagues in their search for work-related information (Leckie, et al., 1996). People are also among the most important sources consulted by chief executive officers during their environmental scanning (Choo 1993). Studies of ordinary citizens' preferred sources of information also confirm the importance of personal contacts in information seeking behavior (Warner 1993). The poor, as well, prefer people over other sources of information (Agada 1999). The explanation for the use of people as information sources has often been that they are “typically easier and more readily accessible than the most authoritative printed sources” (Case 2002). Immigrants are generally perceived to be information poor, meaning they face major challenges with finding and using greatly needed everyday information (Agada 1999). Research findings suggest that personal networks were used more readily than any other type of information source (Fisher 2004). The ability of these populations to establish themselves independently is limited and often restricted by barriers of language and influence. There is a negative spiral effect for these populations as they work to improve their socio-economic situation while being unable to operate outside of the community information system they have established for themselves (Fisher 2004).

Humans have deployed technology to combat disaster since the beginning of recorded history. The cradle of Western civilization, the Tigris-Euphrates river valley, was settled and urbanized through an extensive flood control infrastructure that stabilized the flow of water to fields while also protecting fixed settlements (Moss and Townsend 2006). Over the past century, the role of technology has expanded from just mitigating the impacts of natural disaster to producing disaster itself. The devastating effects of aerial bombardment of cities during 20th century may well have killed more people than all natural disasters in history combined. Chernobyl (1986) and Bhopal (1984) demonstrate the potential for chemical and nuclear industrial accidents to cause major disasters (Moss and Townsend 2006).

A disaster is an unexpected occurrence inflicting widespread destruction and distress and having long-term adverse effects on society. An emergency is a situation or occurrence of a serious nature, developing suddenly and unexpectedly, and demanding immediate action (power failure and minor flooding) (Hunter 1997). The events of September 11, 2001 can be defined as both an emergency and a disaster.

Following the 1993 bombing of the World Trade Center (WTC), terrorism and security experts agreed that the U.S. financial services industry was a prime target for future terrorist attacks. Experts warned that the financial industry’s disaster recovery plans were out-of-date, designed primarily to withstand natural disasters, and were no match for the destructive power of an intentional terrorist attack (Beacham and McManus 2004). Sikich believes one underlying vulnerability issue for organizations continues to be the assumption that threat, hazard, risk, and consequence-assessment are one and the same. These elements are intertwined but are distinct and different (Sikich 2003).

