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HISTORY AND PURPOSE OF NABET

The Northeastern Association of Business, Economics and Technology is in its thirty-eighth year of existence. It was formerly known as APUBEF, the Association of Pennsylvania University Business and Economics Faculty. It was founded by a group of economics and business professors from the fourteen state universities comprising the Pennsylvania System of Higher Education. The goal was to provide a platform for sharing and encouraging scholarly work among the business faculty of the fourteen state universities. As a result of their efforts, the organization has sponsored an academic conference each year for the past 38 years.

The fundamental goal of NABET/APUBEF has been to benefit the business faculty of the colleges/universities in Pennsylvania and surrounding states. Since 2006 NABET has been regional in scope. At the 38th Annual Meeting, the scholarly work of authors from nine states and the countries of India and Norway representing 57 colleges and universities we re presented.

The original founders also established a referred journal, The Northeastern Journal of Business, Economics and Technology (formerly the Pennsylvania Journal of Business and Economics). The Journal applies a double blind review process and is listed in Cabell's Directory. It is published at least once each year, and has a devoted editorial staff supported by an excellent corps of reviewers.

At NABET, we encourage conference presenters to complete their papers and submit them for publication in the Peer-Reviewed Proceedings. Of the 91 papers/workshops/discussion panels presented at the 38th Annual Meeting, the following pages contain those pape rs that were completed by the authors and submitted to the Proceedings editors. Each paper has gone through a thorough review/edit process. *The Official Conference Program of the 38th Annual Meeting including the abstracts of each paper that was presented at the conference is also included.*

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SMALL BUSINESS INCOME REPORTING POST HOUSING AND ECONOMIC RECOVERY ACT: A TOOL TO IMPROVE TAX COMPLIANCE AND REDUCE THE TAX GAP

Ahmed Abdelhalim, LaGuardia Community College

ABSTRACT

The 2008 Housing and Economic Recovery Act provided a provision that require banks and credit card merchants to report payments to the IRS. The provision which took effect in 2012, affected how businesses, including online ecommerce businesses, report their annual gross receipts. As a growing number of consumers are using credit cards for their purchases. Whether swiped, keyed, tapped (contactless) or dipped (Chip), all credit card purchases are now reported to the IRS if they exceed 200 transaction and $20,000 in annual proceeds. The Form name is 1099-K, Merchant Card and Third-party Network Payments. The provision was meant to "improve voluntary tax compliance by business taxpayers and help the IRS determine whether their tax returns are correct and complete" (IRS, 2011) Small businesses tend to have a lower rate of compliance as the cost of bookkeeping is a main factor in hindering the process of compliance. This paper will show evidence that supports how third party information reporting actually helps in narrowing the tax gap. Through a series of randomly selected small business income tax returns, we will show how reporting was significantly increased knowing that the IRS is matching revenue information through third party.

THE TAX GAP

The tax gap is the amount of tax dollars that go uncollected due to both intentional and unintentional errors. IRS defines Tax Gap as the amount of tax liability faced by taxpayers that is not paid on time. The Internal Revenue Service collects more than $2 trillion annually in taxes so producing an estimate of the tax gap is a major statistical effort that it undertakes every few years.

"A core problem for enforcement of tax laws is asymmetric information. The taxpayer knows the facts regarding the relevant transactions it engages in during the year-or at least has ready access to that information. The government is forced to play catch-up, obtaining that information either from the taxpayer or from third parties." Lederman, L. (2010)

The IRS has recently released a new set of tax gap estimates for tax year 2006. The new tax gap estimate represents the first full update of the report in five years, and it shows the nation's compliance rate is essentially unchanged at about 83 percent from the last review covering tax year 2001.
Noncompliance takes three forms; Underreporting (not reporting one's full tax liability on a timely-filed return); Underpayment (not timely paying the full amount of tax reported on a timely-filed return); and Nonfiling (not filing required returns on time and not paying the full amount of tax that should have been shown on the required return). The IRS has separate tax gap estimates for each of these three types of noncompliance. Underreporting (in the form of unreported receipts and overstated expenses) constitutes over 82 percent of the gross tax gap.

Over several decades, the U.S. Government Accountability Office (GAO) has issued reports on ways to reduce the tax gap. One of GAO recommendations from a February 2013 report was to expand information reporting. The GAO notes that "when income information is reported to the IRS and the recipient, such as by Form 1099, compliance is improved. Thus, a logical tax gap measure is to increase information reporting. The GAO suggests expanding information reporting to include payments made by businesses to corporations and for payments made by landlords. The GAO observes that, per Joint Committee on Taxation estimates, these changes would raise $3.4 billion and $2.5 billion, respectively, over 10 years. '' (GAO, 2013)

THE 2008 HOUSING AND ECONOMIC RECOVERY ACT

The 2008 housing and Economic Recovery Act Provided a provision that requires banks and credit card merchants to report payments to the IRS. The provision, which took effect in 2012, was meant to improve voluntary tax compliance by business taxpayers and help the IRS determine their tax returns are correct and complete.
(IRS, 2011)

The provision was enacted as part of the Housing Assistance Tax Act of 2008 and is designed to improve voluntary tax compliance by business taxpayers and help the IRS determine whether their tax returns are correct and complete. "Time and time again, we have seen that better information reporting helps the tax system work better by ensuring that everyone pays what they owe," said IRS Commissioner Doug Shulman. "The new law gives us an important new tool for closing the tax gap and also provides business taxpayers better documentation to compute and report their income and expenses. The IRS will work closely with stakeholder groups to ensure a smooth implementation of this new program." (IRS. 2011)

As a growing number of consumers are using credit cards for their purchases. All these credit card payments are processed and reported to the IRS by the payment companies. Every January, payment companies will furnish a Form 1099-K to each merchant reporting the prior tax year's transactions. Every March, a copy of the Form 1099-K will be filed by the payment company with the IRS. The IRS will then compare what taxpayers reported in the income tax return with the report filed by the third party.

Sample Tax Returns to prove a voluntary compliance has actually occurred post 2008 Act.

In order to prove that increase in compliance has actually occurred after the implementation of the provision; three samples of small business income tax returns were compared over a three year period prior and after the provision implementation. First Sample is for A Restaurant business in New York City has reported more than seventy-five percent increase in gross revenues after the implementation of the provision, compared to the gross revenues prior to the implementation. The small business located in New York City reported revenues of $371,244 in 2010, the revenue reporting jumped to $650,366 in 2012, the first year of the provision implementation.

A Second Sample is A Dry Clean business in New York City that serve a drop off store and accepts credit card as a form of payment. In 2012, the small business reported $450,693 in gross revenues compared to a gross revenues of only $199,587 in 2010. An increase of one hundred twenty five percent. The third Sample is for a Fruit and Grocery business in New York City that reported a gross revenues of $750,536 in 2012 compared to $484,696 Gross Sales Revenues in 2010. A percentage increase of about fifty five percent. It is important to notate that for all three examples of small business reporting, there were no change in the size of the business or its management, nor there were any significant change in competition or other economic factors that would justify such a sharp increase in revenues in a two year period.

CONCLUSION

Based on the three sample tax returns of a randomly selected small business federal income tax returns, we conclude that compliance with tax laws increases when a taxpayer knows that a payer or a third party has reported to the tax authority (IRS) the amount of payments made to the taxpayer. The implementation of the 2008 Act provision has, in fact, helped to reduce the tax gap.

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GENDER DIVERSITY OF CORPORATE BOARDS AND KEY FINANCIAL METRICS

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ABSTRACT

Gender diversity has been a topic of debate for some time. The debate boils down to reliance on market solutions or regulatory remedies to increase female presence on corporate boards. Proponents of gender diversity suggest that women are able to bring a unique perspective to the board table. While males have dominated corporate boards for a long time, women are slowly making their way to the top echelons of the corporate world. For some, this progress is not fast enough. A survey on global trends in board diversity confirms a steady, albeit incremental, increase in female board membership. In this study, we compare key financial performance metrics of companies with gender diversity on boards with those that have no women on boards. Results show a significant difference between the two groups: companies with gender diversity on boards perform better than those that lack diversity. An important question remains: Does diversity contribute to success or does success invite diversity?

INTRODUCTION

Gender diversity on boards of publicly held companies has been the subject of study – and debate – for some time. In 2003, Norway became the first country to require that board composition of public limited companies consist of at least 40%women. Other European countries-France, Spain, Netherlands- soon followed to bolster female board presence. On March 6, 2015, Germany became the latest country to pass legislation requiring large companies to reserve 30% of seats on non-executive boards for women. The new quota will become effective from 2016 (Guardian, March 6, 2015).

There is some evidence that companies with mixed boards have lower volatility and tracking errors and in many cases have better returns (Chanavat & Ramsden, Mining the metrics of board diversity, 2013); improved governance (Garcia et al., 2015); females have better attendance record than males and males have fewer attendance issues when boards are mixed (Adam & Ferreira, 2009); higher quality of earnings (Srindhi, Gul, Tsai, 2011); lower likelihood of financial restatements (Abbot et al., 2012); and lower equity risk but no impact on firm value (Sila, Gonzalez, & Hagerdorff, 2014). The purpose of this study is to compare the performance of companies with mixed boards with companies with the male-only boards.

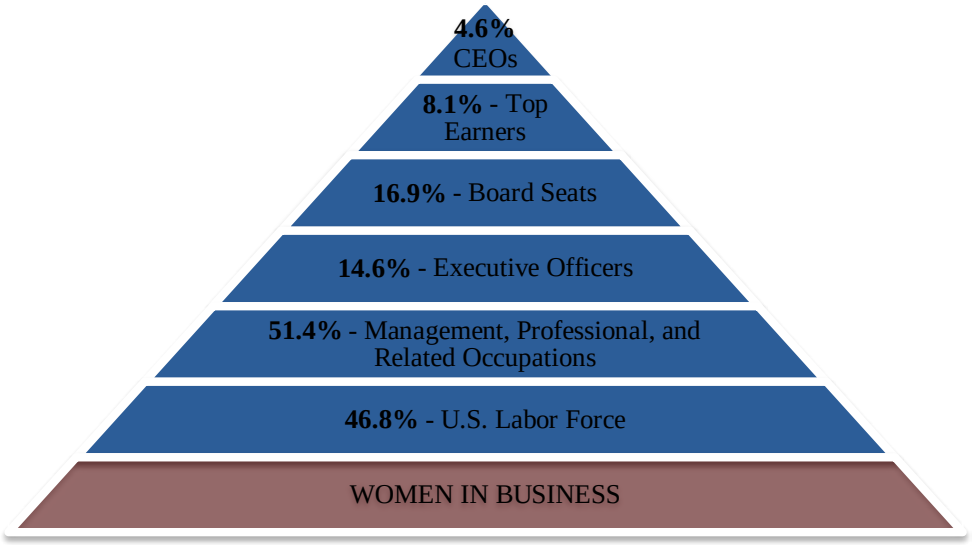
CORPORATE BOARDS AND DIVERSITY

A board of directors is a group of individuals who act as representatives of stockholders. They are in place to establish corporate management related policies and to make decisions on major company issues (Investopedia). The Chief Executive Officer performance is evaluated and salary set by the board, as do for other important officers, such as the CFO and the COO. The board also serves as a "source of advice and counsel, to serve as some sort of discipline, and act in crisis situations" if a change in CEO may become necessary. (Adams, 2010). Directors have a responsibility to the shareholders and have four essential duties: selecting the CEO, instructing top management on the duties of their position, performing management performance audits, and having responsibilities for company objectives and long term strategies. The board reviews corporate and CEO performance and assess the effectiveness of corporate strategy or its implementation. The board often approves budgets, capital needs and funding options.

One way the Board does its due diligence is by reviewing employee benefits and compensation (Ewing 1979). When surveyed, two thirds of directors agree that one of the jobs they performed included setting the strategic direction of the company, while 75% feel they are responsible for setting strategy, corporate policies, overall direction, mission and vision (Adams, 2010). So although directors do not run the company, they are overseeing the Senior Management and ensuring the company has the correct strategy, plans, and people in place to get to where they need to be. While the number of women on the board of directors in the United States has improved over the years, it has been a slow and incrementally small growth. In 1995, women held approximately 9.6% of the board seats in Fortune 500 companies. Ten years later, that number increased to 14.7%, which comes out to an average of only 21 more women added to these boards (Catalyst 05).

In terms of education, women are keeping pace with men. In fact, increasing number of women are pursuing advanced degrees. Since 1981, more women have earned college degrees than men. In 2004, women earned 41% of master of business degrees, 32% of MBAs, and accounted for over 50% of the workforce in the United States, including both professional and managerial positions (Catalyst 05). These numbers make it difficult to argue that there is a deficiency

of qualified women. Women have also been working in more corporate management, professional and related occupations, with the steep dropoff coming once it gets to upper management positions such as officers and board member. The ratio of men to women in prestigious positions is 5:1 while the ration of men to women earning MBA is 2:1. The average number of women managers as a percentage of total management has consistenly improved over the past decade in most sectors of the economy. However, in quoting the New York Times, the Economist (2015) makes a telling point that more big American firmes are run by men called John than by women. Beyond a token prensnce on the board, it seems achieving a critical mass will take considerable time. The chart below, reproduced from Catalysts 2013, shows a precipitous shrinkage in the percentage of women occupying positions at the top.



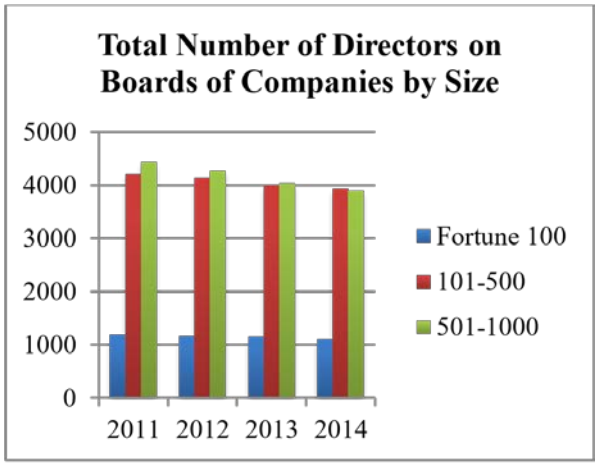
The data complied by the Women on Board website shows that larger companies tend to have greater diversity on boards. The charts below show four years of statistics for Fortune 1000 companies.

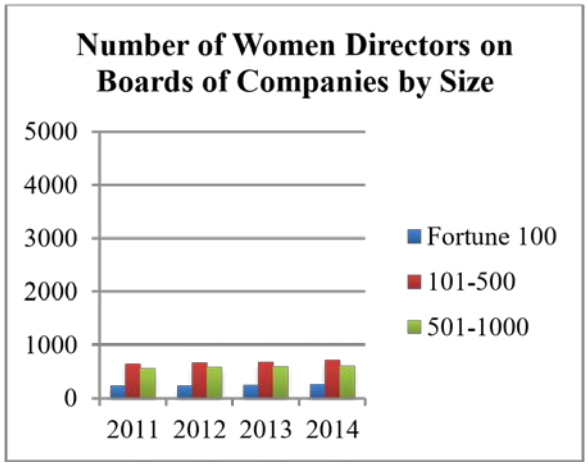
% of Women on Boards	2011	2012	2013	2014
Fortune 100	19.6	19.9	20.6	22.2
Fortune 101-500	15.58	16.37	17.32	18.15
Fortune 501-1000	12.5	13.6	14.8	15.9

2014 saw Fortune 100 companies sustain the 20% threshold of women directors achieved the previous year, and Fortune 500 companies reach 18% of their board seats occupied by women (WOB 2020). The average number of seats occupied by women directors also show steady improvement over the years.

Ave. # of Women on Boards	2011	2012	2013	2014
Fortune 100	2.3	2.4	2.4	2.6
Fortune 101-500	1.8	1.77	1.89	1.97
Fortune 501-1000	1.2	1.3	1.4	1.5

This comes out to an increase of 3.2-6.7% from year to year, which is similar to the increase per year from 1995 to 2005 documented by Catalyst (2005). At these low rates, it will take Fortune 500 approximately 70 years to have the number of men and women board directors be equal **(**Catalyst 05**).** The side-by-side charts below show that women have some ways to go to gain a significant voice on corporate board.





Countries around the world have begun to take notice of the lacking gender diversity in boardrooms, and while the United States has not passed any regulations regarding the issue, there are countries that have been taking action. There seems to be a consensus developing that more women need to be in the boardrooms but how to accomplish this goal varies. Efforts to increase female participation on boards fall into three different areas: legislatively, regulatory, and voluntary efforts. Legislation, also called "hard law", is defined as rules that have been passed by governmental bodies made up of elected officials. Regulatory efforts, called "soft laws", are passed by administrative bodies in the government which oversee how laws are enacted and enforced and oversees the recommendations for conduct for these companies. Voluntary efforts have no legal implications, but are pledges and goals set by a country or a company that states they hope to reach a certain percentage of diversity in their board (Sheshunuff, 2012).

In Italy, a country with one of the lowest percentages of women workers, new legislation was passed that requires listed Italian companies to have one third of their board members be women by the year 2015, otherwise these companies face hefty fines. Italy is not the only country that has passed mandatory quotas on gender diversity in the boardrooms. The European Commission has discussed it, as have Spain, France, the Netherlands and Belgium. Some nations though, are hesitant to force mandatory quotas upon companies (Lublin). They believe affirmative action policies such as these may end up diminishing the true goal of the policy. Sweden and the United Kingdom fall on this side, and while they agree that boards of public companies should have a higher representation of women, they have only set voluntary targets without mandatory quotas. These types of efforts have both their pros and their cons. Regulatory and legislative efforts to get women on boards are mandatory, thus companies in nations with these mandatory efforts must have women represented on boards otherwise they will have to face the consequences. These consequences tend to be fines, but in Norway, they reserve the right to shut down companies that fail to comply with the quota laws (Lansing, 2012). The downside is that due to having to fill a specific quota, boards may not pick the best person for the job, instead simply hiring someone to comply with a specific law. Voluntary efforts put less of a burden on the corporations, as it becomes another layer of regulation that needs to be followed. Voluntary efforts, though, may be less effective, for companies can pledge and make good faith statements to the public all they want, but they have no legal obligation to follow through.

Voluntary efforts are in line with the market solution. However, the market solution has been slow; as such, regulatory remedy has begun to be adopted. While some argue that forcing companies to have women on board members will harm the quality of the board, survey shows that 72% of men and 50% of women felt that the quota system actually improved the performance of their respective boards. These studies done at Oslo University in Norway show that even with the quotas passed by the country the standards required for a board seat are still very high (Lansing, 2012). Thus, the notion that quotas will decrease board quality or performance does not pan out, for the standards are still relatively high, and women, so long as they are qualified, are bringing different values and perspectives that improve the boardrooms decision making as a whole.

The dilemma of quotas, stated perfectly by the head of Spencer Stuart's U.K., is that "it would be an issue when [women] consider positions on boards in countries that have female quotas" (Lublin). This is a reservation women may have in becoming a director in certain countries with quotas. Women may also have reservations becoming the first director in a company. The report (Catalyst 05) interviewed many women directors anonymously, and what one director who has served on multiple boards said was very revealing, "In my particular experience, critical mass has been important because of the whole concept of marginalization. I can tell a real difference- the other three boards that I'm on have more than one woman, and on a [financial company] board, there is just me, and its early days for them. So there are things where, something I'll bring up they'll all look at each other and scratch their heads. And it's like human nature- if you have that information coming to you from one, two, three different sources; I think they would get there a little faster." This director highlights the issue of how even having women directors may not be entirely helpful, especially when they are the only one, for the majority in the meetings may not understand with what is being said or simply disagree.

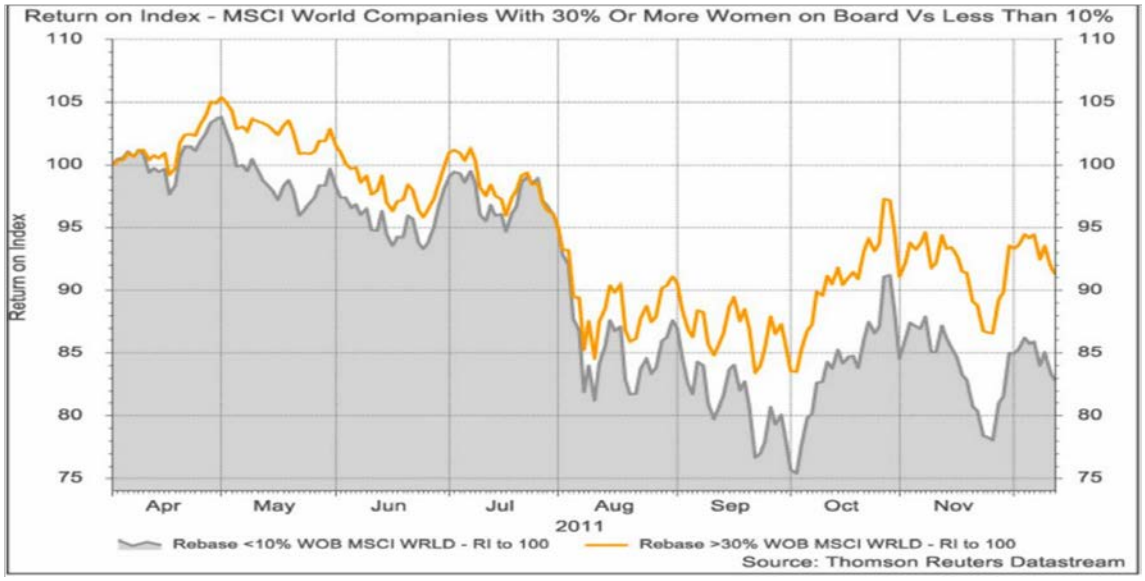
Although the idea of mandatory quotas and laws regarding directors do have their cons, it is something that may need to be discussed in the near future if there is no change with regards to the number of women in director positions. More and more women are going on to receive higher education after receiving their bachelor degrees', and these are prestigious positions. Yet, the ratio of men to women is still alarmingly more than 5:1 male, while the ratio of men getting their MBAs to women is only about 2:1. Many nations in Europe have been making efforts to get more women in the boardrooms, with Sweden leading the pack, aiming for boards of the future which are

comprised equally of men and women. Whether or not to implement mandatory quotas is a sticky situation. There is evidence supporting both sides that mandatory quotas have improved performance, and that quotas will end up putting people undeserving of director positions in the boardroom. Voluntary quotas, which do not require companies to comply but rather are goals and pledges that are set, are something which may want to be tested. They can encourage companies to get more gender diverse boardrooms without forcing it upon them. And there should be no reason why companies do not want women in their boardrooms, especially considering it seems that having them as directors' leads to better profitability and performance. But it will enable companies to do so at their own pace, rather than doing so in order to avoid fines and other punishments.

Norway passed quotas regarding female seats on the board in 2005, which mandated that firms to have 40% female representation by the year 2008 (Torchia, Calabro, Huse 2011). A study conducted on firms in the country found that by reaching critical mass, which is defined as having 3 women on the board, the level of firm innovation and board strategic tasks increases. Another study focused on United States Fortune 500 companies, found that greater demographic diversity, including gender as well as racial diversity, leads to a higher level of organizational performance (Erhardt 2003) in terms of return on equity (ROE) and return on assets (ROA), both of which are consistently used on Wall Street to assess corporate performance (Shrader, Blackburn 1997).

This research tends to suggest that having diversity on a company's board of directors is correlated with better firm performance. So why is this? What is it that women bring to the table that a board without them does not? Historically, boards have been comprised of white males. Having a board consist of people with similar backgrounds can lead to the issue of groupthink. Groupthink is defined as "a mode of thinking that people engage in when they are deeply involved in a cohesive in-group, when the members striving for unanimity override their motivation to realistically appraise alternative courses of action" (Janis 1973). Studies on group efficacy and gender diversity show that diverse groups have better performance and tend to work better together than groups composed of a single gender (Farh, Lee 2004).

Studies have looked into financial performance of companies with women on board and have found some evidence that companies with female directors perform better and are more efficient. Srindhi, Gul, and Tsui report that corporations which have female board director**s** exhibit higher quality of earnings (Srindhi, Gul, Tsui 2011). The MSCI World Index chart below shows that outperform . MSCI World Index captures 1,643 large and mid cap companies across 23 developed countries and ten sectors shows that companies with greater than 30% women on board outperform companies with less than 10% women on board.



By changing the dynamics of a boardroom with the inclusion of more women directors, there are many benefits that a company can reap. Higher levels of diversity will alleviate the possibility of homogenous thinking by bringing in new and diverse point of views. Women directors tend to be younger than their male counterparts and tend not to have long tenures. Women directors seem more inclined toward power sharing than power hungry, which helps governance by creating a culture of inclusion, instead of a company culture which may seem closed off or exclusive (Burgess, Tharenou 2002).

In a report by Catalyst (2005) one woman interviewed summed up the issue quite well when asked about the value of having women serve on boards: "Probably the majority of our employees are women. So it's important for them to have role models, and… for our employees to see minorities on the board, minority directors, and women directors. That's very important, because the message you're giving them is that we don't discriminate and there are opportunities here. And you can say that 'til you're blue in the face, but you have to demonstrate it. You've demonstrated it in your hiring policies and your promotion policies. You've demonstrated all the way along. This is another way of getting the message across." Many women directors were interviewed in this survey, another bringing up a valid point that when it comes to purchasing and the economy, it is driven primarily by women spenders. Thus, it would seem prudent that having people who are spending and driving the economy be a part of the important decision making of these corporations, for they bring new and different insight on how a company may be able to expand its markets and appeal to a new and broader base of customers.

One common stereotype that has been perpetuated through time is that women are more risk averse then men. And according to studies that have been done by psychologists and sociologists, there are strong gender-specific differences when it comes to non-financial risks which are particularly pronounced when it comes to physical or life threatening risks. And in field studies that have investigated whether women are more risk averse then men when financial risks are concerned, they found that women are more reluctant to take risks than men (Fehr, 2006). Perhaps this helps explain the big drop-off of women climbing up the corporate ladder, for while risk needs to be managed, risks also must be taken in the right contexts for a company to succeed.

Research question: Do companies with higher gender diversity on their board of directors outperform those that have only males on their boards?

THE STUDY

We employ a number of commonly used performance measures such as earnings per share (EPS), return on investment (ROI), return on equity (ROE), and return on assets (ROA) for our comparative analysis. Sample companies were selected from the Women on Boards website. The website classifies companies in four categories Z, T, V, and W. A rating of Z means the firm has no women on board, a T rating signifies there is a token woman on board, the V rating means there is more than 1 woman on board and that the women make up 11-19% of the board members, while W is for companies where at least 20% of the board members are women.

For this study, we examine corporate performance metrics of two groups: firms that have no women on board verses those firms that have one or more women on their board. 30 firms were selected for each group, resulting in a total of 60 companies being included in the study. The firms were from six different sectors, which are: consumer cyclical, energy, financial services, health care, real estate and technology. For each sector, firms that have no women on board were matched with firms that have women on board in the same industry. For example, AMC Entertainment and Burger King Worldwide were two companies chosen in the consumer cyclical sector that had no women on their boards. Thus, in order to match them up with companies that are in the similar industry, their counterparts chosen were Regal Entertainment and Chipotle Mexican Grill.

There are many ratios that can be used to evaluate the performance of a firm. Ratio analysis can provide insight into a company's comparative performance, trends and changes in specific industries (Bajkowski). Operating performance ratios, such as earnings per share and ROI, are used to measure how management is utilizing its assets and how efficient the company is. Liquidity ratios determine whether or not the firm is able to meet its obligations as they come due. Solvency ratios, also referred to ask financial risk ratios, are helpful in determining the financial risk in the long-term, and the possibility of defaulting.

For this study, the first two ratios chosen were ROA and ROE. These ratios were picked because they are very commonly used to show how much a firm is earning and how well its returns are to its shareholders. These ratios convey how profitable the firm is, and help measure the competitive advantage and how flexible the firm can be with its resources (Shrader, Blackburn 1997). Two other ratios used were ROI (return on investment) and EPS (earnings per share). Both these ratios were used in addition to ROA and ROE in order to help measure efficiency of the use of assets. Ratio data was compiled using Mergent Online database for all 60 companies, classified by six sectors and whether the firm has women on the boardroom or not.

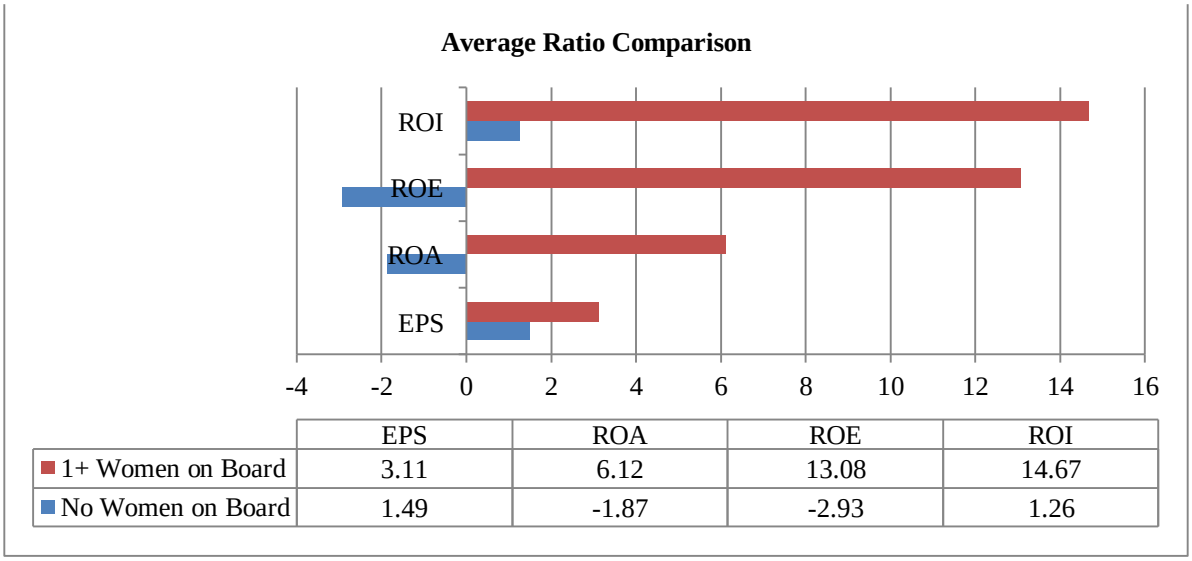
ANALYSIS AND RESULTS

The results show that companies with gender diverse boardrooms perform better on key financial metrics. The graph below provides a snapshot of these results. On three of the four financial ratio, firms with female board directors

outperformed firms without female directors. Table 1 below show that the difference in ROA, ROE, and ROI across the two groups was statistically significant (all p values <.05). Only earnings per share (EPS) was not significant. Table 1

Key Financial Metrics of Sample Companies

Women on Board		ROI	ROA	ROE	EPS
NO	Mean	1.26	-1.869	-2.93	1.494
	s.d	29.315	17.851	36.023	5.832
YES	Mean	14.672	6.117	13.076	3.116
	s.d	11.51	6.324	10.059	2.593
t		-2.414	-2.288	-2.486	-1.534
p(t<=t) one tail		0.018	0.014	0.017	0.086



	EPS	ROA	ROE	ROI
1+ Women on Board	3.11	6.12	13.08	14.67
No Women on Board	1.49	-1.87	-2.93	1.26

The study is subject to certain limitations; sample size being one. While the 60 firms chosen display a picture, it is still a small sample size. A larger sample size needed to validate these results. It would also lessen the potential impact of outliers that may skew the averages. Ratios over a number of years would provide greater insights than a one year snapshot. Another limitation stems from the fact that some companies in the financial sector did not have ROI or ROE ratio available on Mergent Online; thus some averages are based on fewer than 30 companies.

CONCLUSION AND IMPLICATIONS

The results from the study are conclusive for three of the four financial ratios chosen. These ratios are used with regards to measuring the efficiency and profitability of a company. While the earnings per share data did not prove anything significantly, the companies with women directors doubled the EPS of the companies without them. Times are changing from when these companies were run solely by homogenous groups of individuals. Now, the majority of professional workers in the United States are women, and in recent years more women have been graduating with their bachelor's degrees then men have. Although fewer women are earning advanced degrees than men, they have been increasing their numbers within the past few decades.

Women in 2004 earned 32% of MBAs, but their ranks among the top positions are including directors, executive officers and the top earners are sparse (Catalyst 2013). Although some countries have adopted a quota approach, there is potential stigma with quotas. While job specification and responsibilities of those serving on the board of directors may change, their main mission is to perform the stewardship function to protect the interest of stakeholders. This study shows that three of the four financial measures chosen were significantly better for firms with women in the

boardroom than companies with no women on their boards. Women can change the dynamics of a boardroom, and help bring new ideas to the forefront. With differing perspective in the mix, boards can help safeguard investor interests.

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CPAS AND CONTINUING PROFESSIONAL EDUCATION: EXPLORING THEIR PERCEIVED VALUES IN UNDERGRADUATE ACCOUNTING PROGRAMS

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ABSTRACT

Colleges and universities often strive to include accounting faculty who are licensed Certified Public Accountants (CPAs), partly based on the perception that those with CPA licenses will enhance classroom discussions by being current in the profession and drawing on personal experiences. Although requirements vary by state, a key component of maintaining an active CPA license is engaging in continuing professional education (CPE). Because maintaining an active license is an ongoing process, it is possible that licensed CPAs who also teach at a college/university may find themselves unwilling or unable to maintain their active CPA status or devote the time needed to engage in CPE. If this is the case, then these academics risk not staying "current" and losing touch with their profession, thereby impairing that aspect of their teaching effectiveness. This paper will explore how active CPAs, inactive CPAs, and those who have never been a CPA at various institutions feel about maintaining an active CPA license and engaging in CPE.

INTRODUCTION

In higher education, the process of selecting faculty to represent any department can be a truly challenging task. The difficulty is compounded in areas such as business, where oftentimes faculty/ practitioners are expected to maintain professional certifications. It is crucial that institutions determine how much emphasis to place on hiring individuals with those professional certifications. Such a decision cannot be made lightly, because not only will it guide the hiring process, but it also may impact how different stakeholders (e.g., students, employers, faculty candidates, accreditation bodies, peer institutions) perceive the program.

The accounting field is one such program in which institutions need to decide how important it is for its faculty to have professional certifications, such as a Certified Public Accounting (hereafter, CPA) license. On one hand, if more value is placed on research, one might expect the selection process to lean more toward candidates with PhDs in accounting. On the other hand, if an institution places more value on teaching, the selection process may lean more toward candidates with CPA licenses, with the assumption that these individuals will have more knowledge with respect to current practices and real-world application of the material. When institutions want to emphasize both research and teaching, they may strive to pursue a faculty mix that contains both PhDs and CPAs.

It is likely that most colleges and universities can see the value in hiring professors who have CPA licenses, a PhD, or both, but those who actively seek out or prefer those with CPA licenses have an additional concern: will the faculty that they hire keep their licenses current by meeting their state-mandated continuing professional education (hereafter, CPE) requirements? The answer to this question is important, because if one purpose in hiring a professor with a CPA license is to ensure that professional practices are taught in the classroom, then it is imperative that those CPAs engage in CPE courses. But it is possible that faculty may choose not to continue with CPE for various reasons, such as not seeing the need, or placing an increased focus on engaging in tenure-enhancing activities such as research and publications.

REVIEW OF THE LITERATURE

Research has shown having accounting faculty with practical experience and a CPA license as being valuable for an accounting program. Fischman (2007) supports the idea of including CPAs on the accounting faculty so that current practices and profession-related issues can be addressed in the classroom. Diamond (2005) advocates for "significantly more interaction between the profession and accounting educators" (353), interaction that can often be facilitated at professional conferences and CPE workshops. Endorsing the continual exchange of ideas between practicing professionals and academic accountants, Diamond states that "accounting educators must provide those who enter [the accounting] profession with the education they deserve, not an education of detailed rules, but an education of real competencies that drive sound and ethical business practices and decisions" (361).

Marshall et al. (2010) report the results of a survey given to accounting faculty possessing both a doctoral degree and a CPA license. One finding was that 39% rated the importance of a faculty member having a CPA license as "highly important," 32% as "very important," and 13% as "moderately important." Additionally, respondents rated CPA exam

preparation and doctoral studies approximately equal in importance, with respect to developing an ability to teach accounting. This indicates that significant weight is placed on CPA licenses, and the authors conclude that administration "must ensure that faculty members are maintaining their accounting credentials through substantive efforts, including active professional engagement, in addition to activities such as participating in continuing professional education seminars" (10).

Professors are not the only parties who see value in accounting faculty having CPA licenses. Mounce et al. (2004) reports that—assuming all else being equal—faculty with significant real-world experiences are viewed as being higher-quality professors by students, than those who do not have such experience. Buchholz et al. (2014) find "sixty-seven percent [of student survey respondents] strongly agreed or agreed that a CPA license should be required to teach accounting" and students "overwhelmingly said they believe an accounting professor should have passed the CPA Examination" (46). Professional bodies also place value on CPA licenses. For example, the AACSB's Accounting Accreditation Standard A8 states: "The accounting academic unit's faculty, as a whole, includes a sufficient number of individuals with professional accounting credentials, qualifications, certifications, and professional experience, and the unit deploys these individuals in ways that are consistent with the unit's mission, expected outcomes, and supporting strategies" (31). The Pathways Commission Report sponsored by the American Accounting Association and the AICPA (2012) recommends that "professionally oriented faculty"— defined as individuals whose education was to prepare them for careers in accounting, do not typically have PhDs, and enter academia after obtaining relevant work experience—should be purposefully integrated into the school's accounting program (49). The AACSB mirrors this viewpoint by providing four accounting faculty status categories, three of which recognize the value of practical professional experience (Krom and Buchholz, 2014). These four faculty status categories – scholarly practitioners, scholarly academics, practice academics, and instructional practitioners – distribute the scholarly and practitioner focuses across the accounting faculty more broadly than categorizing faculty as simply academically qualified or professionally qualified, as had been the case before the standards were recently changed (Boyle et al. 2015).

However, despite the perceived value of hiring faculty who hold active CPA licenses, it is possible that these faculty may find the additional time commitment involved in maintaining active credentials to be too difficult a task upon entering academia. The AACSB accounting accreditation emphasizes the importance of research in Accounting Accreditation Standard A2: "The accounting academic unit produces high-quality intellectual contributions that are consistent with its mission, expected outcomes, and strategies and that impact the theory, practice, and teaching of accounting, business, and management" (16). This standard implies that having faculty who engage in research and other scholarly pursuits is of critical importance; in fact, relating to this standard, the AACSB report states: "The accounting academic unit maintains a current portfolio of high-quality intellectual contributions that could impact theory, practice, and/or teaching…normally, a significant level of the contributions in the portfolio must be in the form of peer-reviewed journal articles or the equivalent" (16). According to Fogarty and Black (2014), "institutional choice to stress research creates urgency for faculty to display superior capabilities in academic research rather than the knowledge of classic accounting. This preference can be expected to permeate all personnel decisions including who is recruited and who is retained past the probationary period" (233). They go on to assert that the "acquisition and maintenance of practice credentials [CPA licenses] create no advantage in a game of this sort. In some instances, such credentials may even send the wrong signal to the gatekeepers of these processes" (233).

Given such a high emphasis on both professional certification and research, it may be difficult for an accounting faculty member to devote adequate time to both. Kranacher (2007) identifies several aspects of academic life— research, scholarship, committee work, and curricular issues—that could absorb significant amounts of time and impede a CPA faculty member's engagement in continuing professional education. Marshal et al. (2010) suggests that the high importance at many colleges and universities to publish in peer-reviewed journals can create demands that "…come at the expense of maintaining an active dialogue with the accounting practitioner community" (8). As stated by Alshare et al. (2007), "it seems that research and teaching institutions continue to assign more weight to a journal publication than to all other scholarly activities combined" (5).

Arlinghaus (2002, 2008) conducted surveys in 2001 and 2006, exploring tradeoffs between researching and pursuing other professional interactions. The conclusions in both of his papers indicate faculty feel increases in pressure to publish, at the expense of other professional activities. Arlinghaus was clear in his findings: "An institution's expectation for intellectual contributions has a significant impact on how a faculty member allocates time among teaching, research, and service. The greater the expectation in terms of either the nature or the extent of intellectual contributions, particularly if reinforced by salary adjustments and promotion and tenure standards, the less likely are faculty members to have time to devote to professional interactions and obtain relevant experience" (Arlinghaus 2008, 206). In effect, accounting faculty may be willing to sacrifice "remaining current" at the expense of increasing the number of publications.

In sum, there seems to be two potentially competing sources of pressure for accounting academics with CPA licenses: to maintain the license, or to devote time and effort towards publications and scholarly work. Although the literature does address the effectiveness of including both PhDs and CPAs on the accounting faculty, very little has been written about the degree to which CPA faculty members keep their CPA licenses current by meeting statemandated continuing education requirements.

Therefore, one of the main purposes of this paper is to explore if one of the major advantages of an academic having an active CPA license—being able to bring current knowledge and experience into the classroom—is something that faculty actually do, by engaging in CPE and bringing what they learn into the classroom. The answer to this question may be an important first step towards accounting programs evaluating the importance of hiring individuals with active CPA licenses. In addition, we will also examine the extent to which accounting academics and their institutions place value on having and maintaining active CPA licenses, the reasons why those who maintain their licenses choose to do so (and why those who do not, choose not to), and the degree to which accounting academics include what they learn in CPE in their own classes.

RESEARCH QUESTIONS AND METHODOLOGY

The current study is purely exploratory, so no formal hypotheses will be made. We will instead be focusing on the following research questions:

Q1: How do faculty feel about being required to maintain active CPA status and engaging in CPE?
Q2: To what extent are faculty required or encouraged to hold an active CPA license?
Q3: To what extent do faculty engage in CPE courses?
Q4: To what extent do faculty engage in CPE courses related to the classes that they teach?
Q5: To what extent do faculty incorporate what they learn in the CPE courses to the classes that they teach?
Q6: Why do active CPAs choose to remain active?
Q7: Why do those who are inactive choose not to be active?
Q8: Do faculty who are encouraged to keep an active CPA license allocate time between teaching and research differently than those who aren't encouraged to hold an active license?

To answer the above questions, a survey was created and distributed to accounting faculty at the institutions ranked as having the top 20 accounting undergraduate programs as reported by the CCH Public Accounting Report for 2013. This particular report shows results from asking professors to rank the top undergraduate accounting programs in the United States. An advantage to using this report is that it allowed us to select from institutions that accounting faculty across the United States tend to believe have the best accounting programs. After compiling a list of the top 20 listed schools, we reviewed the respective college's webpages that list the accounting faculty, and solicitation emails were sent to these individuals.

The email briefly explained the purpose of the survey, and provided three different links leading to three different survey instruments: one for CPAs with active licenses, one for CPAs with inactive licenses, and one for those who have never been CPAs. The email clearly separated the three different types of subjects we were looking for and the corresponding survey links. In addition, once a survey link was chosen, before answering any questions, respondents were reminded to only proceed if their status was matched to the survey.

Some questions were the same across all three of the surveys, such as:
Rate your level of agreement with "Colleges/Universities should require faculty to maintain active CPA licenses."
Rate your level of agreement with "Colleges/Universities should require faculty to take continuing professional education credits, regardless of the faculty member's CPA status."
Does your college/university require or encourage you to keep your CPA license current?
To what degree do the majority of your CPE credits directly relate to the courses that you teach?
To what degree do you incorporate into your classes what you learn in CPE courses?
On average, how many hours of CPE credits do you complete each year?
Allocate how much of your work-related time goes into teaching, research, continuing education, other. Demographics.

The main differences among the three surveys were questions asking the respondents to rank various reasons relating to their respective CPA statuses. Those that were active CPAs ranked reasons behind why they keep their CPA license current, while those who were inactive CPAs ranked reasons for not keeping their license current. Those who have never been CPAs and do not plan to obtain a CPA license ranked reasons as to why they do not plan to obtain a CPA license.

RESULTS

Emails were sent to 707 faculty members, and 124 responded (a 17.5% response rate). Of the respondents, 65 had active CPA licenses (CPAs), 34 were inactive CPAs (inactives), and 25 did not have a CPA license (nonCPAs). The final number of respondents was 124. Sixty-five respondents had active CPA licenses (CPAs), 34 were inactive CPAs (inactives), and 25 did not have a CPA license (nonCPAs). The table below shows the number of subjects based on their CPA status and the following demographics: private or public institution, research or teaching institution, rank of respondent, whether the individual has tenure, how long they have been teaching, and gender.

TABLE 1: Demographics of Respondents, Separated by CPA Status

	Active CPAs: 65	Inactive CPAs: 34	Non CPAs: 25	Total: 124
Private or Public Institution?	Private: 13 Public: 52	Private: 10 Public: 24	Private: 9 Public: 16	Private: 32 Public: 92
Research or Teaching Institution?	Research: 49 Teaching: 16	Research: 20 Teaching: 14	Research: 18 Teaching: 7	Research: 87 Teaching: 37
Rank of Respondent	Lecturer: 20 Asst. Prof: 16 Assoc. Prof: 3 Prof: 18 Other: 8	Lecturer: 3 Asst. Prof: 8 Assoc. Prof: 11 Prof: 9 Other: 3	Lecturer: 2 Asst. Prof: 10 Assoc. Prof: 6 Prof: 5 Other: 2	Lecturer: 25 Asst. Prof: 34 Assoc. Prof: 20 Prof: 32 Other: 13
Tenured?	Yes: 23 No: 42	Yes: 20 No: 14	Yes: 9 No: 16	Yes: 52 No: 72
Years Teaching	1-5: 21 6-10: 11 > 10: 33	1-5: 5 6-10: 9 > 10: 20	1-5: 9 6-10: 4 > 10: 12	1-5: 35 6-10: 24 > 10: 65
Gender	Male: 42 Female: 21	Male: 15 Female: 19	Male: 18 Female: 7	Male: 75 Female: 47
Age	Under 30: 2 31-40: 19 41-50: 8 51-60: 18 > 61: 18	Under 30: 0 31-40: 9 41-50: 10 51-60: 10 > 61: 5	Under 30: 2 31-40: 5 41-50: 8 51-60: 3 > 61: 6	Under 30: 4 31-40: 33 41-50: 26 51-60: 31 > 61: 29
Average credit hours taught during academic year	12.1	13.4	11.7	12.4
Highest degree earned (some did not answer)	Bachelor: 4 Masters: 15 Doctoral: 44	Bachelor: 0 Masters: 8 Doctoral: 25	Bachelor: 0 Masters: 4 Doctoral: 21	Bachelor: 4 Masters: 27 Doctoral: 90

Q1: How do faculty feel about being required to maintain active CPA status and engaging in CPE?

We asked all respondents to rate agreement with two statements: "Colleges/Universities should require faculty to maintain active CPA licenses" and "Colleges/Universities should require faculty to take CPE credits, regardless of the faculty member's CPA status." Both of these statements asked for agreement on a scale of 1 to 7 (1 = strongly disagree; 4 = neutral; 7 = strongly agree).

With respect to requiring faculty to maintain active CPA licenses, using independent sample t-tests, the average rating of those who had an active CPA license (4.48) was significantly higher than the rating of those whose licenses were inactive (2.53) or were nonCPAs (2.48) (p-values < 0.001). Significant differences were also observed when comparing: 1) faculty who were at an institution that required or encouraged active CPA licenses (4.35), and those who were not at such an institution (2.96, $p < 0.001$); 2) comparing faculty who hold an instructor rank (5.00) as opposed to professors (3.17, $p < 0.001$); and 3) comparing faculty who hold a doctorate (3.29) to those who do not (4.32, $p = 0.012$).

It is worth noting that the correlation between CPA status and ratings is still significant after controlling for whether or not the institution encourages/requires active CPA status, whether the respondent is an instructor or professor, and whether the respondent has a doctorate ($p < 0.001$ for all). In a linear regression analysis with ratings given as the dependent variable, the significant predictors were CPA status ($p < 0.001$), if the institution encourages or requires active CPA status ($p = 0.034$), if the respondent is an instructor or professor ($p = 0.030$). The other predictor—doctorate or not—was not significant.

With respect to agreement with requiring faculty to take CPE credits, using independent sample t-tests, the average rating of those who had an active CPA license (4.72) was significantly higher than the average rating of those whose licenses were inactive (mean 2.97, p-value < 0.001), but not significantly different from those who were nonCPAs (4.00). Similar to the attitude of requiring faculty to maintain an active CPA license, differences were found when comparing: 1) those who were at an institution that required or encouraged active CPA licenses (4.71) and those who were not at such an institution (3.65, $p = 0.005$); and 2) instructors (5.12) and professors (3.84, $p = 0.006$).

The correlation between CPA status and these ratings are still significant after controlling for whether the respondent is an instructor or professor ($p < 0.001$), but not when controlling for whether the institution requires or encourages active CPA licenses. This finding was further explored by preparing a linear regression analysis using agreement with requiring CPE credits as a dependent variable. The only significant predictor was if the institution encourages or requires active CPA status ($p = 0.05$). The other predictors (CPA status, instructor or professor, doctorate or not) were not significant.

Taken all together, faculty are more likely to agree that institutions should require active CPA status if they are already hold an active CPA license, teaching at institutions that encourage or require such licensing, and are instructors as opposed to professors. Faculty are more likely to agree with requiring CPE if they are at an institution that encourages or requires active CPA status. Thus, it appears that the institution's stance on maintaining an active CPA status is very important in helping determine how the faculty view CPA status and CPE.

Q2: To what extent are faculty required or encouraged to hold an active CPA license?

We asked all respondents: "Does your college or university require or encourage you to keep your CPA license current?" Among all 124, 10 reported that it was required (9 CPAs, 1 inactive) and 42 reported that it was encouraged (28 CPAs, 25 inactives, 6 nonCPAs), with the remaining 72 reporting that it was not required or encouraged. This finding indicates that approximately 41.9% of the respondents are at an institution that either encourages or requires an active CPA license among its accounting faculty.

Q3: To what extent do faculty engage in CPE courses?

We asked all respondents to provide an average number of CPE credit hours completed each year. Answers ranged from zero to 200 hours, with an average of 35.4, a standard deviation of 32.8, and a median of 40. If the 27 who reported zero hours are removed (1 CPA, 16 inactives, and 10 nonCPAs), the overall distribution changes to a range of 4 to 200 hours, an average 45.3, a standard deviation of 30.46, and a median of 40.

Not surprisingly, CPAs engage in a much higher number of CPE credit hours. The yearly average was 51.65 hours for CPAs (standard deviation 32.37), compared to 15.41 hours for inactives and 20.4 hours for nonCPAs (standard deviations 19.81 and 25.78, respectively); if those who reported zero hours are removed, the average hours are 52.45, 29.11, and 34.00 for CPAs, inactives, and nonCPAs, respectively. The differences were significant between CPAs and inactives ($p < 0.001$), and CPAs and nonCPAs ($p < 0.001$) using independent sample t-tests (as well as ANOVA with Bonferroni post-hoc tests for multiple comparisons). However, the difference between inactives and nonCPAs was not significant.

We also discovered that with respect to demographics, those who identify as being at research schools (87 respondents) reported average CPE hours to be 39.36, while those at teaching schools (37 respondents) reported average CPE hours to be 26.14. This difference was significant using an independent sample t-test ($p = 0.039$). It is worth noting that the significant differences between CPE credit hours and CPA status mentioned previously is still significant after performing a partial correlation test and controlling for whether the faculty member is at a research or teaching school ($p < 0.001$ for both). This finding is confirmed by a regression analysis to predict the number of credit hours; CPA status is found to be significant predictor ($p < 0.001$), whereas employment at a research vs. teaching school is not.

Hence, CPA status is the most significant predictor. This may indicate that if institutions wish to have accounting faculty engaging in CPE, the faculty should include active CPAs in their faculty mix.

Q4: To what extent do faculty engage in CPE courses related to the classes that they teach?

Respondents used a 1-7 Likert scale to respond to the question: "To what degree do the majority of your CPE credits directly relate to the courses that you teach? (1 = none at all; 4 = from time to time; 7 = regularly)." The reported scores among the three groups were approximately equal: 4.60 for CPAs, 4.12 for inactives, and 4.00 for nonCPAs. The differences between the groups were not significant, but this still indicates that all groups do at least from time to time engage in CPE credits related to what they teach. There are also significant positive correlations (using Spearman's rho) between the extent that faculty engages in CPE courses related to the classes that they teach, and 1) the average number of CPE credits completed per year ($p=0.003$), 2) how many years the professor has been teaching ($p = 0.048$), and 3) the average number of credit hours taught during an academic year ($p < 0.001$). Consequently, accounting faculty appear to take more CPE credits in subjects related to their course content as they mature in the academic world, and when they take on more demanding teaching loads.

Q5: To what extent do faculty incorporate what they learn in the CPE courses to the classes that they teach?

Respondents used a 1-7 Likert scale to respond to the question: "To what degree do you incorporate into your classes what you learn in CPE courses? (1 = none at all; 4 = from time to time; 7 = regularly)." The reported scores among the three groups were: 4.43 for CPAs, 3.82 for inactives, and 3.72 for nonCPAs. Although the differences between the groups were not significant, the mean scores indicate that groups are still incorporating some of what they learn in CPE classes into their own courses. It is possible that these numbers are not higher because perhaps what they learn may be too high-level or situation specific, compared to the material they teach. However, a significant difference was found when comparing: 1) instructors (5.48) to professors (3.78), p-value < 0.001, and 2) those with a doctorate (3.88) and those without (4.87), $p = 0.004$. These findings indicate that those who teach at the lower academic ranks and/or do not hold terminal degrees incorporate more CPE content into courses than do higher ranking academics and/or those who hold terminal degrees. Again, these findings could relate to course specific content or the type of CPE credits completed.

Significant positive correlations (using Spearman's rho) were found between the extent that CPE material is incorporated into classes and: 1) whether the college requires or encourages active CPA licenses ($p < 0.001$), 2) agreement with the stance that schools should require faculty to maintain active CPA licenses ($p < 0.001$), and 3) agreement with the stance that colleges/universities should require CPE ($p < 0.001$). This may indicate that those who regularly engage in CPE and incorporate the material into their classes see the value of doing so, and therefore feel more strongly that institutions should encourage CPA licensing and engaging in CPE.

Q6: Why do active CPAs choose to remain active?

The active CPAs were asked to rank, in order, seven reasons behind why they choose to keep their CPA licenses current (1 = most important, 7 = least important). Of the 65 active CPAs, 22 respondents were excluded (leaving a count of 43) because they did not use 1-7, inclusive, and instead used the same number for multiple reasons. Of those remaining, the reasons and the average rank (out of seven) given to each item is listed below.

1) professional satisfaction and personal achievement (2.07);
2) to enhance my teaching (3.07);
3) to keep myself more marketable to opportunities in the accounting field (3.86);
4) the college/university requires it (3.98);
5) to keep myself more marketable to opportunities in academia (4.37); 6) to enhance my research (4.88); 7) other (5.95).

According to the results, professional satisfaction and personal achievement is ranked the highest the most often. Comparisons using the nonparametric Sign Test indicate that satisfaction and achievement is ranked significantly higher than all other reasons: enhancing teaching, opportunities in accounting, being required, opportunities in academia, research, and other (respective p-values of 0.015, < 0.001, 0.006, < 0.001 for the remaining comparisons).

Enhancing one's teaching is the second most common reason, followed by keeping one more marketable to opportunities in accounting, and next being required by the college. These three reasons were not found to be significantly different from each other, but the difference between enhancing teaching and the bottom three reasons (marketability in academia, research, and other) were significant using the Sign Test (p-values of 0.002, < 0.001, <

0.001, respectively). Therefore, reasons for faculty CPAs maintaining active licenses cluster around three distinct themes: 1) professional satisfaction and achievement, 2) the enhancement of teaching, and 3) other reasons.

Q7: Why do those who are inactive choose not to be active?

The inactive CPAs were asked to rank, in order, seven reasons behind why they chose not to keep their CPA license current (1 = most important, 7 = least important). Of the 34 inactive CPAs, 19 subjects were excluded (leaving a count of 15) because they did not use 1-7, inclusive, and instead used the same number for multiple reasons. The reasons and the average rank (out of seven) given to each item is listed below.
Do not expect to engage in the professional practice of accounting (2.20);
Do not have the time to meet the CPE requirements due to other college/university responsibilities, such as teaching and research (2.93);
Do not have the time due to other responsibilities outside of the college/university (3.47);
Do not feel it is relevant to my academic activities (3.80);
Do not enjoy CPE classes (4.67);
Do not have the funding to meet the CPE requirements and/or renewal fees (5.33);
Other (5.67)

According to the results, not expecting to engage in professional accounting is ranked the highest reason the most often. Using the Sign Test, this reason is significantly more important than insufficient funding, lack of enjoyment, lack of relevance, and other (p-values of 0.001, 0.007, 0.035, and 0.035, respectively). The second most common reason is not having time due to other college/university responsibilities, which is also significantly higher than insufficient funding, lack of enjoyment, and other (p-values of 0.007, 0.035, and 0.035, respectively), but this was not significantly different than lack of relevance. Lack of time due to other responsibilities was third in importance, which was significantly different than funding and other (p-values of 0.007 and 0.035, respectively).

Altogether, the most common reasons for faculty to have inactive licenses are 1) not expecting to engage in professional accounting, and 2) not having time to engage in CPE due to other college commitments. Reasons of medium importance tend to be not having time due to other responsibilities outside the college, and feeling that active licensing is irrelevant to their academic position. Lack of funding or not enjoying CPE courses appears to play a low role in allowing licenses to become inactive. But this does indicate that institutions who hire CPAs may find that some of them allow their licenses to lapse and/or are not motivated to obtain an active license because once they leave the profession they no longer see a need, and they don't have time to engage in the requirements to remain active.

Q8: Do faculty who are encouraged to keep an active CPA license allocate time between teaching and research differently than those who aren't encouraged to hold an active license?

When respondents were split into groups based on whether they were required or encouraged to maintain an active CPA license (n=52) or not (n=72), the breakdown of activities was significantly different. Those who were required or encouraged allocated average time to teaching, research, and continuing education in the following proportions: 51.3%, 23.1%, and 4.3%, respectively. Those who were not required or encouraged reported average time as 36.0%, 43.2%, and 2.2%. All three differences were significant using an independent sample t-test (all p-values <0.001).