While the tragic events of September 11, 2001 confirmed experts’ foreboding predictions of attacks on the U.S. financial system, was the financial services industry inadequately prepared to recover from such an attack? As the financial services sector, and the securities industry in particular, were heavily concentrated within the World Trade Center towers, several such firms have emerged as those “hardest hit” by the September 11, 2001 attack (Cantor Fitzgerald; Keefe, Bruyette & Woods; and Sandler O’Neill & Partners). While the financial services industry as a whole made great strides in recovery and continuity planning regarding data and data systems, the attack on September 11, 2001 revealed inconsistency in the level of disaster recovery preparedness at individual companies. While Cantor Fitzgerald had duplicate systems in place so that its data system never went down, smaller companies, like Sandler O’Neill were less prepared, and had to rebuild their IT system from scratch. What the attack on September 11, 2001 made tragically apparent, however, was the industry’s grossly inadequate preparation for the tremendous loss of human capital. While existing recovery plans assumed the safety of company personnel, on September 11, 2001 several companies literally lost their entire disaster recovery team. The bottom line is that the attack on the World Trade Center exposed both the financial services industry’s reliance on human capital and its inadequate preparation to recover from such a loss (Beacham and McManus 2004). Johnston and Nedelescu (2006) wrote that the economic consequences can be largely broken down into short-term direct effects; medium-term confidence effects and longer-term productivity effects. The direct economic costs of terrorism, including the destruction of life and property, responses to the emergency, restoration of the systems and the infrastructure affected, and the provision of temporary living assistance, are in the short run. The medium-term impact is the indirect costs to affect the economy by undermining consumer and investor confidence. Over the longer term, there is a question of whether the attacks can have a negative impact on productivity by raising the costs of transactions through increased security measures, higher insurance premiums, and the increased costs of financial and other counterterrorism regulations.
Connell (2001) discussed the lessons learned from the 1993 World Trade Center terrorist attacks and the impact on the September 11, 2001 event. Panic was not widely observed during the evacuation of the Twin Towers, as the evacuation experiences of many of the workers in the buildings in the 1993 attack may have had an impact on their decision-making process during the September 11 disaster. Improvements made following the 1993 World Trade Center attack contributed to a more successful evacuation. These improvements included the addition of battery-powered lights and glow-in-the-dark paint in the stairwells, the appointment of floor marshals to guide the evacuation process, and redesigned emergency plans (Connell 2001). Many survivors cited the improved conditions in the stairwells during the September 11 evacuation. As one survivor observed, despite the magnitude of the recent terrorist attacks on the WTC, the evacuation process did not seem as dire as the evacuation following the 1993 attack due to the improvements in ventilation and lighting. Many organizations located within the WTC significantly improved their evacuation plans following the 1993 terrorist bombing. Individuals were more likely to decide to evacuate the premises if they experienced visual or sensory clues that suggested the dangerous nature of the event. Examples of visual or sensory clues that were cited by survivors in their accounts included smoke, fire, water from the sprinkler systems, debris, structural failure, shattered glass, and the impact of the plane collision (Connell 2001).

Over the past two decades, information technology has become increasingly integrated into the day-to-day operations of most financial service organizations. A common phrase today is “ubiquitous” computing. The dependability and continuity of information infrastructures can be a determining factor in how well an organization will be able to respond to a catastrophic event. Although many lessons can be identified, they emphasize three general principles: the establishment and practice of comprehensive continuity and recovery plans, the decentralization of operations, and the development of system redundancies to eliminate single points of weakness (Seifert 2002).

The events of September 11, 2001 also highlighted an increased need for information technology security not only for New York/Washington business end federal executives, but for other state government executives as well. This increased urgency and heightened awareness left many of Virginia's government executives asking the question, “How secure and prepared is the Commonwealth to deal with information security attacks” (Redwine 2002). Even more alarming is that in 1993, the World Trade was the primary target for another terrorist attack. Yet, many organizations were still unprepared.

Business continuity and disaster recovery have been become a higher priority for financial services firms in the years since September 11, 2001. Terrorist threats pushed-up global institutions' projected IT spending on operational recovery. The industry closed operational gaps since the destruction of September 11, 2001. These deficiencies included serious weaknesses in business continuity plans, including the need for geographic dispersion of offices, employees and business processes, as well as redundancy of supporting infrastructure, like telecommunications networks and power supplies. Money has been spent on backup systems, storage units, and remote-mirroring technologies. Many have set up remote-workforce operational-resilience plans to ensure that work can be done at satellite offices and other sites (Krebsbach 2004). Oz researched firms directly impacted by the terrorist attacks (Oz 2003). The impact of not having a disaster recovery plan is clear: two of the four companies that did not have a business continuity plan have not regained their business potential.

Research
This research proposes to examine the impact on information systems security on the disaster recovery effort September 11, 2001
• What happened to the systems that day and how did information systems technologists react?
• What changes to the SDLC (specifically humans role in disaster recovery design planning have been implemented since September 11, 2001?
• What lessons were learned?

The research has indicated that one of the major shortcomings in the Disaster Recovery (DR) or Continuity of Business (COB) design was the reliance on humans to ensure that company’s information infrastructure was restored to an operational status. Subsequently, when people could not be located, or in some cases, entire DR/COB departments were killed, restoration of these services failed. Much of the information about the extent of the disaster is still not in the public domain. Oz, in a previous study, found four major reasons for this situation (Oz 2003):
• The organization has a policy not to participate in any research survey.
• The organization considers the data confidential despite confidentiality guarantees.
• There is a lack of time to fill out the questionnaire.
• The data are not available.

The purpose of this research is to identify if there was a failure to follow information security procedures that day. Kenneth Hewitt has studied disasters in recent years and has found the most important insights come from the workers on the ground (Quarantelli 1998). Specifically, the most knowledge comes from those on the front-line of a disaster reflecting upon field conditions. Those who speak the language and have some depth of knowledge of the culture provide essential insight (Quarantelli 1998). The
methodological challenge of disaster recovery studies is to pay attention not just to the local conditions, but to the voices of the persons involved. Robert Stallings described the challenge of researching disasters: there are many of empirical studies, but less certainty as to what they add up to (Quarantelli 1998). This research intends to explore the September 11, 2001 disaster recovery events on Wall Street and identify any patterns observed.

Research methods are varied and have inherent benefits and risks. For this research, non-experimental design have been used. Specifically, qualitative analysis techniques were used – exploratory and descriptive. The research goal was to uncover what we have learned from the events of September 11, 2001.

For this reason,
• A focus group data gathering technique has been selected.
• The second qualitative technique used for this research will be unstructured interviews.
• The third qualitative technique that will be utilized is observation. The researcher will observe an actual disaster recovery test conducted by Wall Street financial firms.
• The fourth and final qualitative technique that will be utilized for this dissertation is artifact analysis. Disaster recovery plans from the year 2000 will be compared to current disaster recovery plans.

One of the main purposes of this study was to explore empirical data that would help in understanding the information security challenges during a disaster recovery. The present study investigates below the general planning level and identifies the link between technology recovery and the human action required to achieve that task. Though exploratory and descriptive in nature, this research can be used a starting point for further technology studies that focus on providing information services during a disaster.

This study also identifies where knowledge should be captured and is not. People tend to accumulate information and knowledge informally and may not be aware of its value. The data described in this study also suggests modifications to the initial research model.

The primary analysis performed was term occurrence, with the goal of producing a pattern or common trend. Correlation analysis is not applicable in this case. Results emanated from the following analysis (Schutt 1999):
• Reviewing research notes to identify important statements and possible ways of coding the data.
• Determining how many people made a particular type of comments?
• Determining if and how often did the social interaction lead to arguments/disagreements?

Interviews, a focus group, artifact analysis and an observation of a disaster recovery test all indicated the same two ‘reliance’ themes: disaster recovery documentation is not relied upon during a disaster and the recovery of information systems is heavily reliant on humans.

Results

During the analysis of the interviews and focus groups, a number of consistent themes emerged. Undoubtedly, the most common, and passionate statements made during the research involved the immediate desire to check on the safety of family members once the attacks started. These observations signal the importance of recognizing the primacy of relationships people have with their families (Paton 1997). The focus on family has therefore created communication and coordination difficulties with public officials and other organizations in certain situations (Bolin and Borton, 1986).

There was universal agreement across all research participants (the ten focus group participants and 6 interviews) that during September 11, 2001, disaster recovery plans were not used. The rationale was varied, including availability of the plans, lack of confidence in the plan themselves and the “ridiculous idea” of reading a plan while building are falling. The research has shown that organizations often create elaborate emergency operations plans, but they fail to develop the capability to implement these plans (Auf Der Heide 1989). Disaster plans are important, but they are not enough by themselves to assure preparedness. They can be an illusion of preparedness if they are not tied to training programs, not acceptable to the intended users, not tied to the necessary staff or other resources, or not based on valid assumptions. This illusion is called the “paper plan syndrome” (Auf der Heide, 1989). The terms “lack of confidence” and “incomplete” were the term most commonly used by every interviewee and member of the focus group as a rationale of not using the documented DR plans. Those preparing for disasters should therefore ensure that their plans are realistic and achievable in practice. The most memorable comment was: With a building falling down, who will locate or print a 300 page document and start reading? Of course, proper management of the disaster recovery plan will ensure all staff are aware of the plans before a disaster strikes.