CONCLUSIONS

All the results should be interpreted with some degree of caution. As with any survey, it is possible that there is a self-selection bias, in that those who choose to participate may be inclined towards certain responses or attitudes while answering. In addition, the use of an online survey could have resulted in some respondents not giving the responses due diligence and consideration before answering. It is also worth noting that using the top 20 schools may make the results more applicable towards those who work at larger institutions.

Despite these limitations, the results of the study indicate that faculty members who hold CPA licenses clearly see the value in the license and the benefits licensing brings to the sharing of accounting content with future accounting professionals. The institution's support of hiring CPAs as faculty members predicts the faculty member's positive attitude toward continuing education. And those who believe that CPAs make good accounting faculty members and support the idea of ongoing professional education role model those beliefs by maintaining active licenses and completing more CPE credits regardless of whether they teach at an institution that emphasizes research or one that emphasizes teaching.

Although faculty with more years of teaching experience tend to take more CPE credits that relate to their teaching interests, research findings indicate that those who hold lower academic ranks (presumably those with fewer years of experience) and who do not hold terminal degrees actually incorporate more of what they learn from CPE classes into the courses they teach. This finding could lead to further research addressing how senior faculty or those with terminal degrees apply the knowledge gleaned from CPE courses.

Those who keep an active CPA license do so primarily for the personal sense of accomplishment and to enhance their teaching. Additionally, those who are required or encouraged to keep their license current by completing CPE credits prioritize teaching over research, whereas faculty who are not required or encouraged to keep their license current prioritize research over teaching.

Finally, the biggest reasons cited by inactive CPAs with respect to why they allowed their CPA license to go inactive are because they do not expect to be employed in the accounting industry, and lack of time due to other college-related commitments. They also report significantly less time devoted towards CPE. This is an important consideration for institutions: if they hire CPAs with the hope that this faculty will maintain their active status and remain current, then they also need to ensure that those they hire understand the importance of maintaining an active CPA while in academia and are given enough time to devote towards the pursuit of CPE (perhaps by making it just as important a consideration as other college-related activities).

These findings are important as institutions of higher education define themselves as research or teaching institutions and as they establish strategies for attracting faculty members who will best fulfill institutional goals.

***Special Note**: The authors wish to point out that they subsequently discovered that some of the survey responses upon which this was based was deemed unreliable. While the majority of the results presented were similar once these responses were removed, to be safe, this data should not be cited.*

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PERSONAL FINANCIAL LITERACY PEDAGOGY IN THE FIRST YEAR SEMINAR FOR BUSINESS: A TOOL FOR STUDENT ENGAGEMENT, EMPOWERMENT, AND LIFELONG LEARNING

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ABSTRACT

The article begins by discussing the perceived need for personal financial literacy education at LaGuardia Community College. It then describes how two faculty within the Business & Technology Department used the course design process of the newly-created First Year Seminar for Business as a unique opportunity to integrate personal financial literacy into the curriculum. The article goes on to outline the pedagogical approach for the personal financial literacy module within the First Year Seminar and describes the assignments and activities, which were used to facilitate this work.

INTRODUCTION

The President of the United States' Advisory Council on Financial Literacy has defined Financial Literacy as "the ability to use knowledge and skills to manage financial resources effectively for a lifetime of financial well-being" (Schwab et al., 2008). This definition has at least two important facets -- the necessity of having essential knowledge and skills to manage financial resources, and the impact that financial decisions could have over a lifetime.

The 2014 Council for Economic Education Survey of the States found that only 17 states in the country mandate financial literacy education, and only six states require testing of financial management skills before students can graduate from high school (Council for Economic Education, 2014). Also, with student loan debt above $1 trillion (Bloomberg, 2015), it is apparent that college students may have to rely on loans to further their education. Thus, many entering college students may not only lack the resources they need to continue their education, they also may not be equipped with the tools to manage the resources which they do have.

LaGuardia Community College ("College"), an urban, open-access, high-enrollment, two-year college in Queens, New York, is home to one of the most ethnically diverse student populations in the world. In addition to having basic skills like reading, writing, and mathematics, and ESL needs, many of the College's immigrant students are faced with financial decisions (i.e., paying for their education, supporting their families, saving for their future, etc.). According to the College's 2015 Institutional Profile, 60.7% of students living with their parents have Family Income of less than $25,000. That number is 78.5% for students living away from their parents (Dickmeyer, Gau, Lenchner, Weintraub, & Zhu, 2015). Many of the College's students are thus faced with significant financial need as they enter the College. Additionally, New York State does not require financial literacy education in high schools thereby reducing students' ability to tackle complex financial issues that could affect them for years to come.

IN THE CLASSROOM

As accounting faculty, our classes are structured to place students in the role of accountants for a company. In that role, students identify, record, and communicate information that is useful for investors, creditors, etc., to make decisions about a company's operations. Given the nature of the subject matter, class discussions may sometimes touch on personal finance related topics. However, the course syllabi are demanding, thus it is rarely possible to address students' personal finance questions in a comprehensive manner during an accounting class. Our reflection on ways in which to meet students' personal financial literacy needs in more meaningful ways led us to identify a unique opportunity to incorporate a module on this topic into the First Year Seminar for Business (FYS) curriculum.

The First Year Seminar for Business

The FYS was developed by leveraging characteristics identified in first year experience best practices (Keup & Petschauer, 2011). The key features of the FYS are that it is:

- Discipline-specific.
- Mandatory and credit-bearing.
- Taught by discipline faculty and supported by Student Affairs professionals.
- Integrating curricular and co-curricular learning and advisement.
- Leveraging peer mentoring.

- Incorporating technology.

The objectives of this course are to introduce students to the College, familiarize them with the business discipline, and provide them with the opportunity to identify and draw from key resources (e.g., financial aid, scholarships, clubs, etc.) to support their development and success.

Each section of the FYS provides an opportunity for students to meet with faculty in the Faculty Hour, for two hours per week to discuss key topics and complete assignments to achieve the objectives of the course. Students also meet with a Student Success Mentor (i.e., a senior student at the College or a student who has graduated and transferred to a senior college) for one hour per week in a Studio Hour. The Studio Hour provides a venue for students to engage in deep and meaningful reflection so that they can make connections between classroom learning and lived experiences. Students engage in this process through the development of an ePortfolio (i.e., an electronic portfolio).
"The ePortfolio helps LaGuardia students make a direct and powerful connection between their classroom learning and the rest of their changing lives" (Eynon, 2009).

Personal Financial Literacy Module in the FYS

In our course design process we positioned Personal Financial Literacy within the syllabus for both the Faculty Hour and the Studio Hour.

Faculty Hour

The objectives for the session are for students to:

- Strengthen their knowledge of key financial terms.
- Examine the feasibility of their financial goals and identify opportunities to leverage available resources to strengthen or support those goals.
- Explore the impact of debt, saving, and investing on their financial well-being.
- Identify sources of revenue and expense, determine how they spend money, and think of changes in their spending habits, if necessary.

Students work in groups to discuss key financial terms (e.g., gross income, disposable income, spending, savings, income taxes, etc.). This serves as a primer for the students and as a way for the instructor to gauge students' prior knowledge about personal finance. The conversation then moves on to exploring key concepts relating to student loan and credit card interest and payment calculations, saving for retirement, and investing in stocks and bonds. Students are then engaged in a conversation about setting realistic financial goals, steps to take when life disrupts their plans, and available resources they can leverage to support their goals.

In the second half of the lesson, students are prompted to examine their spending and saving habits by creating an itemized list of all recurring sources of income and expenses over a period of one week or one month. Thereafter, students are asked to annualize the amounts and identify significant sources of revenue and expense for a year, as well as to think of opportunities, if any, for adjusting their spending habits. Reconvening in a large group, students are asked to identify the biggest surprise(s) and takeaways that resulted from completing this activity.

At the end of the session, in addition to providing a summary of the lesson, faculty share a list of resources that students can use to strengthen and support their knowledge of personal finance and the achievement of their goals.

Studio Hour

Integration and reflection are an important part of the FYS, and in the Studio Hour, students leverage the conversation and learning relating to personal financial literacy that occurred in the Faculty Hour in order to complete a reflection on this topic. The prompts for the reflection are as follows:

- What is your personal financial philosophy (i.e., your attitude towards money and finances)? Where do you think it came from? What are the benefits of your philosophy? What are the challenges?

- Reflect on the discussion about personal finance we had in class:

    - What are the one or two most important points that you will take away from the session?
    - How, if at all, will you monitor your finances going forward?

- Based on our discussion, what is one personal finance goal that you want to achieve, be specific? “Save $10 a week” is more specific than “I want to be rich”. By when do you want to achieve this goal?

- Review one or two of the resources available for personal financial planning. Do you see yourself using one of these resources, if so, which one, and why?

Students are therefore required not only to reflect on how their financial past has translated into the present, but also on what they have learned during the personal financial literacy module, and how they can use that knowledge to make and reach financial goals.

CONCLUSION

Based on our work with students during the Faculty Hour, and the review of students’ reflections in the Studio Hour, we believe that the financial literacy module in the FYS can be utilized as a tool for student engagement in their own development, as well as their empowerment to make positive financial decisions in their various contexts. Further, students’ exposure to financial resources provides an opportunity for continued learning.

In the Spring 2015 semester, students in one of our FYS classes were so impacted by the personal financial literacy module that they requested faculty to provide a space for further learning about finance. This request resulted in a new Finance Club being chartered on August 13, 2015. The objectives of the club, which is open to all students at the College, are to encourage the research of and familiarity with finance theory, the financial markets and investment, and personal finance, and to broaden students’ knowledge of finance. Within the first month of the club’s existence, its membership reached over 100 students. We believe that by participating in the activities of the Finance Club, students will be able to improve their financial literacy. Additionally, they may be able to take their learning even further to think about finance in the context of, not only meeting their daily financial needs for survival, but also in terms of developing strategies to manage their resources for a “lifetime of financial well-being” (Schwab et al., 2008).

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A TIME OF CRISIS IS A TIME OF OPPORTUNITY FOR ORGANIZATIONS: A STRATEGIC EXAMINATION OF MANAGERIAL RESPONSE AND STAKEHOLDER PERCEPTION

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ABSTRACT

This article helps to bridge the gap between the literatures in crisis management and strategic management. The direct link between managerial response and firm performance has received limited attention in crisis management literature, while the literature surrounding stakeholder theory has emphasized the importance of perception as a key determinant of strategic future action. What has gone mainly unexamined is the role of the stakeholder in the dawn of an organizational crisis. According to numerous studies in marketing and psychology, researchers repeatedly find that reality is not reality; rather, perception is reality. Thus, while an organization may make a completely appropriate response to a crisis in terms of policy and communication, if that response is not accepted and evaluated positively by stakeholders, the response is as good as a poor response or even no response at all. In bridging the gap in these conversations in crisis management and stakeholder theory, this article provides a holistic framework for understanding the implications of an organizational response to crisis.

Organizational crisis is something that all organizations deal with at some point in their history. At times, a major crisis can be the fatal blow to an organization. Other times, crises provide opportunities for organizations to display their gumption, communicate appropriately with their stakeholders, and move forward, potentially with an enhanced reputation and promise of future success. The critical link in the process is the ability to act and communicate with stakeholders, have the stakeholders perceive the response as positive, and allow the positive perception to lead to improved or recovered performance.

This article empirically supports a conceptual model of the relationship between an organization's response to a crisis and stakeholders' perceptions of that response. Data from three organizations (N=505) were obtained through a survey of stakeholders in the higher education industry. The results render support to the central hypothesis that stakeholder perception of the response strategy is a critical factor in an organization's legitimacy following a crisis.

INTRODUCTION

Amid today's recent economic recession, the exposure of multiple scandals in organizations, the loss of key executives, and the destruction of natural resources through corporate irresponsibility, the issue of crisis management in business is as salient as ever. Recent examples such as the Deepwater Horizon oil spill in 2010, the Connecticut power plant explosion in 2010, the death of Steve Jobs in 2011, and the exposure of multiple sex scandals in politics and higher education institutions in 2010 and 2011 have shown that such incidents come with major implications for an organization.

The major proposition advanced in this article is the idea that strategic handling of an organizational crisis can propel and organization to sustained future performance, particularly when it comes to legitimacy factors such as reputation, trust, and commitment to the organization on behalf of the stakeholders. The primary theories used to support this proposition include: stakeholder theory, institutional theory, contingency theory, social learning theory, and dynamic capabilities.

While previous research in strategy has considered the direct relationship between managerial response and competitive positioning (Mantel et al., 2006; Greening and Johnson, 1997), this work extends such prior studies by examining role of the stakeholder's perception towards institutional legitimacy. Properly implemented managerial responses can allow an organization to develop core competencies such as flexibility and an ability to reposition itself in times of uncertainty (Pastoriza et al., 2009). As such, core competencies that can be exploited and deployed successfully are ultimately based on the perception of these responses from an external perspective. It is the perceptual qualities of these responses from the stakeholder's point of view that have a direct implication on the organization's position. Stakeholder theory has suggested that stakeholders are critical resources that influence a firm's competitive position (Freeman, 1984). This article suggests that there is a more complex story to tell about the way in which an organizational response has implications on legitimacy during a crisis.

The two outcome variables in this project focus on the legitimacy of the organization in terms of reputation and relationship quality. This extends the application of relationship marketing to a new context. Relationship marketing (Palmatier et al., 2006), though relatively new in application to organizational literature, focuses on activities that create or enhance relationships between brands and individuals (Morgan & Hunt, 1994). Thus, a similar relationship is

proposed between the organization and the stakeholder. If the organization is able to provide a response which is positively perceived, reputational capital towards the organization is enhanced (Pastoriza et al., 2009). The main constructs that will speak to these relationship-building elements are organizational reputation, satisfaction, trust, helping behavior, and loyalty.

In connecting the dots from the antecedents to managerial response and organizational legitimacy, this work lends support to the integration of the crisis management and strategic management literatures. Ultimately, we are interested in gaining an understanding of the effect of perception on both reputational and financial outcomes of firms facing organizational crises. This article focuses on the former goal, and future research will address the latter.

LITERATURE REVIEW

While prior research in crisis management has looked at the relationship between organizational reactions to crisis and strategy, this article seeks to provide clarity and further insight into the process, highlighting the critical role of the stakeholder's perception. The literature review will focus on the relationships advanced in the conceptual model and identify gaps in the literature, which have paved the way for this study to emerge.

In a seminal work on crisis management, Pearson and Mitroff (1993) discuss the five-phase process of a crisis resolution. The process begins with signal detection. This is where many authors in the field find their niche contribution in discussing ways in which organizations can plan and take preventative action towards crises occurring, by identifying their antecedents (Sturges, 1994). The next step in the process is preparation. Literature on crisis preparation looks at the organizational hierarchy and human resources element in having competent managers in place with the proper training (Coombs, 2009). Managerial contributions of these works focus on advocating for crisis management positions within the organization, namely a Chief Operating Officer. The third step in the process is crisis containment. Containment focuses on limiting the impact and effect of the crisis situation. Some authors have focused on the immediate role of a manager at this point in the process: arriving at the scene of a crisis, providing support and reaching out to those immediately impacted (Small, 1991).

The fourth step of the crisis management process is recovery. This is where the majority of the work in crisis management connects with strategic management. Thus, it is the critical step for the contribution of this article. Strategic communication with stakeholders occurs at the recovery level (Allen & Caillouet, 1994). Authors in this area have cited impression management and institutional theory to help explain the reasons why firms take the actions that they do during a time of crisis. Impression management studies look at the process that managers take when deciding how to approach those impacted by the crisis (Grove & Fisk, 1989). Institutional theory takes into account the external environment and how conforming to social rules enhances an organization's legitimacy (Meyers & Rowan, 1977; DiMaggio & Powell, 1991). Further, a theoretical framework for analyzing strategic communication was developed to understand this element of the process. Garrett, a leading author in crisis management, discussed the different options of responses, including: justification, concession (apology), denial, and excuse (Garrett et al., 1989). The unifying feature in this step of crisis resolution is that communication with stakeholders is the cornerstone of the recovery process. An organization can respond to a crisis in a way that is perfectly appropriate and ethical, but if the message of the crisis recovery is not communicated and received, then the potential positive effect cannot occur. As such, proper communication during a time of crisis can mitigate the negative effects of the crisis itself (Ulmer, 2001). Further, custom tailoring to the specific communication is required during the recovery process, given the crisis, industry, magnitude, and general business environment (Pearson & Mitroff, 1993).

The final stage in the crisis management process deals with organizational learning. While perhaps an assumed step in most processes dealing with mistakes or shortcomings, this element is many times overlooked and similar crises repeat themselves throughout an organization's history (Pearson & Mitroff, 1993).

Crisis management scholars aim to make contributions within the five-step process as defined by Pearson and Mitroff (1993). Much can be learned about the inner workings of the organization and how firms can improve and be more prepared to handle crisis given organizational learning and change. Connecting the crisis management literature to strategic management literature is most appropriately done at the recovery stage. This article aims to unveil legitimacy outcomes from the communicative strategies to stakeholders of the organizations examined. In asking stakeholders to rate the communication approaches to the crisis and their corresponding levels of sincerity, timeliness, and adequacy, a better understanding of the perceptual process at the individual stakeholder level can be gained. Once perception of the response is assessed, response quality will lead to outcomes such as satisfaction and trust towards the organization. The overall story offered by this work lends support for crisis management en route to sustained performance through stakeholder perception.

Stakeholder literature emphasizes the importance of perception as a key determinant of strategic future action (Nijhof et al., 2003; De Saram et al., 2004). In bridging the gap in crisis management and strategy, this article provides a holistic theoretical framework for understanding and predicting the performance implications of managerial response to crisis. In order to successfully integrate the literature streams, three relationships are examined in the forthcoming sections. By dissecting the literature review into these three relationships, an understanding of the work done in these areas is advanced and gaps are identified. These gaps lead to the advancement of the conceptual model. In combining the three relationships into a single model, a dynamic framework for understanding crises, interpreting managerial action, and emphasizing the role of the stakeholder emerges and offers support to the importance of the topic for organizations.

Relationship 1: Managerial Response and Performance

The relationship between managerial response and the performance of the firm has been recognized throughout strategic literature for quite some time, making the contribution that managerial actions have implications for the organization. Strategies are implemented in order to gain an advantage over competitive rivals and institutional forces in the external environment. Part of this organizational strategy consists of managerial action, which has been shown to have a direct impact on the strategic positioning of a firm over competitive rivals at a given point and time (Porter, 1981). In a 1997 study on crisis management, Greening and Johnson demonstrated that top management team characteristics can minimize the severity of a crisis in their planned action. In an even earlier work, Weick (1988) showed that the sensemaking structures within the organization can impact the commitment and capacity for a firm to manage relationships during a crisis. Building on this study, Sellnow and colleagues (1995) recognized that having a proper communication strategy in place during a crisis can aid in the recovery and help re-establish credibility for the organization. Thus, there have been foundational efforts on this topic and the relationship is well established. Since these few seminal works have been published, the relationship between responses and outcomes continues to receive attention in the strategy literature. In a recent work published in 2012, Aldoory and Grunig empirically supported Sellnow's propositions by showing that organizations greatly benefit by using principles of crisis communication when dealing with a dire situation. Furthermore, authors, in an effort to aid practitioners, have even developed models to assess the seriousness of the crisis at hand and make recommendations on the optimal method of response (Burnett, 1998).

What these works continually point to is the role of the manager in a time of crisis. Most of the aforementioned studies have suggested that managerial skills are a distinct resource to the firm, and this may be even more evident when the firm faces a difficult situation. In fact, the resource-based view suggests that an organization can possess a valuable (Huselid, 1995), rare, and inimitable (Donaldson, 2002) resource in a manager who is able to effectively respond to a crisis situation. The human element of this critical resource is so important to a firm's competitive advantage that research has even suggested the creation of additional top-management team positions such as a COO who would be charged with establishing performance benchmarks for a firm's human resource capabilities (Marcel, 2009). Ultimately, the performance outcome of a firm in crisis has been shown to be a result of the resources that the firm has when dealing with adversity or crisis (Litz, 1996). Based on this rich research substantiating the relationship between managerial response and firm performance outcomes, this work takes a deeper look into the underlying facets of this relationship, namely the role of stakeholder perception to the response and legitimacy implications that emerge as a result of an organization's response strategy.

An implication from the work herein suggests that the perceptual component at multiple levels (appraisal and evaluation) can help explain why some organizational crises have cost firms everything while others have been rectified to stakeholders' full satisfaction. A greater understanding of the process of perception to managerial response will better prepare a firm in dealing with such events and help cater to stakeholders in a way that is effective and conducive to a positive response. Thus, an effective response can possibly save an organization's life and/or provide an opportunity to demonstrate its responsibility and accountability, potentially gaining more stakeholders in the process.

Relationship 2: Managerial Response and Stakeholder Perception

Since the relationship between managerial response and performance during a crisis requires further investigation, examining the role of stakeholder perception in the process is advanced from a theoretical perspective in this section. Prior literature has recognized that a relationship exists between stakeholders and managerial action, but this relationship has not been recognized to have an effect on performance in the dawn of a crisis. For example, Brocato et al. (2012) showed that the type of strategy implemented during crisis communication has effects on stakeholder perceptions, but did not consider this factor as an interceding construct in the relationship between response and organizational performance. Other research has looked at the outcome variables on stakeholder perception; for

example, Berman et al. (1999) found that managerial attention to stakeholder interest can lead to positive performance implications. Thus, researchers in crisis and strategic management have recognized the importance of the stakeholder en route to organizational success, but have not necessarily demonstrated the role of stakeholders' perceptions during an organizational crisis and its effect on performance and legitimacy.

The relationship between managerial response and stakeholder perception is based on both stakeholder theory and institutional theory. As illustrated by Brenner and Cochran (1993), a firm must consider stakeholder needs en route to gaining institutional legitimacy. Both stakeholder and institutional theory implicitly suggest our assumption that organizations rely on their stakeholders for performance implications. As Freeman (1984) would suggest, managers must be active in managing stakeholder relations. During a time of crisis particularly, effective managerial response will greatly impact the perception that stakeholders have about how the firm is handling the situation. It is important not only that the response positively affects financial indicators in the short-term, but also that the response promotes positive reputational implications for the organization in the long-term. This is where the institutional aspect of the model is introduced. An organization in crisis will seek to re-gain its legitimacy through ethical managerial actions (Pastoriza et al., 2009). If the organization is successful, its stakeholders, perhaps initially shocked by the magnitude of the crisis, will realize the integrity of the organization in its efforts to rectify the situation and put its stakeholders at ease, knowing that the firm remains true to its core values, despite an anomaly or unforeseen event. Such institutional factors have been shown to be instrumental for organizations (Meyers & Rowan, 1977), and perhaps have the ability to even transcend the crisis itself.

Relationship 3: Stakeholder Perception and Performance

To this point, the literature has established that managerial action results in broadly defined performance outcomes, although it is limited and does not have much direct empirical support. What has also been established is that managerial action results in perceptions by stakeholders. In order to contend that stakeholder perception affects the relationship between managerial action and performance, a direct relationship between perception and performance must be established. The following section lends support to this relationship based on the literature from stakeholder and institutional theories.

In 2008, Peloza and Papania demonstrated that stakeholders have the power to reward or punish a firm based on their evaluation. This finding implies that stakeholders have a significant impact on overall performance implications from a crisis response. Once the stakeholders of the organization have experienced and perceived the managerial response to the crisis, there will be performance implications as a result. Further support from the literature demonstrates that a proper stakeholder strategy can protect a firm's stock price from decline during a time of crisis (Schnietz & Epstein, 2005). Thus, the literature has suggested that stakeholders have power to impact competitive outcomes, but the process by which they go about impacting the outcomes has not been examined.

Based on the resource-based view of the firm (Penrose, 1959; Wernerfelt, 1984; Barney, 1991), internal firm resources can possess qualities of rareness, uniqueness, value, and non-substitutability, all leading to competitive advantage. Managerial responses that possess the critical aspects of resources (VRIO) can lead to an increase in competitive position in the market. What is needed in the crisis management literature from a strategic perspective is an illustration of the process by which such responses are perceived by stakeholders and lead to performance outcomes.

Existing literature has touched on relationship development with stakeholders; through developing sustained relationships with stakeholder groups, firms are perceived in a better light (Freeman, 1984). Intangible relational assets are built over time in the relationships between the firm and its customers, its employees, and the community at large (Christopher et al., 2013). Through sustained interactions with such stakeholder groups, a firm develops brand and reputational strength (Aaker, 1991). Taking this a step further, in a more recent empirical work, Boyd et al. (2010) found that reputations can differentiate organizations and explain variability in performance. While a firm's reputation is something that can sustain and pro-long the relevance of the firm or expedite the firm's recovery period (Choi & Wang, 2009), a manager's response gives stakeholders immediate assurance that the firm is being proactive in rectifying a difficult situation. A recent study has discussed the need to bridge the gap between the response and outcome relationship by showing that public image (a shareholder issue), political reputation (both a shareholder and stakeholder issue), and stakeholder support are complementary resources that work towards better performance (Dahan, 2005). This article helps to address this issue and elaborate on the importance of stakeholder perception towards performance implications.

Top management team characteristics can minimize the severity of a crisis through effective communication with its stakeholders (Greening & Johnson, 1997). In developing a more comprehensive understanding of the relationship

between perceptions and performance outcomes, this paper fills the gap in the literature by illustrating the process of managerial response, stakeholder perception, and performance outcomes.

In sum, this literature review has examined the relationships that lend support to the advancement of a new theoretical framework for crisis management en route to sustained strategic performance. What's missing at present in both literatures is a common link to integrate the conversations. The literatures on crisis management and strategic management have used common constructs and outcome variables, but the two have yet to be integrated within a single framework. In connecting the streams via the stakeholder's perceptual link, managerial response, the primary antecedent in the crisis management literature, can be connected to performance, the primary outcome variable in the strategic management literature. Thus, in linking the gap between these two disciplines, the antecedents and outcome variables of managerial response to crisis, stakeholder perception, and performance will be incorporated into one model.

HYPOTHESIS DEVELOPMENT

This work is concerned with providing insight on three primary research questions. Each seeks to advance the knowledge in the crisis management and strategic management literatures, making the argument that these two literature streams do a better job at explaining performance outcomes of an organization during the crisis recovery period together rather than in isolation (Allen & Caillouet, 1994). Table 1 provides a list of these questions, which are hypothesized about and empirically examined throughout the course of this work.

Table 1
Research Questions

Research Questions	
RQ1:	When an organization implements a response to a crisis situation, what is the process that a stakeholder goes through to evaluate the response strategy?
RQ2:	How does a stakeholder's perception and evaluation of a response to a crisis impact the relationship between the stakeholder and the organization?
RQ3:	What are the reputational implications of an organization's response strategy?

Each research question focuses on the primary relationships: response and stakeholder appraisal, appraisal and evaluation, and evaluation and relationship. In order to examine these research questions, a conceptual model was developed as a new framework to illustrate a stakeholder's perception during a time of crisis. The model demonstrates the relationship among three perceptual elements during a time of crisis with his or her organization. First, there is an appraisal of the type of response or communication strategy taken by the organization that will be assessed by the stakeholder to the organization in the dawn of an organizational crisis. The second level of perception occurs at the evaluation stage, when the stakeholder makes a personal judgment, not on the type of response strategy, but rather, on the quality of the response itself. Factors that a stakeholder will consider at this level will be adequacy, sincerity, and timeliness (Mentzer et al., 1989; Bies & Shapiro, 1987; Lewicki & Bunker, 1996). From the evaluation of the response, stakeholders enter a third level of perception in their rating of an organization's legitimacy and reputation. At this level, the stakeholder, using the information that he or she has appraised and evaluated throughout the crisis, must determine if there has been a change in the relationship between one's self and the organization because of the crisis. Thus, stakeholders will need to assess their satisfaction, trust, and loyalty to the organization, as well as their willingness to help the organization. Finally, the stakeholder will need to decide how the organization compares in

reputation to other rival organizations within the industry after the crisis event. Figure 1 illustrates the conceptual model of stakeholder perception advanced in this article.

Figure 1: A Conceptual Model of Stakeholder Perception

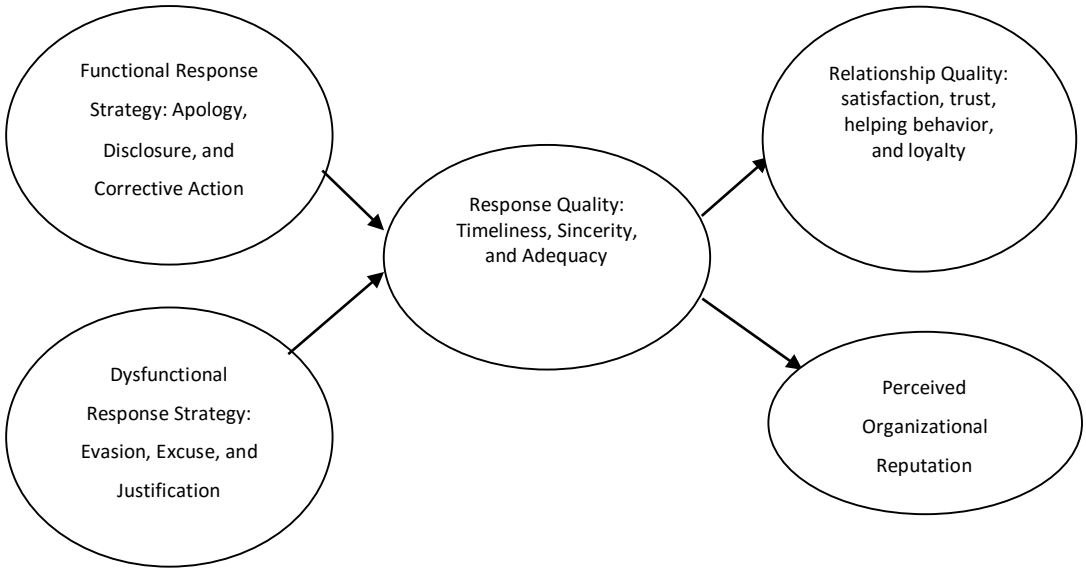
The overarching theoretical framework that drives the proposed conceptual model of stakeholder perception is based on the social learning theory (SLT) (Bandura, 1978) from organizational behavior studies. The SLT explains organizational action by examining the relationships between behavior, the environment, and the organizational participant (Davis & Luthans, 1980). In this case, organizational participants would be the stakeholders perceiving a crisis. According to the SLT, individual actions and the environment do not exist in isolation, but determine each other in a reciprocal manner. Individuals learn from organizations and in the process acquire and maintain new behaviors and cognitions. The theoretical framework, which the SLT is based, is listed below:

Stimulus → Organism → Behavior → Consequence

Based on the SLT, the relationship between organizations and their stakeholders can best be understood in terms of an interacting, reciprocal determinism between the behavior itself, the organizational participant, and the environment (Davis & Luthans, 1980). The conceptual model for this work builds off this understanding of organizational interactions with stakeholders and is consistent with the framework of a highly cited and trusted organizational theory.

In order to test our conceptual model meaningfully from a statistical perspective, factors were selected which speak to the latent variables of the conceptual model: appraisal of managerial response, evaluation of response, and organizational legitimacy. In order to test these variables, scales from the crisis management, marketing, psychology, and strategy literatures were adapted as first order constructs that would speak to the second order variables with which this article is concerned. Figure 2 below presents the statistical model which is used to analyze the data collected from our survey. This framework will be applied to three unique organizational crises (with a unifying theme) towards the goal of empirically justifying the new framework based on theory.

Figure 2: Empirically Testable Model



Managerial Response Hypotheses

Within stakeholder theory literature, researchers advance that managers should take an active approach in dealing with multiple stakeholder needs beyond the firm's shareholders (Smith & Hitt, 2005). According to Freeman (1984), a stakeholder is any group or individual that can affect the achievement of a corporation's purpose. Since stakeholders help to dictate performance, it is important for organizations to be in contact and establish relationships with their stakeholders (Regester & Larkin, 2008). Particularly in times of crisis, a stakeholder model of corporate governance can help firms recover from crises faster than those who do not employ a stakeholder approach (Alpaslan et al., 2009). The major stakeholder groups identified in the stakeholder theory literature include customers, employees, the natural environment, and other external parties (Berman et al., 1999). Some criticism regarding the broad nature of the stakeholder has been developed by other authors in the discipline (Mitchell et al., 1997; Donaldson & Preston, 1995), such that nearly anyone at any time would be able to claim that they were a stakeholder to any organization. In order to resolve using such a broad definition, which includes vague terms like "community" and "external parties", new definitions revolve around the idea that each party claiming to be a stakeholder has a legitimate interest (Mitchell et al., 1997) and a level of power and urgency towards the organization (Donaldson & Preston, 1995).

Managerial response is something that many crisis management scholars examine during the recovery stage of the process as discussed in the literature review. Garrett and colleagues (1989) identified some of the predominant ways in which organizations go about responding to an organizational crisis: denial, excuse, justification, and concession. Since this work, many crisis management scholars have identified other managerial responses to crisis and developed scales to measure each (Allen & Caillouet, 1994; Benoit, 1997; Kaufmann et al., 1994). Based on this stream of literature and the adaptability of the scales for response strategies, the managerial responses that will be examined in this work include: apology, disclosure, corrective action, evasion, excuse, and justification. These strategies and their corresponding author(s) and citation are illustrated in Table 2.

Table 2
Managerial Responses Strategies

Response	Citation
Apology	Allen and Caillouet, 1994; Benoit, 1997
Excuse	Allen and Caillouet, 1994
Justification	Allen and Caillouet, 1994
Evasion of Responsibility	Benoit, 1997
Corrective Action	Benoit, 1997
Full Disclosure	Kaufmann et al., 1994

Having identified legitimate stakeholder classifications and response types, the way in which organizations communicate with its stakeholder groups can vary depending on the crisis itself, the magnitude of damage, and the type/number of stakeholder groups which the organization must communicate (Pearson & Mitroff, 1993). An organization must be dynamic in its selecting a response strategy, as it will have direct implications on stakeholder perception in the process. As has been done in prior crisis management works (Garrett et al. 1989; Pearson & Mitroff, 1993), this project dichotomized the response strategy types into two groups: functional response strategies and dysfunctional response strategies. This allows us to group responses which are generally regarded as functional (apology, disclosure, and corrective action) into one category, and those that are regarded as dysfunctional (evasion, excuse, and justification) into another category.

Examining the following hypotheses will allow for a better understanding of the types of responses that are correlated with positive and negative impressions by stakeholders. Ultimately, we anticipate positive correlations with the functional responses and negative correlations with the dysfunctional responses, as research has shown that top management teams can minimize the severity of a crisis through effective communication with stakeholders (Greening & Johnson, 1997). Thus, the above discussion leads to the formulation of the following hypotheses:

- *Hypothesis 1: As perceived by the stakeholder, functional response strategies will positively affect managerial response perception.*
- *Hypothesis 2: As perceived by the stakeholder, dysfunctional response strategies will negatively affect managerial response perception.*

Evaluation of Response

The relationship between stakeholders and organizations is a two way street: organizations need stakeholders for profitability and viability, and stakeholders need organizations for employment, community building, and basic satisfaction of human needs and wants. Based on this understanding, a stakeholder's evaluation of an organization's response to a crisis appears directly relevant in the crisis management literature. Based on institutional theory (Meyer & Rowan, 1977) and stakeholder theory (Freeman, 1984), the literature suggests that an evaluative link affects the relationship between the actions of a firm and its corresponding competitive position after an organizational crisis. An organization's response to a crisis cannot have performance implications without a perception and evaluation of the response by stakeholders. Perception is defined as the process by which people translate sensory impressions into a unified view of the world around them (Howard & Sheth, 1969; Bettman et al., 1998). As such, perception of the response becomes the reality, even if the reality or intention of reality by the organization was different than what it was perceived to be.

To gauge the level of positive evaluation of a response to stakeholders, this article calls upon constructs utilized in the marketing literature: timeliness, adequacy, and sincerity. Each of these constructs has been utilized by marketing researchers at the individual level to gauge a person's evaluation of a particular situation or action (Mentzer et al., 1989; Bies & Shapiro, 1987; Lewicki & Bunker, 1996). Thus, as we are interested in gaining an understanding of stakeholders' evaluations of responses from an organization, these constructs were adapted to this study. The three elements of the evaluative criterion are discussed below.

First, timeliness refers to the time lag between an event in question and the response or report by the organization regarding the event (Leventis & Weetman, 2004). The construct of timelines becomes a critical factor in the overall satisfaction or evaluation in the aftermath of a crisis situation (Mentzer et al., 1989). When some type of violation or offense occurs in crisis, stakeholders are unsettled by the fact that an assumed trust has been broken (Lewicki & Bunker, 1996), and it is up to the offending party to re-establish the relationship via some timely communicative effort (Tomlinson et al., 2004). Timeliness is evaluated at the individual level, so timeliness to one stakeholder can be untimely to another. As such, it is a perceptual element for the purposes of measuring stakeholders' evaluations, and it is the first construct utilized in this work to determine stakeholder evaluation of response by an organization to a crisis.

Next, adequacy relates to level in which a stakeholder believes an organization has responded to a crisis situation. In a study done by Bies and Shapiro (1987), perceived adequacy of an explanation was a critical component in the reduction of negative action taken by the stakeholder when an organizational problem occurred. Organizations encountering situations in which a response is merited should provide adequate social accounts to offset the negative impact (Tomlinson et al., 2004). The stakeholder ultimately determines the adequacy of a response at the individual level, and thus, there is an evaluation of the adequacy of an organizational response that can be rated by stakeholders of the organization. As such, we conclude that adequacy is a critical construct which helps to determine a stakeholder's evaluation of a response by an organization.

Finally, sincerity, a construct often cited in the brand personality literature, is achieved through an individual's perception of a brand's caring and genuine nature (Aaker, 1991). In the context of crisis management, the level of sincerity of an organizational action has a critical impact on the victim in terms of their willingness to reconcile a relationship after a negative event (Lewicki & Bunker, 1996). An individual's evaluation of honesty and sincerity was found to be a key variable regarding "negative reactions" held by stakeholders when an organizational promise was broken (Shapiro, 1991). Further, sincerity was found to enhance the effect of a response by an organization (Tomlinson et al., 2004). Based on these studies, sincerity is an appropriate construct to use to measure evaluation of response to crisis.

The next section discusses the link between the response quality and the performance of the organization in crisis. As such, the above section has theoretically developed the means for evaluating a response's quality in terms of timeliness, adequacy, and sincerity. How positively the stakeholder judges the response will be reflected in the overall quality of the organization-stakeholder relationship, measured in terms of relationship quality and organizational reputation. These outcome variables speak to the higher order construct of organizational legitimacy, which, during a crisis situation, is imperative to establish.

Organizational Legitimacy Hypotheses

Performance has been defined throughout the strategy literature as the competitive position of the firm relative to others in the industry (Porter, 1981; Hoskisson & Hitt, 1990). Performance can be looked at under two distinct lenses, financial performance and reputational performance. The former iteration of performance is concerned with managerial outcomes demonstrated in financial reports, stock prices, and other financial metrics (Cameron, 1978). On the other hand, according to institutional theory, if a firm is to legitimize its reputation and position in the competitive market by appealing to stakeholders through meeting their demands in time of crisis, the stakeholders play a part in the institutionalization of the firm, and performance implications should follow. As such, this article is concerned with the latter definition of performance; examining organizational outcomes for performance with reputation and legitimacy (Deephouse & Carter, 2005). The constructs that we use to examine the link between a stakeholder's evaluation of a response and the organizational legitimacy are relationship quality and organizational reputation.

Relationship quality can be defined as an all-inclusive assessment of the soundness or health of a relationship (Gabarino & Johnson, 1999). Prior research has regarded relationship quality as the most accurate appraisal of relationship strength (Kumar et al., 1995). While there is no one single dimension to produce an overall rating of relationship quality (Johnson, 1999), researchers in marketing and management use a variety of factors which speak to the higher order construct. For the purposes of this work, the overall relationship quality will be assessed using a combination of four factors: satisfaction (Maxham & Netemeyer, 2002), trust (Morgan & Hunt, 1994), loyalty (Arnould & Reynolds, 2003), and helping behavior (Ahuwalia et al., 2000). Thus, in order to gauge the impact that an organization's response quality has on the relationship quality between the stakeholder and the organization, the following hypothesis is proposed:

- *Hypothesis 3: As perceived by the stakeholder, ratings of response quality positively affect a) satisfaction, b) trust, c) loyalty, and d) helping behavior.*

Next, organizational reputation can be a very powerful and valuable asset to an organization (Dasgupta, 1988). Reputation is defined as the extent to which an organization is perceived to be honest and concerned with its stakeholders' interests (Doney & Cannon, 1997). An organization's reputation is developed over time through exposure to the firm's products, services, marketing, public relations, and employees. Stakeholders develop a sense of what the organization's values are and establish a basis for rating the organization when compared to others in the industry, local community, national forum, and even worldwide. Certainly, communication during a time of crisis has many implications on an organization's reputation. Marketing research has demonstrated that an organization's reputation will affect a consumer's product choice, intentions for purchases, and overall attitude towards the brand (Johnson & Grayson, 2005; Hess, 2008).

This article contends that an organization's response strategy in combination with the stakeholder's appraisal and evaluation of the response will have implications on the organization's overall reputation following a crisis situation. Based on the marketing and management literature surrounding organizational reputation, the following hypothesis is formulated:

- *Hypothesis 4: As perceived by the stakeholder, ratings of response quality will positively affect organizational reputation.*

METHODOLOGY

In order to test the proposed conceptual model on the relationship between managerial responses and stakeholder perceptions en route to organizational legitimacy, an appropriate setting in higher education was identified to investigate these relationships. For the purposes of this work, three universities who recently underwent major leadership transitions were selected. The unifying feature of each of the institutions examined was that there was a change in leadership at the presidential level. The difference in the context of the replacement of the university president provides us diversity in examining the effects of managerial response and various stakeholder groups' evaluation of the organization during its time of transition. Thus, it is an appropriate context for studying the

phenomenon under review in this work. The three schools are geographically diverse, have diverse student populations, vary in their degree of exclusivity, and center around three possible crises circumstances: external crisis, internal crisis, and benign crisis. Using such a sample of institutions and crises makes it possible to generalize the results of our study and negate the idea that crises are an artifact of one particular management circumstance.
Data collection for this article was facilitated through cooperation with students, faculty members, and administrators (as well as their personal contacts) from whom the principal investigators have personal relationships. All three of the selected universities are accredited institutions in the United States whom have each underwent a change in their leadership in the last five years. The unit of analysis is the individual stakeholder-organizational relationship, as perceived by the stakeholder, and the data were compiled through snowball sampling of stakeholders at each of the three selected universities (Bernard, 2002).

Given the focus of this work, we rely on the typology for stakeholder salience as proposed by Mitchell et al. (1997). According to this typology, salient stakeholders possess characteristics of legitimacy, urgency, and power, focusing on stakeholder groups who have a real impact on the shaping of the organization in a more direct, tangible way. In applying this to university stakeholders, seven pre-tested stakeholder groups emerged: students, faculty, administrators, staff, alumni, donors, and sports fans. Each of these stakeholder groups should possess adequate levels of knowledge about occurrences at their particular school of interest, particularly when something out of the ordinary such as a major change in leadership occurs. The key-informant approach (Kumar et al., 1993) was used to assess stakeholder ratings of the institution regarding its crisis situation.

To address the issue of common methods bias, two safeguards were performed (Podsakoff et al., 2003). From the basis that stakeholders would be assessing the organization after being reminded of the crisis that took place (and potentially would impact their present rating of the organization), the survey was coded in such a way that attitude towards the organization was assessed in alternating format in the online data collection tool. Thus, every other respondent responded to the survey answered the outcome variables before their perceived managerial response and evaluation of the response surrounding the crisis. Additionally, survey respondents were guaranteed their anonymity so that the responses would not be publically available, coded in such a way that only the principal investigators would be able to analyze.

In order to test the conceptual model, the scales utilized in the survey instrument were adapted from extant empirical literatures in stakeholder theory, institutional theory, contingency theory, social learning theory, and organizational theory. Thus, the scales have been previously assessed for validity and reliability by scholars in these various fields. Table 3 below provides a summary of the constructs examined, their origins in the literature, and the journals in which they have been published.

Table 3
Construct Measures and Origins

Construct	Origin	Journal
Apology	Garrett et al., 1989	Journal of Business Ethics
Disclosure	Morgan and Hunt 1994	Journal of Marketing
Corrective Action	Coombs and Schmidt, 2009	Jounal of Public Relations Research
Evasion	Coombs, 2007	Jounal of Public Relations Research
Excuse	Tedeschi and Riess, 1981	Journal of Applied Psychology
Justification	Schlenker, 1982	Journal of Experiemental Psychology
Timeliness	Shimizu and Hitt, 2004	Academy of Management

Adequacy	Bies and Shapiro, 1987	Social Justice Review
Sincerity	Davison, 1999	Information and Management
Satisfaction	Garbarino and Johnson, 1999	Journal of Marketing
Trust	Moorman, Deshpande, and Zaltman, 1993	Journal of Marketing
Helping Behavior	Ahearne, Gruen, and Bhattacharya 2005	Journal of Applied Psychology
Loyalty	Oliver, 1993	Journal of Consumer Research
Organizational Reputation	Herbig and Milewicz, 1995	Journal of Consumer Marketing

Sample

In order to test the new framework on organizational response and stakeholder perception during a time of crisis, we focused on organizational stakeholders at American universities. Three institutions which had recently undergone changes in their university president were selected: Saint Louis University (SLU), King's College (KC), and Penn State University (PSU). Due to the fact that the changing of a university president can occur under many different circumstances, diverse situations were examined: one situation in which the former president was fired under hostile terms surrounding a widely publicized scandal (PSU), another situation in which a president was encouraged into stepping down from his position due to an internal vote of non-confidence by the faculty senate (SLU), and a final presidential change circumstance in which a president decided to step down and take an alternative role in the university community after a lengthy tenure (KC). Thus, the organizational setting for this research is at the collegiate university, and the sample population consisted of students, faculty, staff, administrators, alumni, donors, and sports fans. Due to the fact that most university campuses are equipped with current technology and the internet, a decision was made to administer the main survey instrument through an online survey in order to make the response task as participant-friendly as possible. To encourage potential respondents to respond, the principal investigator employed a series of emails and posts to social media.

Of the three institutions selected for sampling, 577 subjects participated in the survey by completing the online instrument in full. Of the 577 subjects, 40 respondents failed the attention check question within the survey; 6 were identified as duplicate responses from the same IP address with the same responses; 15 were identified as speedy responses (less than 3 minutes to respond the full questionnaire); 9 responses showed patterned responses (on the Likert Scale, the respondent would answer descending or ascending in a perfect pattern, 7, 6, 5, 4, 3…); and 2 respondents were identified as illogical. After excluding these 72 exception cases, the final useable sample size for the main study was 505. Table 4 below shows the distribution among stakeholder groups and selected institutions.

Table 4
Profile of Survey Respondents

Characteristic		Number*
Stakeholder Group	Student	233 (46%)
	Alumni	156 (31%)
	Faculty	28 (5.5%)
	Staff	32 (6.5%)
	Administration	27 (5.5%)
	Sports Fan	11 (2%)
	Donor	7 (1.5%)
	Other	11 (2%)
Institutional Affiliation	Saint Louis University	168 (33%)
	King's College	177 (35%)
	Penn State University	160 (32%)

*Rounded to the nearest half percentage

The data collection survey instrument was active for six weeks from February of 2014 through March of 2014, in which time all 505 useable surveys were collected. The sampling distributions appear reasonable given the proportion of stakeholders within a collegiate environment. The majority of stakeholders identified themselves as students or alumni, which was anticipated given the percentage representation of these two groups in the higher education industry. In terms of representativeness of the sample populations, the three institutions elicited nearly identical percentage representations, resulting in almost precisely an even distribution among the three institutions.

Structural Model Assessment

The theoretical model of stakeholder perception of organizational response that specifies causal relationships between the constructs of interest is tested with the technique of Partial Least Squares (PLS) modeling. PLS is a component based covariance structure modeling for analysis of systems of independent and response variables (Chin et al., 2003). This method is appropriate because it allows for the simultaneous testing of the structural paths within the model. Further, the PLS algorithm allows the variation of indicator's contribution to the composite score of the latent variable (Chin et al., 2003). The hypothesized relationships were tested in Smart PLS 2.0 for Windows (Ringle et al., 2005). Table 5 identifies the β and significance levels of the hypothesized relationships.

Table 5
Structural Model Results

Hypothesized Relationship	β	t-Value	Hypotheses Support
Functional Response Strategy → Response Perception	.584	14.695***	H1: S
Dysfunctional Response Strategy → Response Perception	-.055	1.074	H2: NS
Response Quality → Satisfaction	.289	5.757***	H3A: S
Response Quality → Trust	.344	5.595***	H3B: S
Response Quality → Loyalty	.007	.113	H3C: NS
Response Quality → Organizational Reputation	.023	.427	H4: NS
Uncertainty Avoidance * Response Quality → Satisfaction	-.010	1.796*	H5A: S
Uncertainty Avoidance * Response Quality → Trust	-.112	1.453	H5B: NS
Uncertainty Avoidance * Response Quality → Loyalty	-.112	1.425	H5C: NS
Individualism * Response Quality → Satisfaction	-.124	2.071*	H6A: S
Individualism * Response Quality → Trust	-.013	.201	H6B: NS
Individualism * Response Quality → Loyalty	.066	1.273	H6C: NS

* significant at the 0.05 level (2-tailed)
*** significant at the 0.001 level (2-tailed)

Hypothesis 1 is focused on the relationship between managerial response to the crisis and the stakeholder's perception of the response. The original hypothesis states that as perceived by the stakeholder, functional response strategies will positively affect managerial response perception. Consistent with Hypothesis 1, the relationship between functional response strategies and response perception is positive and highly significant (β =.584, p<.001). Thus, a conclusion can be made that Hypothesis 1 is supported. As initially predicted, if the organization makes a functional response strategy, it will be perceived positively by the stakeholder groups.

Hypothesis 2 also focused on the relationship between the managerial response to the crisis and the stakeholder's perception of the response. This hypothesis, however, looks at the negative response strategies and their relationships with stakeholder perceptions. The hypothesis states that as perceived by the stakeholder, dysfunctional response strategies will negatively affect managerial response perception. The PLS analysis reveals that the relationship is indeed negative (β =-.055), but the *t* value of 1.074 falls short of the critical t for a two-tailed test of 1.645. Thus, the relationship between dysfunctional response strategies and response perception is negative, but not significant, and a conclusion can be made that Hypothesis 2 is not supported.

Next, Hypothesis 3 (a-d) focused on the evaluation of the organizational response to the crisis by examining the relationship between response quality and relationship quality with components of satisfaction, trust, loyalty, and helping behavior. The first hypothesis (3a) which proposes that response quality is positively related to satisfaction receives support through its positive and highly significant relationship (β =.289, p<.001). As initially predicted, response quality will have a significant impact on the satisfaction between the stakeholder and the organization. The second hypothesis in this series (3b) examines the outcome of trust with the organization during a time of crisis. Consistent with this hypothesis, the relationship between response quality and trust is also positive and highly significant (β =.344, p<.001). Thus, as predicted, response quality will have a significant impact on the trust between the stakeholder and the organization. Next, the third hypothesis (3c) contends that there is a relationship between response quality and loyalty between the stakeholder and the organization. While the relationship is in the correct direction (positive at β =.007), the *t* value is insignificant, so the hypothesis is not supported in this PLS model. Finally, the component of helping behavior (Hypothesis 3d) was dropped during the convergent validity stage due to poor loading and hence, it is not evaluated in the PLS structural model.

In turn, Hypothesis 4 focuses on the outcome variable of organizational reputation and its relationship with response quality. In particular, the originally formulated hypothesis states that as perceived by stakeholders, response quality positively affects organizational reputation. Despite the fact that the associations between response quality and reputation exhibit positive directionality (β =.023), the magnitude of the associations is statistically insignificant. As such, Hypothesis 4 is not supported. Contrary to the proposed relationship between response quality and reputation, there is an insignificant effect on this outcome variable.

DISCUSSION AND CONCLUSIONS

There are several academic and practitioner contributions from this study. To begin, the idea that an organization's functional response strategy is related to overall response quality is a critical contribution to the stakeholder literature. What this finding substantiates is the role of the stakeholders' perception of the communication response to the crisis event. In other words, in finding empirical support for the assertion that functional response strategies positively affect response quality in the eyes of stakeholder (Hypothesis 1), this work makes a significant contribution by illustrating that a stakeholder's perception is critically important in crisis resolution. As such, literature on crisis management should consider the way in which crisis communication is perceived, rather than focusing on precisely what the organization said and did. As mentioned at the beginning of this article, reality is not reality; perception is reality, so it is important to focus on the impressions that communication strategies actually make on interested groups (Bettman et al., 1998).

Another interesting observation from the empirical analysis is the overall quality of managerial responses to crises perceived by organizational stakeholders. This project examined higher education institutions that had recently gone through major changes in their leadership; namely, the replacement of a college president. Specifically, two of the three institutions had presidency changes surrounded by either internal or external conflict, and thus, it was anticipated that dysfunctional response strategies might emerge as more commonplace among the respondents than functional strategies, namely for the two institutions where the president of the school was either fired or encouraged out of his position of authority. What the data showed, however, was that the mean scores for functional response strategies were nearly an entire point higher than those for dysfunctional response strategies (4.244 v. 3.404), despite the majority of the crisis situations in the study being surrounded by a certain level of negative controversy. This potentially is an indicator that stakeholders exhibit a willingness to forgive or give the benefit of the doubt to organizations with which

they have vested relationships. Perhaps this is a function of the specific industry which was examined, so future research may address this possible deficiency.

Next, this paper contributes to the strategy literature via the supported hypotheses in the second half of the framework, by substantiating the significant relationships between response quality and satisfaction as well as response quality and trust (Hypotheses 3a and 3b). This finding allows the connection to be made between response evaluation by a stakeholder and relationship quality with the organization, a performance outcome. Thus, if stakeholders are satisfied with and trust the organizations that they have relationships with, they will be more prone to continue their relationships, even throughout times of crisis (Maxham & Netemeyer, 2002; Morgan & Hunt, 1994). Further, despite the loyalty and helping behavior hypotheses not receiving significant support in their relationship with response quality, satisfaction and trust are factors which can lead to helping behaviors or increased loyalty in a relationship (Flavián et al. 2006).

In conclusion, the conceptual model of stakeholder perception of organizational response that is theoretically developed and empirically tested in this article addresses a major deficiency in the crisis management and strategy literatures. Specifically, it identifies the role of perception and evaluation by the stakeholder in the crisis resolution process. It also provides support to the assertion that an organization in crisis can reestablish and possibly even strengthen its stakeholder relationships through functional response strategies which have relationship quality implications.

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IMPACT OF SUPPLEMENTAL LEARNING MATERIALS IN THE FORM OF YOUTUBE VIDEOS ON STUDENT TEST SCORES IN AN UNDERGRADUATE OPERATIONS MANAGEMENT COURSE

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ABSTRACT

The operations management course is a required course in most business schools. For many students this course is extremely challenging. Typical problems involve business process modeling, process flow analysis, capacity analysis, inventory theory and tools of Six Sigma. Studies have provided specific analysis that led to the conclusion that on-line video can improve grades and knowledge retention. This research blends well with research from communication, psychology and cognitive science fields that discuss lectures, retention and pacing of reviews, which indicates that not only is review of material integral to understanding, but that the timing of the review may have a direct impact on the length of retention. This paper demonstrates how the provision of supplemental review material in the form of on-line YouTube tutorials had a positive effect on student exam scores in an undergraduate operations management class.

INTRODUCTION

The concept of the static lecture by the instructor at the front of the classroom is being challenged by new technological techniques. New modes of delivery including on-line instruction, along with the flipped classroom, interactive exercises and other techniques are gaining popularity. The key questions are whether these techniques are successful and whether they improve students' ability to learn the material.

In this paper, the author reports her research findings from primary research on the usage of specially designed YouTube videos developed to supplement a junior-level Operations Management course. Test scores of students who did have access to the supplemental videos are compared to the test scores of students who did not have access to the materials, looking for significant differences. The Operations Management course that is used for the analysis is populated with junior- and senior-level business majors at a small to midsized metropolitan university. This course is required for all business majors. All classes were taught by the same instructor, and used the same textbook and in-class materials. The key difference between the two groups is the availability of the supplemental YouTube videos designed for the course.

REVIEW OF LEARNING THEORY LITERATURE

The starting point for the analysis of whether a teaching technique, such as supplemental videos, may be successful begins the recognized standard in good practices using Chickering's (1987) seven tenets of Understanding Good Practice in Undergraduate Education:

1. Encourages contacts between students and faculty.
2. Develops reciprocity and cooperation among students.
3. Uses active learning techniques.
4. Gives prompt feedback.
5. Emphasizes time on task.
6. Communicates high expectations.
7. Respects diverse talents and ways of learning

The seventh point is especially important to consider when looking at the variety of students that make up a required undergraduate class. The students attending this course have not chosen this class due to a specific desire to learn the material. In addition, because the course is required, students of all learning capabilities and talents are enrolled in the class. If we need to respect the different ways of learning, we need to provide effective methods that will match a student's pace of knowledge acquisition and retention.

Evans (2008) discussed the effectiveness of podcast revision lectures. Research has also shown that many students accept and use video lectures in support of homework and preparation for exams (Brecht & Ogilby, 2008). Later studies provided more specific analysis that led to the conclusion that on-line video can improve grades and knowledge retention (Dupuis, Coutu, & Laneuville, 2013; Leadbetter et al., 2013; Ostashewski et al., 2013). This research blends well with research from communication, psychology and cognitive science fields that discuss lectures, retention and pacing of reviews (Gettinger, 1984; Titsworth, 2001; Khajah et al., 2014). This research indicates that not only is

review of material integral to understanding, but that the timing of the review may have a direct impact on the length of retention.

It is important to note that in a standard classroom, the instructor must continually move forward with material and in-class time for review is limited. This means that the student must review the material outside of class. Traditionally, if the student has difficulty in understanding the material, the student must wait to meet with the instructor during limited office hours, ask other students in the class, or meet with a tutor at a designated time. This can cause a break between the time the student is ready to work on the material and the time the student is allowed to work on the material.