This study has demonstrated a strong link between people and the recovery of technology. Disaster recovery plans, at best, can be described as inadequate. Specifically, documentation on September 11 was either ignored or useless. As a result, staff required to restore production application relied heavily on their personal relationships with business contacts, DBAs and management. The most fundamental question of the day could not be answered: are
we open for business today? This validated the Kasten (2001) study that informally developed teams are more effective than formal teams. This was evident during the disaster recovery test, where the formal plans and assignments in the DR plans were largely ignored, and information and problem solving was performed in the coffee room. Rather than search for the information needed, technologists utilized their personal networks to solve problems. These personal relationships are critical during a crisis and are very informal in nature. During September 11th, 2001 and the days following, those relationships were used for the following:

- Access to production system to update databases (e.g., forcing a business day to close).
- Many people that died on 9/11 played critical roles in firms. Passwords to accounts for resources that died on that day were required for business status updates. Junior staff member were given access to room and data not normally afforded to them, as their managers needed particular sets of data.
- Procedures for software change control (a critical part of controlling information security were largely suspended for approximately one week following September 11th).
- The concept of a business day no longer existed and individual department may be open while other departments in the same firm were closed.

The interviews and focus group provided three recommendations businesses can immediately implement to improve disaster recovery efforts. Also, there was an informal recommendation (also called the “wink/wink idea) related to information security.

One unofficial information security recommendation was agreed upon, but the language was debated, leaving the focus group and interviewees to name this item the “wink wink” recommendation. Information security is critical in large firms and is often very cumbersome. The reality is that during a crisis, “brut-force” measures require some policies to be circumvented, such as 48 hours between a change approval and the implementation, no direct database updates via SQL tools and password management. All agreed that information policies can’t be stopped during a crisis, but they need to be relaxed. Due to the human elements and personal relationships, firms need to realize that information system will be changes in an un-controlled manner during a disaster. How these changes conflict with existing information security and change control policies presents an issue for firms.

Although this study was primarily focused on the events of September 11, 2001, several member of the focus group expressed concern with the growing trend in disaster recovery. The “worst-case” has occurred and it seems that the planning is now geared for an all-out terrorist attack and ignore the medium sized crisis that happen on a weekly basis. The topic was probably raised due to the fact that the focus group was held on a day when torrential rain forces mass transit in New York City to a virtual stop. Many people could not make it to their offices that day, and remote access capabilities (the ability to work from home) for many firms could not handle the volumes. Another example occurred on February 12th and 13th, 2008. New York City experienced an ice, snow and heavy rain event. As a result, many staff left early to avoid commuting problems. A quick discussion with two member of the focus group indicated that the remote access capabilities could not handle the volume that evening. It calls into question how viable is the plan to have entire divisions work from home during a crisis.

One area of great debate in the focus group was the role of government surveillance in information systems. It is what I refer to as: “information management versus Information legislation” debate. The often heated discussion centered on the concept of expanding government surveillance of information systems. The argument for increased surveillance and government oversight was based on the governments needs to be proactive in an ever changing technology world. Terrorists are very familiar with banking and financial rules and have become creative in circumventing the rules to avoid detection. The argument against more legislation, such as the Patriot Act, is that the government already had sufficient information on September 11th that an attack was imminent – the information was simply not managed or communicated properly. It was also interesting to note that the debate did not follow political party affiliations. Make no mistake about this topic; people on both sides of the argument were passionate in their beliefs.

This research demonstrated clear and heavy dependence on human intervention in the recovery of information systems. Many participants used the term “brut force” to describe the Herculean effort it took to re-establish the Wall Street IT infrastructure. I can conclude with little risk of contradiction that the present study highlights the lack of confidence information technology staff shows in disaster recovery planning.

The events on September 11, 2001 also demonstrated the fluid nature of management skills during a crisis. In the days and weeks following September 11, 2001, managers were called upon to perform new and unique tasks. A study of professional emergency managers illustrated the importance of leadership skills and abilities (Drabek 1987). The survey indicates that effective emergency managers are able to motivate others and harness their knowledge and contributions for disaster preparedness. Capable emergency
managers also are able to compromise, mediate and facilitate in difficult situations. Finally, strong emergency managers communicate effectively, are highly organized, and are able to maintain control under stressful situations. Emergency managers will be required to make decisions with incomplete or inaccurate information in a period of changing and possibly hazardous conditions. In addition to the "disaster itself", this research documented that inaccurate information will be disseminated during a crisis, thus compounding an already difficult situation. Previous studies have discovered that information outside of official channels may be lacking or inaccurate (Britton 1989). Sensationalizing, misreporting, or generating rumors about the response and/or how it was managed are prominent stressors in this situation (Patton 2003).

The study presented an intimate view of the complex nature of people during a crisis of enormous magnitude. This research study has demonstrated the continued reliance and dependency on humans to resolve disaster incidents. As the events of September 11, 2001 unfolded, their skills and dedication were critical factors in the recovery of Wall Street firms. Many participants in the research made an incorrect assumption regarding the study, believing that the goal of designing a disaster recovery plan should be absolutely no human interaction, and that information systems should be “self-correcting.” The goal of the research was to define the human aspects of the Wall Street recovery on September 11, 2001, not to eliminate those roles (unrealistic). Quite to the contrary, this research demonstrate clearly that due to the complexity of modern information systems, human intervention will be required for the foreseeable future and needs to be accounted for in the design of information systems. This research should be ongoing. The research should be broadened to study other business units and will provide an opportunity to compare other subcultures and mitigating factors. When information system providers are using “brut-force” to re-establish service, are information security concerns (such as emergency password management) placed on hold to expedite the recovery?

Resources


Applying Postponement Strategy to a Multi-Warehouse Inventory Planning

Jishan Zhu
School of Business
SUNY-Old Westbury
Old Westbury, NY 11568
(516) 876-3488
zhuj@oldwestbury.edu

Yajun Yang
Department of Mathematics
Farmingdale State College
Farmingdale, NY 11735
(631) 420-2466
yajun.yang@farmingdale.edu

ABSTRACT
Consider a firm purchases the materials from overseas and operates multiple warehouses. Each warehouse serves a particular region. When one warehouse runs out the inventory, the firm has the option either to ship the stock-out item from another warehouse or to source the item locally, but with significant costs. The firm does its best to avoid the material shortage at each warehouse. The inventory planning objective is to limit the stock-out risk under 5%. The firm faces long lead time when ordering the materials. One way to improve the inventory planning and reduce the stock-out risk is to delay the decision of destination warehouse in the purchase process. In this paper, we investigate and quantify the benefits of such postponement strategy.

Keywords
Supply chain; Purchase planning; Postponement strategy; business applications.

INTRODUCTION
Postponement is an adaptive supply chain strategy that enables companies to dramatically reduce inventory while improving customer service. It is also known as "delayed differentiation," which delays product differentiation at a point closer to the customer. “Delayed differentiation” allows the company to get more accurate demand forecasts and hence to reduce inventory and improve customer service. In today’s competitive business environment, companies are competing to offer greater product variety and customize to consumer’s needs. One way to meet the challenge is to re-design the product or production process so that the point of differentiation can be delayed as much as possible. Before the point of differentiation, the demand forecast can be made in a higher, more aggregated level. The demand forecast of each individual product are needed only at (or after) the point of differentiation. Since the point of differentiation is closer to the point of sales, the demand forecast can be made more accurate. For example, one fashion company, Benetton, re-designed the dyeing and knitting process (from “dyeing first then knitting” to “knitting first then dyeing”). The simple process change resulted in improved forecasting accuracy improvement, and inventory and product shortage costs reduction (Dipiran 1992). More examples can be found in Hock (2001), Venkatesh and Swaminathan (2001).