By providing supplemental video tutorials 24/7, the student is able to review the coursework at the time and place of the student's choosing. In other words, if the student is working on homework problems at midnight, the tutorial video is available, and the student does not have to wait possibly a day or more to get a question answered.

METHODOLOGY

In order to provide students with 24/7 access to the supplemental videos for the course, the decision was made to create the videos and upload them to YouTube. These videos, ranging in length from three to nine minutes, were developed in support of the main topics of the course. A set of 42 videos were created. The course instructor developed each of the videos to align with the material offered, and the videos ranged between basic theories along with worked problems. The structure of the video was PowerPoint along with an audiovisual of the instructor in the corner of the slide. A significant difference between the short tutorial video and the actual class lecture is that each video was narrowly defined to a specific topic; whereas, the classroom lecture may cover more than one topic in a session, provide multiple examples, and allow for class discussion. It was the intent of the instructor to keep the videos to approximately five minutes in length as audience engagement with videos has been shown to drop below 50% of viewing time when the video is longer (Reudlinger, 2012).

The YouTube videos were posted publicly, so there were no restrictions to viewership. The web homepage for the course contained direct links to the video series. A listing of the videos is provided in Appendix A.

The students in the Operations Management course take three exams:

- Exam 1: Process Basics, Architecture, Strategy, Little's Law and Critical Path
- Exam 2: Capacity Analysis, Basic Inventory Theory, Quantity Discounts, Safety Stock, Aggregation,
- Comprehensive Final: Content of Exams 1 and 2 along with Quality and Six Sigma
-

For each examination, test scores for each group of students were analyzed two ways; the total population as well as the middle 60 percent (20^{th} – 80^{th} percentile). The intent was to determine whether overall student test scores improved when students had access to the supplemental videos. In addition, because there are highly motivated students as well as non-motivated students in classes, the researcher wanted to determine whether there was a positive impact on the core middle group of students. By studying the middle 60 percent of the population, it was possible to eliminate the top and bottom groups and concentrate on this middle group.

DISCUSSION OF FINDINGS

As detailed in Table 1, the analysis shows that for the total population, the average score of the students who had access to the supplemental tutorial was higher than that of the population that did not have access to the videos. The scores are significantly higher for Exams 1 and 2. The final exam also has a slight increase in average and median score, but to a much lesser degree. It is also interesting to note that the standard deviation of scores for students who had access to the videos was significantly smaller on Exams 1 and 2. With regard to the 20^{th} – 80^{th} percentile groups, a similar result was obtained. The average score of students who had access to the videos was significantly higher on Exams 1 and 2 than the group that did not have access to the videos.

Table 1
Exam Scores

Exam 1
Total Population

	No Access To Videos	Access to Videos
Number of Students	91	102
Mean (out of 100 points)	67.9	78.5

Median	74.0	84.0
Standard Deviation	26.3	18.4
Exam 2		
Total Population		
	No Access To Videos	Access to Videos
Number of Students	88	100
Mean (out of 100 points)	61.8	68.7
Median	65.0	72.0
Standard Deviation	24.6	18.3
Final Exam		
Total Population		
	No Access To Videos	Access to Videos
Number of Students	84	101
Mean (out of 100 points)	79.6	80.7
Median	81.4	83.6
Standard Deviation	14.4	15.5
Exam 1		
20^{th} – 80^{th} Percentiles		
	No Access To Videos	Access to Videos
Number of Students	57	60
Mean (out of 100 points)	70.1	82.7
Median	72.7	84.0
Standard Deviation	15.9	5.9
Exam 2		
20^{th} – 80^{th} Percentiles		
	No Access To Videos	Access to Videos
Number of Students	52	62
Mean (out of 100 points)	63.7	71.0
Median	65.0	72.0
Standard Deviation	14.9	9.5
Final Exam		
20^{th} – 80^{th} Percentiles		
	No Access To Videos	Access to Videos
Number of Students	50	61
Mean (out of 100 points)	81.5	83.2
Median	81.4	83.6
Standard Deviation	6.7	7.4

It is interesting to note how the grade distributions for the exams were affected (See Table 2). Using the standard grade range of F = score < 60, D = score < 70, C = score < 80, B = score < 90, and A = score 90 and above, for the

total population, it can been seen that there was a shift away from the lower grades of "F" and "D" towards higher grades. This shift towards the higher grades is more pronounced when looking at the middle 60%.

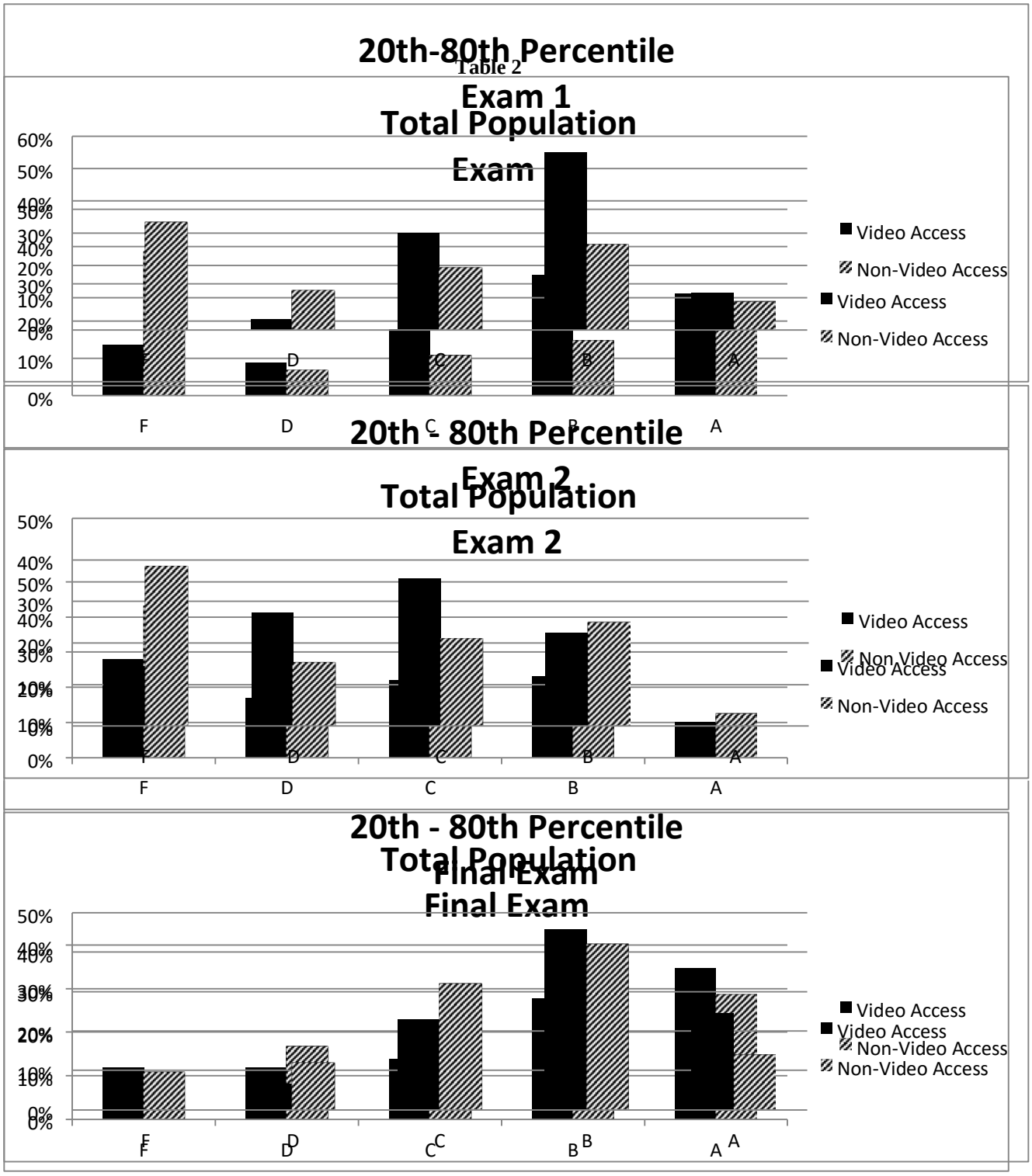

Table 2

SUMMARY AND NEXT STEPS

This paper reported pedagogical research on the impact of supplemental learning materials in the form of YouTube videos on exam scores of students in a required undergraduate operations management course. The researcher looked at two perspectives, the impact of the videos on the total population of students as well as the impact on the core middle

population. In each case, the mean and median scores for the students who had access to the videos were higher than that of students who did not have access to the videos. The grade distributions were also positively affected with fewer students earning failing grades.

In summary, the development of and supplemental learning materials designed in the form of short videos that were specifically designed for the course and available to students 24/7 does have a positive impact on the overall test scores.

The researcher recognizes that this is just the beginning of the research. Further research must be performed to determine how or when the videos were being used and why the videos were effective. In addition, it would be interesting to pursue whether the students who used the videos had better retention of the material beyond the end of the course compared to students who did not have access to the videos.

The next step would be to develop a methodology to determine how and when the videos were used and to relate it to the learning theory. Were the videos used prior to lectures or after lectures? In addition, were the videos used in preparation for examinations? Other aspects of the research would be to determine whether similar style supplemental learning materials could be developed and used to produce a similar effect in other classes.

The final goal is to determine the best use of supplemental videos.

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APPENDIX A

YouTube Videos	
Welcome to Operations Management Video Series	3:15 min
Process Basics	4:43
What makes a good process?	4:23
Process Strategy & Ops Frontier	5:48
Process Architecture	5:23
Operational Audit	3:17
Strategic Fit	4:41
Process Metrics	5:21
Process Analysis Little's Law	6:16
Little's Law Worked Problem	6:08
Financial View of Little's Law	5:46
Drawing Simple Process Flow Diagrams	5:36
Critical Path	5:40
Slack Time and CPM	8:28
Process Efficiency	5:08
Process Capacity	5:31
Effective Capacity	5:32
Capacity Analysis Worked Problem Part 1	5:56
Capacity Analysis Worked Problem Part 2	5:27
Profitability and Capacity Analysis	6:53
Intro to Inventory	6:05
Inventory Total Cost Equation	5:10
Economic Order Quantity	7:56
Quantity Discount and Inventory	6:42
Reorder Point (ROP)	3:20
Safety Stock Part 1	9:05
Safety Stock Part 2	7:15
Service Level	3:59
Inventory Worked Problem	6:22
Inventory Aggregation	5:25
Intro to Quality and Six Sigma	5:15
7 Tools of Quality – Check Sheets	3:41
7 Tools of Quality - Scatter Diagram	5:14
Pareto Charts	3:27
Histograms	3:35
Cause and Effect Diagrams	3:15
Flow Diagrams	3:07
Statistical Process Control	4:47
Inspection and Control Charts	4:12
X bar and R charts	5:30
P charts and C charts	5:46

THE PATENT CITATION APPROACH TO MEASURING TECHNOLOGY OVERLAP

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ABSTRACT

Calculating the technology base of a firm is a critical first step in studies of the technology strategies of a single entity and in making comparisons between the technology strategies of firms. For example, many studies of alliances and alliance portfolios require calculation of technology overlap between firm dyads. These studies typically use the patents of each partner dyad as the bases for the calculation.

This paper introduces a new measure of technology overlap that is based on the patent citations made in the patent applications. Each patent application lists the patented technologies that are being cited, much like citations in an academic paper. By examining patent citations, we can map the evolving technology base of a firm and compare that to itself and to other firms and groups of firms at a broader level than would be available by looking only at the patents themselves. This technique extends the approach used by Sampson (2007) and expands the technology bases being compared, addressing some of the issues of patent analysis. Data on patent citations is obtained from the National Bureau of Economic Research (NBER), a public database.

The paper examines the current techniques for calculating technology overlap and summarizes some of the current applications. Then, the new approach of using patent citations is derived, and examples of the calculation are presented. Finally, application examples are presented for tracking the technology evolution of a single firm and for an alliance portfolio.

INTRODUCTION AND DEFINITIONS

Measuring technological distance is often a concern of managers and researchers when analyzing external alliance partners, mergers and acquisitions, and in developing an R&D strategy within a firm. Here, we first define the terms technology distance, technology similarity, and technology overlap. Then, the focus is on the applications of technology overlap and on current measurement approaches. A novel -- and arguably improved -- measurement technique based on patent citations is described and illustrated, followed by some potential new applications of the citation-based technique.

Technology distance can refer to firms, industries, geographic areas, and countries. In each case, a technology profile is calculated from either inputs, such as R&D spending or number of R&D researchers employed, or from outputs, such as patents or new product introductions. Technology distance can be decomposed into technologies that are complementary to the focal entity and a measure of the technical overlap. This study focuses on the technology overlap measures and their applications.

Researchers have addressed the effects of technology overlap in general and have also specifically addressed technology overlap in external learning. Although there are many potential dimensions to technology overlap, the majority of researchers use patent data as the measurement source and overlap of patent classes as the technology overlap measure.

For example, in looking at organizational learning, Bierly, Damanpour, and Santoro (2009) test the general association of technology overlap, as measured by patent portfolios, with performance in studying university R&D contracts, finding that less technology overlap was associated with increased exploratory innovation. Similarly, Quintana-Garcia and Benavides-Velasco (2008), in a longitudinal study of biotechnology firms, find support for the association of technology overlap with increased innovation. This study also finds that there are diminishing returns to technology overlap and that it had a stronger effect on exploration than on exploitation. Finally, Ahuja and Lampert (2001) find that exploration of a variety of novel, emerging, and pioneering technologies had an inverted U-shaped relationship with breakthrough inventions.

These results reflect that knowledge that is close to the existing base has advantages for learning in organizations. If the new knowledge is in the neighborhood of the existing knowledge base, then the firm can gain economies of scale by reusing the existing knowledge and gain from the learning curve effect (Hayward, 2002). The new knowledge will be easier to absorb as it shares codes, values, language, and symbols with existing knowledge (Grant, 1996).

Similarity of product, customer, and managerial backgrounds facilitates synergies when the knowledge is related (Tanriverdi & Venkatraman, 2005). As a result, organizations often stay in the vicinity of their competencies, reinforcing existing routines (Cyert & March, 1992).

Some degree of knowledge overlap also helps the firm to recognize the value of new, external learning, to absorb it and to commercialize the value (Cohen & Levinthal, 1990). Therefore knowledge acquisition is enhanced when there is overlap between existing and new knowledge. However, if knowledge is too similar, not much new is acquired, there are fewer opportunities for innovative knowledge combinations, and few synergies occur. Learning by reusing existing knowledge is valuable for exploitation and progressing down a similar learning curve, but it is of much less value for external exploration investments where knowledge crosses organizational and technological boundaries (Rosenkopf & Nerkar, 2001).

The calculation of technology overlap is therefore an essential step in determining the value of an alliance partner or the value of a merger or acquisition. Calculation of the technology overlap of a firm's entire alliance portfolio is often referred to as the technology diversity of the portfolio. Firms also rely on this calculation when defining the long-term focus of an R&D project, with the objective that the new technology knowledge is somewhat related to the existing technology base.

EXISTING APPROACHES TO CALCULATING TECHNOLOGY OVERLAP

There are several ways to measure empirically the dimensions and positions of firms in a technology space. Broadly, there are patent-based measures and non-patent-based measures. With non-patent-based measures, the position in knowledge space can be determined by inventor or scientist characteristics (Adams, 1990; Farjoun, 1994). Another possibility is to analyze the R&D profile. For example, Goto and Suzuki (1989) measure the technological distance among 50 sectors based on the spending of R&D into 30 product areas. Sapienza, Parhankangas, and Autio (2004) use questionnaires asking Finnish CEOs of spin-offs about their assessment of the technological distance to their previous parent company.

Patent-based measures of technology overlap are primarily based on either counts of co-occurrences or on calculating distance in a multidimensional space. For example, technology overlap has been measured by the cooccurrence of classifications in patent documents (Breschi, Lissoni, & Malerba, 2003; Nesta & Saviotti, 2005; Schmidt-Ehmcke & Zloczysti, 2008).

The concept of a multidimensional space is most often applied to patents by using the patent classification system to define the dimensions. For each patent, the patent examiner determines a technology class based on the application. Angular separation (Jaffe, 1986) uses patent classifications to measure technological distance. It measures to what degree the vectors point in the same direction, controlling for the length of the vector by the number of patents in that dimension. Rosenkopf and Almeida (2003) propose the use of the Euclidean distance to compare the firms' technology vectors. This approach compares for each technology category the squared difference of the share of that technology category in the focal firm with the share that the technology class has in the object firm. Some authors subtract the Euclidean distance from one to obtain a measure that is decreasing in distance as overlap decreases.

In a further refinement of the calculation of technology vectors, Sampson (2007) calculates the weighted Euclidean distance between two firms across the patent bases of the two firms. Construction of this variable starts with the generation of each partner's technological portfolio by measuring the distribution of its patents across patent classifications, year by year. This distribution is then captured by a multidimensional vector that represents the number of patents assigned to a firm in each patent class. Diversity of partner firm capabilities is then the weighted number of common occurrences of patents in each class.

The Sampson (2007) technique is the most frequently used measure of technological overlap in studying alliances, and it often results in an inverted U-shaped relationship between technological overlap and learning. Examples of use of the Sampson technique of calculating technology overlap include a study of partner selection in R&D alliances (Li, Hitt, & Ireland, 2008), the effects of technology alliances on innovation patterns (Zidorn & Wagner, 2013), and a study of acquisitions (Lee & Kim, 2014; Marki, Hitt, & Lane, 2010). This technique has also been used in examining the complementarity of partners (Noseleit & de Faria, 2013) and in balancing technology portfolios (Gilsing, Vanhaverbeke, & Pieters, 2014).

Researchers using the Sampson method for calculating technology overlap rely on classifications of the patent provided by the US Patent and Technology Office (USPTO), as described in the next section. The refinement of the

Sampson calculation technique described here is based on patent citations, which are also products of the USPTO patenting process.

PATENT DATA AND THE USE OF THE PATENT SYSTEM

Patent data is arguably the best source of information for the measurement of technological distance, given its finegrained split of technological categories and its ready availability from the USPTO, the World Intellectual Patent Office and the International Patent Classification (IPC) system. The USPTO patent has two data fields that are important for calculating technology overlap – the technology class and the patents that are cited as foundation for the new patent. The IPC has similar fields.

The US Patent Classification (USPC) organizes all U.S. patent documents into a class and a subclass. A class generally delineates one technology from another. Subclasses delineate processes, structural features, and functional features of the subject matter encompassed within the scope of a class.

A USPC classification uniquely identifies one of the over 400 classes and more than 150,000 subclasses. A complete identification of a subclass requires both the class and subclass number and any alpha or decimal designations (e.g., 417/161.1A identifies Class 417, Subclass 161.1A). Every US patent document has at least one mandatory classification, and may optionally include one or more discretionary classifications. The principal mandatory classification is known as an OR classification and can have any number of secondary classifications for additional claims in the patent application.

Not only do the applicants of the patent add patent citations, but the examiners of the patent application do as well. Patent citations are determined by the examiner who, with the help of the data supplied by the applicants and their attorney, determines whether specific citations are relevant or not (Leydesdorff & Fritsch, 2006). The number of citations a patent has can also be linked to the market value of the company owning the patent and the value of the technology (Hall, Jaffe, & Ttraijtenberg, 2005).

In 2014, there were 615,234 patent applications to the USPTO and 326,033 patents granted. The elapsed time between application and grant is, on average, 32 months. Given that applicants can repeatedly apply and adjust their applications, the actual patent approval rate in 2012 was almost 90% (USPTO).

The USTPO maintains a searchable database of patents from 1790 to the present. Associated with each patent are the primary classification and any number of secondary classifications. Also associated with each patent are the prior patents cited as a basis for the new patent. However, as this data is not easily compiled into reports, a large number of services exist to do custom searches and reports.

PROBLEMS WITH THE USTPO PATENT DATABASE

Given the extent of the USTPO patent database, it is the source that is used most often in research into technology overlap. However, there are a number of problems that arise from the use of USTPO patent data (Griliches, 1990). A few problems relevant to this research topic are:

a. The propensity to patent depends largely on the size of the company, given the long time between submission and grant, and the expense of documentation.
b. The propensity to patent varies significantly among technologies. Hence,
c. technologies with a lower propensity to patent are underrepresented (Jaffe, 1986).
d. The technology profile of companies and the resulting distance measure depend on a single classification given to each patent, typically a four-digit class/subclass identified at the primary classification.
e. The classification of patents is subject to errors on the part of patent examiners and there are potential biases, in that patent examiners may classify patents in fields with which they are familiar.

One way to address these issues is to broaden the data that is captured by using patent citations as a data source. Patent citations appear at the back of each patent. While the patentee may have the incentive to cite as few other patents as possible in a patent application, a patent examiner verifies the correctness of patents cited and eventually demands that other patents be cited before granting (Lanjouw & Schankerman, 1999).

When the U.S. Patent and Trademark Office grants a patent, the granting officer includes a list of all previous patents on which the granted patent is based. Citations of prior patents thus serve as an indicator of the technological lineage of new patents, much as bibliographic citations indicate the intellectual lineage of academic research (Mowery, 1996).

The National Bureau of Economic Research (NBER) has embarked on a project to make the patent citations of all patents available in an online database. Given the size of the NBER database, as described in the next section, the access and manipulation of the NBER dataset requires a special database and/or programming to extract reports.

Prior efforts to utilize the patent citations include citation counts and cross-citation rate. For example, in a study of acquisitions, Seats and Hoetker (2013) calculate overlap by dividing the count of common citations and patents by the total count of patents and patent citations of the acquirer and target firms. The method described below was developed to take advantage of the patent citation data and to address the shortcoming of current approaches that use the single data point of the primary technology classification assigned to each patent.

THE PATENT CITATION APPROACH TO MEASURING TECHNOLOGY OVERLAP

The data used to examine the technology overlap between the dyads was based on the technologic categories assigned to patents for those companies, or rather, the categories assigned to the supporting patents, and a wellvetted statistic was used to determine a specific metric for that overlap.

The data for this analysis were obtained from the National Bureau of Economic Research website regarding patent data (Roth, 2015). In particular, the two datasets of interest were the Patent data, including constructed variables (pat63_99.txt) and the Pairwise-Citations data (Cite75_99.txt). The first file contained the patents awarded from the years 1963 to 1999 and contained numerous other fields, such as geographic location as well as technologic categories and subcategories. For a full description of the accompanying data, the reader is referred to the documentation linked to in Roth (2015). The latter file, Cite75_99.txt, contained the cited patents for the patent requested.

The datasets were sizable. For the Patent data, there were 2,993,922 company records for the granted patents, which represented the patents granted to companies between the years 1963 and 1999. Each record had 23 fields consisting of elements such as company ID, application and grant year (10 fields), as well as the categories and subcategories of the grant (13 fields). For the Pairwise-Citation data, there were 16,522,439 records with two fields, citing patent number and cited patent number. It was through this second file that the technology overlap could be obtained. Whereas, if looking exclusively at the first file, only one category was applied to that patent; however, by looking at the cited patents, i.e., those patents that were cited in the application of the original patent to justify that patent, and then by referring back to the original technology patent and obtaining that category for the cited patent, a list of technology categories could be built based on the original patent.

For example, if Company A was granted Patent 3, then the technology categories of the cited patents (say, Patent 1 and Patent 2) were used to construct a vector of technology categories. This was denoted as a LAG-1 vector. It was also of interest to look back for a second connection, i.e., to look at the supporting patents for each supporting patent of the original patent. This was designated as a LAG-2 vector. For example, the cited patents for Patents 3, 1 and 2 were then each searched for their cited patents, say Patents 5 and 6 for Patent 1 and Patents 7 and 8 for Patent 2, and those technology categories were also used.

To support this computation, a relational database (Access) was used and recursive queries were built to find the LAG-1 and LAG-2 vectors. As the data made available via the website (Roth, 2015) was simple CSV- formatted data, population of the database was relatively easy as Access allows simple importing of such file formats. For the Patent data, the data were formatted in the data tables as expected, e.g., county as text, but traditionally textual data was converted to numeric fields for speed and space considerations. For this set, the primary key was the patent number as well as the only indexed variable. For the Pairwise-Citation data, there were only two fields, but since this dataset was constantly used in the SQL for the lag computations, and, as indicated above, quite sizable, both fields were stored as large integers and both were indexed to increase efficiency.

Initially, a simple database, Microsoft Access 2010, on a standard operating system, Windows 7, on a common hardware platform, a laptop with 4G RAM, Intel Pentium running at 1.3 GHz, and 400 GB HD was used as opposed to more specialized data stores, advanced analysis techniques, and hardier operating systems. Originally, the first steps involved exploratory data analysis, mostly through the use of co-citations, as the second file's name suggested.

Co-citation analysis is a well-established method of analysis and is the foundation for a framework of various veins of data mining (Buzydlowski, in press). Additionally, since there was to be significant communication between the authors at this exploratory stage, a standard platform for communication, i.e., Windows and Microsoft Office, was important. Nonetheless, when a suitable and promising method of analysis was found, as described here, the original platform was maintained, as it simply worked.

Having arrived at a method and implementation of deriving a technology vector for a patent, the next step was to determine the overlap in technology categories between two merging companies, i.e., the dyad. The technologic vectors were derived by examining the two companies of interest (dyad) and then exploring the patents that were granted for those companies within three years of the acquisition. Thus, each company's patents were found, and the technology categories associated with that set were determined for all patents within three years of the merger. Two vectors then were extracted and stored to be examined.

To determine the amount of overlap between the two vectors, measures were sought to best determine a metric, which would indicate that concept of learning, and the different measures examined are described in a previous section of this paper. To be specific, the statistic described in (Sampson, 2007) was used and is as indicated below:

$$1 - \frac{F_i F'_j}{\sqrt{(F_i F'_i)\,(F_j F'_j)}},$$

where F_i is a vector containing the counts of the technology categories associated with a patent for company i, F_j is a vector containing the counts of the technology categories associated with a patent for company j, and F'_i F'_j are the transpose of the corresponding vectors. A value near 1 indicates complete technology diversity, i.e., there is no overlap between the two entities. Values near 0 indicate complete overlap.

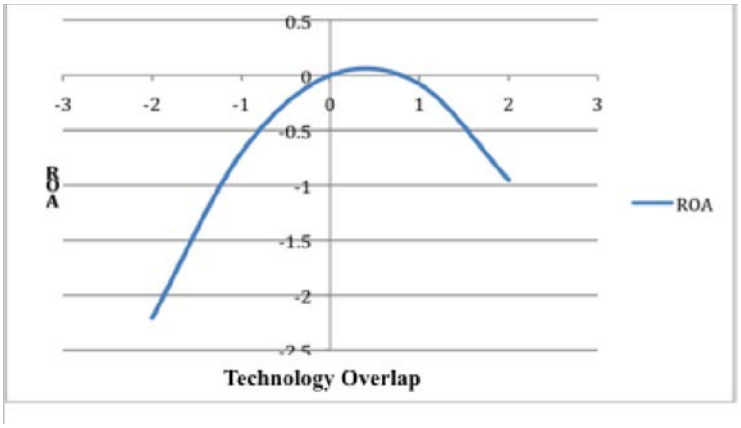
To compute the statistic, the vectors were extracted from the database and exported to a CSV file. From there, an implementation of the Samson Statistic was implemented in Python, Version 2 (Python Software Foundation, 2015). The implementation was done in 123 lines of Python code and included modules to read in the data, read in the companies of interest from an Excel file, and export the data to another Excel file, as well as the computation of the Sampson Statistic. (Python was chosen as it is a scripting language, so the codebase remains small, and works well with other programs, such as Excel, Access, or reading/writing any file format.)

APPLICATIONS OF THE PATENT CITATION APPROACH WITH EXAMPLES

The citation approach to measuring technology overlap offers advantages over existing approaches, as it broadens the computation base. It can also more accurately calculate the technology overlap variable for companies that patent less often, typically smaller companies or more secretive companies.

For example, the authors have used the patent citation approach in research on the application of portfolio theory to learning portfolios, as described in the prior section. This study showed that technology diversity had an inverted-U relationship with firm performance (Figure 1).

Figure 1: Regression of Technology Overlap With Return on Assets



From this dataset from this study, we can illustrate further uses of the measure, for example how the technology overlap differs between firms in the same industry. Within the telecommunications industry, the technology overlap of Cisco (Figure 2) and Motorola (Figure 3) have different profiles over time, with Cisco lower but rising, while the technology overlap of Motorola with its alliance partners is decreasing over time.

Figure 2: Technology Overlap of Cisco with Alliance Partners

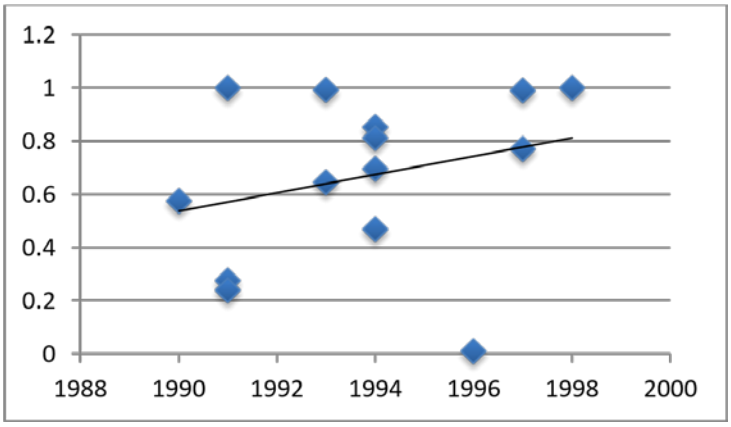
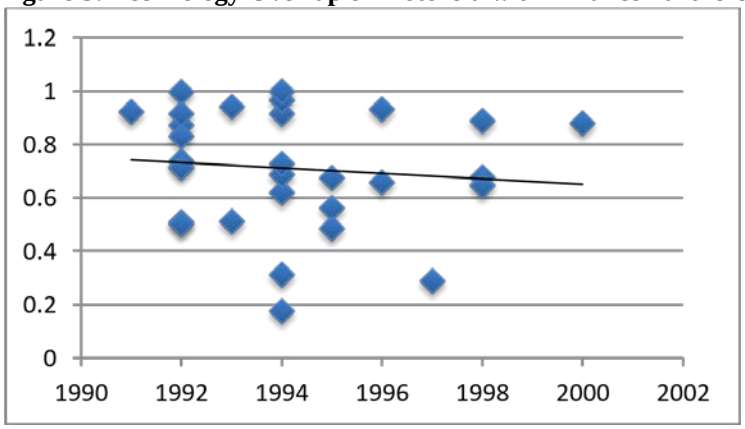


Figure 3: Technology Overlap of Motorola with Alliance Partners



This comparison raises several relevant research questions concerning these trends at the firm level and their relationship to industry, competitive, and financial results.

Another level of analysis is opened up by comparison of the technology overlap of firms with the industry average and trends. For example, in the biotech industry, Enzon's technology overlap is trending toward one (Figure 4) while the overall industry trend is well below that level (Figure 5).

Figure 4: Technology Overlap of Enzon with Alliance Partners

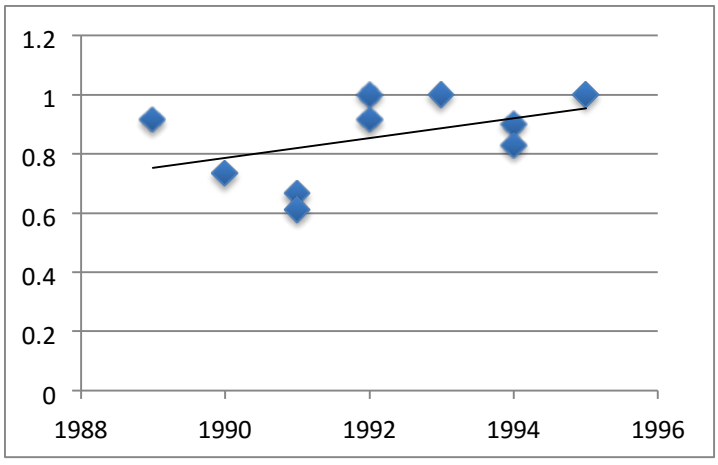
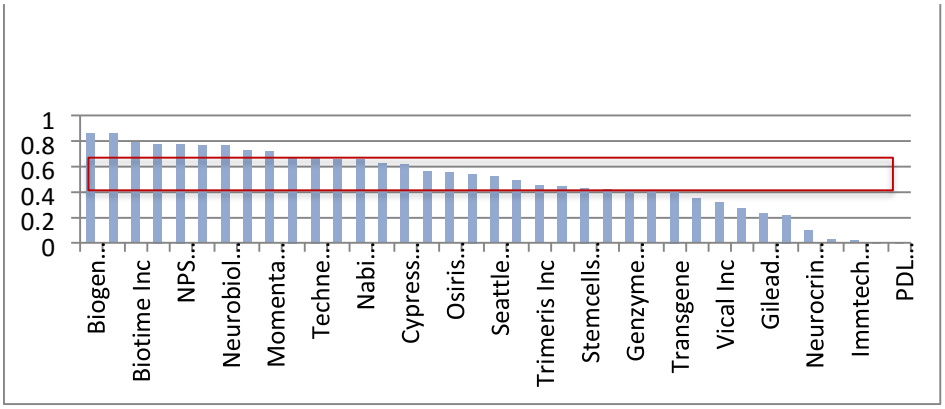


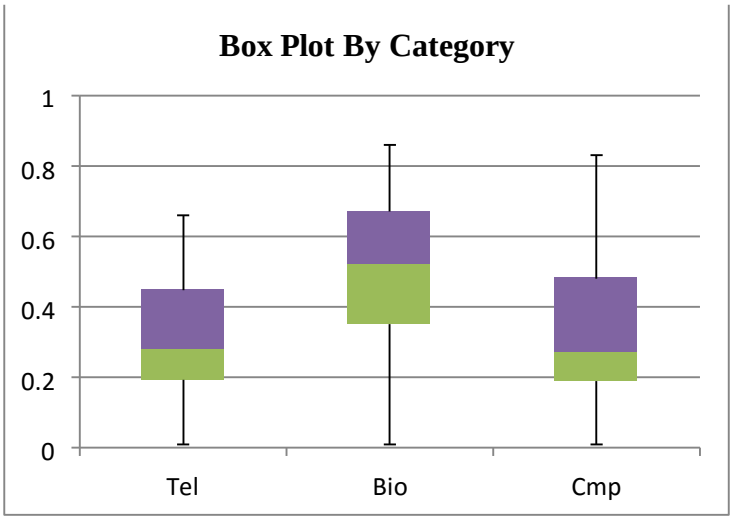
Figure 5: Biotech Industry Technology Diversity



Again, this type of analysis opens up further research questions, such as how the level of a firm's portfolio within an industry could be a leading or a lagging indicator of performance.

In the final example, the comparison of technology diversity at the intra-industry level can also be explored. As shown in Figure 6, the measurements among the biotech, telecommunications, and computer services industries are quite different (whisker ends indicate extreme values).

Figure 6: Comparison of Industry-Level Technology Diversity



LIMITATIONS AND AREAS FOR FUTURE RESEARCH

There are several limitations within the patent citation approach to calculating technology overlap and its applications. Most of these limitations are the same ones that apply to the use of the primary patent classification. First, the classification itself is determined by a patent author and is verified by a single patent examiner. Second, big companies patent more frequently and more broadly than small firms, making comparisons problematic, although this is mitigated somewhat by using the broader base of citations. Finally, this analysis technique is based on the NBER dataset, which currently lags the patent dataset by ten years, limiting the timespan of research.

Areas for future research are examined at the intra-firm, inter-firm, industry, and country levels. At the firm level, one application is to track the technology portfolio over time. If a firm's technologies exhibit a great deal of overlap,that could mean that the company should expand its R&D scope and/or expand the boundaries of the technology space through alliances and acquisitions. A study in this area could relate the firm's technology overlap to market and financial performance. Likewise the direction of the trend line, as illustrated in Figures 3 and 4, could be a leading indicator of the level of competitiveness of a firm, which is useful in competitive strategy studies.

At the firm and inter-firm levels, the trend in technology overlap can be compared to the innovation rates of companies as measured by patents issued and new product/service introductions. Also at the inter-firm levels, technology overlap can be compared to financial performance measure over time to see if diversification leads to improved performance.

Industry and firm-level analysis is illustrated in Figure 5, comparing a firm's technology overlap to an industry average. This analysis could be done as a time series, again looking at the relationship to innovation and financial performance measures.

Figure 6 illustrates a way of comparing industries. Industry-level analyses could include how the technology diversity of the industry changes over time, the influence of global competition on the variable, and a comparison of the R&D intensity at the industry level with the industry technology diversity measure.

In terms of potential evolution of the patent citation approach, the authors are considering ways of combining the patent citation technique with co-occurrence analysis as well as information retrieval methodologies to further broaden the base of the calculation. They are also looking at ways of examining the various technology overlap calculations to find which technique is best suited for different types of analysis. The authors welcome comments on and corrections to these application areas, as well as on the development of the patent citation technique.

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COMPARATIVE ANALYSIS OF FAIR CHANCE POLICIES

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ABSTRACT

The screening of employment applications is a customary practice in the private and public sectors including businesses and governmental agencies. Applicants are considered for employment opportunities in the examination and selection process based on various qualification criteria including skills, experience and background check. Employers establish hiring policies and application screening processes to recruit the most qualified candidates through suitable examination, based upon organizational needs, regulatory compliance and risk management considerations. Criminal background checks by employers present a particular uncertainty in light of recent fair chance policy legislation. According to the National Employment Law Project, such reform legislation has been approved in many states, municipalities and counties (Greenwald, 2015). In addition, major national private sector employers have adopted similar corporate policies (Wescoe, 2015). Prior research to examine provisions associated with fair chance policies within the United States has been limited. To address this gap in the literature, this paper will examine fair chance policy trends including prohibitions, individual assessment, exemptions, job relatedness, notification requirements, eligibility determination, rebuttal and appeal opportunities and disclaimer provisions.

INTRODUCTION

This paper presents a literature review and critique of the various aspects of fair chance or fair hiring policy legislation to understand the emerging employment practice trends. Under existing federal law, Title VII of the Civil Rights Act of 1964 prohibits employment discrimination based on race, color, religion, sex or national origin (42 U.S.C. 2000 et seq). The U.S. Equal Employment Opportunity Commission enforces the Title VII provisions. Employers face several dilemmas in the employment screening process for the selection of applicants with criminal records. Having a criminal record is not listed as a protected basis in Title VII (EEOC Enforcement Guidance, 2012). Therefore, the EEOC has issued Enforcement Guidance in an effort to eliminate unlawful discrimination in the employment screening process. The consequences for job applicants with past criminal records varies widely depending upon whether the business practices display constrained employment opportunities or more pluralistic opportunity structures (Fishkin, 2014).

In an attempt to reverse these exclusionary employment practices, many states, municipalities and counties have recently passed legislation to afford individuals with criminal convictions a fair chance for employment opportunities. State and local jurisdictions have enacted fair chance policy legislation in an effort to discourage blanket exclusion of candidates with prior criminal records. Private employers such as Walmart, Koch Industries, Home Depot, Bed Bath & Beyond and Target have implemented their own policies removing barriers to the employment of persons with criminal histories (N.J. Opportunity to Compete Act, 2014; Wescoe, 2015; Congressional Letter to the President, 2015). This study evaluates the various state statutes and summarizes the similarities and differences of the fair chance policy laws that have been adopted by the states. This paper attempts to examine important aspects of the fair chance policy by state legislatures and propose further provisions to augment the standard model for the examination, screening, hiring and employment selection processes.

EXISTING REGULATORY COMPLIANCE SCREENING PROCESS

The Civil Rights Act of 1964 requires employers to remove artificial, arbitrary and unnecessary barriers to employment when the barriers operate to discriminate on the basis of racial or other impermissible classification (42 U.S.C. 2000). Denying employment to a person with a criminal record may violate Title VII if the controversy is part of a claim of employment discrimination based on race, color, religion, sex or national origin (EEOC Enforcement Guidance, 2012). Title VII liability for employment discrimination may be determined by using a disparate impact analytic framework (EEOC Enforcement Guidance, 2012). Under the disparate impact theory, discrimination can be proven even if the employer lacks discriminatory intent (Loafman & Little, 2014). The use of criminal history information by an employer could be identified as a racially neutral employment practice (Doty, 2014). However, employers may not implement criminal record exclusionary practices that cause a disparate impact on a particular class of persons unless the employer can prove that the practice is job related or a business necessity (Moran, 2005). Under this legal framework, if the neutral employment policy or practice has the effect of disproportionately screening out a member of the Title VII protected group, the employer may be found liable for violating Title VII (42 U.S.C. 2000).

CURRENT CONVENTIONAL REFORM PROPOSALS WITHIN THE EXISTING REGULATORY FRAMEWORK

The EEOC has proposed reform measures that appear to work within the existing regulatory framework. The EEOC recommends delaying the inquiry of a job applicant's conviction history and considering the job-relatedness of the conviction to maximize compliance with federal anti-discrimination law (Vermont Executive Order No. 03015).

Recently, members of Congress sent a letter to President Obama requesting the Administration to require all federal agencies and federal contractors to adopt a federal fair chance hiring policy (Congressional Letter to the President, 2015). The members of Congress recommended that federal contractors and agencies refrain from asking job applicants to report their criminal history at the initial stages of the hiring process.

CURRENT BUSINESS PRACTICES

The national instant criminal background check system allows states to upgrade record keeping and enables them to provide criminal records on an on-line basis (Brady Handgun Violence Prevention Act, 1993). Conducting criminal background checks has become a standard personnel practice in organizations because technology has made this information more accessible (Lageson, Vuolo, & Uggen, 2015). Businesses seek to hire the best candidate for the job who is most likely to succeed (Jacobs, 2015). Companies have adopted best business practices to obtain this information and develop an examination and selection process for screening potential job applicants with criminal backgrounds. Most businesses contract with private information vendors to conduct the criminal background searches for public and private employers (Burns, 2015). These third party companies routinely conduct the background checks utilizing various screening products.

RISK MANAGEMENT CONSIDERATIONS

Companies are concerned about the level of risk associated with the hiring of an applicant with a criminal record. However, the courts have observed that some level of risk is inevitable in all hiring and that hiring policies concern the management of risk (El v Southeastern Pennsylvania Transportation Authority, 2007). The Third Circuit reasoned that employers need to distinguish between unacceptable levels of risk and acceptable levels of risk to justify criminal record exclusion policies and practices (El v Southeastern Pennsylvania Transportation Authority, 2007). Research has found that the fair chance statutes provide the employer with a better methodology for assessing the specific risk by utilizing an individualized assessment process (Nadich, 2014). In addition, research has shown that many individuals with criminal histories pose no greater risk of future criminality than do people with no criminal history and are equally qualified, reliable and trustworthy candidates for employment (N.J. Opportunity to Compete Act, 2014; Delaware House Bill No. 167, 2014).

PRIOR RECOURSE TO JUDICIAL INTERVENTION

Courts have examined employer exclusionary policies and practices which eliminate job opportunities for candidates with prior criminal records. The congressional objective of Title VII requires equal employment opportunities and the removal of barriers to employment which favor an identifiable group over other employees (Griggs v Duke Power Company, 1971). Title VII prohibits not only overt discrimination, but also business practices that are fair in form, but discriminatory in operation (Griggs v Duke Power Company, 1971). An employer is permitted to demonstrate that the challenged application practice is job related for the position and consistent with business necessity (42 U.S.C. 2000). However, employers must proceed with caution in using convictions as an absolute bar to employment. In the Green v Mo. Pac. R.R. (1977) decision, the Eighth Circuit identified three factors that were relevant to assessing whether the criminal exclusion is job related for the position and consistent with business necessity of the employer. The qualifying factors outlined in the case include the nature and the gravity of the offense or conduct, the time that has passed since the offense or conduct and/or the completion of the sentence and the nature of the job being sought (Green v Mo. Pac. R.R., 1977).

FEATURES OF FAIR CHANCE POLICY REFORM LEGISLATION

Numerous fair chance hiring laws have been enacted by states, municipalities and local government. These jurisdictions have adopted ban the box policies and developed practices which remove the conviction history question on the initial job application. The statutes have many similarities and also unique specific provisions. In this paper, the statutory differences are documented for comparative analysis.

MOTIVATING FACTORS

The fair chance statutes typically prohibit employers from establishing initial barriers to employment that screen applicants with past criminal convictions (Fishkin, 2014). These statutes identify many reasons for the adoption of fair chance policies including the removal of unfair barriers to employment, reducing the risk of recidivism and incarceration, added value for communities, post-conviction success rates and the increase in self-sufficiency (Vermont Executive Order No. 03-15). Fair chance practices afford a second chance to individuals by removing unnecessary obstacles to economic success, expanding employment opportunities, improving access to better housing, education and other societal benefits, and creating a diverse and thriving business environment (Virginia Executive Order 41, 2015). Fair hiring policies improve public safety, enhance workforce development and provide increased state employment opportunities for applicants with criminal convictions on their record (Georgia Executive Order, 2015).

Scope of Operation

The scope of operation for the fair chance statutes varies by jurisdiction. Some laws affect public employment opportunities, while other statutes impact public and private employers. The Hawaii Statute (Haw. Rev. Stat. 3782.5, 1998) was the first fair chance statute to apply to public and private employers. The New Mexico statute (N.M. Criminal Offender Employment Act, 2006), the Vermont Executive Order No. 03-15 (2015), the Ohio Administrative Policy HR-29 (2015), Nebraska Legislative Bill 932 (2014), Maryland Senate Bill 4 (2013), Georgia Executive Order (2015), Connecticut House Bill 5207 (2010), and Colorado House Bill 12-1263 (2012) apply exclusively to public employers. In addition to state agencies, the California Assembly Bill 218 (2013) extends the employment application procedures to all cities and counties with the state. Although the Delaware House Bill No. 167 (2014) applies to public employers, the statute stipulates that the state will only do business with contractors that have also adopted and employ written fair background check policies, practices and standards. The Oregon House Bill (Oregon H.B. 3025, 2015), Rhode Island statute (R.I. Stat. 28-5-7, 2014), New Jersey statute (N.J. Opportunity to Compete Act, 2014), Minnesota statute (Minn. Stat. 364.021, 2013), Illinois statute (Illinois Job Opportunities for Qualified Applicants Act, 2015), and the Massachusetts statute (Mass. Stat. 256-176A, 2010) apply to public and private employers. The Virginia Executive Order 41 (2015) imposes guidance for state agencies, boards and commissions within the executive branch but merely encourages similar hiring practices among private employers and state government contractors.

Eligibility Determination

Usually, the fair chance statutes eliminate the inquiry of criminal conviction information on the initial screening phase of job applications for purposes of eligibility determination. In the New Mexico statute (N.M. Criminal Offender Employment Act, 2006) and the Georgia Executive Order (2015), the employer is prohibited from utilizing a conviction as an automatic bar to obtaining public employment. The Oregon House Bill (Oregon H.B. 3025, 2015) makes it an unlawful practice for an employer to exclude an applicant from an initial interview solely because of a past criminal conviction. The Rhode Island statute (R.I. Stat. 28-5-7, 2014) makes it an unlawful employment practice for any employer to include on any application for employment a question inquiring or to otherwise inquire either orally or in writing whether the applicant has ever been arrested, charged with or convicted of any crime.

Under the Nebraska Legislative Bill 932 (Neb. AM 2376, 2014), a public employer may not request information concerning the applicant's criminal record until the entity determines that the applicant meets the minimum employment qualifications. Under the Connecticut House Bill 5207 (2010), the public employer is only permitted to inquire about a past conviction after the prospective employee has been deemed otherwise qualified for the position. The Illinois statute (Illinois Job Opportunities for Qualified Applicants Act, 2015) ensures that all qualified applicants are properly considered for employment opportunities and are not pre-screened or denied an employment opportunity unnecessarily or unjustly.

Under the Hawaii statute (Haw. Rev. Stat. 378-2.5, 1998), the employer may consider an individual's criminal conviction provided the conviction record bears a rational relationship to the duties and responsibilities of the position. In the Massachusetts statute (Mass. Stat. 256-176A, 2010), the applicant must be provided with the criminal history record in the employer's possession prior to questioning the applicant about the information.

Individual Assessment

The Ohio Administrative Policy HR-29 (2015) provides a detailed review process which encompasses a thorough analysis of information received from an applicant regarding a criminal conviction during the application process. Such proactive analysis of information for consideration may include the nature of the conviction, the time elapsed, evidence

of rehabilitation, the age, and any mitigating factors. Under the Delaware House Bill No. 167 (2014), employers are required to consider several enumerated factors in evaluating the candidate including the nature of the crime, degree of rehabilitation, opportunity for commission of a similar offense, likelihood of reoccurrence and the elapsed time since the offense. The City of Memphis Code of Ordinances (Ordinance No. 5363, 2010) also contains a requirement to consider the gravity of the offense. The Connecticut House Bill 5207 (2010) contains similar criteria to deny employment by reason of the prior conviction if the state considers the nature of the crime and its relationship to the job for which the person has applied.

Authorization Release

Under Ohio Administrative Policy HR-29 (2015), the administrative agency is required to request the applicant to complete a background check authorization during the application process. The Virginia Executive Order 41 (2015) directs the Department of Human Resource Management to provide guidance to ensure that any criminal history background check is only conducted after a candidate has signed an appropriate waiver authorizing release of information.

Removal of Conviction History Question on Application

An initiative to afford an applicant a fair opportunity to gain employment is the removal of the conviction history question on the employment application (National Employment Law Project, 2015). The Ohio Administrative Policy HR-29 (2015) mandates that the Ohio Civil Service Application form no longer have an initial question requiring applicants to disclose felony convictions. The Virginia Executive Order 41 (2015) directs the Department of Human Resource Management to remove questions relating to convictions and criminal history from the state employment application form.

Postponement

Delaying the background check inquiry until later in the hiring process affords an applicant a fair opportunity to gain employment (National Employment Law Project, 2015). According to the New Mexico statute (N.M. Criminal Offender Employment Act, 2006), the criminal inquiry may not be taken into consideration until after the applicant has been selected as a finalist for the position. The Maryland Senate Bill 4 (2013) requires the appointing authority to provide an opportunity for an interview before inquiring into the criminal record of an applicant. In the California Assembly Bill 218 (2013), any inquiry about conviction history of the applicant is deferred until the administrative agency has determined the applicant meets the minimum employment qualifications.

Post Offer Background Checks

Other jurisdictions have established laws which postpone the conviction inquiry or criminal background check until after the company extends a conditional offer of employment to the applicant. Under the New Jersey statute (N.J. Opportunity to Compete Act, 2014) and Delaware House Bill No. 167 (2014), an inquiry into the candidate's criminal history may only take place after the employer has determined that the candidate is qualified and has received a conditional offer of employment. Under the Hawaii statute (Haw. Rev. Stat. 378-2.5, 1998), the employer is not permitted to inquire or consider a conviction record until after the prospective employee has received a conditional offer of employment. In the Colorado statute (Colo. Rev. Stat.24-5-101, 2012), the applicable state agency is not permitted to perform a background check until an applicant is determined to be a finalist or receives a conditional offer of employment.

Employer Preservation of Rights

The ban the box policies do not preclude the employer from considering criminal history information (Smith, 2014). Furthermore, the fair chance statutes do not remove the rights of employer from considering an applicant's conviction history when making a hiring decision (Oregon H.B. 3025, 2015). The delayed inquiry process provides the employer with the opportunity to inquire into the applicant's criminal past (Nadich, 2014). An employer under Rhode Island law may ask an applicant for information about criminal convictions at the first interview or thereafter (R.I. Stat. 28-5-7, 2014). Under the Massachusetts statute (Mass. Stat. 256-176A, 2010), nothing in the administrative code prohibits an employer from making an adverse decision on the basis of an individual's criminal history.

Withdrawal of Conditional Offer

Companies may have the ability to withdrawal a conditional offer of employment for legitimate business reasons. A conditional offer of employment means an offer that is contingent only upon a criminal history inquiry (N.J. Opportunity to Compete Act, 2014). Under fair chance policies, the scope of reasons for a conditional offer may be limited. In the District of Columbia (D.C. Bill 20-642, 2014), several factors are defined for the withdrawal of conditional job offers by any employer within the District.

A revocation of a conditional offer of employment from a candidate is considered an adverse employment decision under the New Jersey statute (N.J. Opportunity to Compete Act, 2014). Whenever this type of determination is made in New Jersey, the employer is required to complete a Criminal Record Consideration Form. The document requires the employer to certify its reasonable consideration of the statutorily mandated factors such as the degree of rehabilitation, amount of time that has elapsed since the conviction, and the particular nature of the criminal record as it relates to the duties and setting of the job.

Notification Requirements

Whenever an adverse employment decision is made by the employer under the New Jersey statute (N.J. Opportunity to Compete Act, 2014), a written notification of the decision and a Notice of Rights form must be provided to the candidate which indicates that the employer considered various factors such as the degree of rehabilitation, amount of time that has elapsed since the conviction and the particular nature of the criminal history as it relates to the candidate's suitability for the job. If the candidate believes that the employer has not followed the notification procedure, the New Jersey Department of Law and Public Safety may be contacted by the candidate. Under the Minnesota statute (Minn. Stat. 364.021, 2013), the hiring authority is required to notify the individual in writing of the ground and reasons for the denial. The Connecticut House Bill 5207 (2010) contains similar requirements, but the notice must specifically state the evidence presented and the reasons for rejection. Under the Massachusetts statute (Mass. Stat. 256-176A, 2010), the employer is required to maintain a written criminal offender record information policy and provide the applicant with information concerning the process for correcting a criminal record.

Rebuttal and Appeal Opportunities Process

Under the fair chance statutes, the applicant is afforded the opportunity to explain a conviction or criminal background. During the interview process, the applicant may be asked whether the applicant has been convicted of a felony or has a relevant criminal background (Ohio Administrative Policy HR-29, 2015). According to the New Jersey statute (N.J. Opportunity to Compete Act, 2014), an employer must make a good faith effort to discuss with the candidate any questions or concerns and provide the candidate with an opportunity to explain and contextualize any crime or offense, provide evidence of rehabilitation and rebut any inaccuracies in the criminal history. Under the Minnesota statute (Minn. Stat. 364.021, 2013), the hiring authority is required to notify the disqualified individual of the applicable complaint and grievance procedures concerning alleged violations of the fair chance provisions. The Illinois statute (Illinois Job Opportunities for Qualified Applicants Act, 2015) designates the Illinois Department of Labor to establish an administrative procedure to adjudicate claims and issue final and binding decisions on violations of the fair chance act.

Disclosure

Under Ohio Administrative Policy HR-29 (2015), the administrative agency is required to include a statement on the job posting which indicates any specific violations that may disqualify an applicant from consideration for a position.

Ineligible Positions

State laws may contain provisions to carve out exclusions for certain positions from the intent of the fair chance statutes. However, the definition of ineligible positions are not clearly defined in several statutes. According to the Vermont Executive Order No. 03-15, 2015), a candidate with a criminal conviction may be ineligible for certain positions regardless of the circumstances. Under the Ohio Administrative Policy HR-29 (2015), certain positions of government employment are unavailable to individuals convicted of criminal conduct based upon state law, federal law or other federal restrictions that prohibit using federally-funded positions to pay for a convicted felon in the position at issue.

Under the Oregon House Bill (Oregon H.B. 3025, 2015), certain employers are permitted to consider an applicant's criminal history for hiring purposes in categories such as a law enforcement agency, the criminal justice system and

non-employee volunteers. According to the Hawaii statute (Haw. Rev. Stat. 378-2.5, 1998), the employer is expressly permitted to inquire into an individual's criminal history prior to receiving a conditional offer of employment for sensitive governmental positions in the department of education, department of health, the judiciary, and armed security services. Other categories of sensitive employment include the department of human services, the public library system, the department of public safety and the business of insurance. The Rhode Island statute (R.I. Stat. 28-5-7,2014) stipulates that an employer may include a question or otherwise inquire about convictions if a federal or state law or regulation creates a mandatory or presumptive disqualification from employment based on a conviction. The Virginia Executive Order 41 (2015) directs the Department of Human Resource Management to identify administrative agency positions that are classified as sensitive and remain subject to initial disclosure of criminal history information. Under Georgia Executive Order (2015), the fair hiring policy does not affect the application process for sensitive governmental positions in which a criminal history would be the basis for an immediate disqualification.

Under the Minnesota statute (Minn. Stat. 364.021, 2013), the offender may be denied a license for peace officers, fire protection agencies, private detective agents, school bus drivers, commercial driver training instructors, emergency medical services personnel or taxicab drivers.

Disqualification

An administrative agency may disqualify an applicant following an analysis of the facts and circumstances surrounding the conviction and the nature of the duties associated with the position so long as the agency determines a sufficient nexus between the conviction information and the position (Ohio Administrative Policy HR-29, 2015). In determining the disqualification of the candidate under the Minnesota statute (Minn. Stat. 364.021, 2013), the public employer needs to consider the nature and seriousness of the crime, the relationship of the crime to the purposes of the position and the relationship of the crime to the ability, capacity and fitness required to perform the duties and discharge the responsibilities of the position. In the Colorado statute (Colo. Rev. Stat. 24-5-101, 2012), one of several determining factors is the direct relationship between the conviction, and the duties and responsibilities of the position and the bearing the conviction may have on the applicant's fitness or ability to perform one or more such duties and responsibilities.

Enforcement Provisions

Some fair chance statutes designate the responsible agency with oversight authority. In Oregon, the Commissioner of the Bureau of Labor and Industries is responsible for enforcement of the fair chance law (Oregon H.B. 3025, 2015). However, the Oregon statute does not indicate guidelines for implementation of the act. In the Ohio Administrative Policy HR-29 (2015), the agency human resource administrator reviews and approves recommendations to disqualify or select a candidate who has a criminal conviction. The Virginia Executive Order 41 (2015) directs the Department of Human Resource Management to submit a compliance report to the Office of the Governor.

Under the Minnesota statute (Minn. Stat. 364.021, 2013), the state commissioner of human rights has responsibility to investigate alleged violations of the fair chance policies and may impose penalties ranging from a written warning or fines to the private employer. A similar provision of the Illinois statute (Illinois Job Opportunities for Qualified Applicants Act) designates the Illinois Department of Labor to investigate alleged violations. All monies recovered as civil penalties are deposited into the Job Opportunities for Qualified Applicants Enforcement Fund, a special fund used to enforce employer violations. In compliance with Maryland Senate Bill 4 (2013), the Department of Budget and Management is required to report to the General Assembly each year the total number of positions that have been filled in the State Personnel Management System, and the number of positions that have been designated as exceptions to the fair chance statute.