There are more successful applications reported involving manufacturing and assembly postponement, meaning that the point of differentiation occurred while the product is in production. Relatively fewer postponement applications are reported in logistical postponement decisions like packaging, labeling, and distribution.

In this paper, we apply the postponement strategy to a multi-warehouse inventory planning and study the benefit of using such strategy. The situation involves purchasing materials, sending the materials to the warehouse, and late satisfying the customer demand. The lead time is relatively large. The point of differentiation is where the decisions have to be made which warehouse the purchased materials should send to. And if the point of differentiation is more close to the end of the lead time, the more accurate forecast (for each warehouse) can be made.

The study is motivated by a work that we were involved recently. We were asked by a local company (refer as “the company” henceforth) to improve its inventory planning. The company imports granite stone slabs (refer as “the material” henceforth) from overseas and has three warehouses in east-coast of the United states, one in New Jersey; one in Georgia; and one in Florida. Each warehouse serves a particular region. If one warehouse runs out the inventory, the firm has the option either to ship the stock-out item from another warehouse or to source the item locally, but with significant costs. The firm would like to minimally use such options. The objective is to limit the stock-out risk under 5% (or, equivalently, keep the order fill rate above 95% without shipping between the warehouses or source locally.)

There are two business characteristics of the company that
are worth mention here. One is the ordering lead time for the material are very long, usually it takes about 3 to 4 months between the company issues the purchase order and the company receives the ordered materials. That’s because the vendor prepares the material only after receiving the order from the company. When the materials are ready to ship, it only takes 2 or 3 weeks to actually ship the material to the U.S. ports. Another business characteristic is that the demand for the material becomes much clear one month in advance. In other words, the demand forecast is much more accurate by the time when the material is ready to ship to U.S. than the time when the company issues the purchase orders (PO). The situation makes using postponement strategy (of delaying the destination port/warehouse in PO) a lot of sense.

We suggested the company to negotiate with the overseas vendor that the company will not specify the destination ports when the purchase orders are issued, the destination port will be given to the vendor late when the material is ready to ship. So, the postponement strategy here is to delay specifying the destination port in the purchase order until the material is ready to ship. By applying this postponement strategy to the purchase process, the company enjoys two benefits. One is that the company can forecast and use the aggregated demand (for all three warehouses) when issuing the purchase order. It is easier to predict the aggregated demand than to predict the demand at each warehouse individually. The other one is that, when the materials are ready to ship, the company can instruct the vendor to better match supply with demand by shipping the right amount to the right warehouse (via right U.S. ports). The strategy works very well with the company and it reduces both the average inventory level and the stock-out risk.

In this paper, we will investigate the postponement strategy of delaying destination warehouse specification in the purchase process and quantify the benefits of using such strategy. The objective of the inventory planning is to limit the stock-out risk is under 5% (or the service level is about 95%).

THE DEMAND

Before making the purchase decision, the firm needs to forecast the demand. The demand is treated as stationary and assumed to be normally distributed. The mean of the distribution equals the forecasted value. The standard deviation can be calculated through historical forecast error.

We use the following notation. There will be two decision points. One is the point when purchase order is issued and the company needs to decide the order quantity. We call this decision point as time “p”. Another decision is when the ordered materials are ready to ship to U.S. ports and the company needs to decide the quantities to be shipped to each port (and, subsequently, each warehouses). We call this point of time as time “r”.

Let

\[ f_i(p), i = 1, 2, 3, \]

is the demand forecast for warehouse \( i \) when the purchase order is issued.

\[ f(p) = f_1(p) + f_2(p) + f_3(p) \]

is the aggregated demand forecast when PO is issued.

\[ f_i(r), i = 1, 2, 3, \]

is the demand forecast for warehouse \( i \) when the material is ready to ship to U.S. ports.

\[ f(r) = f_1(r) + f_2(r) + f_3(r) \]

is the aggregated demand forecast when materials are ready to ship.