Qualified Immunity

Under the New Jersey statute (N.J. Opportunity to Compete Act, 2014), employers are granted a qualified immunity from negligent hiring or negligent retention claims that are based on an employee's criminal record unless the employer's hiring decision is found to be grossly negligent. The law provides protection to employers from negligent hiring liability where employers have knowingly hired an individual with a criminal background who later commits an unlawful act (Valdez, 2015).

DISCUSSION

The existing EEOC statutory and regulatory framework for screening job applicants creates a dilemma for the administrative agency, the employer, the applicant and other third party stakeholders. The EEOC is responsible for enforcing the provisions of Title VII of the Civil Rights Act of 1964 (42 U.S.C. 2000). The state and local governments have enacted reform hiring practices legislation by ordinances, statutes or policies to afford candidates with past criminal convictions an equal opportunity to gain lawful employment. However, state and local jurisdictions may also have laws and regulations that restrict or prohibit employers from employing persons with records of certain criminal conduct (EEOC Enforcement Guidance, 2012). The Virginia Executive Order 41 (2015) directs the Department of Human Resource Management to inform its hiring authorities that state employment decisions may still be based on the criminal history of an individual if the position warrants a demonstrably jobrelated concern and is consistent with business necessity. According to a Survey of State Criminal History Information Systems, all state jurisdictions require employers to conduct criminal history background checks for certain occupations such as elder caregivers, daycare providers, school teachers and caregivers in residential facilities (DeBacco & Greenspan, 2010).

Employers have broad discretion to select and hire applicants. The employer may institute an exclusionary policy which bans a candidate from employment with a criminal record for a legitimate nondiscriminatory reason. The employer may be concerned about the employee's propensity for violence, theft, fraudulent acts, or embezzlement.

The fair chance statutes vary from jurisdiction to jurisdiction (Nadich, 2014). Statewide variations in the statutes may create inefficiencies in recruiting and hiring practices for multi-jurisdictional employers (O'Connell, 2015). If large corporations are confronted with a patchwork of differing state laws, they often adopt the approach of the most restrictive state (Loafman & Little, 2014). From a different perspective, numerous major businesses and organizations have voluntarily implemented their own policies removing barriers to the employment of those with criminal histories (N.J. Opportunity to Compete Act, 2014).

Third party stakeholders may have valid reasons to hold employers accountable for negligent hiring practices and liability claims for injuries caused by employees in the performance of their job duties (Shumaker, T.A. & Feldstein, A.L., 2004). This potential threat of litigation claims creates a dilemma for employers conducting background checks. An injured third party may allege that an employer is liable for the criminal acts of its employee if the employer knew or should have reasonably known that the employee was unfit for the job and the employment created an unreasonable risk of harm to the third party (Stalbosky v Belew and Three Rivers Trucking Co., 2000). An employer may be held liable if an extensive background check would have revealed the propensity of bad behavior by the employee (Moran, 2005). The employer is also subject to an alleged unlawful employment practice for refusing to hire an individual with a criminal history if the particular employment practice causes a disparate impact on the basis of race (42 USC 2000e-2). Despite the narrow path, the employer can use the delayed interview process to reduce the risk of liability under negligent hiring claims and avoid violations of Title VII of the Civil Rights Act (Nadich, 2014).

Applicants expect to receive fair treatment in the screening process for employment. When candidates apply for jobs, the applicants want to be afforded just and fair measures and practices for screening and identifying eligibility for employment (City of Memphis Code of Ordinances). However, applicants may also need to take proactive steps to mitigate the effects of their past convictions (Loafman and Little, (2014).

Fair chance hiring legislation needs to encompass a balanced approach which takes into consideration the various perspectives of the interested parties. The state statutes need to incorporate the broad range of perspectives in order to reconcile these competing interests. To resolve the differences in objectives, the federal government could adopt a uniform fair chance law which creates a consistent framework for compliance and enforcement by the EEOC (O'Connell, 2015). However, most criminal statutes are created by local legislative bodies and interpreted and enforced by local jurisdictions. Delegating oversight responsibilities to a federal agency may be cumbersome and difficult to administer. Currently, individuals experience long delays for the EEOC to address their complaints and the long waits may cause individuals with valid claims of overly broad employer criminal records policies to bypass the EEOC process (Smith, 2014).

IMPLICATIONS

According to EEOC best practices, employers may develop narrowly targeted written screening policies and practices for checking criminal conduct which considers the nature of the crime, the time elapsed and the nature of the job (EEOC Enforcement Guidelines, 2012). The research findings of this study demonstrate that blanket exclusion practices in the screening process for criminal backgrounds are no longer being viewed as acceptable. The federal guidelines which have been adopted by many states, municipalities and businesses clarify that an individualized

assessment of the job applicant is required. According to the EEOC Enforcement Guidelines (2012), employers are also expected to provide a written notice explaining that the applicant has been screened out because of a criminal conviction, and provide an opportunity for the individual to demonstrate that the exclusion is inapplicable because of their particular circumstances.

The scope of the fair practice and fair hiring policies affect employment practices at all levels of business. Local municipalities have also enacted city ordinances prohibiting unfair discrimination in hiring policies against persons with previous convictions. The New Haven Code of Ordinances (2007) requires vendors to adopt conviction history policies that are consistent with City standards as part of the performance criteria to award a City contract. The Jacksonville Ordinance 2008-9111-E (2008) requires businesses contracting with the City of Jacksonville to report on employment practices including a monthly tally of ex-offenders hired and currently working, and an explanation as to why an ex-offender was refused employment. The Detroit Code of Ordinances (2010) prohibits a city contractor from making inquiries regarding criminal convictions of an applicant until after being interviewed or qualified. The contractor is also required to submit an affidavit and verify compliance by their subcontractors stating under oath that the contractor's hiring policy is in compliance with the regulation (Detroit Code of Ordinances, 2010).

Companies that screen applicants for positions should review their standard employment application forms. Questions related to criminal background should be removed from the initial application form (National Employment Law Project, n.d.). Job descriptions and essential job requirements should be identified and reviewed, as well as the specific offenses that may demonstrate unfitness, and the duration of exclusions for criminal conduct (EEOC Enforcement Guidelines, 2012). Offer letters and other standardized correspondence should be reviewed and modified as necessary to comply with the EEOC Enforcement Guidelines. Any conditions of employment should be clearly identified in the correspondence so that the applicant is better informed of company policies.

FUTURE CONSIDERATIONS AND CONCLUSION

Since the passage of fair chance or fair hiring legislation in various jurisdictions, the research findings demonstrate a trend for employers to remove the conviction history question on the job application forms. Most fair chance statutes preserve the employer's ability to ultimately conduct a criminal background check as part of the hiring process (Vermont Executive Order No. 03-15, 2015). The fair chance statutes afford the opportunity for applicants with criminal records to explain their circumstances and prevent the conviction from serving as an immediate reason for screening out an applicant (Vermont Executive Order No. 03-15, 2015). Unfortunately, many employment policies still do not consider crucial factors such as the severity of an individual's conviction, the time elapsed since the committed crime and the nature of the sought-after job (Doty, 2014).

The governmental policies are designed to encourage and contribute to the rehabilitation of criminal offenders, to secure employment and to assist them in the resumption of responsibilities of citizenship (Minn. Stat. 364.021, 2013). The Nebraska statute (Nebraska Legislative Bill 932, 2014) was enacted as part of comprehensive legislation to develop a system-wide reentry plan entitled the Step-Up Program for job placement in collaboration with the Nebraska department of correctional services. The primary objectives of the reentry program are to reduce recidivism rates of offenders and to improve the overall transition into the community from the criminal justice system.

In the future, data will be forthcoming from the jurisdictions that have enacted the fair chance and fair hiring policies which measure the effectiveness of these statutes and business practices. The Office of the District of Columbia Auditor is required to provide the city council with a report, using information that is requested from relevant government agencies, non-profit organizations and employers that are willing to voluntarily provide data on the hiring of applicants with criminal backgrounds (D.C. Bill 20-642, 2014). Hopefully, the reform measures will have a substantial impact on the improvement of employment opportunities for job applicants with criminal backgrounds. The business community and other stakeholders have a vested interest in the success of these progressive policies to assist a large segment of the population in achieving a fair and equitable access to gainful employment opportunities.

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EXCESS RESERVES AND THE ZERO INTEREST RATE BOUND: AGAIN

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ABSTRACT

The liquidity and solvency panic of 2008 led to a rescue effort by the Federal Reserve System (Fed) with three stages of "quantitative easing". The Fed purchased enormous amounts of Treasury and mortgage securities from banks. The result is that the Fed has $4,100 billion in Treasuries and mortgage backed securities (MBS) and the banks have $2,400 billion in excess reserves (up from only $2 billion in 2007). It is important to note that the excess reserves are due to the rescue effort to counter the bad behavior of the big financial institutions that caused the panic. The huge amount of excess reserves and the severe recession drove short term interest rates to zero in 2008 where they remain today. Various officials and others say it is time for the Fed to raise interest rates even though the economy has not reached a sustainable 3% or so growth rate and inflation is not yet a problem. The question is how and when the Fed is going to do it. Selling the Fed's huge holdings of securities in the open market could cause a bond market crash.

The Fed has a new tool for managing interest rates put into action in 2008, paying interest on excess reserves (IOER). If Janet Yellen's June 17 conference long run fed funds projection of 3.75% is correct the IOER expense to the Fed (and loss of revenue to the Treasury) could be $100 billion per year. The banks would be getting a risk free $100 billion as a reward for their bad behavior which generated the huge excess reserves in the first place.

The problem of high excess reserves and interest rates at the zero bound has occurred before, from 1934 to 1942 with lingering effects past 1960. This period has some lessons that could be useful regarding the current situation. In 1936-7 the Fed doubled reserve requirements to get rid of excess reserves. The result was a disaster. Hopefully, the Fed will not commit another 1936-7 type mistake again.

INTRODUCTION

Interest rates 1933-42, 2007-15

For almost seven years since the third quarter of 2008 short term interest rates have been near zero. See Appendix 1. This has bothered such people as Richard Fisher (ex-president of the Dallas Federal Reserve Bank), Charles Plosser of the Philadelphia Fed, John Taylor of the Taylor Rule, many bankers, and Rick Santelli of CNBC among others who think that interest rates should be "normalized" at higher levels. On April 30, 2015 Jeff Kilburg, CEO, KKM Financial, on CNBC said it has been 10 years since the Fed has raised rates, it is time, let's go. But there was no real reason other than that. A question is whether the economy itself is "normal". If not, then "normalizing" interest rates may not be the best strategy. The behavior of bank reserves discussed below indicates that the economy is not "normal". Perhaps patience is needed.

When the Fed raises interest rates there is an execution problem; exactly how is the Fed going to do it. If open market operations are employed what mix of short term and/or long term securities should be sold from its asset portfolio. A new and untested tool is its 2008 IOER (interest on excess reserves) power to control interest rates by paying interest on bank reserves, currently at .25%. We anticipate problems with the IOER approach, particularly regarding the expense of the program. In 1935 the Fed got a new tool to use, the ability to double reserve requirements in the Banking Act of 1935. It misused this new tool in 1936-7 with unintended consequences. IOER also could be subject to unintended consequences.

At her June 17, 2015 press conference Janet Yellen said that consensus for the federal funds rate was 1.7% for late 2016 (implied IOER expense on $2.6 trillion excess reserves is 45 billion), 2.75% in late 2017 (IOER expense 71 billion), and 3.75% long run (IOER 98 billion). The Fed appears to be back in the interest rate management style of McChesney Martin, There was no discussion of the money stock. Regarding the Fed's portfolio of bond assets no decision has been made about reinvesting as bonds mature or letting the securities run off as they mature.

There is another period shown in Appendix 1 with short term rates at the zero bound. The period from 2Q1934 to 2Q1942 when WWII controls took over. Perhaps we can learn something by studying this period. It is another example showing that a low interest rate environment can persist for a very long time. There was a blip up of short term interest rates in 1937 which is an interesting story involving the 1936-7 doubling of reserve requirements, contraction of the money stock, and the giant recession of 1937-8. Another interesting feature of 1937-8 is that the recession was not preceded by an inverted yield curve (short rates higher than long rates) as is the case with "normal" recessions. Since

we now have 1930s type interest rates and excess reserves it is possible that the Fed could trigger another recession without inverting the yield curve.

Note: In Appendix 1 iff is the federal funds rate, the rate that banks charge each other for overnight loans, usually to meet bank reserve requirements. The Fed funds market was dormant in the 1930s and became active in 1954 (see BMS, FRED). i3mo is the 3 month Treasury Bill rate. i10yr is the rate on 10 year Treasury Bonds. In the 1930s 10 year bonds were not specifically followed but an index of long term bonds averaging 12 years plus is available (see Banking and Monetary Statistics 1914-41 from the St Louis Federal Reserve FRASER data base).

About a quarter of the CNBC air time involves a discussion of what the Fed will do (quantitative easing under Bernanke, tapering, the anticipated rise of interest rates under Yellen, and much discussion of what will happen to the stock market, and remarkably little about what will happen to the bond market). A rise in interest rates will have an effect on the bond market particularly on the long duration end. Bond prices are inversely related to interest rates so when rates rise bond prices fall affecting the wealth of bondholders. Cheaper bonds provide competition to the stock market so the expectation is that higher rates will hurt stock values. Higher rates also imply higher mortgage rates slowing the housing market, higher consumer rates slowing auto and other consumer purchases. The overall effect of a rise in interest rates is a slowing of the economy which is the only known way of reducing inflation at this point. Those arguing for an interest rate increase seem to have the 1950s thought of then Fed Chairman W. McChesney Martin who said that when the party got going (the economy booming with a threat of inflation) it was the job of the Fed to take the punch bowl away (raise interest rates to slow the economy). Unfortunately, the party has not gotten started yet. We are still waiting for the economy to "takeoff". But, the "hawks" are impatient for the Fed to raise interest rates.

Zero bound interest rates are not the only problem. As of April 2015 the banks have a record $2.5 trillion of excess reserves. Some people believe they could be the source of a boom and inflation which is what some people in 19357 thought in a similar situation. See Appendix 2 for statistics on excess reserves 1933-41, and 2007-14.

Excess Reserves 1933-41, 2007-14

The monetary base Ba is legal tender held by the public (currency held by the public Cp) and reserves of depository institutions mainly banks. Bank holdings of legal tender equivalents are called reserves R. Some reserves are held as vault cash but most reserves are deposited at Federal Reserve banks. In equation form Ba = Cp + R. The Federal Reserve can manage the monetary base with a simple method called open market operations. Suppose the Fed wants to increase the base (and implicitly the money stock M1 which is Cp plus demand deposits Dp: M1 = Cp + Dp). It buys Treasury bills, notes, or bonds from the public and/or banks and pays the public and/or banks in cash directly or indirectly. This increases Ba. To reduce Ba the Fed sells Treasuries to the public and or banks and is paid in cash or cash equivalents reducing the base.

Note: Dr. Econ of the SF Fed in a google article ("I noticed that bankers - -") says that the Fed controls reserves of the banking system absolutely and directly. See the two paragraphs above their conclusion. We believe Dr. Econ is wrong. The Fed controls the monetary base not reserves. The base is reserves plus currency held by the public. Dr. Econ and the New York Federal Reserve Bank referenced forgot about the role of currency held by the public. The problem is that a false belief such as that of Dr. Econ may lead to bad policy.

For our purposes reserves R can be divided into two categories, required reserves Rr and excess reserves Re (there are other categories such as borrowed reserves, nonborrowed reserves and free reserves but they are not needed at the moment). The original 19th century idea of requiring banks to keep say 10% of deposits in the form of cash reserves was to make sure that depositors could make withdrawals (not quite true - to make sure that all depositors could be paid all of their funds at the same time the bank would need 100% reserves) but later the reserve requirement evolved into a tool for managing the money stock as was tried in the unfortunate 1936-7 experiment. Normally excess reserves of banks are very low because prior to Oct 6, 2008 excess reserves earned no interest and .25% since. In "normal" times such as the 1920s and 1965-2007 excess reserves were far below 1% of deposits and below 3% of required reserves. But there are two time periods when excess reserves rose to extremely high levels: 1934-42, and 2009-2015+?. As it turns out excess reserves tend to rise sharply as short term interest rates approach the zero bound. Short term loans earning zero interest can't cover risk and administrative costs. The risk of capital losses if interest rates rise also discourages the purchase of fixed income and discount securities. Table 2a below shows excess Re, required Rr, and total reserves R along with bank deposits, loans and security holdings, and currency held by the public Cp for 1932-41. Table 2b shows bank loan data for 2007-14 along with excess and total reserves, deposits, and currency. Other quantities such as the monetary base Ba can be calculated from Cp + R and the money stock as Cp plus deposits.

There just was not space for these quantities in the tables. In order to assess the impact of "excess" excess reserves on the economy it is useful to consider the simple Brunner-Meltzer money stock function.

The Simple Brunner-Meltzer Money Stock Function

The money stock plays an important role in explaining some economic events. Here is a quick derivation of the formula. Divide M1 = Cp + Dp by Ba = Cp + Rr + Re then multiply by Ba. The result is M1 = [Cp+Dp/Cp+Rr+Re]Ba where the term in the bracket is the money multiplier. Now divide the numerator and denominator of the money multiplier by Dp and let Cp/Dp = k, Dp/Dp = 1, Rr/Dp = rr, and Re/Dp = re, and substitute. Then M1 = (1+k/k+rr+re)Ba. The quantity in the parentheses is the money multiplier. In normal times the multiplier is reasonably constant.

Normally the currency/deposit ratio k is constant in the short run, drifting with payment habits and innovations. It does rise in times of financial panic such as the waves of bank failures 1930-33 as people literally took money out of banks and put it under the mattress.

The required reserve ratio is basically determined by state and Federal Reserve requirements (Regulation D). Since reserve requirements vary according to deposit classification (demand, Passbook savings, and different kinds of CDs) rr is also determined by the deposit mix. In the July 1980 Federal Reserve Bulletin p. A-8 shows 12 different categories of deposits. Fortunately rr has been relatively stable since the disastrous 1936-7 episode. See Appendix 2b for data to calculate rr.

Normally, re is near zero because before 2008 excess reserves earned no interest. In the 1920s re was below.01, rose to .03 in the first quarter of 1933 at the bottom of the Great Depression, and jumped to .10 in 2Q34 when the zero interest rate bound was approached. The two periods of "excess" excess reserves are shown in Tables 2a and 2b. Questions are why, what are the consequences, and what should be done?

Excess Reserves, Control of Money and Credit and Marriner Eccles

M1 = (1+k/k+rr+re)Ba. k in the short run should be constant and is controlled by the public's payment methods. rr is nominally controlled by the Fed through Regulation D, Ba controlled by the Fed through open market operations, and re is controlled by the banks. By December 1935 re was .135, far above the .01 of "normalcy". See data in Table 2a. In 1935. There were two opposing fears regarding the role of excess reserves. One was the fear that the banks could start lending out the excess reserves expanding money and credit and causing an inflationary boom (even though unemployment was around 17%). The other was the idea that expansive monetary policy was ineffective since it was like "pushing on a string".

Pushing on a String

At the March 4, 1935 congressional hearing on the Banking Act of 1935 (signed into law on August 23), then Fed chairman Marriner Eccles mentioned the possible difficulty with stimulating the economy with monetary policy and Rep. T. Alan Goldsborough said "You mean you cannot push a string". Or, you can pull on a string (decrease money and credit and restrict the economy) but not push on it (expand money and credit to stimulate the economy).

Case 1. Here is how the pushing idea works using the Table 2a data for 4Q35. First: check out the M1 formula. M1 = 27.032, Ba = 10.633 billion, k = .2223, rr = .1236, re = .1349. Using the formula M1 = (1.2223/.4808) 10.633 = 27.031, off by a .001 rounding error. Now suppose the Fed increases the base by a billion dollars to 11.633 but that the whole increase goes into excess reserves. Then re rises to .1801. Plugging this value along with 11.633 into the formula gives an unchanged value of M1, $27.032 billion. Algebraically the rise in re cancels the rise in the base. Diane Swonk of Mesirow Financial on CNBC explained it this way in a modern context: Helicopter Ben's (Bernake) QE operation dropped dollar bills but they got hung up in the trees (being kept by banks as excess reserves) and did not get to the people on the ground. This 1935 idea is relevant today and may explain at least partly why it has been so difficult to get the money stock to grow and why the 2009-2015 recovery has been slow despite large increases in the monetary base.

Paul Krugman in the DeLong blog "Liquidity Traps: What's in a Name" Jan. 29, 2009 also describes the situation, "Well, my definition of a liquidity trap is, purely and simply, a situation in which conventional monetary policy - open market purchases of short term government debt (increasing Ba) - has lost its effectiveness. Period. End of story." We can use this idea to define a partial trap. Suppose Ba goes up 10% but the money stock goes up only 5%. Then we have a 50% trap, half being trapped and the other half getting through.

Case 2: Fed Chairman Eccles had a fear that banks could use their excess reserves to cause an unhealthy inflationary boom. Example: suppose the banks decided to reduce re to a "normal" .01 from .1349 in the example above. The new level of money would be (1.2223/.3559) 10.633 = $36.518 billion, a 35% increase from $27.032. The inflation fear is explained on p. 613 of the August 1936 Federal Reserve Bulletin. "The problems raised by these (excess) reserves have long been under consideration by the Board of Governors. In order to change a part of excess reserves into required reserves and thus to eliminate the possibility of this part of the reserves becoming the basis of an injurious credit expansion, the Board on July 14 decided to exercise its power under the Banking Act of 1935 to raise member bank reserve requirements (by 50%, the act allowed a doubling). "The part of the excess reserves thus eliminated is superfluous for all present or prospective needs of commerce, industry, and agriculture and can be absorbed at this time without affecting money rates and without restrictive influence on member banks ...

Furthermore, by this action the remaining volume of excess reserves …is brought within the scope of control by the Federal Open Market Committee.". From the May 1937 Bulletin p. 377, "So long as member banks had a volume of reserves far in excess of legal requirements, the customary instruments of credit policy, open market operations and discounts, were wholly ineffective." The Fed completed the doubling of the required reserve ratio in March and May 1937.

Another statement of what the Fed feared (Aug. 1936 Bulletin p. 614): "The portion of existing excess reserves, which will be absorbed by the Board's action, if permitted to become the basis of a tenfold or even larger expansion of bank credit, would create an injurious credit expansion." This was a gross exaggeration. There is a companion function to Brunner-Meltzer that measures bank lending capacity (BLC). BLC = (1-rr-re/k+rr+re)Ba + BEQNDD where BEQNDD is bank equity plus non deposit debt. Excluding the effect of long term bank capital lending capacity would go from $16.398 billion to $25.885 billion, a 58% increase but nowhere near ten times.

Even as it doubled the reserve requirement the Fed said (p. 614 Aug. 36 Bulletin), "it does not constitute a reversal of the easy money policy which has been pursued by the System since the beginning of the depression " (overlooking their failure to be the lender of last resort during the waves of bank panic failures 4Q1930-1Q1933). The Fed's denial of a reversal was wrong. With the forced transfer of excess reserves into required reserves the Fed made balance sheets look more "normal". But when times are not normal with interest rates at the zero bound, there can be and were unintended consequences (which made the recession of 1937-8 much worse). Similarly today, some of those advocating a rise in interest rates say that it is not a change in policy, just an adjustment. We shall see.

Reasons Why Excess Reserves Were High

Overview: The following balance sheets of the Fed show how the monetary base (Fed Reserve Notes or cash plus Reserves in the liability section of the sheets) grew from Dec. 1933 to Dec 1941. Then the reserves declined relative to other accounts to near normality in 1960. The main highlight is that the main source of the 1933-41 increase in currency and reserves came from the gold inflow from an uneasy Europe with the rise of Hitler and Mussolini. Overall, open market operations were nil meaning that the Fed did nothing to stimulate the economy, monetary stimulus came from the luck of gold inflows. Excess reserves gradually subsided to near "normality" by 1960. There was no deliberate overt effort to get rid of them. A similar analysis is done below for Dec. 2007 to May 2015 (see Table 6).

Table 0
Fed Balance Sheets 1933, 1941, 1960

Dec33	Dec41	Dec60	
3.79	20.76	17.84	Gold + Silver (Inflow from Europe - Hitler unease)
2.50	2.35	26.98	Bills Notes Bonds Certificates (Open Market Opns)
0.45	1.20	6.81	Uncollected Items
0.30	0.04	1.35	Miscellaneous
7.04	24.35	52.98	Total Assets
3.29	8.19	28.45	Currency in Circulation (Cp + Vault Cash at Banks)
2.73	12.45	17.08	Bank Reserves at the Fed
0.45	3.34	6.22	Miscellaneous

0.57	0.37	1.23	Net Worth of the Fed
7.04	24.35	52.98	Liabilities + Net Worth

Business Cash Flow Analysis 1933-41. A major reason why excess reserves were so high from 1933 through 1941 is that business loan demand was virtually zero. The banks had funds but business did not need them. The following cash sources and uses in Table 1a shows that business was self-sufficient. BMS below stands for Banking and Monetary Statistics 1914-41 available on FRASER. NIPA is National Income and Product tables from the BEA (Bureau of Economic Analysis). Other reasons are that lending at near zero rates is not profitable adjusting for risk and administrative costs. Also, if rates do rise there will be a capital loss due to the inverse relation between interest rates and security prices (although adjustable rate loans should not have this problem). Table 1b shows a similar situation for 2007-2014.

Table 1a
Business Sources(S) and Uses(U) of Funds 1933-41

Year . PAT+DPR+CP+NuIss=S/Divs+StrucEq+Inv=U/S-U Cumulative
1933 . 1.3 + 4.0 +.03 +0.16 = 5.49/2.0 + 2.5 - 1.4 = 3.1 / 2.39 / 2.39
1934 . 2.5 + 4.1 +.06 +0.18 = 6.84 / 2.6 + 3.3 - 0.6 = 5.3 / 1.54 / 3.93
1935 . 3.4 + 4.0 +.01 +0.40 = 7.81 / 2.8 + 4.3 + 1.1 = 8.2 / -0.39 / 3.54
1936 . 5.7 + 4.2 +.04 +1.19 = 11.13 / 4.5 + 5.8 + 1.3 = 11.6 / -0.47 / 3.07
1937 . 6.1 + 4.7 +.06 +1.23 = 12.09 / 4.7 + 7.5 + 2.6 = 14.8 / -2.71 / 0.36
1938 . 3.6 + 4.8 -.09 +0.87 = 9.18 / 3.2 + 5.5 - 0.6 = 8.1 / 1.08 / 1.44
1939 . 6.3 + 4.8 +.02 +0.38 = 11.50 / 3.8 + 6.1 + 0.2 = 10.1 / 1.40 / 2.84
1940 . 7.8 + 5.0 +.01 +0.88 = 13.69 / 4.0 + 7.8 + 2.4 = 14.2 / -0.51 / 2.3
1941 11.2 + 5.6 +.16 +1.26 = 18.22 / 4.4 + 9.7 + 4.3 = 18.4 / -0.18 / 2.15
Total 47.9+41.2 +.30 +6.55 = 95.95 /32.0+52.5 +9.3 = 93.8 / 2.15

(1) NIPA Table 7.16 Line 29 / PAT = Profit After Taxes
(2) NIPA Table 1.12 Line 28 / DPR = Depreciation
(3) BMS Table 127 / CP = Net Issue of Commercial Paper
(4) BMS Table 137 / NuIss = Net Issue of Bonds and Stock
(5) S = Sources of Funds
(6) NIPA Table 7.16 Line 38 / Divs = Cash Dividends
(7) NIPA Table 1.1.5 Lines 9-11 / StrucEq = Capital Expenditures on Structures and Equipment
(8) NIPA Table 1.1.5 Line 13 / Inv = Net change in Inventory
(9) U = Uses of Funds
(10) S-U = Sources minus Uses = Net Cash Flow In
(11) Cumulative Cash Flow In. Negative indicates borrowing need.

Table 1b:
Business Sources (S) and Uses (U) of Funds: 2007-14

Year .. PAT + DPR + NuIss + .CP . = S ./ Divs+StrucEq+Inv = U/S-U
2007 . 1303 + 1197 + xxx + -5.3 = 2495 / 819 + 1383 + 34 = 2236 / 259
2008 . 1073 + 1259 + xxx + 19.4 = 2351 / 809 + 1378 - 12 = 2180 / 171
2009 . 1203 + 1261 + xxx + -86.1 = 2378 / 575 + 1083 -148 = 1510 / 868
2010 . 1470 + 1263 + xxx + 28.9 = 2762 / 564 + 1094 + 62 = 1720 /1042
2011 . 1428 + 1299 + xxx + 39.3 = 2766 / 704 + 1220 + 42 = 1766 / 800
2012 . 1681 + 1349 + xxx + 19.5 = 3050 / 857 + 1351 + 65 = 2273 / 777
2013 . 1761 + 1402 + xxx + 15.3 = 3178 / 960 + 1407 + 74 = 2441 / 737 2014 . aaaa + 1457 + xxx + 35.0 = aaaa / aaa + 1524 + 80 = aaaa / aaa

PAT, DPR, Divs, StrucEq, and Inv from NIPA as above. Net change in commercial paper from FRED. S-U is before stock issues less buybacks and new bond issues less retirements. Notice how the drop in profits was offset by large

declines in dividends and investment expenditures on non-residential structures and equipment in 2008-9. A brief history of profitability also explains why loan demand is low. PBT is profit before tax, PAT is profit after tax.

Table 1c
Profits as a % of GDP and Tax Rates (NIPA Accounts)

Year	PBT	PAT	GDP	TaxRate%	PAT/GDP	U.S. President
1929	10.9	9.5	104.6	12.84	9.08	Hoover
1936	7.1	5.7	84.9	19.72	6.71	Roosevelt
1956	52.6	30.6	450.1	41.83	6.80	Eisenhower
1966	90.4	56.5	815.0	37.50	6.93	LBJ-begin the Great Inflation
1979	301.1	211.1	2632.1	29.89	8.02	Carter, Inflation, Iran
1988	388.4	246.7	5252.6	36.48	4.70	Reagan-Bush I
2000	747.1	482.0	10284.8	35.48	4.69	Clinton balanced budget
2007	1748.4	1302.9	14477.6	25.48	9.00	Bush II tax cuts, Re 2bill
2008	1382.4	1073.3	14718.6	22.36	7.29	Financial Crash Zero Bound
2009	1472.6	1203.1	14418.7	18.30	8.34	Obama-Excess Reserves to 1T
2010	1840.7	1470.1	14964.4	20.13	10.16	(T = trillion)
2011	1806.8	1427.7	15517.9	20.98	9.20	Excess Reserves to 1.5T
2012	2136.1	1681.3	16163.2	21.29	10.40	
2013	.2235.3	1761.1	16768.1	21.21	10.50	Excess Reserves to 2.4T

Since the 2008 crash the profit share of GDP has been higher than in the fabled year of 1929. This is one of the driving forces behind business cash self-sufficiency. A discussion of other issues such as the repatriation problem, the desire for flexibility, and a buffer against uncertainty is contained in a St. Louis Fed internet article, "Why are Corporations Holding So Much Cash", by Juan Sanchez and Emircam Yurdagul, and related articles. Note: the profit margin of 1979 might be a surprise to some people.

A more direct way to measure business loan demand is to look at the volume of commercial and industrial (C&I) loans of domestic banks available on the St. Louis Fed FRED data base, or the HSOP data base of the FDIC. Unfortunately FRED goes back only to 1997 and HSOP back to 1992 (with annual C&I beginning in 1938), so alternatively Table 2a has call date data from BMS.

For the seven years from June 1933 to June 1940 loan growth was virtually zero, going from 22243 to 22340. With deposits growing from 38089 to 60582 and stagnant loan demand the banks increased their holdings of government securities and also kept extra cash in the form of excess reserves Re. There are two main reasons why the banks wanted excess reserves. First, most bankers in 1934 had gone through the traumatic experience of the waves of bank runs, suspensions, and failures beginning with the first wave in the fourth quarter of 1930 to the bank holiday declared on March 6, 1933 when all banks had to be closed. Hence, excess reserves were precautionary balances kept against the possibility of future runs. The Fed had failed as the lender of last resort and might do so again. It is interesting to note that the Reconstruction Finance Corp made more loans to banks than did the Fed in 1933-4. See the Bank Suspension article in the December 1937 Federal Reserve Bulletin.

Table 2a
Bank Assets and Deposits 1932-41 from BMS Date

	Loans	Securities	Dp+T	Rr	Re	R	Cp	Dp
J 32	27888	18422	42093	1827	234	2061	4616	15625
D 32	26109	19060	41752	1909	526	2435	4669	15728
J 33	22243	18062	38089	1797	363	2160	4761	14411
D 33	22054	18552	39588	1822	766	2588	4782	15035
J 34	21306	21246	41875	2105	1685	3790	4659	16694
D 34	20439	22983	44599	2290	1748	4038	4655	18459
J 35	20213	24134 .	45492	2541	2438	4979	4783	20433
D 35	20302	25395	48656	2733	2983	5716	4917	22115
J 36	20636	27776	50998	2891	2593	5484	5222	23780
D 36	21359	28086	53323	4619	2046	6665	5516	25483
J 37	22410	27155	52890	6002	876	6878	5489	25198
D37	22065	26362	.52186	5808	1071	6879	5638	23959

J 38	20982	26230	51961	5116	2762	7878	5417	24313
D 38	21261	27570	53835	5520	3226	8746	5775	25986
J 39	21320	28296	55990	5840	4246	10086	6005	27355
D 39	22169	28716	58342	6462	5011	11473	6401	29793
J 40	22340	28996	60582	6900	6696	13596	6699	31962
D 40	23751	30419	65022	7403	6646	14049	7325	34945
J 41	25311	32635	67172	7860	5351	13211	8205	37317
D 41	26616	34485	70791	9422	3390	12812	9615	38992

Loans and Securities and deposits (Dp+T) from BMS Table 2 p. 18; Rr and Re from BMS Table 105 p. 396. Cp and Dp from BMS Table 9 p. 34-5

A second reason was that at the zero bound even administrative costs could not be covered much less an allowance for risk. It is not a coincidence that high levels of excess reserves go hand in hand with near zero interest rates. And with the inverse relation of interest rates and debt security prices there was the possibility of temporary capital losses or opportunity costs if interest rates rose.

A third reason was that in 1934 hearings began on the Banking Act of 1935, which among other things would give the Fed the power to change reserve requirements. Originally, reserve requirements for national banks were frozen by the National Banking Acts of 1863 and 1864 and then updated in the 1917 Amendment to the Federal Reserve Act. As noted above the Fed was bothered by the growing volume of excess reserves because it could lose control of money and credit in the economy which might lead to inflation. It lobbied for the ability to change reserve requirements and was granted the power to double requirements from 1917 levels in the Banking Act of August 23, 1935. Banks were aware of the testimony and saw the threat to their precautionary balances and continued to increase their excess reserves into early 1936. The banks apparently overshot a bit and so reduced their excess reserves from $3.038 billion in Feb. 1936 to $2.593 billion in June. But then in July the Fed announced that reserve requirements would be increased by 50% on August 16, 1936. Faced with this new threat to their precautionary balances the banks began to rebuild their excess reserves, then the Fed increased the requirement again on March 1, 1937, and again on May 1, 1937 reaching the doubled limit. A result was that the reserve/deposit ratio in the money stock formula increased substantially and the money stock actually declined.. This contributed to the severity of the 1937-8 giant recession. The time path of loans 1933-1940 is interesting. Starting at 22243 in June 1933 loan volume dropped to 20213 in mid 1935 then rose to 22410 in mid 1937 as the economy appeared to be recovering. But then came the impact of doubling the reserve requirement and the recession which drove demand back down again to 20982 in mid-1938. Loan volume barely passed the 1933 level in June 1940 at 22340. There is a similar time pattern of loan volume from 2007 to 2014 which is shown in Table 2b.

Table 3 has been compiled from the Historical Statistics on Banking data base of the FDIC which has quarterly data. It should be said that we are sorry that the Federal Reserve Bulletin has been discontinued. From the Loans and Leases option we have gathered quarterly data on domestic C&I loans (DC&I) plus non-residential construction and land development (NRCLD) and commercial real estate (CRE) loans, as well as loans to individuals (LTI). We have left out residential real estate which we feel has been distorted by the collateralized debt obligation derivatives scandal, foreign, miscellaneous, and government operations. Re, R, and Cp come from FRED. Dp+T is M2 minus Cp from FRED. We use semiannual data to condense the table, quarterly numbers are available.

Table 2b
Depository Institution Loans FDIC FRED Data

Date	DC&I	NRCLD	CRE	Total	LTI	Total	Dp+T	Re	R	Cp
D07	1136	560	865	2561	1281	3842	6689	2	43	763
J08	1175	558	905	2638	1294	3932	6926	2	47	762
D08	1211	533	956	2700	1321	4021	7191	559	609	806
J09	1103	484	977	2564	1280	3844	7558	842	903	849
D09	995	414	982	2391	1299	3690	7621	1077	1142	862
J10	953	354	972	2279	1259	3538	7686	1045	1111	.880
D10	960	295	959	2214	1227	3441	7833	972	1039	915
J11	994	253	952	2199	1198	3397	8059	1512	1590	957
D11	1075	221	953	2249	1213	3462	8601	1498	1592	995
J12	1159	201	967	2327	1192	3519	8843	1457	1559	1040
D12	1219	188	978	2385	1230	3615	9215	1435	1546	1084

J13	1228	188	988	2404	1217	3621	9471	1863	1982	1116
D13	1275	196	1014	2485	1249	3734	9775	2392	2517	1155
J14	1355	207	1032	2594	1258	3852	10078	2552	2688	1205
D14	1411	222	1055	2688	1298	3986	10323	2433	2575	1242

Business loans start at $2700 billion, dip to 2199 in June 2011, and then rise to 2688 in 2014, a shallow U shape. The 1930s had a double dip shallow W shape due to the ill-advised doubling of the reserve requirement. Google David C. Wheelock of the St. Louis Fed "How NOT to Reduce Excess Reserves". Again, there is a lack of loan demand. Again deposits grew faster than loans and securities (not listed - space limit) and the surplus spilled into excess reserves. A reason why loan demand was slack is that again business in general was cash flow positive aided by a record profit margin (Tables 1b and 1c).

Economic Views of 1933-42, 2007-2014

The zero bound excess reserve (ZBER) period of 1933-42 is more interesting than 2007-2014 because it had some inflation and the 1937-8 recession. The following table gives a quick annual summary (1972 prices for GNP which are used by Balke-Gordon in their quarterly data, NIPA Tables 1929-76). M1 is from Robert Rasche of the St. Louis Fed. M2 is from p. 35 of Banking and Monetary Statistics 1914-41.

Table 3a
BMS, NIPA 1972 Base

Year	Rr	Re	i3mo	i12+yr	M1	M2	GNP	gGNP	P72	Infl	
1929	2315	0043	3.28	3.60		25.90					
1930	2324	0055	2.49	3.29		24.91					
1931	2234	0089	1.40	3.34		21.65					
1932	1858	0256	0.88	3.68		20.16					
1933	1788	0528	0.52	3.31		19.64	42.55	222.1			
1934	2104	1564	0.28	3.32		22.60	47.98	239.1	7.65	27.30	8.64
1935	2532	2469	0.17	2.79		26.75	52.18	260.0	8.74	27.88	2.12
1936	3477	2512	0.17	2.65		30.46	57.35	295.5	13.65	28.00	0.43
1937	5610	1220	0.28	2.68		28.76	56.64	310.2	4.97	29.30	4.64
1938	5413	2522	0.07	2.56		31.41	58.95	296.7	-4.35	28.66	-1.85
1939	5960	4932	0.05	2.36		35.76	64.10	319.8	7.79	28.43	-0.80
1940	6923	6326	0.04	2.21		41.61	70.76	344.1	7.60	29.06	2.22
1941	8080	5324	0.13	2.12		47.56	78.23	400.4	16.36	31.23	7.47
1942	9980	2668	0.34	2.46		61.48	xx.xx	461.7	15.31	34.32	9.89
1943	11116	1510	0.38	2.47		78.11	xx.xx	531.6	13.91	36.14	5.30
1944	12176	1046	0.38	2.48		88.60	xx.xx	569.1	7.05	37.01	2.41
1945	11934	1121	0.38	2.37		100.0	xx.xx	560.4	-1.53	37.91	2.43
1950	15617	0783	1.20	2.32							
1960	17980	0550	2.87	4.01							
1970	28126	0187	6.39	6.59	millions						
1970	28.13	0.19	6.39	6.59	billions						

Table 3b
BMS, NIPA 1972 Base

Year	Rr	Re	i3mo	i12+yr	M2	gM2	GNP	gGNP	Infl09
2007	41.68	1.78	3.00	4.10	7452	5.76	14874	1.78	2.67
2008	53.56	767.3	0.03	2.42	8177	9.73	14830	-.30	1.93
2009	65.25	1075.2	0.05	3.59	8482	3.73	14419	-2.77	0.79
2010	71.37	1006.6	0.14	3.29	8783	3.55	14784	2.53	1.23
2011	96.51	1502.2	0.01	1.98	9636	9.71	15021	1.60	2.06
2012	111.6	1458.8	0.07	1.72	10424	8.18	15369	2.32	1.80
2013	124.8	2416.2	0.07	2.90	10985	5.38	15710	2.22	1.49
2014	142.0	2523.9	0.03	2.21	11630	5.87	16086	2.39	1.48

This table (BMS data) tracks the path of excess reserves and interest rates from the descent into the Great Depression to the first recovery 1934-36, the 1937-8 setback, the second recovery 1939-41, and the gradual exit from the zero bound and "excess" excess reserves. One interesting observation is how long it took excess reserves to get back to "normal". If 1930 is the old normal, excess reserves were 2.31% of total reserves. Even in 1960 the level was slightly higher than 1930 at 2.97%. By 1970 the level was down to .66%. This number is for banks. In 2006 it was 3.96% for all depository institutions (FRED data). An observation is that ZBER conditions did not hinder growth. Real GNP growth in both recovery periods was brisk, 10.01% for 1934-6 and 10.58% for 1939 (boosted a bit by WWII arming). Inflation was 3.73 and 2.96%, above the current Bernanke-Yellen target which we think should be 3% (K. Rogoff mentioned 6%, Google "Embracing Inflation Kenneth Rogoff"). These inflation rates are higher than the current 2% target. Should the Fed have killed these recoveries with 10% real growth to keep inflation below 2%. We think not.

M1 growth in the first recovery 1933-6 averaged 15.75%/yr and 14.83% in the second. M2 growth was 10.46% and 9.89%. The setback between the two recoveries was caused in part by the Fed effort to get rid of some of the excess reserves in 1936-7 contributing to the recession of 1937-8. Coming out of the 1982 recession (Reagan, Volcker) p.A-3 of the Jan 1984 Fed. Res. Bulletin shows M1 growth of 12.07% and M2 growth of 11.87% for the 4 quarters 4Q82-3Q83. These and other observations lead us to believe that stimulus (double digit M1 and M2 money growth) rather restraint is called for in the current 2015 situation.

The Inflation of 1937: Could it happen again in 2016?

So far in the current slow recovery inflation has been quite low, especially to those of us who remember the 19651982 period. Annual GDP inflation in the recovery from 2010-2014 has averaged 1.61%. But there are people who fear that the high level of excess reserves could trigger an inflationary boom, the same fears that were expressed in the hearings for the Banking Act of 1935. As it turns out there was an inflationary boomlet in 1937 which becomes more apparent with quarterly data. Unfortunately the Commerce Department does not have quarterly price deflators nor real GNP and components prior to 1947.

However, the consumer price index CPI is available on a quarterly and monthly basis available and on an annual basis was 3.87% in 1934 and 2.23, 1.09, and 3.67% in 1935-1937. -2.22% in 1938. Instead of the CPI the Survey of Current Business (summary data in the 1938 biennial edition) has the cost of living COL index along with the wholesale price index WPI and the factory hourly wage index FHWI. The Federal Reserve had access to this information from the Survey of Current Business so we use these to measure inflation in Table 4 as seen by the Fed. The indexes are quarterly totals and inflation is measured as year over year (Yoy) and quarterly rates compounded to annual rates (Qtr).

The last three columns show inflation as measured by the CPI and GDP deflator for 1969-72. Inflation in 1936-37 was comparable to that of 1970-71when Nixon imposed wage and price controls. In retrospect, Nixon was wrong and so was Eccles.

Table 4
Inflation 1935-8, 1969-72

Time	COL	Yoy	Qtr	WPI	Yo	Qtr	FHWI	Yoy	Qtr	Time	CPI	GDPDfl
1Q35	2452	4.34	6.80	2377	8.29	14.28	1786	6.75	1.13	1Q69	4.99	4.1
2Q35	2480	4.69	4.65	2401	8.35	4.10	1796	2.45	2.26	2Q69	6.37	5.4
3Q35	2475	3.21	-.80	2406	5.16	0.84	1804	2.09	1.79	3Q69	5.99	5.8
4Q35	2503	3.77	4.60	2420	5.26	2.35	1811	1.68	1.56	4Q69	5.90	5.1
1Q36	2506	2.20	0.48	2408	1.30	-1.97	1827	2.30	3.58	1Q70	5.44	5.6
2Q36	2523	1.73	2.74	2375	-1.08	-5.87	1846	2.78	4.23	2Q70	6.84	5.9
3Q36	2567	3.72	7.16	2437	1.29	10.86	1853	2.72	1.53	3Q70	4.56	3.3
4Q36	2576	2.92	1.41	2481	2.52	7.42	1880	3.81	5.96	4Q70	5.57	5.3
1Q37	2620	4.55	7.01	2600	7.97	20.61	1939	6.13	13.16	1Q71	3.06	6.3
2Q37	2660	5.43	6.75	2626	10.57	4.06	2090	13.22	34.98	2Q71	4.72	5.5
3Q37	2673	4.13	1.97	2628	7.84	0.30	2140	15.49	9.92	3Q71	4.37	4.1
4Q37	2671	3.69	-.30	2504	0.93	-17.6	2148	14.26	1.50	4Q71	1.98	3.3
1Q38	2609	-.42	-8.97	2404	-7.54	-15.0	2134	10.06	-2.58	1Q72	2.96	6.7
2Q38	2600	-2.26	-1.37	2351	-10.5	-8.55	2154	3.06	3.80	2Q72	3.27	2.4
3Q38	2583	-3.37	-2.59	2352	-10.5	0.17	2138	-.09	-2.94	3Q72	3.90	3.6
4Q38	2572	-3.71	-1.69	2321	-7.31	-5.17	2141	-.33	0.56	4Q72	2.56	4.6

The price declines from 1929 to 1933 were severe but at the bottom the economy lurched along and then started up with prices regaining some lost ground. Cost of Living inflation topped 6% in 1Q35 and wholesale prices were up 14% but factory wages were subdued. Through the rest of 1935 there was no problem. Wholesale prices fell in the first half of 1936 and gains in the cost of living were modest. When prices increased in 3Q36 the quarterly COL and WPI rates jumped to 7.16% and 10.86% making up for the prior softness. In July a substantial bonus was paid to WWI veterans which led to some extra spending and consequent price increases. On a year over year basis there was no problem.

On the labor front the National Labor Relations or Wagner Act encouraging unions was passed on July 5, 1935. It is suspected that increased organizing efforts led to the modest increase in factory wages in the first half of 1936. 4Q36 was a turning point. The wholesale price index was up 7.42% and factory wages 5.96%. The cost of living index rose 7.01% a quarter later. Significant things were happening. The first was a large rise in inventories perhaps in anticipation of a now booming economy. Table 5 has a summary of annual and quarterly inventory changes 19359 from several sources. All show an inventory boom starting at the end of 1936 or beginning 1937. The labor movement really came alive on December 30, 1936 when the United Auto Workers (UAW) of the Congress of Industrial Organizations (CIO) began its famous "Sit-down Strike" of General Motors which lasted until Feb. 11,
1937 and resulted in a contract. On May 2, 1937 U.S. Steel signed a contract with the Steelworkers Organizing Committee of the CIO. Union contracts and business raising wages to head off unions may explain the extraordinary factory wage increases of mid-1937. Exhibit 1 (p. 16 of the Feb. 1940 Survey of Current Business) has a graph showing an exceptionally large increase in inventories beginning in October 1936 compiled jointly by Dun & Bradstreet (D&B) and Commerce. The graph looks like a bubble.

The BEA does not have quarterly inflation adjusted NIPA inventory data prior to 1947. Table 5a compares the annual BEA inventory numbers (1972 price base also used by Balke-Gordon) to those of Balke-Gordon (Google "Appendix B: Historical Data"), Harold Barger (Barger's Revised NIPA Data: 1921-41), and D&B. Meltzer (p. 528) said that changes in inventory were small compared to changes in GNP or final sales. Table 5a also shows changes in business investment in producer's equipment and structures which behaved similarly to changes in inventory. Adding the changes in business investment to changes in inventories accounted for over 70% of changes in GNP in 1937-8 and more than 100% of final sales. Accordingly, we believe that the business investment boom and bust accounts for much of the 1937-8 recession. Table 5b contains available quarterly data: the D&B index data and changes along with inventory changes from Balke-Gordon and Barger. 1929 is presented for historical perspective.

Table 5a
The Inventory Boom 1936-7, Change in Inventories

Time	BEA	B-G	Barger	D&B	NRes	GNP	IBus	IBus/GNP
1929	4.6	4.61	1.246	n/a				
1935	2.9	3.17	0.243	1.6	3.1	20.9	6.0	.287
1936	3.8	3.54	1.905	8.5	5.8	35.5	9.6	.270
1937	6.3	6.61	2.189	17.5	4.4	14.7	10.7	.728
1938	-2.6	-2.49	-1.640	-4.9	-7.0	-13.5	-9.6	.711
1939	1.6	1.41	0.462	6.3	2.1	23.	3.7	.160

BEA and B-G are 1972 prices, Barger 1939, D&B a Jan. 1, 1936 index. Res is the change in nonresidential structures and producer's equipment investment, ^GNP the change in real GNP, IBus = BEA + NRes, : 1972 base.

Table 5b
The Inventory Boom Quarterly, Change in Inventories

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1Q29	-.67	0.064							
2Q29	3.45	0.868							
3Q29	8.35	1.844							
4Q29	7.29	2.208	n/a						
1Q35	4.75	0.060	.1e	98.5	n/a	0.41	252.31	68.608	24.120
2Q35	2.89	-.588	-.5	98.0	n/a	-2.02	253.14	70.012	24.547
3Q35	3.47	0.108	-.7	97.3	n/a	-2.83	260.14	73.236	26.527
4Q35	1.54	1.392	2.7	100.0	1.63	11.57	274.58	75.756	26.984
1Q36	-2.93	0.592	2.0	102.0	3.55	8.24	275.90	79.008	27.255
2Q36	6.95	1.612	1.7	103.7	5.82	6.84	293.20	84.236	28.634
3Q36	4.25	1.796	2.3	106.0	8.94	9.17	301.59	84.936	29.352
4Q36	5.89	3.620	2.5	108.5	8.50	9.77	311.58	86.636	30.041
1Q37	8.77	1.356	8.0	116.5	14.22	32.92	310.53	85.332	30.488
2Q37	8.76	2.752	5.2	121.7	17.36	19.09	318.41	87.816	30.206
3Q37	11.62	5.356	5.3	127.0	19.81	18.59	317.21	91.388	29.944
4Q37	-2.71	-.708	-1.0	126.0	16.13	-3.11	294.46	81.860	29.012
1Q38	-5.04	-1.432	-6.0	120.0	3.00 -	17.73	282.02	79.348	29.197
2Q38	-3.32	-2.136	-3.2	116.8	-4.03	-10.25	286.48	80.004	28.760
3Q38	-2.44	-2.260	1.2	118.0	-7.09	4.17	303.22	83.336	29.905
4Q38	0.86	-0.732	3.1	121.1	-5.39	10.93	315.35	88.592	31.216
1Q39	-.28	0.200	1.9	123.0	2.50	6.43	312.34	87.50	31.254
2Q39	-2.68	-.508	-2.8	120.2	2.91	-8.80	307.79	89.280	32.196
3Q39	-.14	0.504	1.3	121.5	2.97	4.40	319.32	91.404	34.050
4Q39	8.75	1.652	5.9	127.4	5.20	20.89	339.96	93.516	36.108

Key: (1)Time, (2)B-G (3)ChgBarger (4)ChgD&B (5)D&BIndex (6)Yoy (7)Qtr. (8)GNPb-g (9)GNPbargeR (10)M1

1Q37. The WPI advanced at a 20.61% rate, factory wages 13.16% and the cost of living 7.01%. Inventories accumulated at a rapid pace and would pass that of 1929. The CIO won its sit-down strike battle with GM and also organized U.S. Steel. In March the stock market began a decline that would reach 40% in September, perhaps an indicator of a coming recession, one of Paul Samuelson's 9 stock declines predicting the last 5 recessions. Regarding debt markets the 1937-8 recession was a rare example of a recession not preceded by an inverted yield curve (short rates higher than long rates). On March 1 reserve requirements were raised a second time and the money stock growth rate slowed.

2Q37. Inflation continued led by factory wages up at a 34.98% rate for the quarter reflecting many new labor contracts. The May Survey of Current Business (p. 3) noted the "rapid advance in commodity prices at wholesale - - was terminated early in April, coincident with the issuance of official statements warning against too rapid price advances - and speculative activity -". Later, this would be known as "jawboning" as Kennedy did in 1962 to force Roger Blough of U.S. Steel to rescind a 3.5% steel price hike. On May 1 the third reserve requirement increase occurred completing the project of doubling the requirement. Table 5b shows that the money stock actually declined (a much bigger decline than any post WWII decline adjusted for NOWs, MMFs, ATS etc.). The Balke-Gordon GNP hit a peak. The inventory buildup continued.

3Q37. Wholesale prices were up only .30% and the COL 1.97%. Factory wages rose at a 9.92% rate still buoyed by labor's new powers under the Wagner Act. The money stock dropped again and Barger's GNP peaked. Inventories grew rapidly to a cycle top.

4Q37. the economy fell off a cliff. In August the Industrial Production Index was 117, it bottomed in May 1938 at 76. For comparison (August 1938 SCB) from June 1929 to June 1934 the production index dropped to 84 from 125. Just about everything else fell abruptly; GNP, the money stock, WPI, and the COL, except wage rates. Due to the new labor rules allowing organization and strikes there was a change in the behavior of factory wages. In the downward stage of the Great Depression wage rates fell from $.593/hr in April 1930 to .573, .517, and .460 in April 1933. Wage

rates were flexible both up and down. See the June 1933 Survey. But the new labor laws made wage rates rigid to the downside: .716 in September 1937, .715 in December, .714 in March 1938 and .718 in June 1938 when the down turn ended.

2Q38. Roosevelt was very unhappy at the turn of events and jawboned the Fed which lowered the reserve requirements about 25% in April 1938. The money stock began growing again and the economy bottomed. Unintended Consequences. In July 1936 excess reserves averaged $2.903 billion and $3.226 in December 1938. Meltzer (p. 528) summarizes: "banks held more excess reserves at the end of 1938 than they did when the System undertook to eliminate them in August 1936. - - The policy therefore did not achieve what the Federal Reserve set out to accomplish. It not only contributed to the recession but also failed to reduce the System's fear that it could not prevent future inflation." There are similar concerns today.

CONCLUSIONS

What Should the Fed Have Done 1933-42?

There are four periods to be considered; the initial recovery period 1933-36, the recession of 1937-8, the second recovery period mid 1938-1942, and the return to normal excess reserves in 190 or so. And are there lessons that may apply to the current situation?

Recovery 1933-6. From December 1933 to December 1936 the monetary base grew at a 17.56% annual rate and M1 15.76% Balke-Gordon GNP growth was 11.95% with inflation of 2.76% (only 1.83% in 1936). Growth in the base and M1 did not come from Fed actions but was spurred by gold imports from a politically uneasy Europe. Gold in the U.S. had been called in at a price of $35.00/oz. in 1934 and the Treasury and Fed had to buy it. Meltzer p. 493 notes that "propelled by gold inflows the base rose at an 18% rate for the first three quarters of 1935 and 25% in the fourth quarter". On March 7, 1936 Hitler put German troops into the Rhineland which had been demilitarized after WWI and gold inflows continued.

The one significant action taken by the Fed during this period was the 50% increase in reserve requirements on Aug. 15, 1936. As mentioned above, it was worried that excess reserves could be used to start an inflationary boom. And there was a burst of inflation in 3Q36 with the cost of living up 7.16% (Table 4) and wholesale prices up 10.86%. Data Appendix 2 shows that the increase in rr lowered the money multiplier m but this was more than offset by the increase in the base due to the gold inflows, so M1 did not decline. But the M1 growth rate did slow from its double digit growth to 8.11% in the last half of 1936. Whether by accident or design the 1933-36 monetary results were very good. The first reserve requirement increase was understandable but we would have preferred open market restraint rather reserve requirement restraint. The next decision point was March 1, 1937 when it raised the reserve requirement to 75% above the original level.

The 1937-8 Recession. By March 1937 the Fed had data for 4Q36. Table 4 shows a slowing of wholesale inflation to a still high 7.42% (COL 1.41%). Table 5b and Data Appendix 3 show the beginning of an inventory and business investment boom (producer's equipment and structures) but it was not obvious at the time. The result was that the growth rate of M1 dropped to 2.83% in 1Q37 (5.74% over 6 months), a severe drop from the 13.86% rise in 1936 (and greater than the M1 growth rate drops in 1966, 1969, 1973, 1980, and 1981 as the Fed battled the post WWII "Great Inflation").