Additional notations are:

\[ e_i(p), i = 1, 2, 3, \]

represents the forecast error of \( f_i(p) \),

\[ e(p) \]

represents the forecast error of \( f(p) \), so

\[ e(p) = e_1(p) + e_2(p) + e_3(p) \]

\[ e_i(r), i = 1, 2, 3, \]

represents the forecast error of \( f_i(r) \).

\[ e(r) \]

represents the forecast error of \( f(r) \), so

\[ e(r) = e_1(r) + e_2(r) + e_3(r) \]

A general assumption is that \( f(r) \) is more accurate than \( f_i(p) \) in predicting the actual demand. To measure the forecast accuracy, we use the standard deviation of the forecast error. Let \( \sigma(p), i = 1, 2, 3, \) represents the standard deviation of \( e(p) \), then using basic statistics we know that

\[ \sigma(p) = \sqrt{\sigma_1(p)^2 + \sigma_2(p)^2 + \sigma_3(p)^2}, \]

is the standard deviation of \( e(p) \). Also, let \( \sigma(r), i = 1, 2, 3, \) represents the standard deviation of \( e_i(r) \).

The accuracy the forecasts (or the standard deviation of the forecast error) can be obtained by tracking the history data (demand forecast vs. actual demands). We assume that

\[ \sigma(r) < \sigma(p), i = 1, 2, 3. \]

More specifically, we assume

\[ \sigma_i(r) = \alpha \times \sigma_i(p), i = 1, 2, 3, \text{ where } 0 < \alpha < 1. \]

We further assume that the demands at three warehouses are stationary and all follow normal distribution. We use the notation, \( d_i, i = 1, 2, 3, \) as the demand at three warehouses. So at time “p” we treat the demands, \( d_i, i = 1, 2, 3, \) are normally distributed with mean equals \( f_i(p) \) and standard deviation equals \( \sigma_i(p) \).
THE ORDER QUANTITY

If the objective is to limit the stock out risk under 5% (i.e., to keep the service level above 95%), then the order quantity, \( Q \), must satisfy that the probability that the demand is more than the order quantity equals 95%.

Assuming the demand being normally distributed makes the order quantity calculation fairly simple. In practice, we helped the company to plan the inventory using Microsoft Excel spreadsheet. Using the following Microsoft Excel formula (see Levine at. al., 2008), we can easily calculate the ordering quantity \( Q \):

\[
Q = NORMINV(prob, \mu, s),
\]

where "prob" is the probability not being stock out (i.e., the service level); "\( \mu \)" is the mean of the demand forecast; and "\( s \)" is the standard deviation of the demand forecast error. The standard deviation of the demand forecast error can be obtained using historical data.

To make the ordering and inventory planning simple and practical, the company adapts the following procedure. At the time the purchase order is issued, company will order:

\[
Q = NORMINV(0.95, f(p), \sigma(p)).
\]

When the materials ordered are ready to ship, the company will direct the overseas vendor to ship

\[
Q_i = NORMINV(0.95, f(r), \sigma(r)), \quad i = 1, 2, 3,
\]

to the three warehouses respectively. In practice, any excess order amounts (i.e., \( Q > Q_1 + Q_2 + Q_3 \)) or order shortage (i.e., \( Q < Q_1 + Q_2 + Q_3 \)) will be proportionally spread to three warehouses.

ANALYSIS USING AN SIMPLE EXAMPLE

Suppose the company has estimated, when the purchase order is issued, that the demand at three warehouses are normally distributed with a mean of 1000, 800, and 1300, respectively. Historically, forecast errors have a standard deviation of 500, 400, and 650, respectively. The standard deviation of the forecast error can be approximated by tracing the historical demand forecast data against the actual demand. The company’s inventory planning calls for no more than 5% chance of being stock out.

So, in this case, the aggregated demand forecast is 3100 (=1000 + 800 + 1300) and standard deviation of aggregated forecast error is 912 (=\( \sqrt{500^2 + 400^2 + 650^2} \)).