The Fed finished its reserve requirement increases which doubled the original level on May 1, 1937. At the end of May the Fed would have seen the 1Q37 wholesale price index up at a 20.61% annual rate, the COL up 7.01%, and factory wages 13.16% (Table 4). Industrial production of 1Q37 was the same as that of 4Q36. The rapid growth of inventories in 1Q37 should have been evident. That the Fed tried to counter the inflation with restraint was understandable. The problem was that it used a new tool never used previously, had no real idea of its power, and had no idea of the unintended consequence that banks would rebuild their excess reserves. As noted by Meltzer (p. 520), "banks held more excess reserves at the end of 1938 than they did when the System undertook to eliminate them in August 1936. - - The policy therefore did not achieve what the Federal Reserve set out to accomplish. It not only contributed to the recession but also failed to reduce the System's fear that it could not prevent future inflation". Now the Fed has an untested new tool, IOER, interest on excess reserves enacted in 2006 when excess reserves averaged $1.67 billion. The federal funds rate averaged 4.96% implying an annual interest expense to the Fed of $82,832,000. Today excess reserves are $2.5 trillion or $2500 billion or 1500 times as large as 2006. Suppose the fed funds rate gets back to 4.96%. The expense to the Fed and a windfall to the banks that caused the great recession would be $124 billion per year. We think that if the public understands the cost of IOER there will be a firestorm of protest. We are

not sure the Fed understands this unintended consequence just as it did not understand the consequence of doubling reserve requirements in 1936-7.

By 4Q37 M1 had dropped from $30.672 billion to $28.760 or 6.62%. For comparison from the founding of the Fed the only greater M1 drops were 13% (B-G data) from 2Q20 to 4Q21, and 28% for 3Q29 - 2Q33. Other notable declines were 1.93% for 4Q47-3Q49, and 1.61% for Feb 1980 to Apr. 1980 (FRED data) as Paul Volcker started his battle against "The Great Inflation" of the 1970s. From the peak to trough 1937-8 real GNP dropped 14.29% (B-G) or 13.17% (Barger). For comparison the drop from 4Q2007 to 2Q2009 was 4.24%. Friedman (in A Monetary History) said that the rise in reserve requirements was "too blunt a tool used too vigorously". We agree but the overinvestment in inventories, equipment and structures should be given some blame.

Adjusting for the inventory bubble: Suppose the path of inventory had followed the dashed line in Exhibit 1 over the 4Q36-3Q38 period. This can be done by using the average inventory gain for these 8 quarters. Using BalkeGordon data the average inventory change was $2.69 billion/quarter. The next step is to recalculate GNP using the 2.69 value for the change in inventory in place of the bubble actual values. Under this assumption GNP tops out at 312.35 in 2Q37 and bottoms at 289.75 in 1Q38, a decline of 7.24% compared to the actual decline of 14.29%, about half. So, instead of blaming the Fed for the entire 1937-8 debacle perhaps the Fed should get half the blame with the other half going to business for its overenthusiastic investment 4Q36-3Q37 which looks like a bubble.

Note: overenthusiastic behavior is not unusual. There was the run up of stock prices in the "nifty 50" run up prior to the 1973-4 crash. The run up prior to the October 19, 1987 stock market crash. And , there was the monstrous rise of NASDAQ and even the Dow in the "Dot Com" boom following Alan Greenspan's famous 1996 "irrational exuberance" comment that started crashing on March 10, 2000. As well as the real estate boom of 2000-2006. Also, there was the derivatives fiasco that led to the "Great Recession of 2008-9" which led to three "quantitative easings" which generated both excess reserves even higher than those of 1934-42 and zero bound short term rates and what to do about them - a topic of this paper.

The Second Recovery 3Q38-2Q42: From the B-G and Barger data in Appendix 2a GNP bottomed in 1Q38 with a small recovery in the second quarter. Both have the inventory liquidation ending in 3Q38 coincident with a strong GNP rebound. From Table 3 the compounded growth of M1 was 14.83% and M2 9.89%. Along with fiscal stimulus real GNP grew at a 10.51% rate. The TBill rate averaged .05% in 1939, .04% in 1940, and .13% in 1941 (BMS p. 460) so the economy rose on the zero bound. Excess reserves ended at $3.226 billion in 1938, rose to $5.011 billion at the end of 1939, $6.646 billion at the end of 1940, declined to $5.001 billion at the end of October 1941, at which point the Fed raised the reserve requirement to its maximum limit. This dropped excess reserves to $3.390 at year end. This experience shows again that the economy can grow substantially in the presence of zero bound interest rates and high excess reserves.

The end of the zero bound and "excess" excess reserves. Excess reserves did not come down all at once though some action of the Fed. Table 3 with annual averages of required reserves Rr and excess reserves Re did not get back to 1929-30 "normality" until the mid-1960s. Interest rates did not get back to normal until after the 1951 Treasury-Fed Accord. After the Accord, Chairman Wm. McC. Martin had the flexibility to "take away the punchbowl when the party got going" which he did to cool off the Korean War boom in 1953.

The Current Situation 2007-2015

Table 0 shows the Fed balance sheets for the first period of "excess" excess reserves 1933-41. Here we show Dec. 2007 before the 2008 crisis and May 27, 2015, the latest available at this writing. In 2008-9 an alphabet soup of accounts were created: TAF, PDCF, TSLF, CPFF, AMLF, MMIFF, TALF, and MBS. The only significant one left is MBS (mortgage backed securities) which makes the table relatively simple.

Table 6
Fed Balance Sheets 2007, 2015

Dec 07	May 15	
11	11	Gold
228	0	TBills
512	2346	TNotes + Bonds
6	114	Inflation Bonds

49	1722	Loans (2007) / MBS (2015)
109	271	Miscellaneous
915	4464	TOTAL ASSETS
792	1325	Fed Reserve Notes (Currency)
21	2537	Reserves (2 excess 2007, 2387 excess 2015)
44	279	Repurchase Agreements
21	265	Miscellaneous
37	58	Net Worth
915	4464	Liabilities + Net Worth

Maturities	0-3mo	3mo-1yr	1-5yr	5-10yr	10+yr	
2007 Treas	154	175	241	082	089	(23% over 5 yrs)
2015 Treas	001	104	1119	592	644	
2015 MBS	nill	nil	10	1712		(71% over 5 yrs.)

Highlights: Gold has become virtually irrelevant. TBill holdings have gone to zero. Even the Fed doesn't want securities on the zero interest rate bound. The Panic of 2008-9 was both a liquidity and a solvency (bankruptcy) crisis. The Fed made huge purchases of Treasury notes and bonds providing cash liquidity to financial institutions and also tried a new procedure, buying mortgage backed securities MBS (bonds) from the banks currently to the tune of $1.722 trillion. Total assets rose from less than $1 trillion to over $4 trillion. This "swollen" balance sheet bothers the financial "hawks".

The huge increase in Treasury and MBS holdings of the Fed was financed by the increase in the monetary base (Currency and Reserves, the top two lines in the liability section of the balance sheet). Most of the increase in the base has gone into excess reserves. We have already discussed why the banks are not lending or buying debt securities: Low or no net business demand, zero short term rates don't cover risk and admin expenses, regulations, the risk that "hawks" will eventually prevail driving interest rates up causing capital losses on securities.

Regarding losses, in 2007 only 23% of the Fed's Treasury holdings had maturities over 5 years. Now in 2015 it is 71% (including the more risky MBSs). The longer the maturity the bigger the potential capital loss when interest rates rise. It would be interesting to know the value of the Fed's portfolio if marked to market. The bond price of a $20 coupon 10 year bond yielding 2% is $1000. If the 10 year rate goes to 4% in a year (becoming a 9 year bond) its price will be $851.29, a capital loss of 14.87%. That is a nasty spill in the stock market but a blood bath in the "safer" bond market. It is possible that the Fed could suffer large losses since their portfolio has a much longer maturity than "normal". The "hawks" might be careful regarding what they wish for.

What Should the Fed Do Now?

In our opinion, nothing.

From the 1933-6 and 1938-41 experiences, the economy can grow quite nicely with zero bound interest rates and "excess" excess reserves. The economy is still weak and short of "escape velocity" or sustained real growth of 3%. We are not sure the Fed knows how to manage interest rates. From McChesney Martin in 1951 to G. William Miller in 1979 we had recessions in 1953-4, 1957-8, 1960, 1969-70, and 1974-5 ending with high inflation. Then Paul Volcker took over and beat inflation by controlling the money stock and letting interest rates go where they may, but he had to learn. It took two tries, the recession of 1980 and then the recession of 19812. Now we seem to be back in the 1950s thinking of McChesney Martin or even the anti-inflationists of 1936-7. Looking at past recoveries we still think that we need M1 and M2 growth of 10+% until takeoff and a 3% target for inflation (up 1% from Bernanke-Yellen 2% but not to Rogoff's 6%).

A problem mentioned by Cramer on CNBC is the strength of the dollar hurting exports and encouraging imports. If interest rates are raised the dollar should get even stronger. Even the head of the IMF Christine Lagarde has said twice that raising interest rates in 2015 would not be good.

The guessing game on CNBC is when the Fed will raise interest rates. The question we have is how it is going to be done. The traditional way is an open market sale of short term TBills from the Fed's portfolio. But they don't have any

3mo bills and are thin in the 3mo-1yr category. With 71% of the portfolio in longer term securities the Fed has a problem. Selling long term securities could provoke a bond market crash.

Our guess is that when the Fed decides to raise the Federal Funds rate (iFF) it will do it by raising the IOER (interest rate on excess reserves). Banks will love the IOE because it will raise their ROA (return on assets) and ROE (return on equity) significantly. From FDIC Historical Statistics on banking online, total bank assets averaged 15142 billion in 2014 including 2710 billion in reserves (2570 excess reserves). Net Worth was 1697 billion. The Fed paid an interest rate of .25% which gave the banks 6.77 billion in interest income. Table 7 shows various profit scenarios.

Table 7
Bank Profits Under Various IOR Rates

.25%	1.00%	4.00%	IOER Rate
6.77	27.00	108.00	IEOR Income to banks, expense to the Fed
211.23	211.23	211.23	Other Income (assume other int inc = int exp)
218.00	238.23	319.23	Income Before Tax
65.00	71.47	95.77	Tax (30%)
153.00	166.76	223.46	Income After Tax
1.01%	1.10%	1.476%	ROA Return on Assets
9.02	9.83%	13.17%	ROE Return on Equity

If the target rate for the federal funds rate goes to 1% (still very low for normal periods) and IOR is used to get there the Fed's interest expense will be $27 billion. A Bloomberg internet article (Fed Seen Paying $77 Billion on Reserves Apr. 15 2013) estimated a normal funds rate of 4.5%, we use 4%. Our updated estimate brings the expense to the Fed to $108 billion. "Normality" would wipe out the record $97 billion remitted to the U.S. Treasury in 2014. We hope that when the public learns that the banks could receive $100 billion for doing nothing and that the government deficit is worse that there will be a public outcry against the expense of the IOE method of interest rate control.

The "normalized" ROA of 1.476% would be a record. Table 8 from FDIC HSOB data shows ROAs for selected years. The record high is 1.342% in 2006. ROAs were high in 2000-6 for two reasons; the repeal of Glass-Steagall which allowed commercial banks back into the higher margin investment banking business, and senator Phil Gramm's midnight insertion into the 2000 Commodities Modernization Act which exempted derivatives contracts from regulation. Given what happened to derivatives (CDOs) in 2008 it is probable that some of the profits 2003-6 were phony.

Table 8
Historic ROAs

1936	0.916	1970	1.029	2007	0.878
1941	0.591	1980	0.790	2009	-.096
1943	0.600	1990	0.478	2011	0.892
1950	0.666	2000	1.169	2013	1.057
1960	0.908	2004	1.298		

The Monetary Effect of IEOR. The money stock formula is M2 = (1+k/k+rr+re)Ba described above. We now use M2 since M1 has been distorted by NOWs (negotiable orders of withdrawal), ATS (automatic transfers service), MMFs (money market funds), etc. which essentially allow interest on checking accounts blurring the difference between demand deposits and saving. The question now is what will a higher IOR do to the re ratio. Table 9 Line 1 shows monetary statistics for March 2015.

If banks are content to hold 2584 billion in excess reserves when IOR equals .25% it seems reasonable to assume that they would want to hold more if IOR was say 3%. Unfortunately since this is a new tool and essentially unchanged there is insufficient information to run statistical tests of a re-IOR relation. So at this point we just guess that a 3% IOR would increase re by .02 from .24453 to .26453. Using the money formula the new M2 on Line 2 equals 11253, down 5% from Line 1. Since k = .12104 = Cp/TDp, Cp = .12104TDp. Then M2 = .12104TDp + TDp = 11253 and TDp = 10038. Then Cp = 1215. Rr = rr TDP and Re = re TDp filling out Line 2.

The McChesney Martin purpose of raising interest rates is to slow the party of an inflationary boom. From a monetarist point of view the decline in money from increasing IOR should have the same effect of slowing the economy. But

there is a disturbing feature of the IOR method. Excess reserves increase. Hence we predict that if IEOR is used to control interest rates "excess" excess reserves will become permanent, give the banks a huge boost to income and they were the ones who caused the 2008 mess in the first place. And Fed contributions to the Treasury will drop causing a rise in the government deficit.

There is the old fashioned alternative way to tighten, Have the Fed sell securities from its portfolio. Suppose it sells 201 billion reducing the base from 4012 billion to 3811 billion. The solution is in Line 3. With this plan excess reserves decline. We cut IOR to zero (it is obvious that we think IOER is a bad idea) so the Fed has no extra expense, and the banks do not get an undeserved windfall.

Table 9
Money Statistics March 2015 (FRED, Release H.3)

M2	Cp	TDp	Rr	Re	Ba	k	rr	re	IOR
11846	1279	10567	149.0	2584	4012	.1210	.01410	.24453	.0025
11253	1215	10038	141.6	2655.4	4012	.12104	.01410	.26453	.0300
11253	1215	10038	141.6	2454.6	3811	.12104	.01410	.24453	.0000

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APPENDIX 1

Interest Rates 1933-42, 2007-14

Time	3mo	2+yr	Time	iff	i3mo	i10yr	
My33	.42	3.30	My07	5.25	4.73	4.75	Sources: BMS, FRED
Nv33	.42	3.46	Nv07	4.49	3.27	4.15	iff = federal funds rate
My34	.16	3.02	My08	1.98	1.73	3.88	13mo = 3 month T Bill rate
Nv34	.25	3.07	Nv08	.39	.19	3.53	i10yr = 10 yr Treasury rate
My35	.15	2.72	My09	.18	.18	3.29	i12+yr =[long term Treas
Nv35	.16	2.83	Nv09	.12	.05	3.40	rate in BMS
My36	.20	2.66	My10	.20	.16	3.42	
Nv36	.11	2.53	Nv10	.19	.14	2.76	
My37	.41	2.76	My11	.09	.04	3.17	
Nv37	.09	2.71	Nv11	.08	.01	2.01	
My38	.05	2.51	My12	.16	.09	1.80	
Nv38	.04	2.50	Nv12	.16	.09	1.65	
My39	.03	2.17	My13	.11	.04	1.93	
Nv39	.05	2.46	Nv13	.08	.07	2.72	
My40	.06	2.38	My14	.09	.03	2.56	
Nv40	.02	1.97	Nv14	.09	.02	2.33	
My41	.11	1.92					
Nv41	28	1.85					
My42	37	1.97					
Nv42	38	2.06					

Appendix 2a

Data 1933-41

Time	R	Re	Cp	DP	GNPbg	P72	GNPbgr	P39	M1
4Q33	2599	794	4934	14488	222.05	26.17	58848	95.00	19422
2Q34	3695	1623	4652	16217	247.72	27.14	67520	97.25	20869
4Q34	4100	1834	4753	18115	237.16	27.61	68292	98.14	22868
2Q35	4778	2297	4793	19754	253.14	27.90	70012	99.75	24547
4Q35	5757	3061	4964	22020	274.58	27.89	75756	99.69	26984
2Q36	5638	2800	5125	23509	293.20	27.67	84236	98.79	28634
4Q36	6785	2219	5468	24573	311.58	28.40	86636	100.98	30041
1Q37	6747	2152	5579	24909	310.53	29.17	85342	102.44	30488
2Q37	6932	937	5589	24617	318.41	29.44	87816	105.33	30206
3Q37	6701	750	5710	24234	317.21	29.62	91388	106.37	29944
4Q37	6919	1104	5669	23343	294.46	28.97	81860	104.20	29012
1Q38	7230	1406	5548	23649	282.02	28.75	79348	102.89	29197
2Q38	7587	2525	5548	23212	286.48	28.61	80004	101.83	28760
3Q38	8119	2955	5548	24357	303.22	28.70	83336	100.86	29905
4Q38	8727	3276	5679	25537	315.35	28.58	88592	99.94	31216
2Q39	9997	4212	6012	26184	307.79	28.19	89280	99.05	32196
4Q39	11688	5259	6314	29794	339.96	28.87	93516	101.34	36108
2Q40	13086	6288	6626	31336	334.66	28.93	97140	101.07	37962
4Q40	14131	6830	7200	33693	363.54	29.41	103404	101.80	40893
2Q41	13650	5831	8106	37058	391.93	30.71	114260	105.39	45164
4Q41	12900	3611	9244	38075	426.38	32.55	120732	114.79	47319
2Q42	12510	2667	10895	41286	446.44	34.18	nanana	nanana	52181
4Q42	12618	2362	13352	46730	492.72	35.02	nanana	nanana	60082

Appendix 2b

Data 2007-2015

Time	GDP	P09	M2	TDp	Cp	Rr	Re
4Q06	14717	95.58	7046	6296	750	41	2
2Q07	14839	97.19	7252	6497	756	42	2
4Q07	14992	97.96	7452	6692	761	42	2
1Q08	14890	98.52	7639	6880	759	41	3
2Q08	14963	99.00	7705	6936	769	44	2
3Q08	14892	99.67	7831	7050	781	43	59
4Q08	14577	99.82	8137	7361	816	54	767
1Q09	14378	100.06	8354	7510	843	55	723
2Q09	14356	99.90	8416	7564	852	60	749
3Q09	14403	99.87	8416	7555	861	63	859
4Q09	14542	100.17	8482	7619	864	65	1075
2Q10	14746	100.97	8583	7700	883	64	1035
4Q10	14939	101.95	8783	7864	919	71	1007
2Q11	14990	103.15	9099	8136	964	77	1589
4Q11	15190	103.92	9636	8634	1002	97	1502
2Q12	15337	104.94	9951	8905	1046	98	1457
4Q12	15434	105.82	10424	9333	1091	112	1459
2Q13	15607	106.49	10640	9517	1123	116	1947
4Q13	15916	107.30	10985	9825	1160	125	2416
2Q14	16010	108.23	11331	10119	1211	1352	587
4Q14	16295	108.65	11631	10378	1252	142	2524
1Q15	16264?	108.61	11846	10567	1279	149	2584

HOMEOWNERSHIP AND INCOME INEQUALITY

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ABSTRACT

The incidence of homeownership is examined in an analysis of local real estate markets that parses the causal relationships among labor market conditions, education, family structure, income, housing costs and the amenity value of homeownership. Inequality in the distribution of income in the housing market is found to have a negative impact on homeownership. This effect is thought to result from a disruption of the normal progression from rental housing to homeownership. The policy implications of this finding are explored.

INTRODUCTION

Most research on home ownership focuses on the relationship between the amenity value of housing and income with causality assumed to run from amenity value and income to home ownership. While these variables are linked, issues associated with family structure, education, labor market conditions and housing costs foster a complex set of causal relationships impacting homeownership. We attempt to understand these relationships by considering the interaction between income inequality and home ownership. Parsing these connections contributes to a better understanding of homeownership and suggests more successful social policies directed towards increasing homeownership.

This study uses data provided by the Bureau of the Census, American Community Survey for 2013 (ACS, 2015). The American Community Survey samples about 3.5 million households every year to supplement the Census Bureau's decennial census program. The Survey covers a wide range of self-reported social, economic and housing data. While the one-year tabulation for 2013 covers 817 separate counties, this study utilizes the data from the 437 urban counties for which the relevant data is available in the 2013 survey.

The data from this survey allows a cross-sectional analysis of factors influencing housing tenure decisions. Across counties, the housing market is characterized more by its heterogeneity than its homogeneity (Rickman & Guettabi, 2015). Spatial patterns of homeownership may yield insight into long-run housing tenure decisions (Lebo & Weber, 2015; Carruthers & Mulligan, 2013). Variations in housing market characteristics can provide a useful framework for analyzing the factors influencing homeownership (Huang, 2014).

The overall rate for homeownership in the United States at the end of 2014 was 64% (Bureau of the Census, 2014). The average homeownership rate in the ACS counties used in this study was 62.5% with a standard deviation of 9.6%. The lowest percentage of home ownership was in Bronx County, N.Y. (18.5%) and the highest was Hunterdon County, New Jersey (85.4%).

On a policy level, the goal of home ownership is an important social marker. Home ownership may be seen as generating an array of social and individual benefits (McCabe, 2013; Mok & Lee, 2013). Current government policy to encourage home ownership relies on a market-based approach using government sponsored entities (GSEs: Freddie Mac, Fannie Mae, and the Federal Home Loan Banks) to provide mortgage funds for prospective homeowners. While this approach has worked well for upper- and middle-income households, its success with lower, middle-income and poor households has been limited. Past attempts to increase home ownership by reducing credit standards have been disappointing (Barakovaa, et. al., 2014; McDonald & Stokes, 2013). Government policies focused on easing credit terms have often been counterproductive and led to increased alienation and disenfranchisement among lower income households (Smith, 2014; Clark, 2013).

The results of this study suggest the need for a more comprehensive and nuanced approach to increasing home ownership among lower income households. Aside from social factors that increase the desirability of home ownership and economic factors that increase the ability to acquire a home and sustain its homeownership, attention must be paid to the setting in which housing tenure decisions are made. In particular, we find that a more unequal distribution of income retards homeownership by weakening the traditional nexus of obtaining homeownership through the process of stepping up from rental housing to owner-occupied housing, where that process involves a progression from less expensive housing to more expensive housing. A diversified economic base which generates a more equal distribution of income in a given housing market appears to have a positive effect on promoting homeownership.

A MODEL FOR HOME OWNERSHIP

Empirically specifying the relationships between home ownership, modal income levels and the distribution of income has proved difficult because of a casual loop between these factors and the possibility of uncontrolled confounding elements in hypothesized models of this relationship (Alexandre, 2015). The estimators generated by an OLS equation may therefore be biased, but are not necessarily inconsistent (Greene, 2012). Despite the absence of a conceptual framework which considers the endogenous evolution of financial factors and inequality, the chain of causation usually assumed is that causation runs from factors such as racial and residential segregation, poverty, and limited educational and employment opportunities, to income inequality (Beck, Demirguc-Kunt, & Levine, 2007). In contrast, we examine the implications of causation running from income inequality to homeownership (Scarpa, 2015).

The relationship between income and homeownership may be understood within the context of affordability (Stone, 2006). The decision for homeownership represents a balance between housing and non-housing expenditures that maximizes the utility of the individual or household. While the economic dimensions of homeownership are significant, the decision for home ownership is not a simple matter of identifying and discounting the net cash flows associated with ownership (Smith, 2014; Coulson & Li, 2013). Homeownership may generate utility for the individual or household from pride of ownership *per se*, a sense of permanence of place associated with ownership, the physical attractiveness of the dwelling, environmental advantages, closeness to nearby friends and relatives, ease of access to employment opportunities, and the desirability of nearby schools, recreation centers, parks, etc. (Linblad & Quercia, 2015; Morgenroth, 2014; Kemeny & Storper, 2012).

As a consequence, we propose the following model for home ownership:

$$Ownership = \alpha + \beta_i Amenity\ Value_i + \gamma_j Labor\ Force\ and\ Education_j + \delta_k Cost\ and\ Income_k + \rho Gini + \ .$$

Where: i=1, 2, 3, 4 (i.e. four factors are used to describe amenities of homeownership); j = 1, 2, 3, 4, 5; and k= 1, 2, 3, 4, 5, 6. Specifically,
$Amenity\ Value_1$=% of Married householders
$Amenity\ Value_2$= % of Households with Children >3 in school
$Amenity\ Value_3$= Residence Value/Gross Rent
$Amenity\ Value_4$= Number of persons in household

$Labor\ Force\ and\ Education_1$ = % of population with <9 years of education
$Labor\ Force\ and\ Education_2$= % of population with Bachelor of Science Degree
$Labor\ Force\ and\ Education_3$= Total Unemployment Rate
$Labor\ Force\ and\ Education_4$= Female Unemployment Rate
$Labor\ Force\ and\ Education_5$= Male Unemployment Rate

$Cost\ and\ Income_1$ = Selected Monthly Operating Costs with a mortgage (SMOC W)
$Cost\ and\ Income_2$ = SMOC W/Median Household Income
$Cost\ and\ Income_3$= Median Household Income
$Cost\ and\ Income_4$= Mean Household Income
$Cost\ and\ Income_5$= % of families with< $10,000 income $Cost\ and\ Income_6$= % of families with > $200,000 income

Amenity Value

Table 1 presents the ACS data for amenities of homeownership which generate utility for homeowners.

Table 1
ACS Amenity Characteristics

Amenity Values	Average		Stdev
% Married	48.8%	7.1%	% C School
33.0%	5.4%		
% Not Moved	84.6%	4.6%	

Value/Rent	62.700	9.510
H Size	2.610	0.231

% Married: % of population married

% C School: % of population with children > 3 in school

% Not Moved: % of population residing in same residence 1 year previously

Value/Rent: the ratio of median owner-occupied housing value to average gross rent

Data from 437 ACS Counties, 2013

While research in sociology suggests the importance of an array of sociological factors on the home ownership decision, marriage (% Married) and concerns about schooling for children (% C School) appear to play a dominant role in this decision (Sekkat & Szafarz, 2011). A higher rate of family formation (especially by marriage) may be expected to increase the demand for owner-occupied housing (Eriksen, 2010; Smits & Mulder, 2008). Families with children often consider the quality of their children's education to be an important amenity associated with home ownership (Read & Tsvetkova, 2012). The presence of school age children in the household may similarly be expected to increase the demand for home ownership as household location is such an important factor in accessing the educational system for younger children. It is generally felt that the quality of the education system available is higher where schools are supported by neighborhoods characterized by owner-occupied housing (Beracha & Johnson, 2012). Despite disagreements as to the magnitude of the impact of home ownership on the welfare of children, research overwhelmingly argues for a large positive benefit for homeownership (Barker & Miller, 2009).

Residential stability (% Not Moved) also plays a role in the home ownership decision. More stable neighborhoods may be seen as more desirable places to live and a better place to form social relationships and raise children (Read & Tsvetkova, 2012). Chen (2013) found both a positive ownership effect and a negative residential stability effect for adolescent educational success. Li (2014) found that ethnic homogeneity had a positive impact on housing prices because non-market social interactions influence people's preference and behavior. Stability in the neighborhood has been found to generate positive utility for homeowners (Yamamura, 2011). Stable neighborhoods tend to encourage stability in social relationships which can be seen as producing positive utility (Patillo, 1998).

A fundamental assumption of this analysis is that there is a difference between the economic value and the amenity value of homeownership. The market price of a home expresses its value as an economic asset, but also includes the home's non-monetary amenity value to the homeowner. In contrast, gross rent represents the value of housing in that market without the homeownership amenity value. While the amenity value of owning a home cannot be measured directly, Krainer and Wei (2004) and Smith (2014) have found that the ratio of home value to rent (Value/Rent) serves as a good proxy for the relationship between the economic and amenity value of homeownership.

The number of individuals residing in a single household (H Size) has important sociological and housing implications (Tscharaktschiew & Hirte, 2010). Bradbury (2014) has noted that house size has been increasing in the U.S. and is concerned about the sustainability of this trend. Changes in household size and composition have been found to impact optimal consumption decisions, including housing decisions (Bick & Choi, 2013). While it is possible in a given household that more wage earners means a larger pool of resources with which to gain home ownership, household size may also be an impediment to home ownership. If additional household members are unable to contribute to the earnings pool (e.g., children, the elderly, disabled individuals), such individuals may represent a claim on household resources that reduce the amount available to spend on housing.

Table 2
Amenity Value Correlations

		% Married	% C School	% Not Moved	Value/Rent	H Size
% Married	1	-0.006	.386**		.531**	.412**
% C School	1	-.402**			-.081	.444**
% Not Moved		1			.319**	.416**
Value/Rent					1	-.129**
H Size						1

% Married: % of population married
% C School: % of population with children > 3 in school
% Not Moved: % of population residing in same residence 1 year previously
H Size: number of persons in household
437 ACS Counties, 2013

* * P = .01, * P = .05

The correlations presented in Table 2 augment the observations in the above cited literature by noting the absence of a linkage between marriage and having children in school which probably reflects variations in the demographic profile of married couples. A higher incidence of marriage is associated with greater residential stability while the negative relationship between households with children in school and stability suggests that educational considerations may cause households to change location. The positive relationship between amenity value (value/rent) and the incidence of marriage and a stable residential pattern is as expected. The absence of this relationship between amenity value and households with children in school suggests the independence of these two dimensions of residential tenure.

The partial correlations presented in Table 3 show a positive relationship between a married household and a household with children in school given home ownership. This shows the importance of homeownership in both dimensions of these utility creating household circumstances. Similarly, the relationship between Value/Rent and % Not Moved when homeownership is controlled for is no longer significant, suggesting the importance of homeownership in creating stable neighborhoods.

Table 3
Amenity Value Partial Correlations
(Controlling for Homeownership)

	% Married		% C School		% Not Moved	Value/Rent	H Size
% Married	1	.328**	-.029	0.131**			.563**
% C School		1	-.299**	.153**			.478**
% Not Moved		1	-.023				.149**
Value/Rent			1				-.197**
H Size							1

% Married: % of population married
% C School: % of population with children > 3 in school
% Not Moved: % of population residing in same residence 1 year previously
Value/Rent: the ratio of median owner-occupied housing value to average gross rent
H Size: number of persons in household
437 ACS Counties, 2013
* * P = .01, * P = .05

Education and Labor Force Factors

The data in Table 4 present the ACS data for educational attainment and labor market conditions in the surveyed counties. While the relationship between home ownership and unemployment is nominally negative, Green and Hendershott (2001) have found that this relationship is very sensitive to the demographics of the affected population. Lower levels of education have also been found to be associated with less stability in employment which would make sustaining the continuing commitment of homeownership more difficult (Airo & Cajner, 2014). Riddell and Song (2011) found that post-secondary education was particularly important in overcoming sporadic unemployment.

The effect of attained education levels on homeownership may be indirect through their effect on labor force participation and income or direct by impacting an individual's tastes and preference for homeownership (Ford & Wilcox, 1998). Higher levels of education may also provide individuals with the confidence to enter the house buying and mortgage application processes as well as increasing the competency of individuals to successfully negotiate obtaining a mortgage and buying a house (Read & Tsvetkova, 2012; Bostic & Lee, 2008).

Table 4

Education and Labor Market Characteristics

	Average	Stdev
Ed < 9	4.700	3.100
% BS	18.4%	5.7%
U Rate	9.1%	4.0%
FU Rate	8.1%	3.0%
MU Rate	9.9%	5.2%

Ed < 9: % of Population with < 9 years of Education
% BS: % of Population with a BS or higher
U Rate: Total Unemployment Rate 16+
FU Rate: Total Unemployment Rate of Males 16+
FU Rate: Total Unemployment Rate of Females 16+
437 ACS Counties, 2013

The correlations presented in Table 5 of this ACS study of Education and Labor Force factors confirm the relationships suggested in the above literature. Lower levels of education are found to be negatively related the overall unemployment rate and the female unemployment rate, but not the male rate of unemployment. This may reflect the cultural expectation that males should find work, whatever their circumstances. Similarly, the possession of a post-secondary degree is negatively associated with all three measures of unemployment.

Table 5
Education and Labor Market Correlations

	ED < 9	% BS	U Rate	FU Rate	MU Rate
Ed < 9	1	-.355**	.171**	.356**	0.067
% BS	1	-.357**	-.345		-.321**
U Rate		1	.954**		.568**
FU Rate			1		.775**
MU Rate					1

Ed < 9: % of Population with < 9 years of Education

% BS: % of Population with a BS or higher
U Rate: Total Unemployment Rate 16+
FU Rate: Total Unemployment Rate of Males 16+
FU Rate: Total Unemployment Rate of Females 16+
437 ACS Counties, 2013
* * P = .01, * P = .05

The partial correlations presented in Table 6 for education and labor market conditions suggest that homeownership does not affect the relationship between educational attainment and unemployment.

Table 6
Education and Labor Market Correlations
(Controlling for Homeownership)

	ED < 9	% BS	U Rate	FU Rate	MU Rate
Ed < 9	1	-.355**	0.065	.272**	-0.034
% BS	1	-.407**	-.394**		-.358
U Rate		1	.746**		.950**
FU Rate			1		.523**
MU Rate					1

Ed < 9: % of Population with < 9 years of Education

% BS: % of Population with a BS or higher

U Rate: Total Unemployment Rate 16+

FU Rate: Total Unemployment Rate of Males 16+

FU Rate: Total Unemployment Rate of Females 16+

437 ACS Counties, 2013

* * P = .01, * P = .05

Cost and Income Factors

Table 7 presents the ACS data for cost and income factors in the surveyed counties.

Table 7
ACS Cost and Income Characteristics

	Average		Stdev		
SMOC W	$ 1,450		$ 423		
SMOC W/Med Y	0.027		0.005		
Med Y	$ 54,910		$ 13,649	Mean Y	$ 72,714
$ 17,893					
Y < 10k	0.072	0.028	Y > 200k	0.045	0.035
Gini	0.452	0.035			

SMOC W: Selected Monthly Operating Costs with a Mortgage

SMOC W/Med Y: SMOC W/Median Household Income

Med Y: Median Household Income

Y< 10k: % Households < $10,000 Income

Y>200k: % of Household > $200,000 income

Gini: Gini Coefficient

437 ACS Counties, 2013

The ACS develops a measure of the cost of housing as Selected Monthly Operating Costs (SMOC) for owneroccupied housing with a mortgage (Schwartz & Wilson, 2014). Considerable variation is found in the costs of ownership from county to county as one standard deviation in this distribution amounts to 29% of the mean. Home ownership costs may vary from factors such as the simple fact that a house in Arizona requires less heating fuel than a house in Minnesota. In addition to variations in utility costs, maintenance costs, property taxes and various ownership fees vary considerably from locale to locale. SMOC data uses self-reported monthly expenditures on a first mortgage, a second mortgage, any home equity loans, homeowners insurance, condo or HOA fees where applicable, and utilities.

One approach to the decision for homeownership is to weigh the affordability of that decision (Stone, 2006). Common factors considered in determining affordability include the price of housing, household income, utility costs, maintenance costs, insurance costs, taxes, and daily expenses (Carlyle, 2015). Some researchers use a gross measure of housing affordability by examining the ratio of housing price to income (Lin, et. al., 2014). Others distinguish between the short-run perspective of acquisition and the longer-run perspective of housing consumption. In this study, we follow Haffner and Heylen (2011) and use a ratio of continuing housing cost relative to income (SMOC W/Med Y) to measure affordability.

As indicated in Table 7, the fact that the mean exceeds the median of the income distribution suggests a highly skewed income distribution across ACS counties. Specifically, the difference between the average mean and the average median income across all counties is $17,804 with two-sample t-test of 16.54. That is, the difference between the mean and median income is both economically and statistically significant. The fact that the degree of skewness of the income distribution varies from county to county affects the interpretation of the degree of income inequality as measured by the Gini Coefficient. By definition, the Gini ratio is the ratio of the difference between the actual

cumulative distribution of income (the Lorenz curve) and the cumulative distribution of income if all income were equally distributed. A Gini ratio of zero expresses perfect equality, and a Gini ratio of one represents the maximum possible inequality.

Variations in the Gini Ratio among the ACS counties in our study suggests different responses in the relative income levels among the poor, middle class and wealthy to a general increase in income. Thus, the same Gini ratio can reflect two entirely different distributions of income (Hagerbaumer, 1977). While a given change in median income may leave the Lorenz curve unaffected, a more likely occurrence is that the slope of the curve will change depending on whether the impact of the change in modality income levels is felt on the lower or upper end of the distribution (Krause, 2014). This means that variations in median income and the Gini Ratio will not be unambiguously correlated with each other. As a result, median income and the Gini Coefficient may have different and independent impacts on home ownership. Consequently, causation may be expected to flow from both the Gini and median income to the incidence of home ownership.

The correlations presented in Table 8 confirm the suspected relationship between the modality of the income distribution and the Gini Coefficient. While the overall impact of an increase in median income is to reduce income inequality, the correlation, though significant, is weak (-.204). Insofar as the incidence of the very poor (Y < 10k) increases, inequality will increase. Insofar as the incidence of the rich (Y> 200k), inequality will increase. Reducing the incidence of individuals at both ends of the income distribution will increase equality.

Table 8
Cost and Income Correlations

	SMOC W	SMOC W/Med Y	Med Y	Mean Y	Y < 10k	Y > 200k	Gini
SMOC W	1	.486**	.783**	.847**	-.414**	.837**	.246**
SMOC W/Med Y		1	-.115*	0.021	.381**	.127**	.532**
Med Y			1	.952**	-.737**	.864**	-.204**
Mean Y				1	-.621**	.960**	0.072
Y < 10k					1	-.456**	.566**
Y > 200k						1	.246**
Gini							1

SMOC W: Selected Monthly Operating Costs with a Mortgage

SMOC W/Med Y: SMOC W/Median Household Income
Med Y: Median Household Income
Y< 10k: % Households < $10,000 Income
Y>200k: % of Household > $200,000 income
Gini: Gini Coefficient
* * P = .01, * P = .05

A larger presence of the very poor is seen to be associated with lower housing costs (SMOC W). A larger presence of the rich is seen to be associated with higher housing costs. While median income is positively associated with housing costs, when housing costs are adjusted for median income (SMOC W/Med Y), the association with median income turns negative. This would suggest that the response of housing costs to income is characterized by an inelastic downward sloping demand curve.

In Table 9, controlling for homeownership, the coefficient between SMOC W and Median income turned positive, suggesting that among those who do not own homes, the response of housing costs to income is elastic. In addition, controlling for homeownership changes the relationship between median income and the Gini from significantly negative to a lack of significance. An implication of this change is that the distribution of income has a different effect on homeowners and non-homeowners.

Table 9
Cost and Income Partial Correlations (Controlling for Homeownership)

	SMOC W	SMOC W/Med Y	Med Y	Mean Y	Y < 10k	Y > 200k	Gini
SMOC W	1	.560**	.874**	.887**	-.583**	.850**	.127**
SMOC W/Med Y	1	.130**	0.191**		0.027	.224**	.246**
Med Y 1	.963**				-.710**	.898**	-0.021
Mean Y		1			-.645**	.967**	213**
Y < 10k					1	-.518**	.355**
Y > 200k						1	.339**
Gini							1

SMOC W: Selected Monthly Operating Costs with a Mortgage

SMOC W/Med Y: SMOC W/Median Household Income
Med Y: Median Household Income
Y< 10k: % Households < $10,000 Income
Y>200k: % of Household > $200,000 income
Gini: Gini Coefficient
* * P = .01, * P = .05

Race

The issue of race is an important consideration in almost all studies examining homeownership (Greif, 2015; Collins & Margo, 2011). As of the 2000 Census, the rate of homeownership for whites in the U.S. was 71.3% and for blacks 46.3% (Census, 2010). Most research finds that race continues as an important factor shaping spatial housing patterns (Friedman, et. al., 2013). However, Madden (2014) finds that racial integration and poverty integration are independent processes because racial integration occurs mostly within its own poverty groups and poverty integration occurs mostly within its own racial groups, making these integration processes largely independent. Therefore, while race is correlated with many of the socio-economic variables in this study, by itself, race is not a significant factor in

determining spatial patterns of homeownership which are explained by other socio-economic variables (e.g., income). As a consequence, race is not considered as a separate variable apart from the indicated socio-economic variables in this study.

THE IMPACT OF INEQUALITY ON HOMEOWNERSHIP

A simple regression of the Gini Coefficient on homeownership looks like:
Ownership = 1.388 – 1.626 Gini**
(-15.326) R^2
= .351
t value in parentheses **
P = .01
While significant, this approach does not recognize the complexity of the interaction of amenity values, education levels, labor market condition, costs and income on the homeownership decision. Given that these relationships are complex and that causation is not linear, it is possible to specify a model that reduces endogeneity concerns. The following regression represents such an attempt:
Ownership = .489 + .175 Value/Rent** -.276 SMOC W/Med Y**
(4.261) (-6.812)
-.082 Gini* -.035 Med Y+ .472 % Married**
(-2.190) (-1.031) (11.486)

R^2 = .673 t value in parentheses ** P = .01, * P = .05

As might be expected the primary factors determining the incidence of homeownership are the amenity factors characterizing that area. This is consistent with the literature and analysis discussed above. What is not generally treated in the literature is the impact of the distribution of income on homeownership indicated in this regression. Simultaneously, the median level of income is not found to be significantly related to homeownership. The correlation coefficient between median income and the Gini Coefficient in the survey counties is -.204 (significant at p = .01). The explanation for this is that while an increase in median income generally reduces the inequality of the income distribution, the impact of a change in median income can affect either the lower portion of the distribution or the upper portion of the distribution. Where the impact of an increase in median income is on reducing the incidence of lower incomes, the inequality of the distribution will be reduced. Where the impact of the increase in median income is to increase the incidence of higher income, inequality will be increased. The important insight provided by this equation is that how a change in median income affects the distribution of that income is more important for home ownership than the change in median income itself.

The reason for this may lie in the structure of housing values in a particular area. Where the distribution of incomes is more equal, the normal progression of households from rental housing to low-cost housing to moderately-priced housing to expensive housing is facilitated because there are buyers and sellers at every income level for a variety of housing at different price levels. Where the distribution of incomes is more unequal, the normal progression of households from rental housing to low-cost housing to moderately-priced housing to expensive housing is retarded because there are individuals with low income who rent and a preponderance of expensive housing occupied by high-income individuals. In this case, there is no easy transition from rental properties to less expensive homes in the affected real estate market.

CONCLUSIONS

The above spatial analyses of home ownership patterns reveal the importance of the utility creating facets of home ownership in the decision to become a homeowner. This largely explains the past success of government policy by facilitating mortgage funds for middle- and upper-income households. This does not imply that future increases in homeownership rates can be accomplished by the same policies.

The findings above suggest that to increase homeownership (particularly among low income households) is not sufficient to focus on policies designed to raise modal levels of income. It can be argued a free market approach to generally raising income levels is more advantageous to the already well-to-do than among the economically disadvantaged. An unintended consequence of such policies might be to create a less equal distribution of income, even though average incomes increase. It can be seen that in ACS-surveyed counties, a less equal distribution of income has a negative effect on the incidence of homeownership.

To encourage home ownership, government policies should pursue those programs which would have the effect of creating a more equal distribution of income. Such policies are likely to be most effective when directed towards those at the lower end of the income distribution. Thus rather than directly promoting homeownership by increasing the availability of mortgage funds, homeownership can be facilitated by focusing on the basics of increasing the earnings power of prospective home owners through education, job training, and job placement in the context of a vibrant economy that provides opportunity for all. Reductions in unemployment would contribute towards the necessary stable economic base required for homeownership. This would allow currently economicallydisadvantaged individuals to better utilize the existing conventional mortgage facilities to realize home ownership. While this might be too slow an approach for contemporary politicians (Jacobs & Manzi, 2014), the above spatial analysis suggests this as a viable solution to increasing home ownership.

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BASEBALL'S RACIAL "CHANGE-UP": ECONOMIC FORCES LEAD TO MAJOR LEAGUE BASEBALL'S DESEGREGATION

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ABSTRACT

Baseball began to desegregate in 1947 when Jackie Robinson with the Brooklyn Dodgers broke the color line, a process that would take until 1959. There is considerable research about the positive impact from integration, but little research about the reasons that led individual teams to desegregate or explain the pace of integration. We posit that baseball's weak financial position following the Depression and World War II created pressures on financially weak teams to desegregate. This relative weakness is clearest in cities with more than one team (New York, Philadelphia, Boston, St. Louis and Chicago). We consider the pairs that arise from multiple team cities. We use attendance as a proxy for financial performance, given the poor state of data. In addition, we consider on-field performance as well as team financial histories. We find the more poorly performing team, in the seven instances where teams shared cities, predicted first integration.

INTRODUCTION

After decades of intransigence, baseball finally began the process of desegregation in Major League Baseball in 1947 when Jackie Robinson (with the Brooklyn Dodgers of the National League) and Larry Doby (with the Cleveland Indians of the American League) finally broke the color line. It would take until 1959 for each of the sixteen major league teams to finally begin the process of desegregation. Official segregation had deprived baseball of a significant pool of baseball talent, as eighteen future National Baseball Hall of Fame players spent considerable amounts of their career in the segregated Negro Leagues. As would be expected, tapping that talent pool by major league baseball (MLB) had significant impacts. Andrew Hanssen (1988, p. 603) has noted that "A sizeable and statistically significant relationship between winning and the number of black players is found for the 1950s." Nonetheless, MLB retained segregated teams until 1959 when the Boston Red Sox finally integrated.

In that article, Andrew Hanssen (1988, p. 605) further notes that "Why the color line was broken remains an open question" and posits changes in attitudes following WWII. We consider the impact of the Great Depression, the subsequent World War II era, along with demographic shifts West and South, combined to provide financial incentives for integration. Baseball's unique structure in 1947 allows for relative comparisons: in 1947, there were five cities which shared MLB teams (Philadelphia A's/Phillies; Boston Braves/Red Sox; Chicago Cubs/White Sox; St. Louis Browns/Cardinals; New York Yankees/Giants/Dodgers). We undertake a pairwise analysis of the teams in each city against each other, considering on-field performance, attendance and team histories. We find that the team in each city which was underperforming in terms of attendance and performance, and which had other financial difficulties, integrated first. In other words, competition within the local market drove the decision to integrate.

BASEBALL'S COLOR BAN AND "GENTLEMEN'S AGREEMENT"

By the 1890s, African Americans were slowly being banned by all of organized baseball. The major league level completely eliminated the possibility of black players through an informal agreement and not a written rule. The Sporting Life (June 29, 1895; Greg Bond) noted that "nothing is ever said or written about drawing the color line in the [National] League. It appears to be generally understood that none but whites shall make up the League teams, and so it goes."

By the end of the 1800s, this gentlemen's agreement also made it to the minor leagues and in 1899 there was only one African- American player in all of organized baseball, Bill Galloway playing in the Canadian League (Hylton, 1998). Despite this, in 1942, baseball Commissioner Kennesaw Mountain Landis, stated that "there is no rule, formal or informal, or any understanding –unwritten, subterranean or sub-anything – against the hiring of Negro players by teams of organized ball." (Tygiel, 1997, p. 30). This response rang hollow. When Galloway was released, there were no other black players in organized baseball until Jackie Robinson in 1946, when Robinson played for the Montreal Royals of the International League, and then eventually in 1947 when he was brought up to the Dodgers (Hylton, 1998).

The gentlemen's agreement to exclude black players was never challenged in court during baseball's color ban between the 1890s and 1940s. Had the unwritten rule been legally challenged, it is doubtful that it would have seen any success given the state of civil rights law at that time. This time period in our country was known as the "separate but equal" time period, and there were no existing laws banning discrimination in employment. It was not until 1964 that Congress enacted employment discrimination statutes that could have potentially protected the players against any type of color ban. (Civil Rights Act of 1964).

Additionally, during this time period, in 1922, the U.S. Supreme Court ruled in the landmark decision, Federal Baseball Club v. National League, that professional baseball was not engaged in interstate commerce and therefore the Sherman Anti-Trust Act (1890) did not apply to the sport. This protected the owners from not just the players but also from outside market competition. This bizarre decision only applied to baseball, while the other major sports, football, basketball and hockey, were all subject to the law. The Sherman Act turned out to be a powerful tool for the players in those leagues to gain many rights not previously available to them. They attacked restrictions on salaries, the draft, and eventually achieved free agency. Baseball owners, on the other hand, were able to control their players as they saw fit, beyond the reach of the Sherman Act. Therefore, the courts sent a clear message to the baseball players at that time that the league itself was protected and beyond reproach.

ECOMONICS OF DESEGREGATION

Economics Nobel Prize winner Gary Becker is well known for his path breaking studies of labor market discrimination. In his book *The Economics of Discrimination*, Becker (1957) modeled taste-based discrimination as a product of personal prejudice or taste against associating with a particular group. He identified three sources: employer discrimination, co-worker discrimination and customer discrimination. Employer discrimination reflects the prejudices of employers who restrict their hiring to certain groups. Co-worker discrimination arises from within the labor force that influences firms not to hire minorities. Customer discrimination exists when customers have discriminatory preferences.

Becker's model predicted that market competition would reduce employer discrimination (Becker, 1957). He observed that as long as wage differentials existed, non-discriminating employers would have an incentive to hire equally productive black workers at lower wages or pay the same amount of wages to more productive black workers. On the other hand, discriminating employers who did not want to hire black staff would have to pay more to hire white employees. Eventually, low-cost non-discriminating employers would out-perform discriminating employers. Market competition, however, would not reduce co-worker or customer discrimination. In particular, white workers, who do not want to work with black workers, are likely to be less productive than they would be. As a result, the demand for black workers will be lower. Similarly, if customers are willing to pay more not to interact with black employees, then it will be more profitable to avoid hiring them. In summary, in a competitive market, eliminating employer discrimination increases profits and accommodating co-worker or customer discrimination can also increase profits.

In sports, the costs of employer discrimination are the foregone equally or more talented minority players for lower or the same level of salaries. However, hiring minority players can be costly due to the worse on-field performance by unhappy white players, and the loss of fans who prefer to watch teams that have more white players. There have been numerous empirical studies on the impact of ending discrimination in sports, all showing positive returns accrue to teams that end discrimination. Lawrence Kahn (1991) surveys the literature and finds that a number of studies show that teams which integrated sooner had better on-field results. He concludes this is what would be expected in a market that eliminates employer discrimination. In terms of co-worker discrimination, he notes that both members of teams integrating, as well as teams they would oppose, balked at playing on an integrated team/game. Oh and Buck (n.d.) looked at wage differentials based on race and marginal productivity and found at least some evidence of all three sources of discrimination in sports. Kuper and Szymanski (2012) find that there was discrimination in the 1990s English Premier Soccer League, and that integration improved team records. We posit that the literature suggests that the positive effects of eliminating employer discrimination on increasing profitability are greater than the negative effects of ending co-worker and customer discrimination.

In the case of baseball, we know that both the Dodgers and Indians (the first teams to integrate) strongly came down in favor of integration and did not allow co-worker discrimination. Dodger players presented Manager Leo Durocher with a petition to jettison Robinson. Durocher told them that "I'm the manager and I say he plays" (Eig, 2008, p. 44). Bill Veeck, owner of the Cleveland Indians, had attempted to integrate the Philadelphia Phillies in 1943, and was staunchly in favor of integration.

Importantly, lucrative barnstorming tours between white and black players were common in the 20th century and showed that co-worker discrimination was not as prevalent as might be supposed in a segregated society. Hall of Fame

pitchers Dizzy Dean of the National League St. Louis Cardinals barnstormed with Negro League stalwart Satchel Paige from 1934 to 1945, in a tour of mixed race baseball. Their relationship was an important step forward, as "The color coded pairing of stars gave a human face to the battles between white and black teams which had been playing out in California for twenty five years" (Tye, 2011, p. 94) In fact, in the 1930s Paige was earning some $50,000 annually, reportedly second only to Babe Ruth (Chadwick, 1992).

Kahn (1991) notes studies which demonstrate that customer discrimination was an important consideration. However, given that integration of the field prompted immediate integration of the grandstands, this effect is difficult to estimate for baseball. Hanssen (1988, p. 605) explains that "because of the change in attitudes, and the complementary rise of the black middle class, the integration of baseball presented the prospect of a profit to be made". Importantly in a segregated society, "on the barnstorming tour, ballparks that normally walled off blacks let them sit where they wanted" and "it brought in white reporters with white fans" (Tye, 2011, p. 94, 95).

OTHER HISTORICAL FACTORS

While the Dodgers and Jackie Robinson are rightfully well known for integrating major league baseball, it is important to recognize that American sports – and society – had been desegregating throughout the 20th century. Baseball was a late integrator. Of the major league sports in the United States, only hockey integrated later, not until 1958, when Walter O'Ree laced up for the Boston Bruins and became known as "hockey's Jackie Robinson". There are several examples of integration that occurred in major sports prior to baseball. In 1892, NCAA football named William Henry Lewis an All-American (Kinshasa, 2006). In 1904, George Poage won a medal in the Olympics in track (Floyd, 2001). In 1908, Jack Johnson won the heavyweight title for boxing (Ward, 2006). In 1920, Bobby Marshall and Fritz Pollard joined the NFL (Finkelman, 2009).

Segregation was clearly not the simple result of ignorance by baseball talent scouts of the abilities of AfricanAmerican players. Hall of Fame manager John McGraw tried to sign a black player as early as 1901 "claiming that he was actually Native American" (Chadwick, 1992, p. 28). Major league owners were often very knowledgeable about their Negro League counterparts. Negro League teams such as the New York Cubans (NY Giants' Polo Grounds), Newark Eagles (Newark Bears' Rupert Field, home of the Yankee AAA team), Homestead Grays (both Pittsburgh Pirates' Forbes Field and Washington Senators' Griffith Park), and the East West All Star Game (Chicago White Sox Comiskey Park), among others, gave white owners the opportunity to evaluate black talent.

Besides Dean, the Cleveland Indians Hall of Fame pitcher Bob Feller barnstormed with Paige, including a 1941 "big money matchup against Satchel Paige and the (Negro League Kansas City) Monarchs at Sportsman's Park in St. Louis" and an important 1946 tour. That tour, aided by the Flying Tigers Airlines, "provided blacks with a 'chance to prove [themselves] against white players" (Gay, 2011, p. 224). A few years later, Dodger GM Branch Rickey recognized "the Negro Leagues contained a gold mine of big league players "and hence he 'saw inefficiency and exploited it at the expense of his competitors'" (Bradbury, 2007, p. 130).

World War II

Right after the 1941 Pearl Harbor attack, MLB Commissioner Keenshaw "Mountain" Landis petitioned the government for approval to go forward with the 1942 season (Obermeyer, 2013). In what has become known as the "Green Light Letter", President Roosevelt replied in part "I honestly feel that it would be best for the country to keep baseball going. There will be fewer people unemployed and everybody will work longer hours and harder than ever before. And that means that they ought to have a chance for recreation and for taking their minds off their work even more than before (Obermeyer, 2013, p. 51)." Interestingly, the President foresaw an inevitable drop in talent, stating that "even if the actual quality to the teams is lowered by the greater use of older players, this will not dampen the popularity of the sport" (Obermeyer, 2013, p. 51). A chance to nudge baseball towards integration was bypassed over the exigencies of the war effort.

The military draft took most white men into the service, leaving a diluted pool of white players either too young for military service (including one 15 year old pitching appearance), players who failed to qualify for military service, or players who were too old to serve and past their baseball primes (Obermeyer, 2013). These inconsistencies intersected in with the sacrifices made by African American troops during the war. President Truman made the decision to integrate the military in 1945, which made segregation impossible to keep as a policy. The 1945 death of Commissioner Landis opened the door to integration. However, an open door for the military did not translate into immediate action for the MLB.

MODEL OF INTEGRATION

Given the apparent benefits from integration, we consider why it took MLB twelve seasons until each team had begun to move away from discriminatory hiring practices. We contend that the economic pressures of the 1930s sowed the seeds for integration. Discrimination is a luxury good, and economic research has shown decisively that "discrimination is expensive and its cost may reduce its incidence" (Hanssen, 1988, p. 603).

As explained earlier, the elimination of discrimination presumes a free market, where the inefficiencies of hiring lower ability workers can be bid away. In the post WWII era, baseball teams were not evenly distributed across the country. In fact, five cities had multiple teams; Philadelphia, Boston, Chicago and St. Louis each had two teams and New York City had three teams. These teams were geographically distributed across the eastern part of the country, covering New England (Boston), the Upper Mid-West (Chicago), the Mid-Atlantic (Philadelphia and New York) and baseball's West (St. Louis), though did not cross the Mississippi. Single team cities were found only in Cleveland, Cincinnati, Pittsburgh, Detroit and Washington. While anti-trust legislation protected MLB from external competition, within cities there was strong internal competition for fans. This competition negated, to some extent, the protective benefit that the monopoly granted.

We posit a simple model, where baseball's economic losses in the 1930s and WWII era began to pressure ownership for a new business model. MLB attendance fell from over ten million in 1930 to a low of six million by 1933. It was not until 1945 that the ten million attendance mark was reached again. This was matched by demographic trends. The 1940 census recorded the first drops in population for Boston, St. Louis and Philadelphia. The 1950 census saw population peaks for Boston, St. Louis, Philadelphia and Chicago.

The 1930s is the only decade on record where the average MLB team sales price dropped in real 2002 dollars (Haupert, 2007). In the 1930s, there were four sales, and the average price change was a 33% reduction or about 4.1% per annum as compared with a 0.3% annual drop for the Dow Jones Index.

Our analysis is based on seven pairs in five cities: four cities (Boston, Philadelphia, St. Louis and Chicago) with two teams, the two New York pairs (both the Dodgers and Giants compared with the late-integrating Yankees), and the Philadelphia situation in 1943. This generates seven pairs of competing teams which integrated at different points.

By comparing teams within a market, we are able to isolate important variables which would exert similar pressure on each team: local demographics including population changes, state/local pressures on teams to integrate, income growth, and transportation issues. Financial data for the pre-integration era is notoriously difficult to find. There are limited team salary statistics and team financial statements. In the absence of other potential sources of financial information, we use attendance as a measure of financial performance. We also consider team histories to see if there is evidence of poor management or financial performance to go along with attendance data.

We hypothesize that financial turmoil arising first during the Depression and then exacerbated by World War II led teams with weaker financial positions to innovate and turn to integration. We use both relative attendances in the 1930s until integration, and also team histories to see if there is a developing pattern to the timing of integration. We find a pattern of significant differences in attendance matching poor on-field performance is already well established in the Depression years of the 1930s, and the underperforming team in fact would ultimately integrate first.

As a result, with the door open, we still see an uneven pace of integration driven by competition within markets led the underperforming team to integrate first. Brooklyn Dodger GM Branch Rickey famously said that the greatest font of untapped talent was in the Negro Leagues, and that "The Negroes will make us winners for years to come, and for that I will bear being called a do-gooder…" (Eig, 2008, p. 20). We believe that this impulse, the need to win and attract fans, led to integration.

RESULTS

To measure developments going into the integration era, we consider on field performance, thumbnail team histories and cumulative attendance from 1930 until integration in each pair. Considering the ten years leading up to the beginning of the integration era, we note that on-field performance of each team that integrated first was significantly worse than that of its main competitor. As is well documented, performance is correlated with attendance. Of single city teams which integrated later, only the Washington Senators had a sub-0.500 record.

Philadelphia Phillies (Attempt to integrate, 1943)

The Philadelphia Phillies franchise foundered from the Depression into the WWII years. By the early-1930s, deferred maintenance at the Phillies home field the Baker Bowl was such that "rather than use lawn mowers, groundskeepers used goats instead" (Gershman, 1993, p. 144). Into the 1930s, there was considerable "agitation about the state of the Philadelphia facility in general and the franchise in general" National League owners "had enough votes to force change in the ownership", and the team went into new hands by 1933. In 1938 the Baker Bowl closed, the team moved to the Athletics home grounds, Shibe Park, and attendance fell further (Dewey & Acocella, 2005, p. 462).

In the years leading up to integration, the Philadelphia Athletics outperformed the Philadelphia Phillies in performance on the field and in the box office. The difference in attendance was drastic; with the Athletics drawing over 2 million additional fans over the previous 14 seasons (see Figure 1 in the appendix). The Athletics also bested the Phillies on the field; averaging nearly 5 more wins per season (see Figure 2 in the appendix).

National League ownership again pressured the Phillies, and in 1943 owner Nugent seemingly agreed to sell to Bill Veeck, the impresario and then-owner of the AAA Milwaukee Brewers. In the early-1940s, Bill Veeck, saw the Negro Leagues as a great, untapped area of baseball talent. In 1943, Veeck made a bid to buy the "down in the dumps" Philadelphia Phillies (Eig, 2008, p. 181). "Veeck's transformation plan for the Phillies included a secret weapon: the Negro Leaguers" (Eig, 2008, p. 182). Veeck made the mistake of informing Commissioner Landis that he would stock the team with stars from the Negro Leagues, and the sale was voted down. The League agreed to a low bid from Mr. Cox, a local business owner (Eig, 2008, p. 182). Veeck followed through in July 1947 when, as owner of the Cleveland Indians, broke the American Leagues' color line with Hall of Fame player Larry Doby, just months after Jackie Robinson's introduction to the National League.

Brooklyn Dodgers (Integrated 1947)

The rivalry on the field between the Brooklyn Dodgers and New York Yankees was well documented. The Dodgers were struggling to keep up with their cross town rivals. Brooklyn last showed a profit in 1930, and the phones at times were shut off for non-payment (Dewey & Acocella, 2005). When Walter O'Malley become involved in the team in 1938, "the Dodger situation...was so frightfully tangled that no commentator was quite able to explain it" (Murphy, 2009, p. 44). Basically, the Dodgers had less money than the New York Yankees, who performed strongly both on the field and in the box office. "If the Dodgers wanted a winning team, he had to tap new talent" (Kuper & Szmanski, 2012, p. 106). Unlike other pairings, the difference in attendance was just over 1 million fans in favor of the Yankees (See Figure 3 in the appendix). The discrepancy on the field was evident; with the Yankees winning more than 11 games a year (see Figure 4 in the appendix).

St. Louis Browns (Integrated 1947)

St. Louis Brown attendance was the lowest in all of baseball in the 1930s, and didn't crack 100,000 in each of three separate years (Dewey & Acocella, 2005). Grass maintenance was turned over to a goat by the Browns as well (Golenbock, 2000). In 1933, when owner Gus Ball died, no one wanted to buy the team. By 1941, owner Don Barnes "concluded he could not successfully fight the Cardinals" (Golenbock, 2000, p. 322). In 1941, the team began discussion to move to Los Angeles. Those plans were interrupted by WWII. By 1947 when Sportsman's Park was sold, the park was 'badly run down, with a leaky roof, broken chairs and a dilapidated clubhouses…despite a fix up, the Browns drew only flies" (Golenbock, 2000, p. 270).

The disparity between the rival St. Louis franchises was drastic. Gussie Busch, owner of the St. Louis Cardinals, charged his manager to "tell us what you need, and we'll get it for you" in pursuit of championships (Golenbock, 2000, p. 407). The Cardinals doubled the attendance figures of the St. Louis Browns since the 1930 season (see Figure 5 in the appendix). The Cardinals outpaced the Browns on the field, averaging 26.3 wins more per season (see Figure 6 in the appendix).

Boston Braves (Integrated 1948)

In the 1930s the Boston Braves began to sink under its debts to what was "a desperate situation" (Dewey & Acocella, 2005, p. 62). In 1933, the team was in financial distress, and ownership put forward a plan to use Braves Field for dog-racing. Ultimately, the National League took over the Braves. The team was turned over to Bob Quinn, who ran it until 1945 when he finally "tired of running the ailing franchise" (Craig, 2012, p. 85-86). In the late 1930s to early 1940s, when the Braves had a good player on its roster, "he didn't last long" due to the franchises "continuing

need for cash" (Dewey & Acocella, 2005, p. 63). The Braves developed the habit of "hiring bodies rather than talents" during the early 1940s (Dewey & Acocella, 2005, p. 63).

The Boston Red Sox were flexing their financial muscles at the same time. The Red Sox sent $375,000 off to teams in one off-season to acquire star talent (Dewey & Acocella, 2005). The Braves inability to hold on to good players hurt them on the field, leading to 15 fewer wins a season than the Red Sox (see Figure 7 in the appendix). Attendance figures also show a Red Sox advantage, with the Braves trailing by nearly 4 million fans (see Figure 8 in the appendix).

New York Giants (Integrated 1948)

From the mid-1920s forward, Giant ownership was beset by legal and financial woes, including a lawsuit by a minority owner that the Stonehams were out to 'destroy the club". By the end of the 1930s, the New York Giants were "treading water more seriously than any time…since the start of the century…the team was beset by uncertainties about the managerial abilities of the son" (Dewey & Acocella, 2005, p. 383). The Giants would never become even "on the field or at the gate, the city's leading team in the National League" (Murphy, 2009, p. 38). The New York Giants struggled to compete with both the New York Yankees and Brooklyn Dodgers on and off the field. The New York Yankees averaged over 20 wins more a season than the Giants (see figure 9 in the appendix). The Giants were also outgained at the box office by over 3 million fans (see Figure 10 in the appendix).

Chicago White Sox (Integrated 1951)

The Chicago White Sox ownership struggles in the 1930s turned into "years of wrangles that made the club's efforts to stay above water in the standings of almost secondary importance" (Dewey & Acocella, 2005, p. 168). This included the team's bankers determining that it was a financial risk in 1940. Later in the decade, "the club became an object of ridicule around the league" (Dewey & Acocella, 2005, p. 169). This situation was in stark contrast with cross-town rival Cubs, who were backed by Wrigley family money (Dewey & Acocella, 2005). The Cubs had a strong attendance that drew nearly 5 million more fans that the White Sox (see Figure 11 in the appendix). The onfield performance between the two franchises favored the Cubs by nearly 5 games a season as well (see Figure 12 in the appendix).

Philadelphia Athletics (Integrated 1953)

In this instance, we consider the post-1943 sale of the Phillies. As noted, in 1943 the National League forced the sale of the Phillies to new ownership, ultimately backed by money from the DuPont Company. With DuPont money behind the National League squad, the two Philadelphia teams began to undergo a metamorphosis. For the Athletics, ownership squabbles "erupted in the boardroom" in 1949. The Mack and Shibe families constantly fought. A 1950 deal which saw the team go into the hands of the Macks "insured that the franchise would continue to be run on a shoe string, never sure how the next payroll would be met" (Jordan, 1999, p. 171. The Athletics saw their box office success over the Phillies dissipate after the 1948 season as the Phillies drew over 1 million more fans from the 1949 to 1952 seasons (see Figure 13 in the appendix). The Phillies also demonstrated success on the field by averaging over 2 wins a season (see Figure 14 in the appendix).

CONCLUSION

Each of the seven team pairings supports the hypothesized model that the less financially stable franchise would integrate before their counterpart in the same city. Some instances were more severe than others, but the three measures of attendance, on field success, and team financial histories were met in each case. The St. Louis Browns, Boston Braves, New York Giants, and Chicago White Sox all drew less than 3 million fans in comparison to their cross town rivals. The Brooklyn Dodgers, Braves, Giants, and Browns all experienced win differentials exceeding 11 wins per season. The two pairings between the Philadelphia franchises present the closest competition on and off the field, yet still support the model.

We believe that the available evidence is that teams which were poor financially and were doing poorly at the box office were faced with an incentive to integrate. Once management decided to integrate, co-worker discrimination was mooted. And while consumer discrimination may remain a problem, the data shows that teams which integrated first performed better on the field and were able to tap into a growing African American consumer market (Kahn, 1991; Kuper & Szmanski, 2012; Hanssen 1988). The results help answer Hanssen's (1988) question about why teams integrated; ours an answer rooted in competitive economics.

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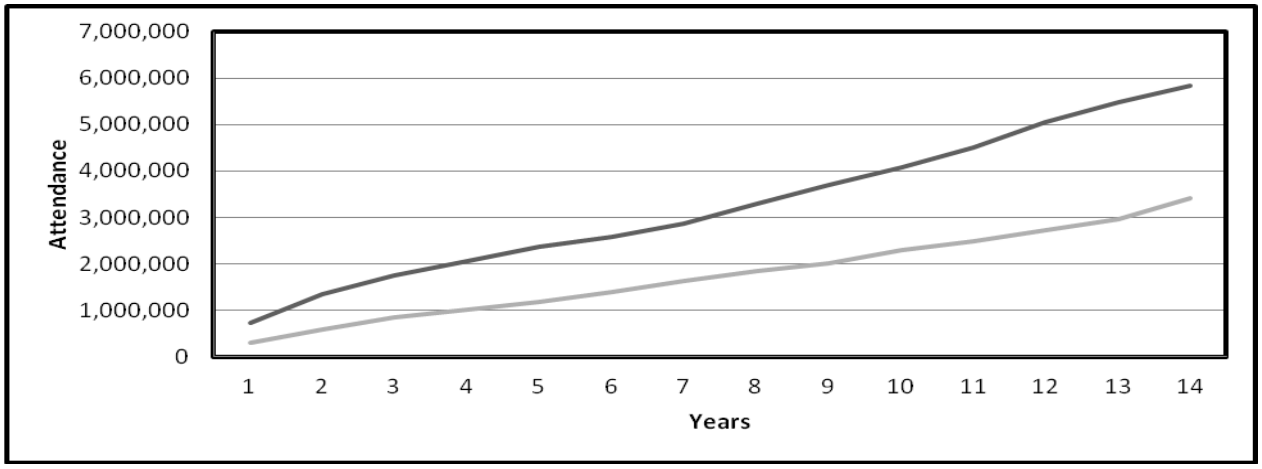
Figure 1
Philadelphia Phillies & Philadelphia Athletics Attendance (1930-1943)



Phillies: Light, Athletics: Dark

Figure 2
Philadelphia Phillies & Philadelphia Athletics Wins Total (1937-1942)

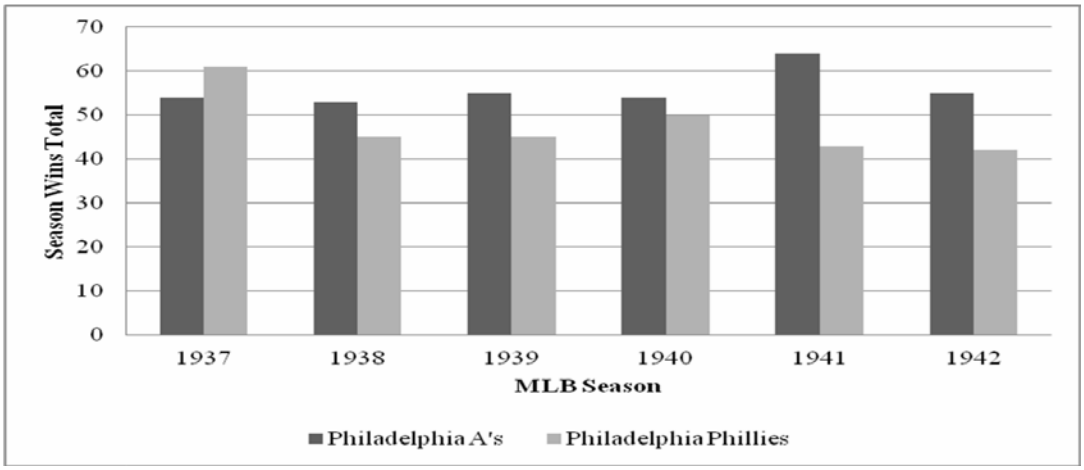
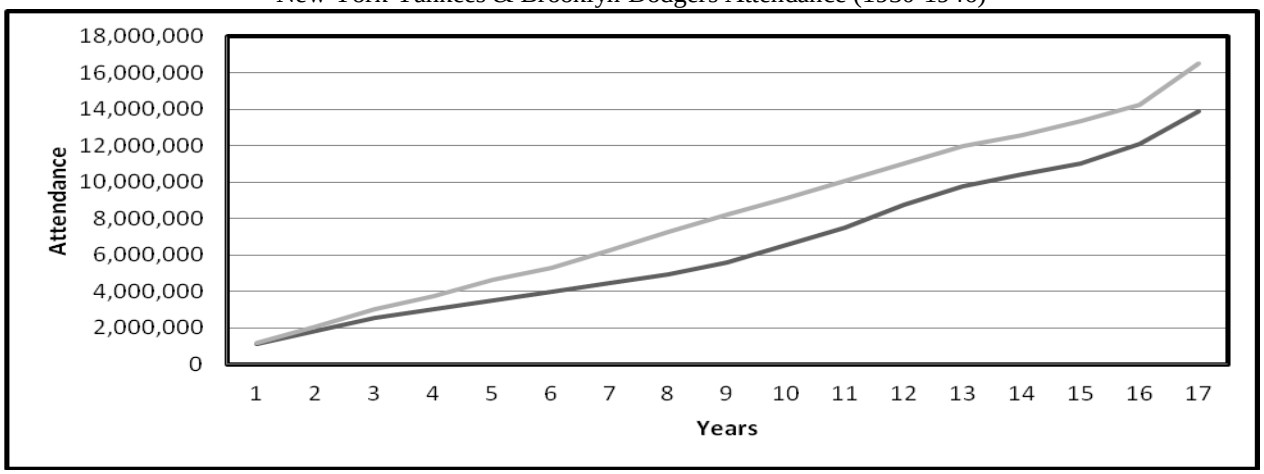


Figure 3
New York Yankees & Brooklyn Dodgers Attendance (1930-1946)



Dodgers: Dark, Yankees: Light

Figure 4
New York Yankees & Brooklyn Dodgers Wins Total (1937-1946)

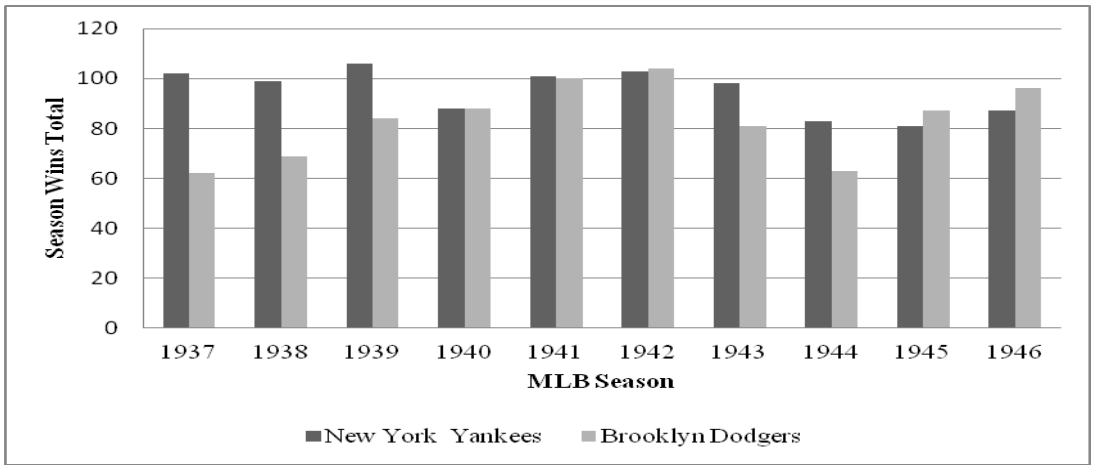
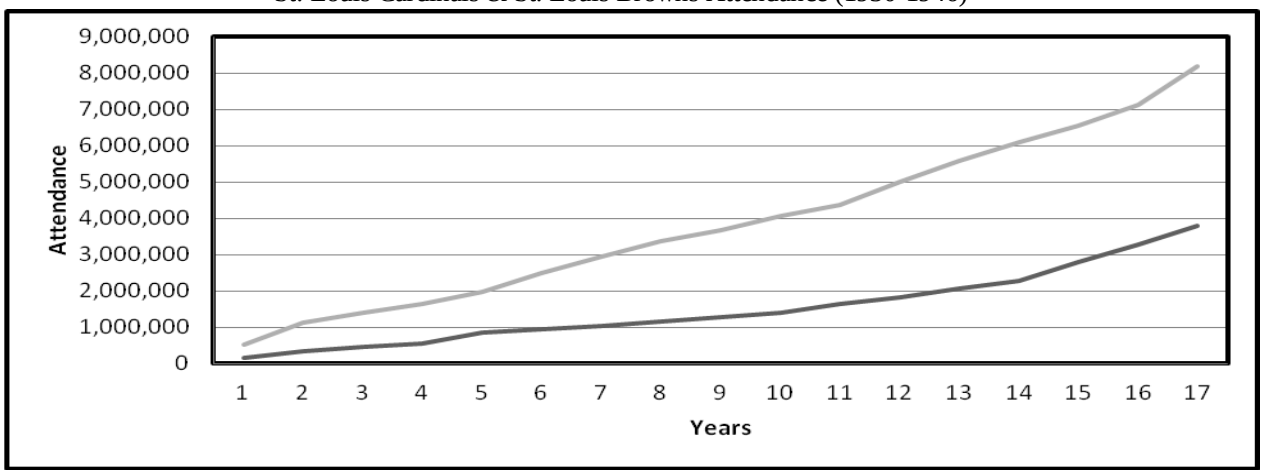


Figure 5
St. Louis Cardinals & St. Louis Browns Attendance (1930-1946)



Browns: Dark, Cardinals: Light

Figure 6
St. Louis Cardinals & St. Louis Browns Wins Total (1937-1946)

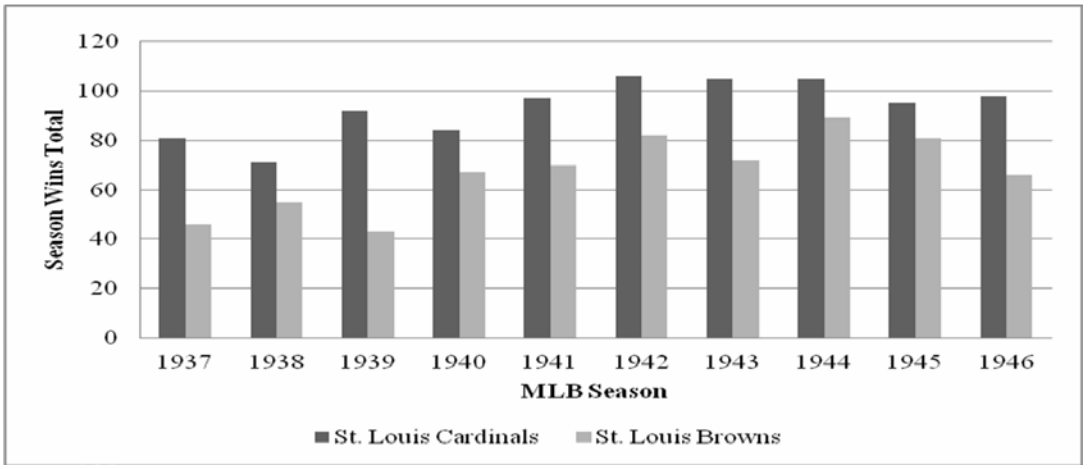


Figure 7
Boston Red Sox & Boston Braves Wins Total (1937-1947)

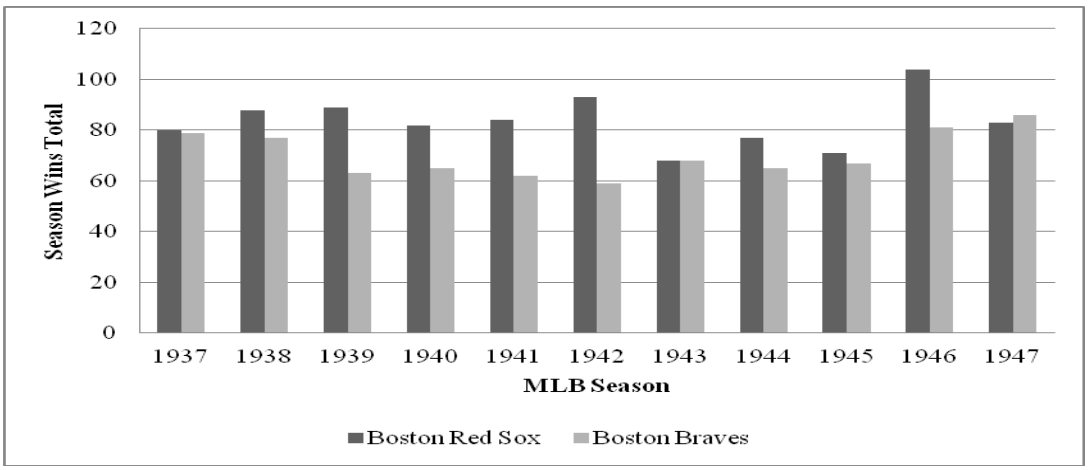
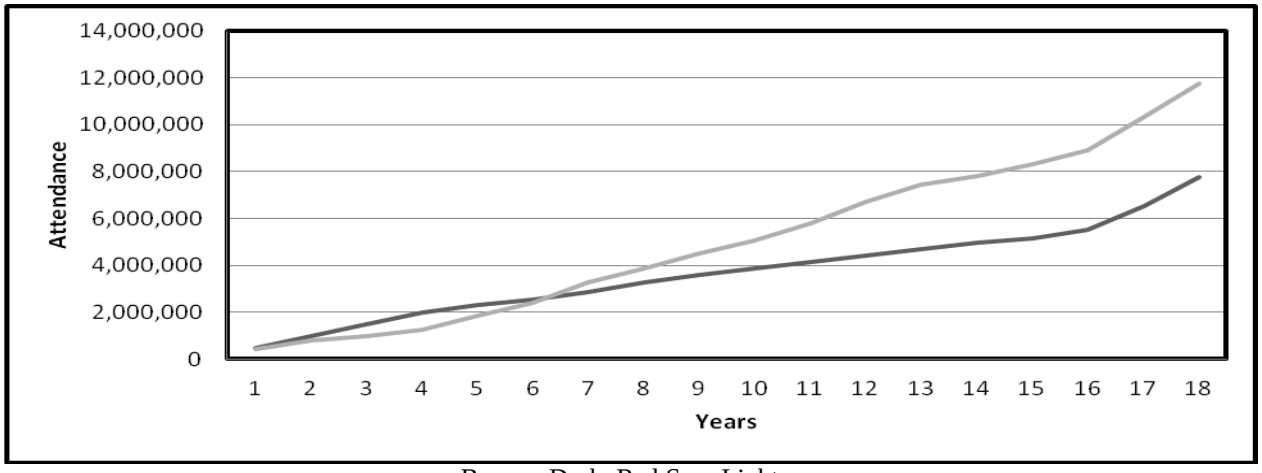


Figure 8
Boston Red Sox & Boston Braves Attendance (1930-1947)



Braves: Dark, Red Sox: Light

Figure 9
New York Yankees & New York Giants Wins Total (1937-1947)

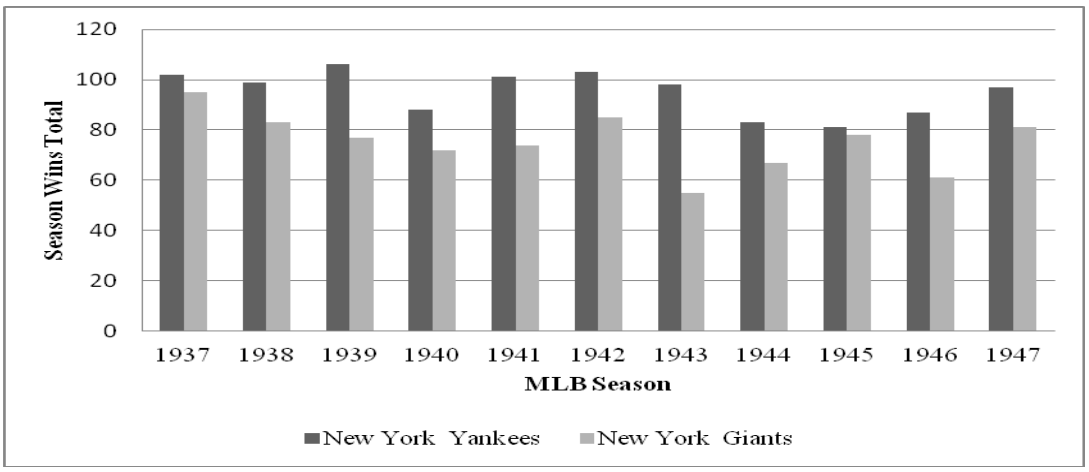
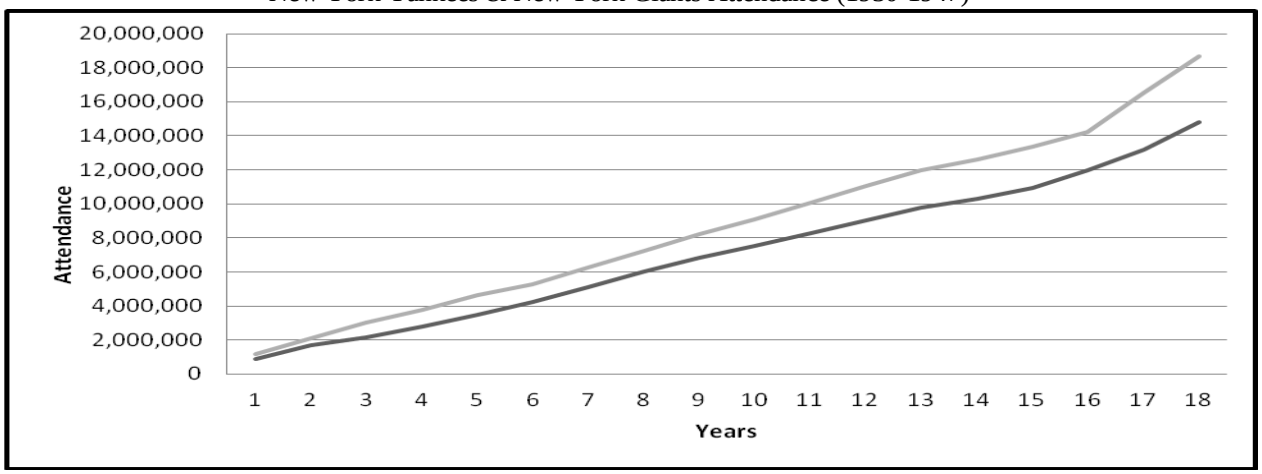
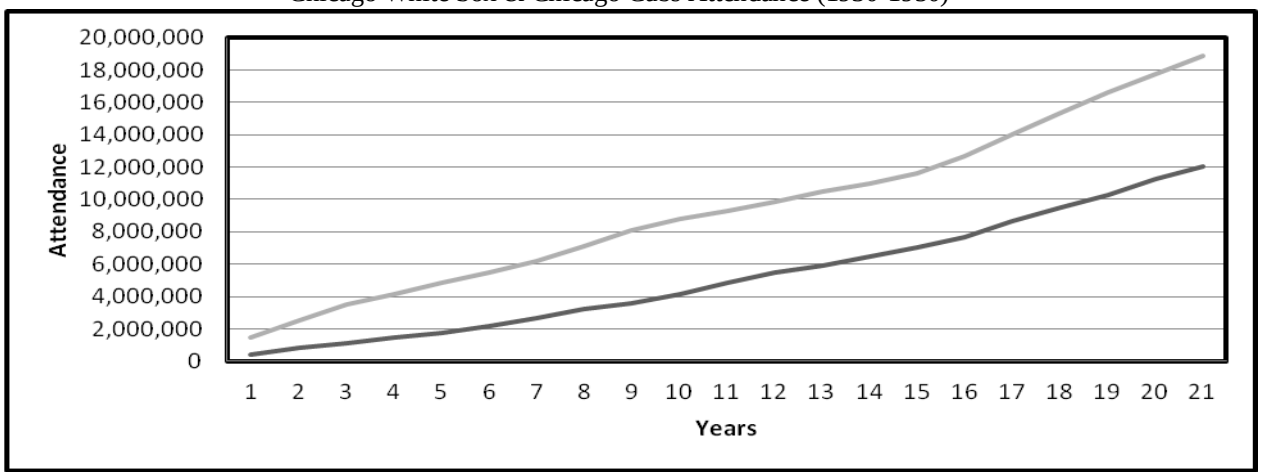


Figure 10
New York Yankees & New York Giants Attendance (1930-1947)



Giants: Dark, Yankees: Light

Figure 11
Chicago White Sox & Chicago Cubs Attendance (1930-1950)



White Sox: Dark, Cubs: Light

Figure 12
Chicago White Sox & Chicago Cubs Wins Total (1930-1950)

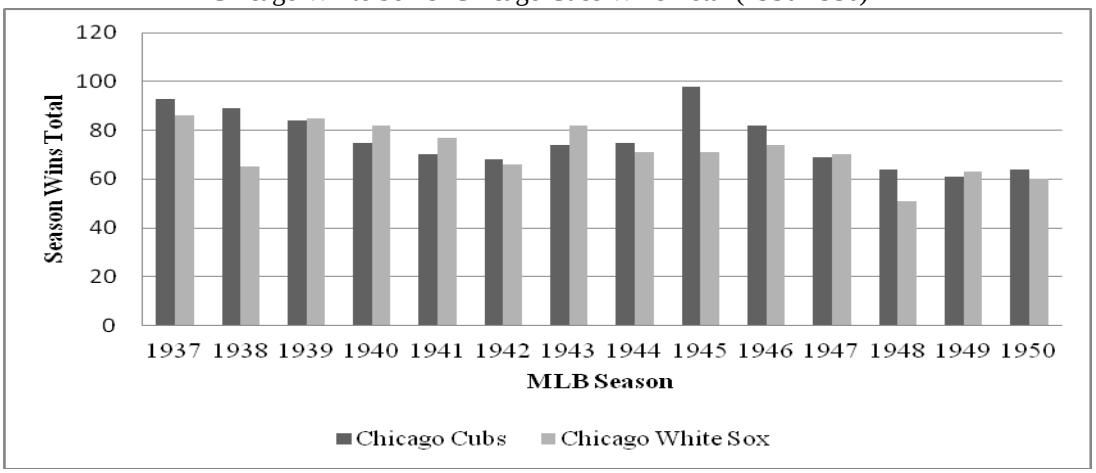
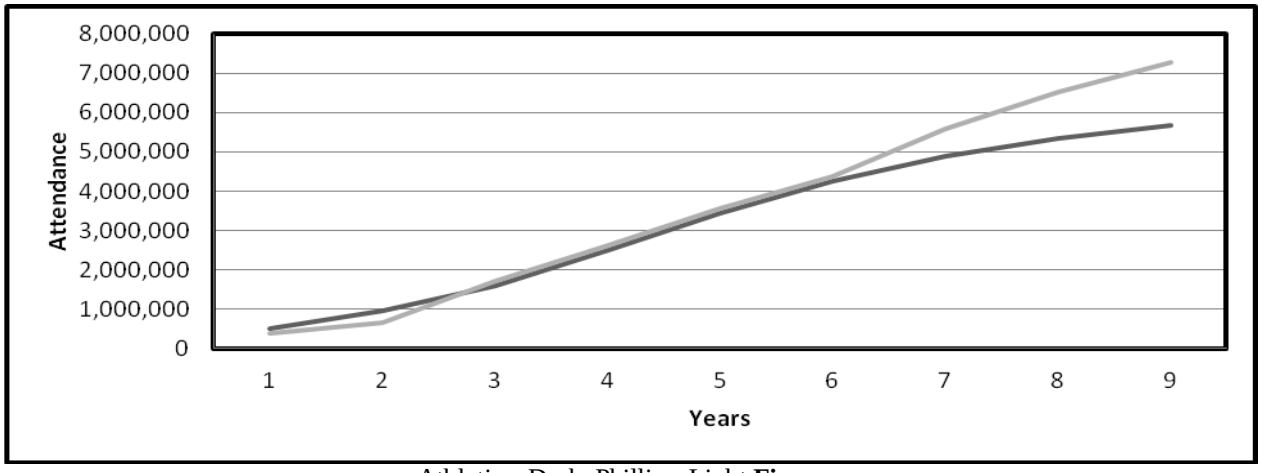


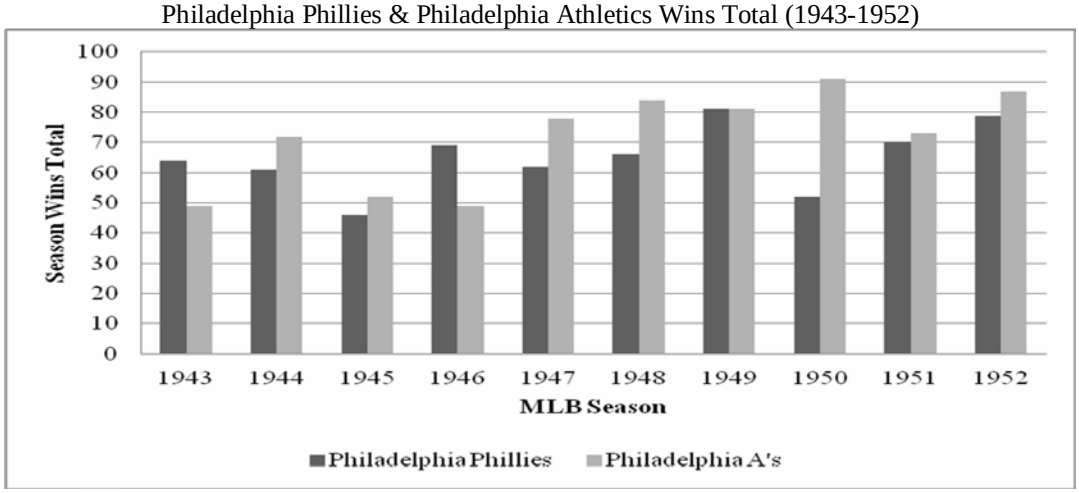
Figure 13
Philadelphia Athletics & Philadelphia Phillies Attendance (1944-1952)



Athletics: Dark, Phillies: Light **Figure**

14

Philadelphia Phillies & Philadelphia Athletics Wins Total (1943-1952)



E-GOVERNMENT: SUPPORT OF ADMINISTRATION AND DEMOCRACY

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ABSTRACT

Information and communication technology (ICT) capabilities create new opportunities to improve and enhance national governance to the betterment of both the government and its citizens. Through e-government systems, the weakening of spatial and temporal barriers (Becker, 2001) enhances the accessibility and impact of government systems as the reciprocal mandate to govern and involve citizens is strengthened. Included in e-government are information systems that focus on automatic transaction-based services such as paying taxes and obtaining permits as well as services that increase citizen participation, such as voting systems and electronic forums. E-government categorization includes both *e-administrative* and *e-democracy* systems (Mahrer & Krimmer, 2005).

This paper discusses the complementary and unique roles of *e-administrative* and *e-democracy* systems (Mahrer & Krimmer, 2005). Both positive aspects of the technology and potential drawbacks are highlighted. Then the case of e-government in Estonia is presented as a model of successful deployment of a national e-governance presence. Finally, the Estonian context is compared to the level of readiness for e-government in the United States.

E-ADMINISTRATIVE

E-administration systems, also labelled e-*inclusion* (Irani, Love, & Jones, 2008), strive to automate the role of the civil servant, the bureaucrat who works with citizens to provide information, process applications, and other routine types of paper work. By automating the public interface and capturing and storing relevant data at the source (stakeholder entry into the system), the process is disintermediated leading to operational efficiency. Additionally, the chance for errors is reduced because the information is entered only once, which also reduces costs and mitigates risks (Irani et al., 2008). Furthermore, availability of these types of systems is not limited to typical working hours. It can be available 24 hours a day, seven days a week. By expanding the time available to interact with the system, demand spikes would decrease given the citizen has the convenience of accessing the system from anywhere at any time. Therefore, e-government contributes to both citizen convenience and better use of tax dollars.

While disintermediation, eliminating the 'clerk' from the interaction, alleviates spatial and temporal barriers and controls cost, it also de-individuates the citizen by removing what Reddick (2005) calls the street-level bureaucracy. By necessity, bureaucracy is then institutionalized within the e-government system. Pre-defined heuristics are encapsulated within static computer code. Reddick calls this system-level bureaucracy. System-level bureaucracy introduces more integrity into citizen touch points as each citizen receives the same, pre-defined treatment. This deindividuation can create a sense of distance where the citizens are not valued and have little control over outcomes. Given there is little chance to question the process, users could perceive the system as less transparent.

E-DEMOCRACY

Whereas e-administration is geared toward increasing government control while improving service levels, edemocracy is about empowering the citizenry. Citizens are more than just tax payers. In a democracy, the citizens' rights and duties extend to involvement in the process of government itself (Davison, Wagner, & Ma, 2005). ICT can contribute towards this result by supporting the creation of open forums that can be used to debate public policy. Additionally, other technologies like Twitter can be used to gauge public response to current events. Wikis can be used as vehicles for citizen-driven policy creation. E-democracy, on the whole, is regarded as a means for mitigating the impact and power of the representative system by enhancing direct citizen participation (Mahrer & Krimmer, 2005).

There is much debate on the efficacy of transferring government responsibility to the public, however. One must question whether or not ICT have the capability of providing the quality of discourse and insight found in the forums populated with our elected government representatives and appointed officials. In a representative democracy, an individual is elected to represent his or her constituents by advocating their will or at least their best interests. In a deliberative democracy (pluralist democracy) the citizens are directly involved in the process (Pina, Torres, & Acerete, 2007). Various forms of democracy can be described as quick, strong, and thin (Åström, 2001). A quick democracy views a citizen's insight as equivalent to elected representatives, and thus the need for representation is an unfortunate necessity to implement policy. In a strong democracy, public debate by the elite is considered necessary to ensure decisions are legitimate. The act of casting a ballot is necessary for citizen engagement. Thin democracy

assumes the typical citizen is uninterested and unqualified to participate in the debate and the elite should determine what is best for the people (Åström, 2001). This view of a thin democracy was evident in interviews with parliamentarians concerning Austria's e-government policy created in 1997. "They tried to argue that the ordinary citizen was 'uninterested' in politics and 'unqualified' to participate" (Mahrer & Krimmer, 2005). Some of the parliamentarians were open about their bias and self-interest. They shared, "More citizens' participation leads to a loss of power for the member of the political elite. We do not oppose a higher degree of transparency for the political system or a better flow of information related to our work toward the citizens. All these ideas are quite reasonable. But enabling the voters deciding on all and everything? That would cause the total annihilation of our system, of our networks and of our lobbies" (Mahrer & Krimmer, 2005, p 37).

Despite resistance from the political elite, ICT redefine the potential for citizen involvement. Citizen activities need not be limited to voting and feedback, but they could be included in coproduction of new ideas, policies, and plans. Crowdsourcing is one promising tool for effecting change (Bertot, Jaeger, & Grimes, 2012; Linders, 2012). Crowdsourcing has a strong record of generating societal good through initiatives such as the creation of new sources of knowledge, humanitarian programs, and civic engagement. Crowdsourcing, however, only works if a crowd is involved. Bott and Young (2012) identify eight critical success factors of crowdsourcing systems: 1) infrastructure, 2) a clear vision, 3) human capital, 4) financial capital, 5) linkages and trust, 6) external environments, 7) motivation, and 8) criteria of governance. Thus an e-government strategy needs to ensure that crowdsourcing is only used when the characteristics of the project are able to ensure the critical success factors are met. For example, the government must ensure it will invest the funds and manpower needed to lead and support the crowdsourcing effort.

The question of whether the ordinary citizen is interested and qualified to participate in policy formation depends on a number of contingencies. Are the barriers that distance the ordinary citizen from the political elite insurmountable or could ICT be employed to lessen or quash their existence? Habermas (1970) described an 'ideal speech situation' as one where all participants have the opportunity for equal participation and all can expresses ideas and pose questions. This ideal situation assumes that all participants are reasonable and that all claims are comprehensible, true, sincere, and legitimate. The goal of the discourse is not to be correct, but to understand. Heng and De Moor (2003) developed and an internet-based collaborative authoring tool based upon principles behind the ideal speech situation. Their design principles were 1) to provide an open forum, 2) to appoint an editor, who may be an author, 3) to make appointments as editor temporarily to inhibit the development of a power-base, 4) to report un-biased presentation of all views, 5) to assure that all participants assume responsibility, and 6) to create common understanding and true consensus if possible. Upon deployment of the tool, they found that the tool considerably reduced, but did not eliminate the impact of power structures, limitations to human rationality and individual responsibility (Heng & De Moor, 2003). ICT tools like Heng and De Moor's and wikis have great promise for involving citizens in e-government in the creation of policy.

CASE STUDY – ESTONIA

Estonia, in 2000, declared internet access as a human right and free Wi-Fi became commonplace throughout (K., A.A., 2013) In the country, today, information systems are used by citizens for banking, processing payments, claiming health benefits, filing taxes, which are some of the 500 services possible with the use of digital signatures. Voting technology was successfully piloted in 2005 in local elections. Then in 2007, Estonia became the first country to allow online voting in general elections. Internet voting was largely successful because it depended on two-factor authentication, requiring not only national smart identity cards and ubiquitous smart-card readers, but also the personal identification numbers (PIN) in order to cast an encrypted and signed digital ballot (Healey, 2015). Internet voting occurred during a three-day early period, where Estonian nationals visited the appropriate website, authenticated themselves to obtain a ballot and cast their vote. To begin voting citizens inserted their identity card in the reader and typed their first PIN code. Post authentication, the voter would select their candidate from a list and confirm their choice followed by the entry of their second PIN (Alvarez, Hall & Trechsel, 2009, p 500). To preserve the anonymity of voters in the collection and processing phase, the outside encryption that stores and protects identity was removed and the inner encrypted vote with no personal identification information was given to election commission to be counted (Healey, 2015).

All nationals of Estonia are given the opportunity to propose laws and amendments in a platform called E-opinion first piloted in 2001 (Jian, 2010). Ministries also post current political bills and motions for discussion: a small number of issues received the majority of citizen input, frequently the posts receive few or no responses (Kitsing, 2011). E-opinion encourages direct democracy by promoting citizen participation and discussion with law makers yet the practice proves not many issues generate wide-spread interest. The E-opinion platform requires users to identify themselves which was proven to be a deterrent to use because the anonymity and legality of the structure is thus questionable (Jian, 2010).

As administrative work becomes digital, it enables data collection on individuals and companies, which allows the government to monitor for illegal activities such as terrorism (Jian, 2010). The system allows not only outside surveillance, but also tracks inside state transaction aiming to minimize fraud and ensure fairness in both the public and private sector. On April 27th 2007, a cyber-attack interfered with government communication channels and disrupted administrative web assess, as well as completely blocked commercial websites (Deceth, 2012). Even though no vital information was leaked, the attack proved the vulnerability of the system and the risk of disabled government systems.

Estonia has become one of the most successful examples of the practice of e-voting. Some critics argue that e-voting is not only risky, subject to politically motivated corruption, but only may prove to be a challenge for hackers who not necessarily carry a political agenda (Gross, 2011). Much of internet voting is based on trust, which is difficult to achieve and hard to monitor. Estonia has not presented with a way to audit, backtrack, or confirm data to prove the safety and security of the system yet.

CONCLUSION

United States is on the path to e-government. In compliance with the E-government Act of 2002, the U.S. government has developed several government website features to improve customer service (Department of State). The act has resulted in more transparent websites and increased information shared not only in the states, but also abroad through embassy and consulates. On the local level, states are increasing the availability of services such as education, health care, taxation, and law enforcement (Pang, 2014). Similar to for profit businesses, the state government is implementing IT to achieve greater efficiency and to provide more responsive public services. In 2000, the U.S. military began a voting experiment by testing Secure Electronic Registration that allows service members stationed oversea to cast their vote (Gross, 2011). Even though, the program was terminated for security reasons it is important that steps are taken forward. One of the issues that the United States faces is the lack of a structure on the national or state level that is able to provide citizens with identification cards or digital signatures. In e-voting, those components are necessary for the authentication and authorization of the individual casting the ballot. In the US there are also laws that prohibit the use of digital signatures for transactions (Alvarez, Hall & Trechsel, 2009, p 499).

E-government is rapidly becoming popular across the globe, it encompasses both e-administrative and e-democracy systems. The goal of those systems is to improve the effectiveness and efficiency of government in addition to increased involvement of citizens. E-administrative represents the bureaucratic part of government and emphasizes on the automation of the civil servants work. The system attempts to limit the human error, to make documentation more accessible, and to decreases the time necessary to process citizen's request. E-democracy empowers citizens and aims to increase participation in government affairs as well as policy making, which is the fundamental idea behind democracy.

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GPE: A SLIPPERY SLOPE INTO A TANGLED WEB – A CASE STUDY

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ABSTRACT

This is an original case study regarding an international manufacturing company; GPE in the United States. The company is based out of Europe and produces machinery used to generate electricity. The European Corporate organization is comprised of several subsidiary organizations and incorporated subsidiaries. GPE has created separate companies for the equipment manufacturing, as well as for the sale of parts and services outside of the Americas. Further, GPE Corp also consists of the US Corporate organization, which is comprised of four business units including the US Financing Division focuses on finding other corporations to provide funds as outside investors. Credit financing is obtained from the World Bank and private banks for these power plant projects. Bob Smith has been assigned to a new position working for Joe Daboss, the VP of Plant Management division of the US operations. In this case we have covered several different scenarios involving revenue recognition, consolidation, transfer pricing, forecasting and ethics. Bob's problems which are presented in the case begin with the billing that he is asked to process based on a "handshake deal", or verbal commitment, which is not confirmed by the subsidiaries. Bob is embarrassed by these scenarios, but discovers that his boss; Joe Daboss is getting bonus payments for meeting the profit budget. In our opinion, this is a multidimensional case that would be appropriate for courses in Advanced Accounting, Advanced Managerial Cost Accounting, Auditing, Accounting Ethics and a Business Strategy course for Accounting majors. Points of emphasis for Advanced Accounting and Auditing would be consolidation, revenue recognition, internal controls and ethics. In a Managerial Accounting or a Business Strategy course, the instructor should place emphasis on transfer pricing, forecasting and performance evaluation and Ethics.

INTRODUCTION

On the day before the year-end holiday period, Bob Smith's boss, the VP of US Parts and Service called Bob into his office and told him that the company has been reorganized, and that Bob's position has been relocated to another city. Knowing that Bob really doesn't want to relocate, the company had decided to transfer him to an exciting new opportunity located in the same office, working for Joe Daboss, the VP of Plant Management.

Plant Management is a new business unit within the US Corp subsidiary of GPE, tasked with global responsibilities for starting up and managing the operations of new power plants that GPE has constructed. Bob met with his new VP, Joe Daboss, who expressed his enthusiasm about bringing Bob into his small team of experts, telling Bob he really values having a financial expert to help guide the *rapid growth that is planned*.

At the conclusion of the meeting, Joe asked Bob to make a couple of billings to reflect a deal that he has made to provide startup services a new plant in Asia. This power plant is outside the normal US market area, but since Plant Management has global responsibilities, another GPE parts and service organization outside the US group called Parts/Service Asia 1 has contracted with Plant Management to provide management of the startup. The GPS intracompany revenue and accounts receivable to Parts/Service Asia 1 needs to be billed today, before the end of the year to get the financials right for the current year. The work had already been done by the Plant Management team, Joe said, so there are no additional costs to the job. Joe has just been waiting for Bob to join the team. When Bob asked Joe to see the contracts so he can be sure to get the documentation, Joe says that this is a handshake deal within the company, arranged personally by him, so there is no need for that formality. Bob entered the billing of intracompany revenue and accounts receivable from Parts/Service Asia 1 and heads home for the holidays.

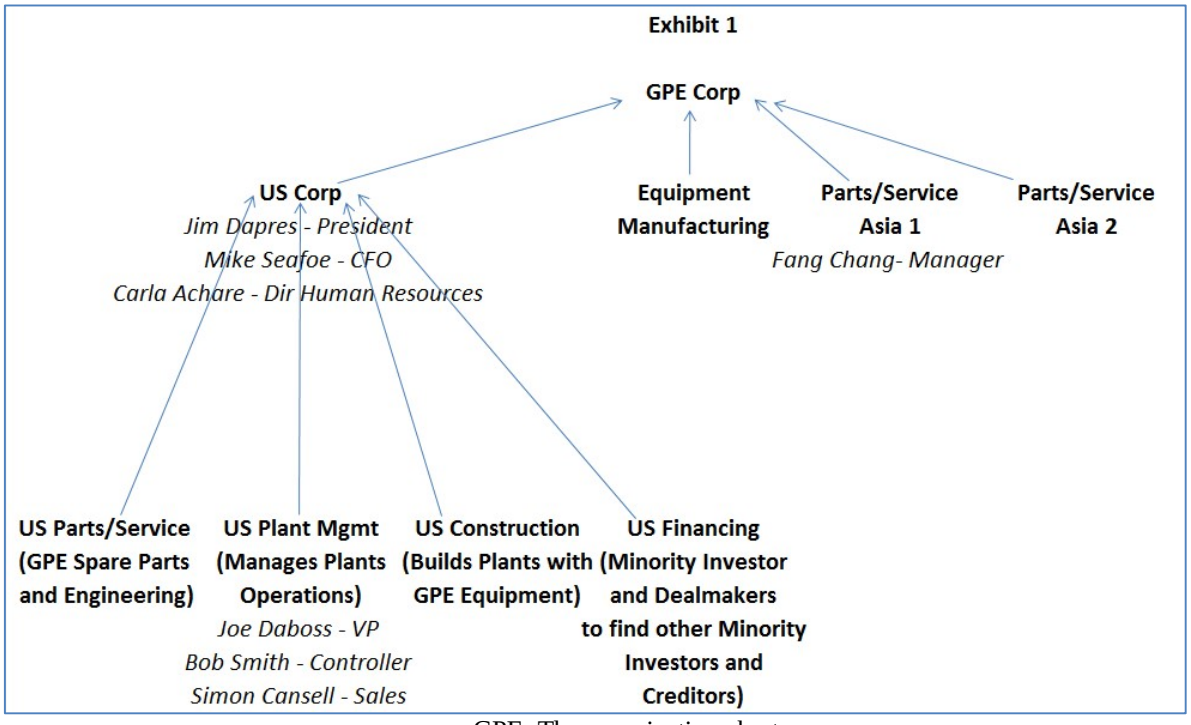
GPE is organized to construct the power plant and help to operate them. In order to build the power plant, GPE requires a great deal of funding which they get through their own financing as well as outside investors and the World Bank. The company first will organize a division to oversee the building of the power plant and then assist in operating the plant. The cost of the original investment and the operating cost of the plant, will determine the rate of the electricity that the local government regulated utility will charge the customer.

BACKGROUND

A simplified organization chart of Global Power Equipment (GPE) is shown below in Exhibit I. Financial reporting relationships are shown with arrows and the names and titles of the GPE employees from this case are entered under their organizational unit.

Global Power Equipment (GPE) is an international, European based manufacturer of machinery that is used to generate electricity. The business units of GPE Corp. provide all of the equipment and services required build a new power plant and operate it to generate electricity. In order to build the power plant, GPE requires a great at deal of funding. While GPE provides some of the equity financing, most of the equity funds come from outside investors. Because these power plants are for less developed countries, major credit financing is obtained through from the World Bank. The US Financing unit creates a new investor corporation for each power plant (not shown below). GPE and each outside investor take a minority share ownership in the new power plant. The US Corp of GPE buys power generating equipment and spare parts from GPE Equipment Manufacturing for use in the construction, startup and operation of the power plant that is owned by the new investor corporation. The new Plant Owner corporation negotiates the rates for electricity with local government regulated utilities (not shown below) which then distribute and sell electricity end consumers (not shown below). The rates are partially based on the cost of the original investment and the operating cost of the plant.

Bob Smith has just completed his assignment as the business area controller for the US Parts and Service business unit at Global Power Equipment (GPE). GPE is an international, European based manufacturer of machinery that is used to generate electricity. The US subsidiary company that Bob works for has had a great year, and Bob has shared in the success as his business unit has met and exceeded their revenue and operating profit goals. US Parts and Service provides GPE branded spare parts and expert technical engineering services to their customer base of power plants located throughout the Americas. This has been a particularly good year, as the US subsidiary has had several new plants in less developed countries that have recently started operations.



GPE: The organization chart

The GPE financial systems are not integrated, and GPE relies on a series of manual consolidations to prepare their corporate reporting. The European corporate organization is comprised of subsidiary organizations and incorporated subsidiaries. Separate companies have been established for the equipment manufacturing and the sale of parts and service outside the Americas, (Asia 1) & (Asia 2). The US Corporate organization is comprised of four business units, Bob's old parts and service unit, Bob's new plant management business unit, a unit to construct new power plants with GPE equipment purchased from the European equipment manufacturing unit and a unit that provides financing for new power plants, called US Financing.

US Financing business unit specializes in finding other corporations to provide funds as outside investors, where typically each of the GPE US Financing and three other investors each provide 25% of the equity. Credit financing is also obtained from the World Bank and private commercial and investment banks for these power plant projects, which can stretch into the hundreds of million dollars. US Financing and the other Outside Investors each provide a minority share, and the ownership is established as a new Plant Corporation. A nice feature of this arrangement is that the debt incurred by the plant is not shown on the four owner's corporate financial statements. This "off-balance sheet item", is reported only as an asset investment in an unconsolidated subsidiary.

The new Plant Corporations are managed by GPE US Plant Management and generate the electrical power, sell it to a local utility, subject to local government regulation. The electrical power is then resold by the local utility to the end user customers within the local country. US Plant Management orders GPE factory spare parts and service exclusively from US Parts and Service at GPE list prices according to maintenance schedules prepared by GPE.

Chronology of events:

After the holiday, in January Bob Smith was excited to return to his new position with US Plant Management. Bob met with Mike Seafoe, CFO of US Corp. Mike has recently promoted and transferred in Bob's office location as a result of a reorganization. In their brief meeting, Bob assured Mike that the books for the year will be closed quickly so that Mike and his staff can begin their consolidations for GPE Corp.

Bob faxed an intra-company accounts receivable confirmation form to Fang Chang, the manager of Parts/ServiceAsia 1, for the billing he did before the holiday. When Bob realized that he has not received a reply a few days later, so he sent an email to Fang Chang asking about the status. A week later, still hearing nothing, from Fang Chang, Bob sent another email and another confirmation fax, but again received no reply. Since Parts/Service Asia-1 half way around the world and twelve time zones away, the time difference makes calling pretty impractical. The following week, Bob stayed very late one evening, and placed a telephone call to Fang Chang, but had to leave a message since Fang is out of the office on a business trip.

The deadline to close the books arrived the next day. Unconfirmed intra-company accounts receivable must be cleared out from the books so based on Joe Daboss's assurances that the billings were valid Bob decided to 'park' the amount in a other asset account by crediting the intra-company accounts receivable and debiting other assets. Bob assumed that this reclassification would allow the necessary time for the issue to be resolved after Fang Chang returned from his business trip.

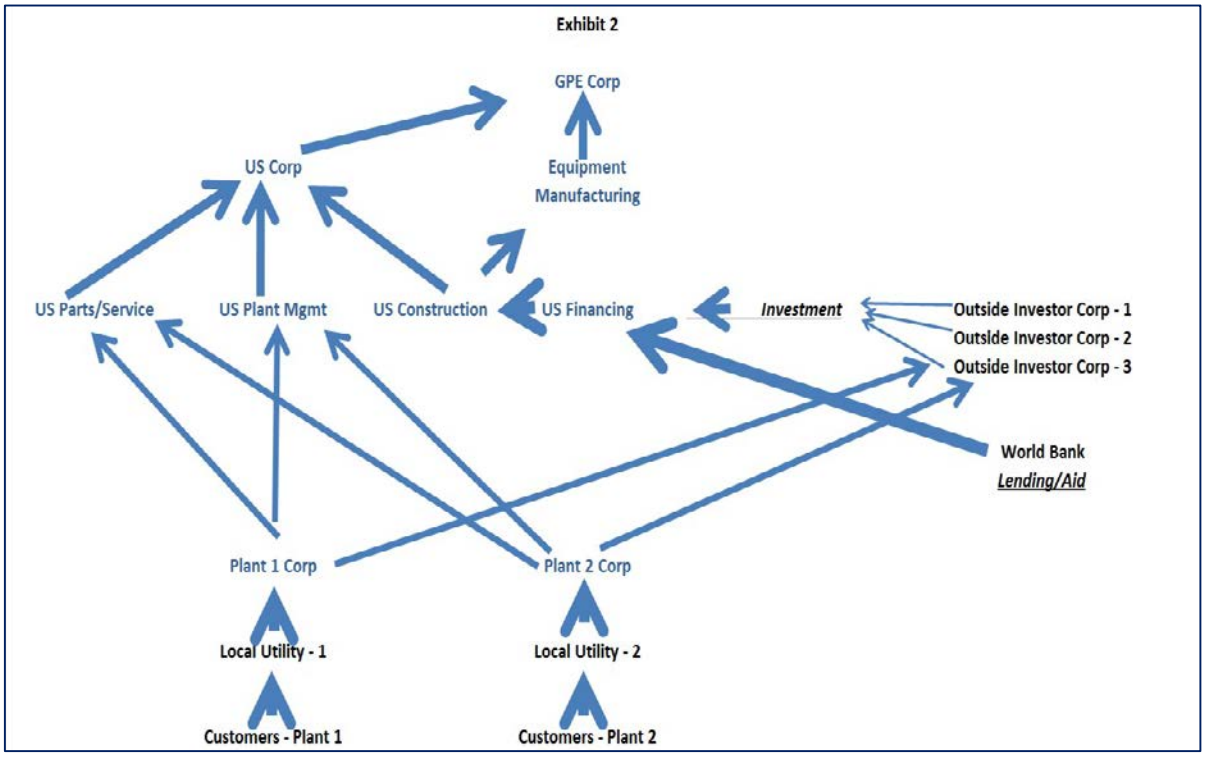
As January turns into February, after another series of faxes and emails to Fang Chang, Bob began to really worry, however, Bob was swamped by a backload of work and learning his new job. Joe Daboss has been out of the office building in business for the whole year. While the amount that was reclassified as an "Other Asset" was pretty big for US Plant Management business unit's results, having made the difference between an operating loss for the year and reaching the budgeted operating profit, it was pretty small and immaterial for US Corp as a whole. The auditors came and left. Bob answered truthfully that he had no unconfirmed intra-company accounts receivable. The auditors never asked Bob about the immaterial amount of other assets where he had parked the bill to Parts/Service Asia 1.