In contrast, if the company plans inventory individually at each warehouse, then the ordering quantities for three warehouses are:

\[
\begin{align*}
1822 &= NORMINV(0.95, 1000, 500); \\
1458 &= NORMINV(0.95, 800, 400); \quad \text{and} \\
2369 &= NORMINV(0.95, 1300, 650),
\end{align*}
\]

respectively. The company has to order total of 5650 (=1822 + 1458 + 2369) units.

Using postponement strategy, company will order according to the aggregated demand forecast when purchase order is issued. The ordering quantity is

\[
4601 = NORMINV(0.95, 3100, 912),
\]

That is 1049 (=5650 – 4601) less than the ordering amount with no postponement strategy. It translates into almost ordering 20% less while maintaining the same level of service (i.e., not being stock out.) If company does 10 million businesses a year, inventory holding cost alone can save company 2 million annually by simply applying the postponement strategy.

Further assume that the new forecast, the one produced when the material is ready to ship, cuts the standard deviation of the forecast error by half. By the time the material is ready to ship, the company updates the demand forecast at three warehouses. Suppose that the new forecast estimates raises the mean of demand at three warehouses by 5% to 1050, 840, 1365, respectively. And Using the same Excel function, we can calculate that three warehouses need

\[
\begin{align*}
1461 &= NORMINV(0.95, 1050, 250); \\
1169 &= NORMINV(0.95, 840, 200); \quad \text{and} \\
1900 &= NORMINV(0.95, 1365, 325),
\end{align*}
\]

respectively, in order to keep the stock out risk lower than 5%. The total material needed is 4503 (=1461 + 1169 + 1900), which is less than what company has ordered. In practice, the excess part of the ordering quantity,

\[
98 = 4601 – 4503,
\]

can be evenly added to the three warehouses delivery, further cut down the stock out risk.

However, suppose that the new forecast raises the mean of demand at three warehouses by 10% to 1100, 880, and
The company needs to ship 1511, 1209, and 1965 units to three warehouses, in order to limit the stock out risk under 5%. That is total of 4685 units, which is 182 more than the quantity being ordered when purchase order is issued. In such scenario, the company has no choice but to even the shortage among three warehouses. The end result is that the company may or may not have the stock out depending on the real demand.

**CONCLUSION**

Stemming from a real case, we discussed the possibility of applying a postponement strategy to a multi-warehouse inventory planning. The postponement strategy is to delay the decision of destination warehouse until the material is ready to ship. There are two folds of benefits of do so. First, the strategy allows the company to use aggregated demand forecast, which can reduce the ordering quantity significantly. Second, if the error of updated forecast has smaller standard deviation, it will help shipping right amount material to right warehouse. It can either further reduces the risk of being stock out or allow the company to lower the ordering quantity further. For the illustration purpose, we show the analysis through a simple example, rather than overwhelmed by the mathematical proof. Also, calculations using Microsoft Excel are demonstrated, which can be very easy to implement in practice.

This paper is to target the practitioners and managers. We avoid using tedious mathematical modeling and manipulations. Intuitively, the benefit of applying such postponement strategy depends on the forecast accuracy improvement. Basic assumption is that

$$\sigma_i(r) = \alpha_i \times \sigma_i(p), \text{ where } 0 < \alpha_i < 1.$$

The smaller $\alpha_i$ is, the more benefits would be. If we know the exact demands are when the materials are ready to ship, i.e., if all $\alpha_i$ are equal to zero, we can easily calculate the inventory reduction as

$$-\sum_{i=1}^{3} \text{NORMINV}(0.95, f(p), \sigma(p)) - \sum_{i=1}^{3} \text{NORMINV}(0.95, f_i(p), \sigma_i(p))$$

One future study we planned is to develop a simulation tool to study and quantify the relationship between forecast improvement (i.e., the value of $\alpha_i$), and the inventory reduction.

**REFERENCES**