In early March, Bob finally reached Fang Chang by telephone. Fang Chang asked "Why do you keep sending me these faxes, I have no idea what you are talking about!" "We don't need your help starting up this new plant", Fang continued. The following week, Joe Daboss returned to the office from his business trips. Bob explained that he has no option but to reverse the billing of intra-company revenue and eliminate the other asset. Because the prior year had been closed, the net impact will reduce profit for the current year. This reversal would really put US Plant Management behind the budget. Bob was pretty embarrassed, and didn't mention it to Mike Seafoe. Since at the end of the first quarter, when a lot of adjustments are occurring, Mike never noticed the charge to Parts Management Revenue and Profit. It is just the first quarter, so no forecast for the year is due. Soon after, Bob investigated a new expense in Plant management and discovered that it is Joe Deboss's bonus payment for meeting the profit budget in the prior year.

In April, Simon Cansell, the Sales Engineer for US Plant Management returned to the office from an extended period of travel throughout the GPE global operations. Bob has heard a lot of good things about Simon, especially about how well he builds spreadsheet financial models and his ability to close deals by estimating plant startup and operating costs. These estimates were then given to US Financing who used them in contract negotiations with outside equity investors and the World Bank.

Bob is also wizard in spreadsheet based financial forecasting, having done many budgets, strategic plans and financial analysis projects in the course of his career. Bob met with Simon to discuss upcoming contracts, seeking to learn more

about the business and was hoping to assist him any way he could. Simon was ecstatic. He has so many deals close to signing which were big not only for Plant Management, but for the entire GPE US Corp. As they were talking, Bob and Simon sketched the Exhibit 2, shown below, to show the flow of money into GPE.



GPE: The relationship between subsidiaries

Referring to Exhibit 2, Bob noticed that there were two major funding paths. On the right side, the initial funding for power plant construction from outside investors and the World Bank came through US Financing to buy equipment and construction costs. The second flow of funds started at the bottom of Exhibit 2 when end customers in less developed countries purchased electricity from their local utilities. The local utilities then paid for the electricity purchased to the investor owned Plant 1 and 2 Corps. These funds were used to purchase parts from GPE US Parts and Service, for management fees to US Plant Management and for other operating expenses of the power plants. Profits of the plant went back to the investors and profits of US Corp went to GPE Corp. Noting the direction of the arrows, Bob and Simon agreed that this was a "sweet" series of arrangements. The profit from both paths then flowed to the GPE Corp parent.

As they begin to review Simon's forecasts, Bob became concerned some of Simon's financial assumptions. Large increases in price and volume each year are forecasted in the projections; however, there are practically no increases in inflationary cost per unit assumptions. Bob was also curious why there were no costs forecasted for central US Plant Management office support in Simon's forecasts. Simon explained to Bob that he has assumed that these central support costs were all non-incremental fixed costs, and not therefore relevant to new plants.

The length of the contracts that Simon was proposing covered a span of five or more years of plant management. When Bob asked Simon about how he allowed for contingencies and unplanned problems, Simon Cansell stated that this is marketing, and to do that would be like telling the outside investors and the World Bank that we plan on running the power plants inefficiently.

Bob expressed his concerns to Simon Cansell, and later discussed them with his VP, Joe Daboss. Bob was really concerned that while these contracts might make money in the first couple of years, the lack of inflation in costs, the lack of allowance for central office support and the lack of any allowances that something might go wrong or an unexpected change occur makes it likely that, in Bob's opinion, these contracts might become unprofitable in a very few years. Joe Daboss responded to Bob that he is an accountant and should stick to accounting. Bob was told that he should concentrate on his job and leave marketing to people who have the knowledge of engineering and the process of making deals, like Simon and himself.

In May, Joe came into Bob's office. He was really angry. "Why haven't you billed Plant-1 Corp for management consulting fees in addition to our regular plant management fees?" Joe demanded. Bob responded that he is not aware that anyone had been to or even called Plant-1 all year, so he had no reason to bill. Joe explained to Bob that Plant-1 was wholly owned by GPE US-Financing. Consistent with the past, Plant-1 had been making a lot of profit this year. If it were not billed for consulting fees, the local government would lower the rates that the plant could charge to the local utility for the electricity it generates. Joe was livid that Bob, as an accountant, did not understand this simple principle of business. "This is just the kind of thing I was talking about last month", Joe say's to Bob, "when you were wasting your time with Simon instead of doing your accounting work". Joe then made it clear to Bob that US Plant Management needed a qualified accountant to continue on the path to growth, and that if Bob didn't get with it he would find a qualified accountant to do the job.

When Bob prepared the bill in the US Plant Management accounting system and showed it to Joe Deboss, Joe explained that the government regulators will question this big bill, so it should be broken up for the previous months. Bob explained that he cannot prepare bills in the US Plant Management system for any other date than today. Bob then got an idea, and prepared duplicate back dated bills in Excel for the previous months that can be forwarded to Plant-1. Joe Daboss complemented Bob on his ingenuity in resolving the problem, and reminded him to keep up with the billings in the future before they fall behind and have this problem again.

In June, Joe scheduled a US Plant Management staff meeting to share the Strategic Plan for the business. The five year forecast showed that the number of plants to manage was going to double each of the next five years. Each plant will make a tidy profit for US Plant Management, and the number of central office staff was projected to stay the same throughout the whole five years as they become ever more efficient. Bob wondered how the staff can do this, as there are only a few of them working on the staff now, and they are all really busy. Not wanting to aggravate Joe Daboss, however, Bob said nothing.

In August Joe called Bob into his office and told him that he was going on a critical week long trip to Plant-2, which is owned by US Financing and three outside investors. There had been some major operational issues at Plant-2, and most of the Plant Management staff has been there already this year.

Financially, Plant-2 revenue is much lower than expected because the local utility had not been purchasing nearly as much power as originally planned. Expenses are out of control, especially those for spare parts purchased from Bob's old business unit, US Parts and Service. Bob is very aware that the technical US Plant Management staff from his office have been spending a lot of time and travel expense at Plant-2, resolving many operational issues and determining whether the replacement spare parts used should be considered as a warranty expense and changed to US Construction, or whether these additional spare parts should be considered as normal use, and charged to Plant-2.

Joe Daboss explained that the owner group is losing money due to the revenue shortfall, and has not paying their bills to the US Corp business. It had become a real mess and the Plant's accounts payable did not match the accounts receivables from GRE US Parts and Service and GRE US Plant Management. Bob's task was simple on this trip; Joe explained; figure out the bill and come home with a check.

When Bob arrived at Plant-2, his meetings with the owner representatives, led by Outside Investor Corp-1's Dick Naster, were highly charged and contentious. Dick stated that all the problems at Plant-2 were due to poor plant management and the "incestuous" relationship that GPE had created. Bob compared the budget to the actual expenses and found disturbing cost overruns versus the budget. The budget had been based on Simon Cansell's original marketing projections. After a week, Bob has figured out the accounting, but had to fly home without a check.

On the plane and over the weekend, Bob prepared a report that concluded that the Plant-2 operations would continue to lose money due to the many operational issues that were not foreseen in Simon Cansell's original marketing forecast. The report also concluded that the US Plant Management unit had little chance of ever succeeding at Plant-2 under the current contract, especially given Dick Naster's unwillingness to work cooperatively, and will probably never get fully paid for the significant amount of work already done. Bob's report recommended activating the termination clause of the plant management contract for Plant-2, and cutting the losses for US Plant Management. Bob gave a copy of his report to Joe Daboss. Bob also gave a copy to the President of US Corp, Jim Depres. Bob didn't really know much about Jim, since he had recently been transferred into US Corp from another part of GPE. Shortly afterwards, Bob learned that Jim Depres worked on the Plant 2 deal.

In September, Joe Deboss scheduled a meeting with Carla Achare, Director of Human Resources for US Corp and with Bob Smith. Carla explained to Bob that he had been placed on a formal performance improvement plan and would

have regularly scheduled meetings with Carla until his job performance improved. Joe Deboss was particularly concerned that Bob was not being a "team player". After Joe left, Bob explained what had been going on from his perspective to Carla, who expressed her deep concern.

In October and November, it became increasingly clear to Bob that US Plant Management would not meet their financial objectives for the current year. The impact of the reversal of last year's intra-company billings to Parts and Service Asia 1, and cost overruns in the central office for marketing and Plant-2 travel are the primary unbudgeted causes. Bob reviewed the forecasts with Joe Daboss and Mike Seafoe, CFO of US Corp.

In late December, Joe Daboss came into Bob Smith's office and said "I have some billings that I would like entered before you leave for the holidays." These intra-company billings are handshake deals just arranged with Parts and Service Asia-2, in different countries and with a different manager than Fang Chang of Asia-1. There is no additional cost since the work has already been done. The additional revenue with no cost would generate just enough to profit for US Plant Management reach the budgeted profit for the current year.

Bob summarized what Joe had told him and met with Mike Seafoe. Mike agreed with Bob that, without contracts, these billings did not meet the criteria billing based on the revenue recognition principle of accounting. Bob explained to Joe why the billings could not be made.

CONSEQUENCES

Bob was relieved that the second year's financial statements were clean, but knew that Joe Daboss was not pleased with the loss that had occurred. Bob knew that this would mean that Joe Daboss would not get his bonus for the year and that he would suffer a loss of reputation among his fellow executives. Soon after, Bob arrived to work to find Joe waiting at his desk with a box for him to pack his personal belongings. It was Bob's last day with GPE.

Required Case Questions

1) What was the financial statement impact of:
   - Bob's original billing to Parts/Service Asia 1 after the initial meeting with Joe Daboss (assume $300,000)?
   - Bob's 'parking' of the Parts/Service Asia 1 billing in January?
   - Bob's reversal of the billing to Parts/Service Asia?
2) Why was Joe Daboss so upset that Bob did not bill Plant 1 for management fees? Were these fees appropriate?
3) Are there ethical issues with Simon Cansell's marketing forecasts?
4) Was Bob Smith on a Slippery Slope? Compare his actions at the beginning, during and end of the case. Was Bob personally profiting from his actions?
5) How should Bob Smith respond to Joe Deboss's request to bill Parts and Service Asia 2? How does the revenue recognition principle apply? What are Bob's potential options, and potential consequences of each option?
6) Refer to Exhibit 2. What did Dick Naster mean (August) about the 'incestuous' relationship within GPE in regards to Plant-2? What ethical issues can you identify with transfer pricing, warranty and other management issues?
7) In general what is the perception of the "role of the accountant" in the case? What are the implications of how Bob's role was defined by Joe Deboss? What other professional issues might have existed.

Teaching Notes are available on request from the authors.

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IMPLEMENTING SCRUM IN A SOFTWARE DEVELOPMENT COURSE

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ABSTRACT

This paper reports on the implementation of Scrum within a traditional semester-based software development course. Scrum is an agile methodology used for project management. Scrum is used in the software industry for software development projects because it excels when project requirements change rapidly or cannot be identified at the beginning of a project. Anecdotal evidence shows students graduating with Scrum experience differentiate themselves from other candidates when seeking employment. Limitations imposed by the class meeting times, student time availability, and course learning objectives impact the implementation of Scrum in the classroom. The implementation described in this paper adheres to the basic Scrum framework, but with modifications made for time and evaluation reasons. The modifications include changes to the sprint review and retrospective, and the submission of Scrum artifacts for assessment against course learning objectives. Observations on the results of incorporating Scrum into the course are included.

INTRODUCTION

Scrum is an agile project management methodology in widespread use today across many industries and many organizations (VersionOne, 2015). Within those organizations, Scrum is the most commonly used agile methodology (VersionOne, 2015). Scrum is used for software development because it works well with projects where requirements are not known upfront or rapidly change during the lifetime of the project (Rubin, 2013). Because of the widespread use of Scrum, students who graduate with Scrum experience can differentiate themselves when seeking employment. Scrum experience should be included within a software development curriculum.

Many of the Scrum practices are based on a group working in the same physical location for eight hours a day, five days a week. Implementing Scrum within a traditional semester-based course requires modifications. Students have limited time available to spend on the class each week, and the class only meets two or three times a week. It is also important that the students achieve the course learning objectives. The objectives and assessment of those objectives need to be integrated into the Scrum process.

This paper reports on the implementation of Scrum and assessment of learning objectives within a database application development course. This course is taken by both Computer Science students and Business Administration students studying Management Information Systems. A semester-long project is assigned to groups which use Scrum to develop a database application.

The remainder of this paper is organized as follows. The next section provides a brief overview of Scrum. This is followed by a review of the related literature. The following section is a discussion of the implementation of Scrum to the database application development course. The final section provides observations on using Scrum in the classroom and ideas for the future.

SCRUM OVERVIEW

Scrum is an agile project management methodology for developing products and services. Scrum is described as agile because it embraces the ideas of the Agile Manifesto (Beck, et al., 2001): valuing people over processes, working software over documentation, collaboration over contract negotiations, and responding to change over following a plan. Scrum is an iterative process that responds well to emergent and changing project requirements. The Scrum framework consists of four types of practices: roles, activities, artifacts, and rules.

The roles in Scrum are: product owner, ScrumMaster, and development team. The product owner is a representative of the customer and other stakeholders. The product owner is responsible for identifying the requirements and determining that they have been met. The list of requirements is called the product backlog (one of the Scrum artifacts), and the items in the list are called user stories. The product owner develops the product backlog and values each of the user stories. The ScrumMaster is very knowledgeable of Scrum and guides the team through the process. The ScrumMaster is also responsible for removing impediments from the team's path. The development team is responsible for delivering the product that meets the product owner's requirements. All three roles must work together.

There are many activities in Scrum. The first and most important is the sprint. Scrum is iterative. Each iteration is called a sprint. A project is made up of many consecutive sprints. In industry, sprints tend to be 1-4 weeks in duration. Each sprint begins with identifying the user stories to be accomplished (this is another artifact called sprint backlog).

The product owner and development team work together to choose and refine user stories from the product backlog for the sprint backlog. The product owner identifies and prioritizes those user stories that need to be done first. The development team provides time estimates. Both then determine what is included in the sprint backlog.

Once the sprint backlog is agreed upon, the development team then takes the sprint backlog user stories and identifies tasks that make up each story. Members of the development team self-organize to work on these tasks. Each day during the sprint, the development team meets for the daily scrum. This short meeting is used to communicate progress and problems among the development team. Each team member answers these three questions (Rubin, 2013):

- What did I accomplish since the last daily scrum?
- What do I plan to do by the next daily scrum?
- Are there any obstacles preventing me from making progress?

The meeting is kept short by limiting the time and by making all the attendees standup during it. This meeting is not to be a problem solving meeting – problems are tackled outside of the meeting by interested parties.

For software development projects, each sprint produces potentially shippable software. This is software that can be installed and used by the customer. It may not include all of the required features yet, but can be used. This is important because during the entire Scrum process, the project customers and stakeholders need to provide feedback.

At the end of the sprint, there are two activities: the sprint review and the sprint retrospective. These are also called inspect-and-adapt activities. The sprint review focuses on the product. During the sprint review, the project stakeholders get to see the current product and provide feedback. It is expected that back-and-forth discussions occur between everyone involved. This feedback helps guide the project in the right direction. The sprint retrospective focuses on the development process. The ScrumMaster, product owner, and development team participate. The goal is to review the process and see where process improvements can be made.

During the sprint, another activity is also occurring: product backlog grooming. This activity is led by the product owner, but incudes input from the ScrumMaster and development team. The goal is to improve the backlog by refining user stories and improving estimates. Sprints continue until the project is deemed complete or continued work no longer adds business value.

The Scrum rules cover all aspects of the Scrum process (Berteig, 2015). There are rules for the Scrum process (each sprint is of the same length), the product backlog (all tasks are related to one project), development team members (I will attend each daily scrum), ScrumMaster (is truthful about the condition of the team and the process), and product owner (uses the sprint review to continuously improve the product).

SCRUM IN THE CLASSROOM IN THE LITERATURE

Scrum is implemented in varying ways depending on the differences in the course. The following are some representative implementations from the literature.

Zorzo et. al. (2013) discussed using Scrum within a two-year graduate course. The course covered a large number of software engineering topics and included a project to be completed by the students. Students had prior software development experience. Teams chose between several pre-selected project options. The class consisted of a preScrum phase followed by eight sprints lasting three months each. Students were expected to work on the project 810 hours per week. Development teams consisted of 5-6 students. Faculty members acted as product owners for the groups. Students took turns being ScrumMaster in each sprint. While working on the projects, students were introduced to various software engineering topics (during the pre-Scrum phase and during each sprint). The paper did not discuss how the daily scrum, sprint review, and sprint retrospective activities are implemented or how learning objectives are assessed.

Reichlmayr (2011) implemented Scrum in an upper-division undergraduate software engineering course. From prerequisites, students had prior experience with the software process and project management. Scrum in this course consisted of a pre-sprint planning period where the product backlog was initially created. Three, three-week sprints were executed. Development teams were made up of 6-7 students. The teams got to define their own projects. One member in each team was appointed as the product owner. Daily scrums were held in the classroom. At the end of each sprint, teams demonstrated their products and held sprint retrospectives. At the end of each sprint, teams presented to the class and were critiqued by their classmates and instructor. Students worked 8-12 hours together during each sprint. Learning objectives for the course consisted of executing a project using agile methodologies and critically evaluating agile practices and their application to software development. The learning objectives were assessed through classroom discussions, case studies, and a research report.

Schroeder et. al. (2012) developed a lab course where Scrum was used. The class started with a two-week introduction of Scrum and the tools available for development. Three sprints were executed. The product owner and ScrumMaster were assigned to lab assistants. Each team developed the same project based on the card game "The Bug is a Lie." Teams were given a product backlog that needed estimates. Students were expected to work thirteen hours per week on the project. Daily scrums were held once per week. Sprints ended with sprint reviews and retrospectives. At the sprint review, product and other requested documentation was presented, and feedback was gathered. The ScrumMaster (lab assistant) guided the sprint retrospectives.

Mahnič (2012) used Scrum in an undergraduate capstone course. The course was divided into three, four-week sprints that were preceded by an initial three weeks of formal lectures. The first three weeks covered Scrum and introduced the product backlog and the development environment. Teams consisted of four students. The instructor assumed the roles of ScrumMaster and product owner. The project entailed developing a student records system. The initial prioritized product backlog was provided to the teams. Teams were responsible for estimating the backlog items. Daily scrum meetings were held twice a week. Sprint review and sprint retrospective meetings were held at the end of each sprint.

For a more comprehensive overview of Scrum in software development courses, see Mahnič (2015). In addition to using Scrum for software development in the classroom, the review covers using games to teach Scrum, students' perceptions of Scrum, teaching aids, and Scrum with other process models.

SCRUM IMPLEMENTATION

Course Overview

Scrum is implemented in a software development course called Database Application Development. This course is taken by three groups of students. It is a required course for the database and network administration track of the computer science program. Students from this track will have fundamental programming skills along with (possibly) intermediate database skills. The course is an elective in the software development track. Students from this track will have intermediate programming skills. The third group of students is from the Management Information Systems concentration in the business program. These students will have no programming skills (they are not required to take a programming course). All students will have fundamental database skills as a database design course is the prerequisite.

The learning objectives for the course consist of:

- **LO1:** Understand the Systems Development Life Cycle (SDLC) and Database Development Life Cycle (DBLC)
- **LO2:** Analyze, design, and implement database applications
- **LO3:** Use agile project management and agile software development methods to develop a database application

Using Scrum fulfills the third objective. Scrum is a good tool for teaching and learning the first two objectives. Each sprint is basically a SDLC or DBLC. Developing, refining, estimating, and developing the user stories for the product backlog involve analyzing and designing a database application. Producing the product involves implementing a database application.

The course has been offered twice with Scrum integration. Both times, the class met twice a week for one hour and fifteen minutes.

Scrum Implementation

Like the implementations reviewed above, the course is divided into an initial pre-Scrum phase followed by three sprints. During the pre-Scrum phase, SDLC and DBLC are reviewed and Scrum is introduced through lectures. The initial activities for the project are accomplished. Teams are assigned, projects are selected and the initial product backlog is developed. The sprints are time-boxed at three weeks.

The teams are assigned by the instructor. The instructor uses the students' program and track/concentration, current GPA and previous course experience in the process. The goal is to have teams that are a mix of skillsets and relatively equal academically. Previous course experience is used because students take the course at different times in the college careers and hence, every student brings a different skillset to the teams. (For example, some students have had

a web application development course.) The size of the teams has changed. The first time the course was offered; teams consisted of 3-4 students. The second time; teams consisted of 6-8 students.

Projects are chosen by the teams. The only restriction on the project is that it must include a database of a reasonable size (no one-table databases). Students can use the project as an opportunity to explore areas of interest beyond their program's curriculum. Projects have ranged from mobile applications to web-based e-commerce applications. The most common type of project is a web-based e-commerce application. It is expected that the projects won't be completed by the end of the course.

The Scrum roles are all assumed by the students. Each student is a member of the development team. The teams are responsible for the product owner role. The team develops the product backlog and user stories for their projects. This gives them experience analyzing and designing applications. The team is also responsible for the ScrumMaster role. The instructor is involved in the three roles for each team. The teams submit artifacts (like the product backlog) on which the instructor provides feedback. At times the instructor acts as a product owner and ScrumMaster. The instructor is also available to help with technical questions and problems.

After agreeing and selecting the project, the teams begin creating user stories and assembling an initial product backlog. The teams work together in this process. The initial product backlog (estimated and ordered by business value) is submitted to the instructor for grading and feedback as a product owner and ScrumMaster. Each team presents their backlog to the class. This allows for more feedback and an opportunity to learn from the other teams. The teams take the feedback and anything else they learned from the presentations, refine their backlogs and submit an updated version for grading and more instructor feedback.

Initially, students were free to use whatever tool they wanted for their product backlogs. Submissions came in as spreadsheets and word documents. Use of Agilefant (Agilefant, Ltd., 2015), an open source, web-based project management tool, was mandated for the second offering. Agilefant makes it easier to keep track of user stories, tasks, task assignments, etc.

Each sprint is three weeks long. The weeks run from Monday to Sunday. The class meets twice a week on Tuesdays and Thursdays. Students are expected to work five hours per week on the project.

The first task of each sprint is to generate the sprint backlog. Product and sprint backlogs are submitted to the instructor for grading and feedback. The backlogs are due by the beginning of the second class meeting of the first week of the sprint. This is to ensure that the teams complete the sprint backlog in a timely manner, have an opportunity to work together during class time, and ask the instructor for help if needed. The remainder of the first sprint week and all of the second sprint week are primarily devoted to development activities.

The potentially shippable product is due by the end of the second sprint week. This is submitted to the instructor for grading and feedback as product owner.

The third week of the sprint is devoted to the sprint review and retrospective. The review and retrospective meetings are replaced with team presentations. For the review, each team discusses the goals of the sprint, what was achieved, and demonstrates their product. The instructor and class provide verbal feedback during the presentation and use comment forms to provide written feedback. The retrospective is also a team presentation. Each team discusses insights to the process (what went right and what went wrong), an action plan to improve the process, and reviews what was accomplished on the prior action plan (except for the first retrospective). The instructor and class provide feedback during the presentation. The presentations give the team the opportunity to learn from the other teams. The presentations are another opportunity for the instructor to act as product owner and ScrumMaster, and provide feedback.

Assessing Learning Outcomes

Assessment of the learning objectives encompasses submitted Scrum artifacts, team presentations, and individual work.

The product backlog is the first Scrum artifact to be submitted. This represents the team's current analysis and design for their project. It is assessed against the following goals:

- Overall organization
- User story level of detail
- Estimations of user stories
- User story quality

Overall organization basically addresses the value of the user stories in the backlog. Higher value stories (those that should be completed first) should be at the top of the list. Lower value stories belong at the bottom. The required level of detail of the user stories is different at different points of the project. At the time first product backlog submission, high level stories are acceptable. As a sprint approaches, the story detail needs to be increased. User stories that are part of a sprint need to be more detailed. Each story in the product backlog needs to be reasonably estimated. Finally, the quality of the user stories is assessed. The INVEST (Wake, 2003) criteria are used (I – independent, N – Negotiable, V – Valuable, E – Estimable, S –Small, T – Testable).

The product backlog presentation is given to the entire class. This gives the class an opportunity to understand each team's project as well as to see good and bad examples of user stories. The instructor and the class provide feedback during the presentation. The product backlog presentation is assessed against these goals:

- Overview of the project
- Applicability of stories to the project
- Presentation skills

Presentation skills are included because everyone can improve.

The teams have the opportunity to refine their backlogs based on the feedback from the initial product backlog submission and presentations. The second product backlog submission is assessed using the same criteria above. Sprint backlogs are also assessed using these criteria although the user stories included in the sprint need to be at a greater level of detail.

The next sprint artifact submitted is the sprint deliverable (potentially shippable software). If everything went according to plan, all of the user stories identified in the sprint backlog would be completed. The goals are:

- Correctness of logical database design
- Correctness of ERD implementation
- Completeness of the deliverable
- Execution of the deliverable

The first two goals relate to designing and implementing a database. These goals are included to put artificial value on user stories relating to the database. Since this is a course about developing database applications, database user stories should be completed within the first three sprints. The third goal addresses that everything needed to install and execute the deliverable is included in the submission. The final goal is to have a fully executable deliverable.

The sprint review and sprint retrospective presentations occur at the end of each sprint. The goals that the sprint reviews are assessed against are:

- Overview of the sprint
- Successful product demonstration
- Product-related changes
- Presentation skills

In the sprint review presentation, the team should provide an overview of the sprint goals and what was and was not completed. They demonstrate their product. Finally, they report on any changes to the product discovered during the sprint.

During the sprint retrospective presentation, the teams report on what is going well and what can be done better as related to the process. This presentation is assessed against:

- Previous action plan update
- Identification of process successes and failures
- Determination of actions to address failures
- Completeness of an action plan
- Presentation skills

The second and third goals go the heart of the sprint retrospective. Teams must identify parts of the process that go well and parts that don't go well. Actions need to be identified to address the problem areas and a complete plan needs to be developed (who is assigned the tasks). After the first sprint, the team needs to report on the progress of previous action plans.

All of the above are products of the team's collective effort – not an individual's effort. A peer evaluation process is used to gauge an individual's contribution to the team's effort. At the end of the pre-Scrum period and at the end of each sprint, the students submit a peer evaluation where they evaluate their teammates and themselves. Everyone is rated in the following categories: contributions, quality of work, attitude, preparedness, focus on the task, working with others, monitors group effectiveness, and time-management. Each student receives a report comparing their self-

ratings with the average ratings of their peers. The student can use this to identify and improve low-scoring areas. The results of the peer evaluation are used to adjust project grades. Student averages are compared to the team's average. Students with lower averages are penalized and students with higher averages are rewarded. This is an attempt to ensure all team members contribute equally to the effort.

In addition to the team submissions, students have a weekly individual assignment. This assignment consists of three parts: summarizing any assigned readings, reflecting on what they accomplished each week and how it relates to software development, and finally, answering a weekly question. During the pre-Scrum phase, reading assignments match lectures introducing the SDLC, DBLC, and Scrum. During the sprints, the reading assignments cover Scrum concepts in more detail. For example, just prior to the first sprint review and retrospective, more detailed readings on these topics are assigned. The reflection assignment encourages students to think at a higher level about what they are doing. The goal is to get them to see how their activities that week relate to the software development process, SDLC, DBLC and Scrum. For the final part, the weekly question, students are asked pointed questions about SDLC, DBLC, and Scrum. Usually these reinforce concepts from the assigned readings and ask the student to relate the concepts to what is happening in the team.

The submitted artifacts, presentations, and weekly assignments all support the course learning objectives. As a reminder, the learning objectives for the course are:

- **LO1:** Understand the Systems Development Life Cycle (SDLC) and Database Development Life Cycle (DBLC)
- **LO2:** Analyze, design, and implement database applications
- **LO3:** Use agile project management and agile software development methods to develop a database application

The first learning objective, LO1 is mostly assessed through the weekly assignment. The reflection part asks students to relate what they do to the SDLC and DBLC. LO2 is assessed through the backlogs and sprint deliverables. LO3 is assessed through the weekly reflection and question of the individual assignment, and through the sprint review and sprint retrospective presentations.

OBSERVATIONS

This section includes observations and thoughts on future changes to the course and implementation.

Larger teams are better than smaller teams. The first time the course was offered, smaller teams were used (3-4 vs. 6-8). One advantage of a larger team is that more gets completed on the project. A second advantage is that the organization of the team is more difficult. The additional difficulties provide more opportunities for learning. Students begin to understand the need for source code repositories for sharing code. Communication is more difficult and students see the need for good communication skills.

Students don't understand user stories until after the first sprint. The definition and importance of good user stories is covered in the initial lectures and reading assignments. The instructor provides feedback as the ScrumMaster on the product and sprint backlogs. Even so, students don't understand user stories until they have worked with poor stories. Poor user stories are almost always discussed in the first sprint review. This is an example of an advantage of working on a practical project versus book learning.

Estimation is hard. Initial estimates by students are always off. Usually the estimates are significantly lower than they should be for the first sprint. The estimates become higher than they should be for the second sprint. By the third sprint, they are closer where they need to be. Estimation skills can only be improved with experience. Having multiple sprints gives the students multiple opportunities to practice estimation.

The daily scrum needs to be improved. Currently, daily scrums are held at the beginning of each class during the first two weeks of each sprint. The class stands and each student answers the three questions. Some students complain that this is a waste of time, others (but fewer) find the exercise helpful. One possibility is to have a separate daily scrum for each team. This is an area that needs improvement.

Students don't focus on the process for the first sprint retrospective. Invariably the teams discuss product changes during the first sprint retrospective. It is believed that this happens because students' prior experience with developing software in previous courses always focused on what, not how. The sprint retrospective concepts need to be stressed during the pre-Scrum lectures, prior to the presentation and the end of the first sprint.

Teams need to develop code that uses the developed database. The second learning objective for the course is to analyze, design and implement a database application. This objective was meant to include writing code to access the database in addition to developing a logical design and implementing that design in a DBMS. All teams developed code accessing the database in the first course offering. The last time, one team did not develop code. The rubric used to assess the sprint deliverable needs to be updated to address this issue and force teams to attempt to develop code.

How much should a team accomplish? This is an interesting question. Each team will have its own pace (velocity). How does an instructor identify when a team is working (well) below their capacity? Comparing what a team actually accomplished to the sprint goal may not be accurate due to under estimation on the user stories. This appears to be an issue that the instructor needs to take up on a case-by-case basis.

Scrum experience helps when seeking employment. Some students were seeking jobs during each offering of the course. The feedback from these students was that employers were interested in their experiences. Students were able to intelligently discuss Scrum as part of the interview process. One student attributes getting his job to getting experience with Scrum in this class.

CONCLUSION

This paper presents an implementation of Scrum for an undergraduate software development course. It shows that implementing Scrum in a semester-based course is possible. Some changes to Scrum practices are needed to accommodate class schedules, students' time availability, and pedagogy. Course learning objectives can be mapped onto and assessed from Scrum artifacts. Experience with Scrum differentiates students when seeking employment.

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PREDICTING PREFORMANCE IN A SENIOR OPERATIONS MANAGEMENT COURSE

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ABSTRACT

Many colleges of business use a required level of performance in freshmen and sophomore courses as a screening mechanism to control access to their majors and/or junior and senior level courses. Because many colleges use this approach to control access, it should be of interest to policy makers to know whether or not their screening mechanism is valid through the senior year. This paper uses an Ordered Probit Model to investigate how well performance in freshman and sophomore courses predicts performance in a senior level Operations Management course.

INTRODUCTION

Student performance in Principles of Economics courses has been investigated by Kim (1976), Becker (1983), Borg et al. (1989), Park (1990), Watts and Bosshardt (1991). Performance in Intermediate Macroeconomics has also been investigated by Spector and Mazzeo (1980) who used a logit model, Raimondo, Esposito, and Gershenberg (1990), and Yang and Raehsler (2005).

Simpson and Sumrall (1979) were early in the examination of student performance in finance courses with their examination of the determinants of test scores in finance courses. Following after their work, Berry and Farragher (1987), Liesz and Reyes (1989), Ely and Hittle, (1990), Paulsen and Gentry (1995), Chan et al. (1996), Cooley and Heck (1996), Sen et al. (1997), Chan et al. (1997), Didia and Hasnat, (1998), and Nofsinger and Petry (1999), all examined various aspects of student performance in introductory finance courses. Performance in higher level and graduate level finance courses was also investigated by Rubash (1994), Mark (1998), and Trine and Schellenger (1999).

In the Accounting literature many studies with a gender focus have been undertaken such as those by Mutchler et al. (1987), Lipe (1989), Tyson (1989), Doran and Bouillon (1991), Ravenscroft and Buckless (1992) and, Rayburn and Rayburn (1999). Johns et al (2005) examined student performance in a sophomore accounting course and others such as Murphy and Stanga (1994) and Graves et al (1993) have studied such topics as CPA exams or income tax courses.

Multiple studies of student performance in Operations Management (OM) have been performed in the past. Desai and Inman (1994), Morris (1997) and Peters et al (2002) explored the possibility of a decline in quantitative ability and an increase in mathematics anxiety of students. To address these problems Griffin (1997) suggested an integrative approach to teaching OM which would connect various areas and build students' confidence in their ability as problem solvers. Using t tests and Pearson correlation techniques, Peters et al examined the role of homework in overall student performance. They found, surprisingly, that homework did not improve student performance in an OM course.

Raehsler et al (2012) examined student performance in OM based on students' choice of major, gender, overall GPA, and two composite variables Comp1 and Comp2 which consisted of the students grades in two groups of courses which were separated based on whether they were perceived as being more qualitative or quantitative courses. They found that GPA and Major were significant predictors of performance while Gender and their predetermined groupings of courses Comp1 and Comp2 were not significant.

This paper differs from previous research in that it examines the role of using required freshman and sophomore courses as "gatekeepers" to upper-level (junior and senior) level business courses. Many Colleges of Business require students to enroll in a number of foundation courses, the successful completion of which allows the student to then access junior and senior level courses and/or declare a business major. Specifically, this paper investigates how well performance in required introductory courses predicts success in a senior level OM course, a course which is often taken two or more years after the completion of the gatekeeper courses.

EXPERIMENTAL DESIGN

An ordered probit model was used in this study to determine the significant predictors of student performance. The ordered probit model is a great improvement over the more commonly used t test, regression, and analysis of variance models used in many earlier studies. The advantage of the ordered probit model is that it can adequately address student performance that has been categorized into letter grades of A, B, C, D, and F. It is an improvement over the binary logit

or probit model which was used by Spector and Mazzeo which can only separate student performance into the binary results of pass and fail. The ordered probit model allows the dependent variable, in this case letter grades in Operations Management, to be ordinal in nature. The data are ordinal in nature because the same scale may not be applied to every letter grade. For instance, while a B might be from 80 to 90 (10 points) a C might range from 68 to 79.99 (~12 points) with similar variations for other possible grades. In this study, Y=4 was used if the student received an A, and 3, 2, 1, & 0 were used if the student received a B, C, D, or F, respectively.

The data were collected in a public university in rural western Pennsylvania with an enrollment of approximately 6,000 students over a 15 year period. The school is part of the Pennsylvania State System of Higher Education, a system of 14 state owned universities. The College of Business Administration at this university has an enrollment that has varied between 700 and 900 students over the course of this study. The College of Business Administration offers seven different academic majors that lead to a Bachelor of Science in Business Administration (BSBA) degree. The seven majors are accounting, economics, finance, human resource management, international business, management, marketing, and real estate. The data were collected across all majors. The college is accredited at both the undergraduate and master's level by the Association to Advance Collegiate Schools of Business International (AACSB International).

Due to the size of the sample gathered, only the grades of students who had complete records were used which resulted in a sample size of n=1180. Employing an ordered probit model the following explanatory variables were examined: Math131 (applied finite math), Math232 (business calculus), Econ211 (macro economics), Econ212 (micro economics), Actg251 (financial accounting), Actg252 (managerial accounting), Econ221 (business statistics I), Econ222 (business statistics II), CIS217 (applications of micro computers), and BSAD240 (legal environment of business) as ordinal variables. The explanatory variables were then used to predict the probabilities of receiving different letter grades as shown below.

$$y_i^* = \beta_0 + \beta_1 Math131_i + \beta_1 Math232_i + \beta_1 Econ211_i + \beta_1 Econ212_i + \beta_1 Actg251_i + \beta_1 Actg252_i$$
$$+ \beta_1 Econ221_i + \beta_1 Econ222_i + \beta_1 CIS217_i + \beta_1 BSAD240_i + \beta_e \ldots\ldots\ldots\ldots\ldots\ldots (1)$$

Where;

y_i^* = unobserved Operations Management grade,

y_i = letter grade for Operations Management,

y_i = 0 if $y^* \leq 0$, indicating the student received a letter grade F,

y_i = 1 if $0 \leq y^* < \mu_1$, indicating the student received a letter grade D,

y_i = 2 if $\mu_1 \leq y^* < \mu_2$, indicating the student received a letter grade C,

y_i = 3 if $\mu_2 \leq y^* < \mu_3$, indicating the student received a letter grade B,

y_i = 4 if $\mu_3 \leq y^*$, indicating the student received a letter grade A, and

μ_1, μ_2, and μ_3 are jointly estimated threshold values which determine the letter grade a student is expected to receive.

HYPOTHESES

Based on the above design the following hypotheses were tested:

H1: Performance in freshmen and sophomore required business courses is a significant predictor of performance in a senior level OM course.

H2: Freshmen and sophomore courses which are quantitative in nature will be better predictors of performance in a senior level quantitatively oriented course than will freshmen and sophomore level course which are nonquantitative in nature.

ANALYSIS

The initial results of the analysis, as shown in Table 1, is that performance in freshman and sophomore level courses is a significant predictor (p=.000) of performance in a senior level OM course with R^2=.36 and n=1180.

Table 1

Variable	Estimated Coefficient	Standard Error	t-statistic	P-value
C	-.895268	.233131	-3.84019	[.000]
BSAD240	-.026560	.044735	-.593715	[.553]
ACTG251	.029755	.043177	.689145	[.491]
CIS217	.074285	.040850	1.81848	[.069]
MATH131	.146516	.048657	3.01123	[.003]
MATH232	.222513	.043994	5.05778	[.000]
ECON211	.092811	.048178	1.92640	[.054]
ECON212	.155927	.046977	3.31922	[.001]
ACTG252	.208814	.043576	4.79190	[.000]
ECON221	.194684	.043893	4.43539	[.000]
ECON222	.153774	.040543	3.79284	[.000]
MU2	.936906	.105882	8.84859	[.000]
MU3	2.34611	.116400	20.1556	[.000]
MU4	3.55114	.123656	28.7180	[.000]

Next, reverse stepwise regression was performed to remove the non-significant predictors. The data in Table 1 is ordered so that the predictors are listed from the top down to aid in understanding the order in which they were removed. One-at-a-time the variables were removed from the model, after each variable was removed the model was recalculated to account for any multicollinearity between the variables that remained. Variables were removed in this order; BSAD240, Actg 251, and CIS217, which left the variables in Table 2 as the significant predictors of performance.

The results shown in Table 2 are that the model is a significant predictor of performance (p=.000) with R^2=.35 and n=1335. The sample size is slightly larger for this model due to fewer variables resulting more complete student records.

Table 2
Ordered Probit Results for Reverse-Stepwise Regression

Parameter	Estimate	Standard Error	t-statistic	P-value
C	-.756690	.165781	-4.56439	[.000]
MATH131	.157286	.044285	3.55171	[.000]
MATH232	.213138	.040898	5.21147	[.000]
ECON211	.127978	.044329	2.88696	[.004]
ECON212	.188733	.043531	4.33558	[.000]
ACTG252	.174424	.038710	4.50596	[.000]
ECON221	.204831	.040236	5.09069	[.000]
ECON222	.153843	.037425	4.11066	[.000]
MU2	.902795	.093979	9.60640	[.000]
MU3	2.28844	.104099	21.9834	[.000]
MU4	3.47436	.111028	31.2926	[.000]

EXPERIMENTAL RESULTS

H1: Is strongly supported by the results. An R^2 of .35 is high for social research leading to the conclusion that freshman and sophomore courses are significant predictors of future performance, even performance two years later.

H2: This hypothesis is somewhat supported. The course related variables that dropped out of the model were BSAD240, CIS217, and Actg 251. While BSAD240, Legal Environment of Business, and CIS117 Applications of Microcomputers are not quantitative in nature, the question of Actg251 remains. While some readers may consider

Actg251 to be a quantitative course others may not. Also, while Actg251 fell out of the model, Actg252 remained a significant predictor. Because of these factors, this hypothesis is said to be somewhat supported.

CONCLUSIONS

The efficacy of using of a core set of freshman and sophomore courses to control access to junior and senior level business courses has been supported. Performance in a senior-level OM class can be predicted by performance in freshman and sophomore level courses which may have been taken as much a three years before the senior-level course.

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PRIOR OUT-OF-POCKET SPENDING VERSUS HEALTH STATUS AND CONSUMER DIRECTED HEALTH PLANS CHOICE

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ABSTRACT

Health Reimbursement Accounts (HRAs) and Health Savings Account (HSA) eligible health plans emerged as new health care insurance models referred to as Consumer Directed Health Plans (CDHPs) in the early 2000s. Factors that determine enrollees' plan choice can influence the distribution of socio-economic, health risk, and behavioral characteristics across plans. These factors in turn can affect the financial costs, risk pools, and long-term solvency of such plans. Prior out-of-pocket spending may have a different association with plan choice than health risk scores relative to CDHPs choice. This study examines differences in the possible influence between health status and outof-pocket spending on health care needs on health care plan choice between Managed Care and CDHPs.

PURPOSE

The purpose of this study is to examine the association between enrollees' out-of-pocket medical spending, health status, and plan choice when a Managed Care PPO, HRA, and HSA eligible HDHP are offered concurrently in an ESI program. Enrollee plan choice behaviors may differ based on enrollees' actual health status, versus the perception of how their prior health care use influenced out-of-pocket health care spending in conjunction with prior health plan cost sharing characteristics.

BACKGROUND

Of the approximately 56 percent of Americans insured through Employer Sponsored Insurance (ESI), Consumer Directed Health Plan (CDHP) enrollment has increased from four percent in 2006 to nineteen percent in 2012 (Kaiser Family Foundation and Health Research And Educational Trust, 2012). Thirty-one percent of employers offer at least one CDHP plan, a number that is also expected to increase (Kaiser Family Foundation and Health Research And Educational Trust, 2012).

Health insurance cost to employers has nearly doubled since the late 1990s (Fronstin, 2012). CDHPs emerged approximately one and a half decades ago as an alternative to Managed Care Health Maintenance Organizations (HMOs) and Preferred Provider Organizations (PPOs) with the intent to slow the increasing cost of ESI. Economists argue that one cause of high healthcare insurance cost is attributed to moral hazard (Arrow, 2004). Moral hazard impacts health care costs when enrollees consume more healthcare services than they would if they were not partially insulated by a third party payer. CDHP designs are intended to compel health care consumers to "…steer clear of moral hazard, purchasing only the health care they need or, more precisely, only the health care that enhances their welfare more than alternative goods such as food, transportation, or movie tickets" (Kravitz, 2007). Based largely on findings from the Rand HIE study, cost sharing has become the primary control incorporated in plan designs to reduce moral hazard (Newhouse, 2004). To help offset the burden of high deductibles and engage consumers in health care purchasing decisions, CDHPs are designed to include either an HRA or HSA medical savings account. Medical savings accounts allow enrollees to coordinate pre-tax dollars to pay and plan for some health care use during the high deductible period. CDHPs also attempt to make provider cost and quality information accessible through online portals and/or telephonic member support for better health care purchasing decisions. Consumer engagement is intended to lower discretionary healthcare use, facilitate better healthcare choices, and reduce ESI costs (Greene, Hibbard, Dixon, & Tusler, 2006; Robinson, 2002).

PRIOR RESEARCH

There is no research that examines prior FSA funding and CDHP choice. A study by Parente, Feldman, and Christianson (2004) presents descriptive statistics relative to FSA funding in an analysis that incorporates prior FSA funding in a regression model while examining post CDHP choice medical expenditures. Parente et al. (2004) examined a single large employer that added a CDHP to their choices of an HMO and PPO. The CDHP incorporated an HRA medical savings account. Data was collected from health insurance claims and benefits data, and employs regression analyses to estimate a model that includes health care use, health status, demographics, FSA funding and plan choice. Descriptive statistics indicate greater prior FSA funding by those who chose the CDHP. The authors also find those who funded an FSA in the prior year were more likely to have increased medical expenditures. The greater increased medical expenditures were associated with the CDHP. Parente et al. (2004) suggest the CDHP actually had the lowest cost sharing due to a generous HRA funding level by the employer for the plan examined in their study,

and may have contributed to the greater expenditures. The authors, however, did not directly examine the association between FSA participation and CDHP choice. The dearth of research regarding the importance of medical savings accounts to the selection of a CDHP indicates the need for additional study.

STUDY SETTING

This study examines employee households of an employer that operates in the East North Central, South Atlantic, East South Central, and West South Central United States. They offered ten ESI plans including six HMOs, three PPOs, and one High Deductible Health Plan (HDHP) in 2005. Effective January 1, 2006, employees faced a new choice set comprised of a PPO, HRA, and HSA eligible HDHP.

Plans with more generous benefits generally require the greatest enrollee premium contributions, while the lowest cost plans have higher initial cost sharing, and thus considered least generous. The Managed Care PPO represents the most generous option for 2006 with no deductible (in-network), however, requires the greatest enrollee premium contributions. Although the HSA eligible HDHP has the lowest enrollee premium contributions (no employee contributions are required toward premiums), it represents the least generous choice due to the largest deductible with no employer contributions to a medical savings account. The HRA represents a "middle" benefit generosity due to a HDHP that is coupled with an employer funded medical savings account.

METHODS

Data are retrieved from the employer's human resources information system (HRIS) and claims system via a third party data management firm in de-identified form. Data was available for one year prior to the plan choice year of 2006. Data was available for those who were continuously enrolled from January 1, 2005, to December 31, 2009, and under the age of 60. The resulting sample is N = 9,617.

This study is an ex-post facto, non-experimental design guided by an adaptation of the Andersen Behavioral Model, and includes the constructs of predisposing, enabling and choice factors. The Andersen Behavioral Model was developed to evaluate the access and use of health care. The model acknowledges the prominent role of third party insurance coverage in the access and use of healthcare, and thus, guides this study for Managed Care verses CDHP choice (Andersen, 1995). The Behavioral Model examines predisposing, enabling, and need factors association with access to health care. Andersen identifies the prominent role of insurance coverage, and the form of plan and medical savings account is an integral determinant to such access (Andersen, 1995). Andersen identifies constructs associated with health care decisions to include predisposing, enabling, and need. Predisposing factors include enrollee household size, marital status, ethnicity, exempt status, union status and region. Enabling factors include employee earnings and the dependent variable of HSA funding. Need factors include perceived health care need via prior-out-of-pocket spending, a Relative Risk Score (RRS) to measure health status, and prior FSA participation. Health status is a ratio measure of relative health risk at the contract level. The RRS is based on a weighted score calculated from demographic and Diagnostic Cost Grouping (DCG) captured from prior health care use. DCG is a proprietary diagnosis cost grouping software developed by Verisk Health Inc. Flexible Spending Account (FSA) participation is operationalized as a dichotomous variable.

First, descriptive statistics are presented followed by a multi-nomial logistic regression. The dependent variable is a nominal categorical measure of choice among health plans (Managed Care PPO, and HRA or HSA eligible CDHPs). Plan choice is estimated for one of three health plan options based on model parameters. The Managed Care PPO represents the reference category. Outcomes for the non-reference plans within the choice set can be assessed for their relationship relative to the reference category.

Relative risk ratios are estimated relative to the reference category and represent the change in odds when there is a one-unit change associated with parameter coefficients. For alternatives j1-3 in choice set J, the outcome of plan choice for each household at the contract level is represented by h (described by the set of attributes Xh comprised of the covariates for h), and the model probability vectors are □h1,…, □h3, w
chosen by h from choice set J. Estimates are generated for J – 1 outcomes, with the reference category odds ratio of one. The mutually exclusive and exhaustive choice set of alternatives (j1, j2, j3) for h is:

Choice Set *J* of Alternatives

j1, …, j3 = { *j1*) PPO plan, *j2)* HRA plan,

j3) HSA eligible plan,

and the probability that a given single household *h* chose alternative *j*, from *J:*

$$\pi_j = \frac{\exp(\alpha j + \beta j x)}{\Sigma h \exp(\alpha h + \beta h x)}, \quad j = 1,\ldots, J - 1$$

where πj is the probability that household *h* selected alternative *j*, and covariates of *h* are represented by *x*. $\beta 1,\ldots, \beta h$ are regression vector parameters, and $\Sigma j \pi j = 1$.

RESULTS

Appendix A includes all variable frequencies. The PPO was chosen by 58% of the study employer population, followed by 37% who chose the HRA, and 5% for the HSA eligible HDHP. The study population is 79% married, 85% white, 60% non-exempt, 71% non-union, and 48% reside in the East North Central part of the United States. Medial prior health care cost sharing for 2005 was $3,115 with a median Relative Risk Score (RRS) of 46. A higher RRS equates to poorer health and ranges from single digit scores to several hundred. Median employee earnings are $66,181 with a mean of $69,615. Mean enrollment months is 35 with a median of 36, or roughly 3 insured/covered persons per household. The PPO enrolled the fewest single coverage households, while the HSA eligible HDHP included the fewest households covering employee plus children and family coverage.

Regression results suggest HSA eligible HDHP enrollees spent less the year prior to plan choice than those in the Managed Care PPO, however were less healthy. This plan was positively associated with slightly lower prior cost sharing, but was also positively associated with a higher RRS (Table 1). Alternatively, those who choose the HRA spend more out-of-pocket the year prior to choice, but had a lower RRS (better health status) than those who chose the Managed Care PPO.

Table 1
Parameter Estimates (n=9,617)

Plan Chosen 2006 (DV)	Independent Variable	B	Std. Error	Wald	Sig.	Exp(B)
	Intercept	-2.096	.302	48.044		
HSA eligible CDHPa	*FSA Participation: No*	*.445*	*.153*	*8.400*	*.004**	*1.560*
	FSA Participation: Yes	*0b*	.	.	.	.
	Employee Earnings	*.000*	*.000*	*2.994*	*.084*	*1.000*
	Out-of-Pocket Max	.000	.000	20.099	.000**	1.000
	Total Cost Sharing	*-.001*	*.000*	*263.774*	*.000***	*.999*
	Health Status (RRS)	*.002*	*.001*	*8.572*	*.003***	*1.002*

Table 1
Parameter Estimates (n=9,617), continued…

Plan Chosen 2006 (DV)	Independent Variable	B	Std. Error	Wald	Sig.	Exp(B)
	Intercept	-1.226	.145	71.800	.000**	.
HRAa	FSA Participation: No	.011	.062	.030	.863	1.011
	FSA Participation: Yes	0b	.	.	.	.
	Employee Earnings	*.000*	*.000*	*.082*	*.774*	*1.000*
	Out-of-Pocket Max	.000	.000	139.355	.000**	1.000
	Total Cost Sharing	*.000*	*.000*	*28.512*	*.000***	*1.000*
	Health Status (RRS)	*-.003*	*.000*	*70.305*	*.000***	*.997*

Notes:
aThe reference category is: PPO.
bThis parameter is set to zero because it is redundant.
*Parameter is significant at the 0.05 level (2-tailed).
**Parameter is significant at the 0.01 level (2-tailed).

DISCUSSION

Findings suggest enrollees may select a plan based on health perceptions and future need to minimize their future financial exposure. However, perception of need may differ between enrollees' past out-of-pocket spending versus a validated and objective measure of health status. These findings may possibly be explained by enrollee behavior and risk-taking characteristics. Individuals' and household medical care seeking behaviors can influence both cost of care and health status. HSA eligible HDHP enrollees may have spent less due to their lower likelihood to seek care, including preventive care. This would support their lower health status and lower prior cost sharing. Alternatively, HRA plan enrollees may be more predisposed to seek preventive and minor care which could support better health. Other factors could also include individual perceptions of one's health and their risk tolerance related to high deductibles and the risk of greater or less out-of-pocket spending related to health care.

Limitations to this study include the convenience data and non-experimental design. Related to the convenience data, health care seeking behaviors and risk tolerance could not be directly examined. Generalizability is also limited to similar populations. However, findings do provide support to further examine the efficacy of what information should be emphasized to potential enrollees in an employer-sponsored insurance program. If spending data is more aligned with enrollee perceptions of health care need and risk tolerance thresholds related to plan cost sharing structures, employers may wish to emphasize such over health status measures to assure proper plan choice.

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Appendix A – Variable Frequencies

(N=9,617)

Variable	Percent %	Frequency # N=9,617
Male	82.5	7,933
Female	17.5	1,684
Ethnicity		
White	86.4	8,309
African American	5.6	537
Asian	0.9	84
American Indian/Alaska Native	1.1	101
Hispanic	5.7	547
Native Hawaiian/Other Pac. Isles	0.0	1
Two or more	0.3	31
Not Stated	0.1	7
Hourly/Salaried		
Hourly	60.1 39.9	5,783
Salaried		3,834
Union Status		
Union	29.1	2,797
Non-Union	70.9	6,820
Region		
Region 1 – New England	0.0	0
Region 2 – Mid Atlantic	0.1	10
Region 3 – East North Central	47.9	4,609
Region 4 – West North Central	0.5	46
Region 5 – South Atlantic	19.5	1,877
Region 6 – East South Central	4.3	414
Region 7 – West South Central	27.1	2,604
Region 8 – Mountain	0.0	0
Region 9 – Pacific	0.6	57
Plan Chosen 2006		
PPO	58	5,577
HRA	37.3	3,586
HSA Eligible CDHP	4.7	454
FSA Participation 2005		
Yes	17.7 82.3	1,701
No		7,916
Marital status		
Single	12.3	1,186
Married	79.0	7,597
Separated	.0	1
Divorced	8.3	793
Widowed	.4	40

Appendix A – Variable Frequencies, continued…

Coverage Tier All Plans 2006		
Self	17.4	1,669
+ Spouse	21	2,022
+ Children	11	1,057
+ Family	50.6	4,869
Coverage Tier PPO Only		

Self	15.3	854
+ Spouse	23.2	1,294
+ Children	10.8	603
+ Family	50.7	2,826
Coverage Tier HRA Only		
Self	19.2	688
+ Spouse	17.2	615
+ Children	12.1	433
+ Family	51.6	1,850
Coverage Tier HSA Eligible CDHP Only		
Self	28	127
+ Spouse	24.9	113
+ Children	4.6	21
+ Family	42.5	193

Notes:
a Regions based on the U.S. Census Bureau regional division Appendix
A continued…

VALUED PARTNERS FOR SUCCESS: STUDENT CLUBS AND CASE COMPETITIONS

Christine Lombardo-Zaun, Cedar Crest College

ABSTRACT

Can learning take place outside the classroom? Yes. The presenter shares a best practice of using student clubs to connect students together with the business world. This student club entered an ethics case competition where they earned first place, established strong networks, and one student earned a paid internship. This paper is applicable and to any institution or professor who wishes to learn new methods of accessing the student entirely to engage in more meaningful and beneficial learning opportunities.

INTRODUCTION

Educators, instructors, faculty, and teachers – are all trying to compete for the students' attention. They used to only have to compete with sleep deprivation or passing notes to friends in the past. In today's world, however, the instructor now faces additional barriers to obtaining the student's full attention in class: technology, and the student's life. The students today are much different than ever before. When the author began teaching on a fulltime basis, she initially thought that the "typical" college student was one who came from a two-parent family, would enroll in college full-time, and would take a full semester load of 15-18 credits. This "student" would get plenty of sleep and would treat their studies like it was their full-time job. Unfortunately, the author quickly learned these were not her students. According to U.S. Education Department data, about 40% of all college students are older than 25 years old. (Johnson, 2013)

TODAY'S COLLEGE STUDENT

According to an article from the Washington Post, "Of the more than 20 million students enrolled at thousands of two –and four-year colleges and universities across the nation, only about one-third fit [that] traditional description." (Johnson, 2013) The article described how the current college student population is much different than from years past. Johnson (2013) introduced three non-traditional students that comprised a significant population of our students. The first college student interviewed was a "mother of four" who was struggling to balance parenting, paying her tuition, and keeping up her grades. (Johnson, 2013) A second student was "the veteran" who served his time and had hopes of using his G.I. Bill federal funding. (Johnson, 2013) Finally the author introduced the "young self-supporter", who supported herself since turning 17. (Johnson, 2013)

All of these students are a representation of the percentages of our current student population. They are juggling families. They are working full-time or part-time jobs. Some of these students are commuting great distances to get to class and some are taking the classes online so it will fit into their hectic schedules. As an instructor, the author quickly changed her perception of the "college student" and saw them as "college students with baggage". It is important that instructors realize that these students are not coming to the classroom with a "free and clear mind" ready to learn. Instead, they are coming to class tired, overwhelmed, or with lists of things to that day or week on their mind.

Some students are also coming to class with documented disabilities. There are thousands of students who have a learning disability but wish to keep it a secret. (Krupnick, 2014) However, only approximately 25% of students who received help for the disabilities in high school will acknowledge they need the same assistance in college, according to the National Center for Learning Disabilities. (Krupnick, 2014) College professors are now faced with yet another barrier to really reaching the student in the classroom. Academic accommodations are confidential pursuant to the federal Family Educational Rights and Privacy Act (FERPA), and thus professors are not in a position to have an open discussion with a student about their disability if it is not properly documented. These students are also at a larger risk of dropping out of a four-year college. According to the National Center for Special Education Research, only 34% complete a four-year degree within eight years of finishing high school.
(Krupnick, 2014)

This paper is an illustration of an experience the author had over the last two years while learning about this new generation of college students. Her goal was to break through those barriers of "distraction" to allow the students the opportunity to be engaged and to think critically despite carrying all of their "baggage". The instructor had the challenge of attempting to get students engaged in a student club "after class hours" and in between all of the student's extracurricular obligations. She knew she needed to provide value to the students as she knew their time was precious.

WHAT EMPLOYERS WANT FROM COLLEGE GRADUATES

Students value learning real-life information. They value knowing what employers want because it will help them be better prepared once they graduate from college. Before transitioning into the world of academia, this instructor worked full-time in corporate America. She happily played the roles of both employee and manager. She hired, fired, and trained many employees. She learned that it cost an employer over six figures to hire and train an employee, so for her, hiring the right person was extremely important. In order to hire the right people, she started researching what employers wanted in their new hires. She knew what her company wanted, and she knew what she wanted, but was this what other employers wanted? It turns out that it was what the other employers wanted and it is what employers have wanted for the last few decades.

According to the National Association of Colleges and Employers (NACE), employers are looking for graduates to have verbal communication skills in addition to being able to solve problems and make decisions. (https://www.naceweb.org/press/faq.aspx) A *Money Watch* article written by Lynn O'Shaughnessy in April 2013, reviewed a survey of 318 employers was conducted by the Association of American Colleges. Of the employers interviewed, all companies had at least 25 employees and at least a quarter of new hires held either an associates or bachelors degree. (O'Shaughnessy, 2013) "[Ninety-three] percent of employers said that a demonstrated capacity to think critically, communicate clearly and solve complex problems is more important than a job candidate's undergraduate degree." (O'Shaughnessy, 2013)

This was no surprise to the author. All the years spent as a hiring manager, communication skills were at the top of her list. When she started teaching, however, she found her college students were lacking in these skills: mainly the communication skills. She went on a mission to change that. She would tell her students, "I can teach you how to do the job, and I can teach you how to be a better communicator, but I cannot give you a personality or a work ethic." She felt fortunate being a new academician that had the opportunity to work in corporate America and saw first hand what employers were looking for in our college graduates. The students were excited about learning how to improve their professionalism skills.

EXPERIENTIAL LEARNING

The author wanted to get her students to be involved in the College outside the classroom. In particular, she wanted the students to have an extracurricular activity through the use of the student club. The author believed she could teach the students how to improve their communication skills, and problem solving skills necessary for finding employment after graduation through the use of the student club. Unfortunately, it was not that easy and it required strategy. Being a junior faculty member, and being in a small school where a majority of the students were commuters, the students were less than eager to stay after class to meet for a student club. She knew that the students wanted to develop their professional skills and there just was not enough time to complete that in the classroom. She invited students to join the Society for Human Resources Management Club (SHRM).

Because the students were coming to campus before their classes started or after their classes finished for the day, the author offered the club the opportunity to fundraise to provide funds to have dinner at each of their meetings. Most of these students were running from one place to another and the only way they would come to the meeting was if they could eat dinner. The club met every other Tuesday and discussed the various aspects of what employers wanted from college graduates. The students were every excited about this information and the author knew it was time for application of these newly learned skills. The author proposed to the student club that they put their new knowledge to use in the form of a case competition and thus, the author's new best practice.

BEST PRACTICE

A quote by Neale Donald Walsch states, "Life begins at the end of your comfort zone". The author uses this quote frequently with her students as she believes this to be true. Most students wish to remain "comfortable" and therefore do not challenge themselves and grow professionally.

The students agreed to compete in a local ethics case competition at a neighboring college. A team of five students was formed. The students were apprehensive, but were willing to jump "outside their comfort zone." The hosting college sent a case study for which the students had to prepare a position and a presentation supporting it. The students were instructed to read the information and come to our meetings prepared to discuss their position. The student club meetings were used as practice sessions for the most part, although because the students were so motivated to perform well, they also met on two Sunday afternoons for additional practice.

Many of these students never spoke in front of a live audience before. The author was aware of this and focused on teaching proper communication and presentation techniques. The students would rehearse many times. The author

also focused on many intangible items such as appearance, vocal quality, and overall professional demeanor for students to display when presenting.

The day of the competition was quite stressful as the group of students and the author did not know what to expect as this was their first time competing. The author provided each student with a small set of business cards with their name printed on it. After the first session, the students had a lunch break, where they could meet some of the judges and network. Networking was a major discussion point in the student club meetings and so by this point in time, the author's students were well prepared and ended up being the only group of students to actually approach the judges. The students in this group also did something amazing. They approached the founder and funder of the ethics case competition who happened to be present at the luncheon. The students spoke to and thanked the founder for providing this excellent learning opportunity to them. He personally commended the students to the author for their professionalism.

RESULTS

The students competed in a first round in the morning session. They gave a 20-minute presentation to a group of five judges, who happen to be local business executives in the Lehigh Valley. After the presentation, the judges would ask the students difficult and challenging questions to attempt to get the students to waiver from their original position. The author's students did not waiver and actually maintained a professional, composed demeanor throughout the questioning.

After the first round, the students had a break where they and the author held a debriefing session. The students discussed what they thought went well and they discussed what they thought could be improved. It was then time for the luncheon where the students networked beautifully.

After lunch, the host school announced the top four schools would be moving onto a second, more challenging round. The students were selected to be one of the four finalists. The challenge was that there was a twist to the original case and the students had only 45 minutes to reconfigure their position and create a new presentation based on that. Although very stressful, the team handled the pressure well and came up with a position and developed their presentation.

Students participating in the second round actually presented to all of the judges and in total there were fifteen judges. There was a 20 minute presentation and then another round of questioning, this time by the entire group of judges. The author's team ended up defending their position well and earned a first place finish at this competition. To make the win sweeter, the students earned a cash prize of $3,500.00 to be split among the five of them. This was the equivalent of a semester's worth of books.

The students were elated. A transformation took place that day in each of those students. They walked into the competition feeling nervous and afraid of failing and leaving embarrassed. Instead, because of their tireless preparation, they left the competition feeling confident and eager to compete in more competitions. One student even earned a highly paid internship thanks to her networking efforts at the case competition. The judges were able to see these students in action and were able to get a real sense of who they were as professionals.

CONCLUSION

Teaching is difficult. It is a constant challenge. It is even more of a challenge now that the students have many more issues than before. The author is constantly looking for more innovative ways to secure the student's attention so actual learning can take place; not just rote memorization. This experience has not only served that first team of students well, but it has motivated new groups of students to form teams. The author is now preparing her third team to enter the ethics case competition and hopefully bring back another cash prize for her students.

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BEYOND THE ICE BUCKET CHALLENGE: INSIGHTS INTO CHARITABLE GIVING

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ABSTRACT

The summer of 2014's Ice Bucket challenge also known as the ALS Ice Bucket challenge involved dumping ice water on someone's head to promote awareness for the disease amyotrophic lateral sclerosis (ALS, commonly known as Lou Gehrig's disease), and encourage donations to research. The person nominated for the challenge had the option of: a. making a cash donation to the ALS Association or b., dumping ice water on their head, or both. Most people, including celebrities and politicians opted to do both. On December 30, 2014, the ALS Association announced that the summer's "Ice Bucket" challenge rose over $115 million in cash donations for the largest nonprofit organization that fights Lou Gehrig's disease.[i] The year 2014 was a phenomenal year for the Association due to the unprecedented social media frenzy. The ALS Association's top priority is research and drug development to help treat and find a cure for those affected by the disease. Amyotrophic lateral scierosis is a progressive neurodegenerative disease that affects nerve cells in the brain and the spinal cord. When the disease has progressed the brain loses the ability to initiate and control muscles. The disease leads the victim to become paralyzed and eventually leads them to death. The ALS Association's mission includes providing care services to assist people with ALS and their families through a network of chapters working in communities. The cash raised in 2014 from the Ice Bucket challenge will allow the Association to triple it's spending on research and focus on services to care for the victims living with ALS and their families.

Over the course of the challenge celebrities, sports teams, corporations, executives, moms, dads and children took the ice bucket challenge. Facebook, Youtube, and Twitter were flooded with videos of everyone dumping the ice cold water over their heads. What does this mean from a tax benefit perspective? Who will actually benefit from the challenge and or the donations? Why did they choose to do this? As mentioned above, most people opted to dump the ice water and make a cash donation. How much of this will qualify as a donation, if at all?

This purpose of this paper is to examine the benefits of contributing cash and personal property to a qualified organization primarily from the perspective of the individual taxpayer. Using the ALS Bucket Challenge as a starting point, we will revisit the Internal Revenue Service's rules regarding tax deductions for charitable giving. In addition to the Ice Bucket Challenge we will review some other real-life examples to apply the rules regarding the maximum amount of charitable deductions allowed in a tax year. We will also provide some taxpayer guidance regarding documentation needed they can properly capture all of their charitable giving tax benefit in the 2015 tax year. In summary, we will explore some of the other types of tax benefits (i.e. State Tax and Estate Tax) as well as non-tax benefits of charitable giving.

Who is qualified to take the tax deduction for a donation?

Gifts of cash contributions as well as non-cash contributions made to a "qualified domestic organization" (defined later) by individuals and corporations are tax deductible as charitable contributions.[ii] Such a contribution can be used to reduce taxable income in computing a tax liability for the tax year. From an individual perspective, the tax deduction is only available to individuals that itemize their deductions. In other words, the individual must have enough itemized deductions (i.e. real estate taxes, mortgage interest, charitable contributions) that exceed the standard deduction in the tax year. The basic standard deduction amount available to an individual depends on his or her filing status. For 2015 the standard deduction for single individuals is $6,300, and $12,600 for married filing jointly.[iii] In general, the taxpayers that itemize their deductions, and can take the charitable deduction for tax purposes would be homeowners.

The overall deduction for contributions by a corporation is limited to 10 percent of the corporation's adjusted taxable income. This means that the charitable deduction is limited to the lesser of 10 percent of the adjusted taxable income[iv] or the sum of the property donated during the tax year. If the charitable contributions for the year exceed 10 percent, the excess contribution will be allowed to carry forward for five years.

What organizations are "Qualified Domestic Organizations"?

Internal Revenue Code Section 501(c)(3) defines a qualified domestic organization or public charity in this case is typically a ".org" that is created and operated exclusively for religious, charitable, scientific, or educational purposes. In order for a donation to qualify as a charitable contribution for tax purposes, it means a contribution or gift for the use of an organization that is operated exclusively for religious, charitable, scientific, literary, or educational purposes. Also, a qualified organization may have the mission to prevent cruelty to children and animals. No donation will

recognized as a charitable contribution for tax purposes if the gift insures the benefit of an individual. Any gift must be made for exclusive use of public purposes.[v]

An organization becomes qualified when it has received a ruling or determination letter from the Internal Revenue Service (IRS) that it is a qualified organization eligible to receive deductible charitable contributions. Then the organization will be listed in the IRS's "Publication 78" data base. The IRS provides this information in a searchable database on its website, along with an "Auto-Revocation List" database of organizations that have had their tax-exempt status automatically revoked for failure to file annual returns or notices for three consecutive years. The IRS's Exempt Organizations Select Check (EO Select Check) online search tool allows donors to determine whether an organization is qualified to receive deductible contributions. These databases are updated monthly.[vi]

What can the taxpayer deduct as a charitable gift?

Any cash donation made to a qualified public charity would be limited 50% of the taxpayer's adjusted gross income (AGI). Donations in the tax year that exceed this limitation will be allowed to be carried forward for 5 years.[vii] A taxpayer also has the option to donate property to charity. Donating used clothing and household goods is a great way to take advantage of a tax benefit by simply cleaning out closets, basements, and garages. The IRS allows a deduction for non-cash gifts to charity but there are special rules regarding the gift of property to an organization.

A property, including capital gain property, donation to a qualified public charity would be limited to 30% of the taxpayers AGI. A donation of capital gain property (stock) will qualify for a 30% of AGI deduction when given to a public charity.[viii] The value of donation will be the fair market value of the stock on the day the donation is made. For publically traded securities this value can be found on http://finance.yahoo.com.

When donating used property (i.e. common household items and clothes) a good rule of thumb is to take the deduction equal to the thrift value of the item. For example, a taxpayer donates a designer coat that that she purchased 5 years ago that cost $1,500. The taxpayer may feel that the coat's value is now $150, but other coats in the thrift store are selling for $50. The thrift value and the amount allowed as a deduction is $50.[ix] Keep in mind that in order to qualify for the tax deduction, the taxpayer must relinquish all ownership rights to the property. There is no deduction allowed for the rent-free use of property by the organization. For example, a taxpayer may donate a week's use of a vacation house to a silent auction at church. Let's say the fair market value of a week's rental of the vacation house is $3,000. This does not qualify as a deduction for tax purposes. In order to qualify as a tax deduction, the charity must be given ownership of the property without consideration. Simply allowing the rentfree use of property does not constitute a donation of property to an organization.

How does my donation to an organization such as ALS.org qualify as a tax deduction?

First, The ALS Association is a 501(c)(3) organization, a qualified public charity. If your donation was given for the public good of the organization and not specially allocated to a certain individual this would satisfy the second test. If you relinquished all ownership rights to the property and the organization accepted the property you should have proper documentation of this transaction. Documentation of this nature will may include an online payment receipt or cancelled check. The cost incurred to purchase ice and a bucket would not qualify as a property donation. Also, your time incurred to do the challenge, record it, and post it online would not qualify as a deduction.

What receipts do I need to keep for record purposes?

First, I would advise taxpayers to avoid making a donation in cash if at all possible. At the very least you would want a check as a receipt of payment. For any donation that is less than $250, a cancelled check will suffice as documentation. Any cash donation in excess of $250 requires acknowledgement by the organization. Usually, the organization will send the taxpayer a very nice 'thank you' letter indicating the amount donated, the date of the donation and indication that there was no consideration associated with the contribution. Any gift of property in excess of $500 (thrift value for used household items) and additional form must be filed (Form 8283). For gifts of more than $5,000, a qualified appraisal must be attached to the tax return in addition to the completion of Form 8283.[x]

If a taxpayer purchases items for a charity, a cash register receipt would be sufficient to take the deduction. Usually around the Holiday Season taxpayers will purchase toys for Toys for Tots, or grocery items for a local food bank, or homeless shelter. Since these items are purchased for the organization are not considered used. Therefore the fair market value of the items donated is the value of the purchase.

What about a donation of my time and travel expenses to perform charity work?

Although you can take a tax deduction for travel expenses, and mileage (.14 per mile) while performing charitable services, you cannot take a deduction for your time spent working for an organization.[xi] Even though volunteering your time at a soup kitchen, or preparing tax returns is a great way to give to the community, there no tax deduction allowed for the performance of these services. For example, a tax professional participated in the VITA (Volunteer Income Tax Assistance Program) and the tax professional's going rate in industry is $100.00 an hour, the tax professional will not be able to take any deduction for the time spent preparing tax returns for VITA.

Can I earmark my donation to a specific person or family?

All taxpayers for one reason or another have a charity that is very close to their heart. For example, let's say you have a best friend that is suffering from ALS and you would like to know if you can make the donation to ALS and have the funds go directly to that particular ALS patient. In order for this donation to qualify as a charitable contribution this would not be permitted. According to Code Sec. 170(c) (2)(C) no part of the donation or earnings can be set aside to insure the benefit of any individual. The term "charitable contribution" means that a contribution or gift for the use or the qualified organization for the exclusive public purpose of the organization. No part of the gift or the net earnings from property can be used to benefit an individual.

In the case of Michael Sklar v. Commissioner (December 12, 2008), the taxpayer (Sklar) tried to take a tax deduction for a charitable contribution for tuition and fees paid to a religious private school. The taxpayer felt as though a portion of the tuition payments were for certain "qualified religious services" therefore they would allocate such portion as a charitable gift of their tax return. The IRS rejected this as a charitable deduction since the taxpayer did not have a charitable intent in paying their child's tuition. Also, the taxpayer received a significant benefit for the payments to the school, an education for the child. The taxpayer failed to prove that the payments made to the school were in addition to the benefit they received.[xii]

Additional Tax and Non-Tax Benefits to Charitable Giving

Giving cash and property away to charity during a taxpayer's lifetime and after death will result in a lower Estate Tax Liability. The Estate Tax is a tax on the transfer of possessions from one owner to another. There is an unlimited charitable deduction allowed for Estate Tax purposes.[xiii] In essence, a taxpayer could transfer all of their assets to a qualified organization and not incur the Estate Tax. From a State Tax perspective certain states that are known as "AGI states" will allow a deduction similar to the Federal Tax deduction. Residents in Delaware, New Jersey, and New York are examples of "AGI states". The state of Pennsylvania does not allow a deduction for charity or any other itemized deduction.

When a taxpayer is subject to the Alternative Minimum Tax (AMT) charitable contributions are not lost. However, since the AMT rate is 28% and the regular tax rate is 39.6% a charitable gift of $100,000 reduces taxes by $28,000 rather than $39,600. If the taxpayer wishes to make a large charitable donation, he or she may want to wait until a tax year when they will have enough income to get them out of the AMT situation so as to maximize their tax benefit.

That being said, it is worth noting that whether or not the taxpayer received the tax deduction may not be what is motivating them to give the charity of their choice. As mentioned above taxpayers give to charities that are very close to their heart. They give what they give for personal reasons. Even though there is no tax benefit, some taxpayers may feel that volunteering and donating property to charity is a great way to foster family traditions. Beyond the tax benefit, or lack thereof people like to see their wealth being put to a good use as well as create a legacy. Just looking at college campuses in the Philadelphia area, people put their life's work into providing libraries, student centers, auditoriums, and football fields. Most people, when you ask them will tell you that they do their best work and feel best about themselves when they are contributing to the community.

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Sec. 2055 Transfers for Public, Charitable and Religious uses

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THE IMPACT OF CPA EXAM CHANGES ON ACCOUNTING EDUCATION AND HOW TO TRAIN ACCOUNTING STUDENT TO THINK CRITICALLY

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ABSTRACT

Accounting profession like any other profession is constantly evolving and changing to better serve the business community and protect the interests of the public. To ensure that the accountants are adequately prepared to fulfill the tasks required by ongoing changes in the business world and advancement in technology, American Institute of Certified Public Accountants (AICPA) proposed changes to the uniform Certified Public Accounting (CPA) exam. The draft was issued by AICPA first on June 4, 2015 and it was an Invitation to Comment (ITC) addressing all parties interested and impacted by changes on the uniform CPA exam. This paper is going to explain in detail the proposed changes; however, the main focus is the impact of these changes in the accounting curricula and how accounting educators can prepare students to fulfill these skills.

INTRODUCTION

After the initial Invitation to Comment (ITC) there were over 300 responses by various interested groups including public accounting companies, state boards of accountancy, the National Association of State Board of Accountancy (NASBA), academia, standard setters and regulators. The most important suggested change that will impact accounting education is the skills that will be tested. All participants agreed that testing should be on higher-order skills beyond basic content knowledge, i.e. critical thinking, problem solving, analytical ability and professional skepticism. The question is how can accounting educators help students hone these skills?

This paper will show that questions about the quality of education are not new to the accounting education community. Studies began around 1940 and we have been gathering and comparing data for over 40 years. Madsen (2015) found that there is evidence suggesting that current accounting programs fail to teach accounting students many important skills, the educational models that emphasize reasoning and judgment over rote learning may improve accounting educational outcome.

To accomplish the goals of teaching accounting students higher order skills according to Boyce, Gordon; Greer, Susan (March 2013) there are four aspects that accounting instructors may wish to pursue: (i) adopting a comprehensive approach to "critical thinking" rather than designing stand-alone courses, (ii) problematizing student goals to achieve success in their professional lives, (iii) framing discussions along fraud triangle and (iv) discussing the interactive effect of technical knowledge and managerial skills and values.

NEXT VERSION OF THE CPA EXAM

According to the American Institute of Certified Public Accountants (AICPA) the Uniform CPA Examination (the Exam) provides reasonable assurance to boards of accountancy that individuals who pass possess the minimum level of technical knowledge and skills necessary for initial licensure. To remain relevant to a dynamic profession and current with the real-world demands of accounting on newly licensed CPAs, the Exam must continue to evolve. In early 2014, the American Institute of Certified Public Accountants (AICPA) launched a practice analysis, a comprehensive research project, to identify the knowledge and skills required of newly licensed CPAs for the next version of the Exam.

According to the AICPA the overall, research demonstrated that the profession supports the initiative to make meaningful changes to the Exam, to operationalize the testing of higher order skills and to align more closely with the types of tasks regularly performed by newly licensed CPAs. An experienced group of CPAs and psychometricians has developed blueprints, which are outlines of the content topics and skill levels that will be tested in the next version of the Exam.

Important and relevant conclusions based on the practice analysis and proposed changes to the Exam include: The Exam will be designed to enhance the ***testing of higher-order cognitive skills*** that include, but are not limited to, critical thinking, problem solving, analytical ability and professional skepticism. The Exam will remain structured by the ***four existing sections*** – Auditing and Attestation (AUD), Business Environment and Concepts (BEC), Financial Accounting and Reporting (FAR) and Regulation (REG).

Each section will have a ***blueprint*** illustrating the knowledge and skills that will be tested on the Exam which are linked directly to tasks that are representative of the work of a newly licensed CPA. The blueprints will replace the current Content Specification Outline (CSO) and Skill Specification Outline and will be more informative overall for candidates, academia, regulators and stakeholders.

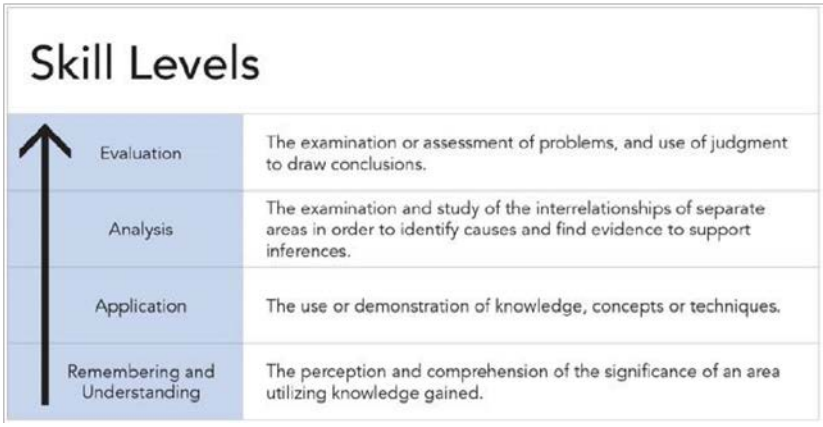
To test a combination of content knowledge and higher order skills, more ***task-based simulations*** (TBSs) are planned for the Exam. Total Exam testing time will increase from 14 to 16 hours – four sections of ***four hours each***

According to the AICPA the most significant change proposed by the task force for the next version of the Exam will be an increased emphasis and focus on testing higher order skills. The need to test higher order skills was identified in the initial research for the next version of the Exam as well as in the invitation to comment. It is critically important that newly licensed CPAs are competent in recognizing issues, identifying errors, challenging assumptions and applying both professional judgment and skepticism.

To focus on and enhance the testing of higher order skills, the AICPA has adopted a skill framework based on the modified Bloom's Taxonomy of Educational Objectives. Bloom's Taxonomy classifies a continuum of skills that students can be expected to learn and demonstrate. Since its inception, the categories have been used to structure learning objectives and develop examinations. Bloom's Taxonomy was initially developed by educational psychologists in 1956 and refined in 2001 (Anderson. L, and Krathwohl, D, eds. 2001). The taxonomy is widely used in educational and licensure testing to define the level of skills to be assessed and to guide the development of test questions.

In applying this framework, approximately 700 representative tasks that a newly licensed CPA may be expected to complete were initially identified by Exam staff and reviewed with the Exam content committee and its subcommittees. The content committee and subcommittees associated each of the tasks to specific areas of content within each section of the Exam.

The representative tasks combine both the applicable content knowledge and skills required in the context of the work of a newly licensed CPA. Based on the nature of a task, one of four skill levels, derived from the modified Bloom's Taxonomy of Educational Objectives, was assigned to each of the tasks, as follows:



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Generally, the current Exam equally assesses (i) remembering and understanding and (ii) application level skills in AUD, BEC, FAR and REG. In the next version of the Exam, there is a clear shift to test higher order skills – analysis and evaluation – as demonstrated in the table below.

AUD is the only section in the next version of the Exam in which the evaluation skill is assessed; this is consistent with the nature of the tasks identified by the content subcommittees in the surveys of newly licensed CPAs and their supervisors.

Section	Remembering and Understanding	Application	Analysis	Evaluation
AUD	30%–40%	30%–40%	15%–25%	5%–15%
BEC	15%–25%	50%–60%*	20%–30%	–
FAR	10%–20%	50%–60%	25%–35%	–
REG	25%–35%	35%–45%	25%–35%	–

*Includes written communication.

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The blueprint for each of the Exam sections includes the content, skills and related representative tasks that will be tested on the Exam. The blueprint will replace the current CSO and SSO. The purpose of the blueprint is to:
Provide assurance that the Exam is properly designed to test such knowledge, skills and tasks.
Assist candidates in preparing for the Exam by delineating the knowledge and skills that may be tested.
Apprise educators about the knowledge and skills candidates will need to function as newly licensed CPAs.

HOW CAN EDUCATORS TRAIN ACCOUNTING STUDENTS TO THINK CRITICALLY?

Question of accounting education and quality of education are not new among members of accounting community. To address some of the questions in 2010 the Institute of Management Accountants (IMA) and the Management Accounting Section (MAS) of the American Accounting Association (AAA) formed a Joint Curriculum Task Force to create a comprehensive educational Framework that defines required competencies of accounting and finance professionals working in a variety of organizational settings.

As the Pathways Commission (2012, 10) noted, the organizational field of accounting must develop a comprehensive understanding of its role in society. This effort requires a strategic view of accounting's value proposition—how accountants add value to organizations—and a curriculum based on this value proposition. The Task Force proposes that accounting's value proposition be defined in terms of strategy formulation and analysis, planning, and execution. Effective managers need to understand how to help formulate, analyze, and execute strategies that enable their organizations to succeed (Brown 1986; Malina and Selto 2001; Sopariwala and Subramanian 2004; Skaerbaek and Tryggestad 2010). Groysberg et al. (2011) found that top financial executives need a broad set of technical skills and understanding of business fundamentals, noting an expansion of duties from the traditional ones of budgeting and historical performance evaluation into the area of the real-time analytics that is essential for a quick, yet strategic response to changes in the environment. CFO Research Services (2011) studied senior accounting and finance executives and identified competency gaps in areas including business strategy, business intelligence, analytics, and operational experience. This research suggests that accounting and finance professionals need the skills for providing enhanced reporting of risk exposures, for reporting information to inform decisions on deploying capital to grow the business profitably, for supporting the long-term value creation for their enterprise, and for communicating the ways in which accounting can promote the success of enterprise leaders.

The Pathways Commission (2012, 24) identified a need for a new model of education that is better aligned with the contemporary environment and evolving demands on accounting professionals. Accor din g to *Raef A. Lawson (Chair), Edward J. Blocher, Peter C. Brewer, Gary Cokins, James E. Sorensen, David E. Stout, Gary L. Sundem, Susan K. Wolcott, and Marc J. F. Wouters (2014)* to address this issue they provide the general Framework. This Framework includes three interconnected components: (1) Foundational Competencies, (2) Broad Management Competencies, and (3) Accounting Competencies. It assumes these competencies are developed and integrated over time via a combination of education (including continuing education), training, and work experience.

The focus of the Framework is on the development of *competencies*, not *courses*. It is comprehensive, encompassing competencies from all accounting disciplines, including financial and management accounting, taxation, information systems, and assurance, and focuses on the educational needs of accounting students for their long-term careers. The Framework incorporates the competencies identified by the Pathways Commission (2012) including technical knowledge, professional skills and professional integrity, and responsibility and commitment. In the following sections, the Task Force discusses each of the components of the Framework individually.

Foundational Competencies

Foundational competencies are those needed by all business school graduates. They support other broad management and specialized accounting competencies and prepare students for life-long careers. The Framework includes five foundational competencies: communication, quantitative methods, analytical thinking and problem solving, human relations, and technology.

Communication

Speaking and presenting effectively involves dialogue skills and requires the ability to recognize and adapt to a specific audience, as well as the use of nonverbal skills such as posture and mannerisms. Also important are effective listening, interviewing, use of electronic media software, professional writing, and other qualitative tools in communication such as case studies, electronic videos, audio, social media, and other emerging tools. Strong communication competencies are especially critical in cross-cultural and global settings.

Quantitative Methods

Quantitative method competencies include the ability to comprehend and use the time value of money, mathematical methods including calculus, statistics, programming, constrained optimization analysis, decision modeling, and simulation and risk-analysis techniques.

Analytical Thinking and Problem Solving

Analytical thinking and problem solving are competencies that enable accountants to conduct research, identify alternatives, objectively and logically evaluate data-driven and qualitative evidence related to specified options, and apply professional judgment. This competency requires accountants to be able to define a broad range of alternatives including: stakeholder effects; to provide objective evaluation of the strengths and weaknesses of evidence and the alternatives; to incorporate risk and uncertainty; to evaluate decisions within the context of organizational strategies; to remain open to constructive criticisms and minority viewpoints; and to do all of these while incorporating professional values, ethics, and attitudes, and other accounting and management competencies.

Human Relations

Human relations competencies are necessary for team-based interactions within the context of gender, ethnic, and multicultural diversity. These competencies include developing and practicing relationship-building skills, fostering and using team-based management skills, learning and applying methods of negotiation, and developing and using ethical approaches to conflict resolution. These competencies frequently suffer from underinvestment in education and training. According to an Accountemps (2013) survey of 2,100 U.S. CFOs, the top reason for an employee failing to advance in the respondent's organization is ''poor interpersonal skills.'' While 30 percent of respondents identified the critical nature of this skills deficiency, only 19 percent of these executive respondents said their organization is likely to invest in soft skills training for accounting and finance staff in the next two years.

Technology

Technology competencies include the use of software, including proficiency in the development and use of spreadsheet models and the use of technology to enhance communication. Also vital is knowledge of the purpose and design of information systems (IS), system architecture, processing modes, network types, hardware components (including mobile devices), operating and application software (including cloud computing), system security, and IS continuity.

The foundational competencies outlined above provide the base upon which other business- related and accounting competencies are grounded. These competencies align with the ''professional skills'' identified by the Pathways Commission (2012, 132). Mastery of these competencies is necessary for *all* accountants if they are to add value to their future organizations.

Broad Management Competencies

An education for business professionals, including accounting professionals, must help students develop broad integrated management competencies. Possessing these competencies will help accountants work jointly and effectively with all members of the organization to create value. These competencies are essential, in fact, for those who aspire to become successful managers and executives.

Leadership

Leadership involves developing and implementing a vision, values, and a mission for an organization. Leadership creates a sustainable organization by focusing on performance improvement, creating positive customer experiences, investing in workforce learning and development, building leadership in others, and succession planning. Leaders must maintain an awareness of responsibility to the community and the larger society.

Ethics and Social Responsibility

Ethical and social responsibilities extend beyond legal and regulatory requirements into voluntary standards and activities for environmental stewardship, labor practices and conditions, human rights, health and safety, community partnerships, and global citizenship, for example. Relevant topics include the U.S. Foreign Corrupt Practices Act (FCPA); organizational responsibilities for ethical conduct including the organizational Code of Conduct; the difference between legal and ethical behavior; the relationship between leadership ability, organizational culture, and ethical conduct to the organization's internal control system (''tone at the top''); whistle blowing; and regulatory requirements involving the ethics of senior officers.

Process Management and Improvement

Accounting and finance professionals must be able to use the organization's value chain effectively and efficiently to satisfy customer and other stakeholder requirements. These competencies include management of organization value chains; the design, management, and improvement of key processes; the development of customer relationships and customer relationship management; and competence with process frameworks and certifications, such as Six Sigma, Cost-of-Quality, ISO 9000, the Baldrige Performance Excellence Program, etc. This competency is not unique to management accountants. External auditors must understand and document how audit clients manage business processes. Internal audit departments increasingly add value by focusing on business process improvement. Financial and tax accountants evaluate business transactions within the context of the economic environment and entity operations to comply with financial reporting standards and tax regulations. In addition, public accounting firms have been called on to improve their internal business processes to achieve higher audit quality.

Governance, Risk Management, and Compliance (GRC)

An important broad management competency includes corporate governance, enterprise risk management (ERM), and compliance with applicable laws, regulations, contracts, strategies, and organizational policies.
The Framework suggests mutual dependencies with these items and other core management responsibilities and practices. Risks to be managed include legal and regulatory compliance risks, information security risks, reputational risk, technological risks, commercial/ financial risks, etc. Compliance and internal control may be viewed as part of an organization's ERM, which in turn is a key element of an organization's overall governance process.

Additional Core Management Competencies

Additional core management competencies include finance, investments, human resource management, operations management, marketing, economics, business law, mergers and acquisitions, and globalization. A global focus is especially important. The development of intellectual, social, and psychological capabilities that allow a person to function anywhere in the world is viewed as essential within the professional world of accounting and finance. Accounting and finance professionals must be able to communicate and build relationships with people from different backgrounds based on the history, culture, and language of these individuals. The import of this element is highlighted by the student leadership initiatives of each of the Big 4 accounting firms and the Pathways Commission (2012, 37, 73–75).

Accounting Competencies

Accounting competencies enable accountants to integrate management and analytical methods, supported by technology, to assist an enterprise to formulate and execute its strategy successfully. The Framework groups accounting competencies into six categories: external reporting and analysis, planning, analysis and control, taxation compliance and planning, information systems; assurance and internal control, and professional values, ethics, and attitudes.

External Reporting and Analysis

External reporting (including related internal reports) is focused on conveying financial and nonfinancial information primarily to various external stakeholders for private, governmental, and not-for-profit entities in accordance with reporting standards. Accountants must be able to prepare, analyze, and enhance the usefulness of external reports to users. Analysis includes the use of judgment when applying accounting principles, assessment of both earnings quality and the valuation methods used in the statements, risk analysis, financial ratio analysis, and forecasts of profitability and future cash flows based on the information reported in external financial statements. Analysis increasingly employs data from nonfinancial sources, such as the previously referenced environmental and social responsibility reports.

Planning, Analysis, and Control

Accountants must be able to aid the identification, evaluation, selection, and implementation of choices that best support the organization's strategic and operational goals for private, governmental, and not-for-profit entities alike. Within this competency, accountants participate with other functional area managers in management teams to inform the decision-making process that advances the organization's strategy. *Planning* is the process for defining the organization's strategic and operational goals and implementing decisions that support these goals. This includes strategic planning, risk management, formulation of capital projects, and operational planning such as budgeting and forecasting. Accountants support top-level planning through ''What If'' analysis of competition, innovation, and environmental, political, and regulatory factors for products or services, or of the business itself, and by designing cost systems for implementing strategy. Planning also extends to accounting activities such as audit assignments and information systems projects. *Analysis* is necessary for virtually all decisions involving resource allocation. These include, but are not limited to, cash management, pricing, capital investment, product and customer profitability, performance measurement, risk and uncertainty (e.g., sensitivity and real-options analyses), opportunity costs, valuation (namely, cost or fair value), tax effects, financing costs, and others. Activities included as part of this competency are the analysis of the cost, profitability, and quality of audit engagements and of information systems projects.

Accountants uniquely support *control* through establishing, implementing, and improving comprehensive management control systems. This involves establishing systems for aligning, monitoring, and providing feedback on management-level goals, measures, and incentives with strategic priorities, including the Balanced Scorecard, Six Sigma, ISO 9000, and similar systems. These controls are essential for achieving strategic goals, and for improving product, service, and process efficiency and effectiveness. These contributions are as relevant to public accounting practices as they are to other types of business organizations, and are not limited to management accounting careers; they are also vitally important for nonprofit and governmental organizations.

Taxation Compliance and Planning

All accountants must understand the basics of taxation to be able to assess tax impacts of decisions and to know to seek expert advice where appropriate. Accountants are also intimately involved in calculating tax liabilities, as well as planning and advising on taxation issues including assessment of the likelihood that the accounting for a transaction will be challenged by taxing authorities and the likelihood of such accounting prevailing. Broad competencies in corporate and personal tax are therefore essential for all accountants. Beyond this, tax specialists must be able to offer advice on tax planning and be able to compute tax liabilities in routine and nonroutine situations in light of changing tax laws and a continuous stream of new court decisions. In addition to tax planning, tax specialists must be able to analyze, assess, and advise on tax liabilities and assets (including the financial statement effects of tax expense and deferred tax assets and liabilities), tax consequences for complex corporate or partnership transactions, the assessment and appeals processes, and international tax planning.

Information Systems

Internal and external reporting, including financial statements, management control, decision support, and analytics, depend on the successful design and deployment of an information system (IS). IS competencies involve gathering, validating, and analyzing data to enable cross-functional and global cooperation and communication. Included here are data, transaction flow, data organization and access, and database management. Strategic and operating decisions require integrated information systems such as specialized software/reporting systems with decision support, enterprise resource planning (ERP) systems, business intelligence, enterprise analytics information search and retrieval, data mining, and familiarity with languages such as XBRL. Accountants must also be able to design and evaluate IS controls and manage IS risks and compliance, including overseeing fraud prevention, privacy safeguards, and data integrity. Extensive technological knowledge and skills are required to assess system needs and investment, procurement, and implementation, including oversight of vendors and service providers. Maintaining close awareness of emerging technological trends (for example, the evolution of descriptive and predictive analytics to what Davenport [2013] refers

to as prescriptive analytics) and risks is essential. Information systems competence is of primary importance for long-term career success, adding value to an organization and supporting strategic and operating decision making, regardless of the area of accounting specialization.

Assurance and Internal Control

Accounting and financial professionals in all types of organizations must understand the role of assurance and apply the principles of internal control. Certified Public Accountants (CPAs) in professional practice require extensive knowledge, expertise, and experience in assurance for private, governmental, and not-for-profit entities. This expertise includes a range of accounting and review services, such as fraud detection or forensic accounting, in addition to auditing. Accounting and finance professionals outside of professional practice manage assurance services for their organizations either through internal audit functions or with the organization's external auditor, or both. *Internal control* systems are an integral component of an organization's ERM system, discussed earlier under the ''Broad Management Competencies'' section. Internal controls provide information about the effectiveness and efficiency of operations, the reliability of financial reporting, and compliance with laws and regulations. The CPA in public practice requires extensive knowledge of internal controls to effectively complete an audit and to comply with regulatory requirements. The accounting professional outside of public practice also requires extensive knowledge of internal control to ensure that the functions of the internal control system are not compromised. Knowledge of internal controls is a key competency for all accounting graduates, whether they enter the public accounting profession or join other organizations.

Professional Values, Ethics, and Attitudes

Professional values, ethics, and attitudes refer to the professional behavior and characteristics that identify accountants as members of a profession. They include commitments to technical competence, ethical behavior, professional manner, pursuit of excellence, societal responsibility, professional skepticism, objectivity, professional judgment, creativity, and innovation. Several bodies, including the IMA, the AICPA, the IIA, and IFAC, provide ethical guidance for accounting practitioners. Professional attitudes also include an understanding of the demands involved with working with people from different cultures and backgrounds, as discussed above under the ''Broad Management Competencies'' section. Effective leaders define, promote, and ensure ethical behavior to develop an organizational culture of integrity—or tone at the top—as well as monitoring and responding to breaches of ethical behavior and the profession's ethical codes.

Competency Integration

The literature review shows that accountants need to be able to integrate their competencies. This integration can take place within a single competency, across multiple competencies within the same domain, and across domains. At all levels of integration, the foundational competencies permeate all other competencies (IMAMAS Curriculum Task Force 2013a). Mastery of accounting competencies begins with the competency itself and then extends to integrations with other competencies. For example, the competency focused on *planning, analysis, and control* should first ensure internal integration—the ability to apply all of the concepts and techniques within the competency as appropriate. Then it should address cross-functional integration with other accounting, broad management, and foundational competencies. Cross-functional competency gains are bi-directional, as accountants better understand context for applying the information they create and managers in other functional areas learn to integrate financial performance with other metrics such as time, quality, service levels, and capacity. Cross-functional competency promotes discovery of the interrelationships among all of the accounting and managerial disciplines and improves understanding of the contribution that accounting can make to the success of an enterprise.

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AUTHENTIC LEADERSHIP IN THE CLASSROOM

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ABSTRACT

From glamour and glitz to graphics and gadgets, popular trends emerge and quickly become *all the rage*. Emergent trends in social media and mobile devices have spurred the Selfie trend of photographing oneself and posting it on such outlets as Facebook or Instagram (Moreau, n.d.). The younger generation seems intent at portraying to the world how they look, where they are, and what they are doing, but not who they are as individuals. This paper suggests faculty reach future leaders as undergraduates and discusses how the undergraduate teaching/learning process can initiate a distinguishing, more introspective Selfie framework/process. We will consider how faculty can model attributes as an authentic leader who provides learning experiences that elicit awareness in students of self and key areas that characterize authentic leaders.

INTRODUCTION

You've probably seen them - members of the younger generation (i.e., pre-teens, teens, and young adults into the 30s) persistently snapping photos that put forth a moment as a focal event. Today, the popularity of social media and mobile devices has enabled these technologies to surface as a primary communication channel with family, friends, and increasingly employers and the world, that tell an illustrated story of what's happening. U.S. News and World Report (2014) lists the top 10 reasons why employers use social media in recruitment and selection, five of which focus on appearances. Recruiters examine social media sites for evidence that a candidate appears interesting, professional, creative, networked, and fitting in terms of personality. Scanning applicant social media sites may expedite the search process for what may appear to be the ideal candidate based on outward appearances, but can fail in identifying such inward characteristics as empathy, integrity, honesty, and humility. Are employers using artificial criteria by which to narrow their applicant pool? Do these media show who candidates are as individuals which begs the question regarding how will this next generation lead? The answer to this question remains important as today's younger generation will be tomorrow's leaders at various organizational levels, but the answer may seem chilling in light of recent research.

Work by Twenge (2007, 2012) and Konrath, O'Brien, and Hsing (2011) reveal that the next generation of leaders may aptly be named *Generation Me*. Their studies show a declining emphasis, as compared to the prior generation, on values, intrinsic life goals, empathy, concern for others, civic engagement, and the environment; areas on which authentic leaders place high importance.

STATEMENT OF THE PROBLEM

Contemporary and classical theorists alike emphasize how effective leaders fundamentally identify and adhere to values, exude passion for noble causes, build trusting relationships, invest in and engage employees, and pursue lifelong learning and development (Collins, 2001; Collins & Hansen, 2010; Covey, 1989; Deming, 1986; Drucker, 1973; George, 2003; George, Sims, & Gergen, 2007; Hamel, 2012; Maslow, 1943; McGregor; 1960; Peters, 2010; Peters & Waterman, 1982). These actions serve as hallmarks of authentic leaders who also are described as selfaware, disciplined, service-oriented, compassionate, and consistent (George, 2003, George et al., 2007, Craig, n.d.). Authentic leaders, Bill George (2003) proclaims, build enduring organizations and are sorely needed in today's business world where leaders' illegal, immoral, and unethical behaviors have violated the public trust. He cites examples of companies that flourished under leaders characterized as authentic, holding these as models for the future; however, developing an authentic leader is a lengthy and unending process that may seem even more challenging as *Generation Me* continues to take shape. How can we get this next generation, the millennial generation, of leaders to look at and frame their inward Selfie to align with the ideal of "authentic"? Can we elicit an awareness of how their personal/professional outlook does or does not align with the leadership qualities that differentiate authentic, hence effective leaders? This paper implicates undergraduate education as a primary point prior to entering the workforce for laying the foundation upon which authentic leaders will develop and initiating a more introspective Selfie process at an earlier point. Faculty assist in building the foundation by modeling authentic leadership in the teaching role and providing learning experiences that will elicit greater awareness of self and key areas that characterize authentic leaders.

CONCEPTUAL FRAMEWORK

Authors like Bill George (n.d.) suggest that "successful leaders lead with the heart, not just the head. They possess qualities like empathy, compassion, and courage. They also have the ability to establish deep, long-term, and genuine relationships where others trust them" (para. 1). The work of George, as well as Craig, Hamel, Collins, and others point to the power of authenticity. As such, this conceptual framework pulls from these authors to develop three Selfie dimensions that can be applied and modeled by faculty as well as leaders at all career stages and used to construct an undergraduate curriculum that emphasizes authenticity. The Selfie Framework (self-aware, selfdisciplined, and self-developing) below consists of ideal dimensions that move leaders, teachers, and undergraduates toward becoming authentic leaders recognizing that this development is a lifelong process. Leaders must continually navigate planning and decision-making by being:

- **Self-Aware** o Seek to know self and understand values
  o Discern strength and weaknesses
    - o Identify those who can complement your weaknesses o Serve a larger purpose
- **Self-Disciplined** o Act with empathy, integrity, and transparency
    - o Consider long-term outcomes o Serve and empower others
    - o Implement with consistency in alignment with mission and values
- **Self-Developing** o Be open minded in sharing ideas and concerns o Build relationships and seek honest feedback o Reflect on feedback
    - o Engage in continuous improvement

(Collins, 2001; Collins & Hansen, 2010; Covey, 1989; Craig, n.d.; Deming, 1986; Drucker, 1973; George, 2003; George, Sims, & Gergen, 2007; Goleman, 2004; Hamel, 2012; Maslow, 1943; McGregor; 1960; Peters, 2010; Peters & Waterman, 1982).

These three dimensions reinforce one another and include actions that will help shape thoughts and behaviors of current and future leaders. The first dimension includes self-awareness whereby one engages in continual introspection about their values, motivations, abilities, and purpose. George (2003) discusses the need for leaders to be their "…own person, authentic in every regard" (p.12). This pathway would compel the authentic leader to remain true to values and resist opposing pressures, capitalize on strengths, and understand and complement weaknesses to serve others through leadership. Craig (n.d.) affirms this logic indicating that this genuine form of leadership requires "…self-awareness: they know and own who they are" (p.1). Likewise, Covey (1990) espouses the importance of being proactive (taking responsibility for actions and reactions) and beginning with the end in mind (understanding self, values, mission, etc.). Along with George (2003), current authors like Hamel (2012) or classics like Drucker (1973) affirm the importance of consciously serving a larger purpose, addressing causes, and satisfying a societal need.

Merely being self-aware and understanding one's societal role will not likely lead to authenticity unless accompanied by critical thought for applying insights to leading or serving. The application of such insights, in fact, requires a great deal of self-discipline whereby, leaders must continually consider the long-term outcomes versus short-term gains, align decisions with values even when faced with adversity, and empower and invest in others' growth despite the efficiency of take-charge commands or do-it-yourself maneuvers. Collins (2011) accentuates the need for self-discipline with his 20 Mile March paradigm which requires self-discipline to push forward in difficult circumstances and to hold back in good conditions all the while acting consistently with values and goals. Being self-disciplined requires not only action to develop decisions and responses, but especially the foresight, planning, and tenacity to implement. Covey (1990) explains that private victory is achieved by actually putting first things first (aligning actions with mission and values). Many authors like Deming, Herzberg, Maslow, and Hamel call for leaders who empower others.

Finally, self-developing acknowledges the unending leadership development process marked by open-mindedness in the pursuit of ideas, concerns, feedback, and real continuous improvement. Evidence for the continual need for leadership development can be viewed by the litany of self-improvement books such as those cited in this paper.

Becoming highly effective, great by choice, or an authentic leader involves an ongoing search and discovery process about oneself and the changing environment in which one lives and works.

IMPLICATIONS FOR TEACHING AND LEARNING

Recognizing that authentic leaders must be self-aware, self-disciplined, and self-developing, this framework suggests that teaching and learning include both modeling each selfie dimension to students as the classroom leader (the instructor) as well as designing learning activities that target each dimension. In his Authentic Leadership Institute (ALI) publication, Craig (n.d.) suggests that leaders should be the "live case… willing to share [the] most humbling moments, …moments of greatest hypocrisy" (p. 7). Craig (n.d.) proposes that leaders need to be a "living example of authentic leadership" (p.4). While teaching faculty may not always be mature in their own leadership style, considering their own self-developing as a leader in the classroom seems vital to shaping the lives of undergraduates in this regard. Drawing on *Leadership Reconsidered: Engaging Higher Education in Social Change* (Astin, et al., 2000), we recognize that faculty can model aspects of the Selfie Framework in their teaching role in so many ways. Generally, business leaders can create a sense of transparency and vulnerability by sharing personal stories that tend to build trust among participants. In the classroom, instructors might share some of their own fears and failures as it relates to school, home, or work life; thereby, providing a glimpse of personal and professional struggles that faculty, too, face as well as depicting the need for authenticity in more dimensions than just work. Examples of modeling authenticity in the classroom can come from many sources. Students may perceive selfawareness from the instructor's personal stories of lacking confidence in delivering a speech, feeling unprepared or less prepared than undergraduate peers, receiving a failing grade on a paper and recognizing the shortcomings related to lack of effort, facing realities of professional obligations for which s/he were unprepared, or holding to unwavering religious beliefs and faithfully serving God and community. The vulnerability associated with disclosing feelings, failings, and faith may help build a stronger community of learners especially if the instructor describes how to address resulting issues. The instructor can also model how to effectively demonstrate expectations like good time management, providing prompt feedback, and establishing means of ongoing communication.

Being self-disciplined can be modeled in many ways as well. Actions that may show self-discipline include being consistent and fair in levying expectations and holding students accountable when it may seem easier to bend the rules for some, admitting not knowing an answer to a question despite the expectation for a ready response, allowing students to have input into changing the course schedule to gain a better understanding of how the change may affect them, being respectful to students especially when differences of opinion exist, or giving latitude for a creative approach to an assignment while making the student responsible to meet the primary learning objectives. Being selfdisciplined requires a balance between upholding expectations and values with empowering students to take responsibility for their development in a way that will produce learning outcomes.

Of course, as a third dimension, self-developing also strives to produce learning outcomes, but more so from the standpoint of exposure to diverse ideas, seeking and reflecting on feedback, and using this information to make changes. Many ways exist to model appreciation for different perspectives and give feedback in the classroom. Recognizing the importance of diverse perspectives and providing opportunities for their expression can serve as a starting point, especially when those ideas may differ from the key lecture points. Acknowledging perspectives, especially highlighting those ideas the instructor had not considered, can help break down barriers and encourage students to share more freely. Receiving feedback and continuously improving can be easily modeled. For example, telling students about course or program changes that stemmed from student evaluations or other student/stakeholder surveys can confirm not only the value of getting student feedback, but the willingness to make changes and improve.

Modeling authenticity will certainly help promote those behaviors, but designing learning activities that help students see and apply these ideals will increase the likelihood that students will actually demonstrate these behaviors beyond the classroom. Steeped in literature on effective pedagogy (Baker & Baker, 2012; Johnson, Johnson, & Smith, 1998, 2007; Slavin, 1996; Chickering & Gamson, 1987; Smith & MacGregor, 1992; Stanton, Giles, & Cruz, 1999; Astin, 1993; Whetten & Clark, 1996; 2007), ideas for using experiential learning, collaboration and teamwork, and service learning can certainly make the learning experiences more vivid.

Learning activities could be designed individually or comprehensively including all three dimensions in one project. Learning activities designed to promote self-awareness may include discussion, papers, or projects that ask students to identify and share about their own personal and professional mission and values as well as their strengths and weaknesses. In an undergraduate management class, students are provided the opportunity to assess their values and evaluate them in the broader managerial context using Rokeach's Values Inventory. Students discuss their values hierarchy in small groups, and then through an ethics case exercise, see how those values may manifest in managerial decision making and action.

Leadership inventories, mission development, values clarification, mock interviews, and debate exercises can bring about self-awareness which is foundational to being self-disciplined. As noted earlier, being self-disciplined requires

ability to develop decisions and responses, and foresight, planning, and tenacity to successfully implement those actions. An assignment prescribed in an undergraduate sustainability entrepreneurship class helps students understand the complexity of integrating sustainability. In developing their small business strategy amidst differing perspectives, students were asked to assume a particular stakeholder's role (e.g., employee, customer, community member) in their real or fictitious small business and examine expectations from that point of view. Students researched sustainability frameworks and current small business practices, applied the framework, and considered how it might create value. They described how the enterprise, employee, or community might implement practices to achieve economic, environmental, and social sustainability, and finally, developed a sustainability action plan. This exercise facilitated student learning of small business sustainability and encouraged students to weigh the mission of their business with competing values. In developing action and implementation plans that included ethical dilemmas and controversial topics, students were required to consider their mission and values, how they can positively influence outcomes and remain a good corporate citizen, while being cognizant of the influence on various stakeholders. The assignment was an individual one, but using collaborative learning, students could gain experience in distributing work and empowering team members as they complete the project.

Of course, reflecting on learning activities with prompts that relate to authentic leadership, whether through a written paper, presentation, large or small group discussion, threaded discussion or other strategies, can illuminate lessons learned and emphasize requisite characteristics. Taking those learning activities and articulating goals or personal action plans for continuous improvement may help students in their self-developing process. One such semester-long assignment that achieves this end involves connecting student teams with an external business partner who, as external coach and mentor, provides an opportunity to make real-world connections to the course. Students have the opportunity to discuss management concepts learned in the textbook and classroom with a practicing manager who shares his or her experience in solving problems, making decisions, and dealing with all types of daily work activity. Through ongoing discussions with their external company partner, students develop insight into the vagaries of management and related capacity for open-mindedness in dealing with real-world work concerns. A final paper, class presentation, and team reflection require students to develop strategies for capitalizing on the learning experience and provide students the opportunity to help each other improve by sharing what they have learned through the experience.

While teaching faculty possess many ways in which to model authentic leadership, barriers do exist. Such obstacles as financial constraints, inadequate applicant pools, and tenure and promotion processes interfere with onboarding qualified faculty who share the desire to serve as authentic leaders and hold students accountable. Financial constraints (e.g., limiting salary negotiations) and inadequate applicant pools may impede the recruitment and selection process resulting in hiring candidates with less authentic leadership qualities who are unwilling to model or incorporate learning activities to help undergraduates develop as authentic leaders. Tenure and promotion policies that overlook excellent learning strategies (e.g., self-discipline that requires holding irresponsible students accountable) for higher evaluations may also discourage faculty from being or becoming an authentic leader in the classroom.

CONCLUSION

Both classical and contemporary authors have articulated the importance of authentic leaders for forming trusting relationships and building enduring organizations. As *Generation Me* prepares for leadership roles in these organizations, instructors can help shape this generation of leadership through undergraduate teaching and learning. Modeling and planning well-conceived learning activities that help students identify characteristics of authentic leaders and apply them to their own lives can serve as a great step in the leadership development process of *Generation Me*.

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THE CONTRIBUTIONS OF US FOREIGN DIRECT INVESTMENTS TO EONOMIC GROWTH IN SUB-SAHARIN AFRICA: EVIDENCE FROM PANEL DATA

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ABSTRACT

This paper uses panel data for the period ranging from 1996 to 2013 to investigate the contribution of US foreign direct investment to economic growth in fourteen Sub-Saharan African Countries. We apply the fixed and random effects model as well as the Generalized Method of Moments model to estimate two different equations; the first equation considered the entire stock of capital including US foreign direct investments while the second equation excluded US direct investment in the sub region from capital stock variable. The results of estimations revealed that domestic capital significantly affect economic growth in these countries but found no evidence that US FDI have any direct effect on economic growth in the host countries. The results also found significant effect of political stability and openness on the growth of Sub Saharan African countries. The implication of these findings is that the region can promote economic growth by mobilizing more domestic resources, ensuring that there is political stability and opening their economies to external competition.

INTRODUCTION

Sub Saharan African (SSA) countries like most other developing countries implemented inward-looking import substituting industrialization policies immediately after gaining independence in the 1960s to protect the domestic industry and to reduce foreign dependency through the production of industrial products. Import-substitution strategy was not sustainable as it depended on imports to maintain production, export revenue from primary products to finance production and on favorable terms of trade. In a study of long-term development and sustainable growth in Sub-Saharan Africa, Elbadawi and Ndulu (1996) found that the terms of trade deteriorated between 1970 and 1990 and accounted for a loss of income estimated at 3.8 percent of GDP. The disappointing economic performance of SSA economies from the late 1970s to the mid-1990s is evidence that the import-substitution development strategy was a failure (Rodrik 1998). The strategy discouraged trade and foreign direct investments to these countries and deprived SSA countries of external resources that are critical for economic growth (Rodrik 1998).

Foreign direct investment (FDI) is an important source of growth in host countries (Blomstrom and Kokko 1998; Li and Liu, 2005). Foreign direct investment enables low income host countries to build up capital stock, acquire skills through labor training and transfer of technological know-how and managerial skills required for economic progress (Blomstrom and Kokko 1998). A majority of sub-Sahara African countries fall in the category of countries with low income and savings levels and lack access to international capital markets. Foreign direct investments can boost to domestic capital investments in these countries. Unfortunately, SSA countries have been unsuccessful in attracting foreign direct investment flows compared to other regions.

In another article, Kaplinsky and Morris (2009) analyze the impact of foreign direct investment (FDI) and domestic investment (DI) on economic growth in Sub-Saharan Africa for the period 1990–2003. The results show that direct investment is positive and significantly correlated with economic growth in both the OLS and fixed effects estimation, but FDI is positive and significant only in the OLS estimation. The study also found that FDI has an initial negative effect on direct investment and subsequent positive effect in later periods for the panel of countries studied. In another interesting article, Elmawazini and Nwankwo (2012) the technology gap effects of foreign direct investment in sub-Sahara Africa and pointed out that the technology gap between SSA and OECD countries is a major factor in the effectiveness of FDI on industrial capacity of SSA countries relative to other countries,(using OECD countries as proxy for other developed countries) Kelemli, Chanda, Ozcan and Sayek, (2004) on how local financial markets impacts the link between FDI and growth argue that the countries with only well-developed financial markets derive more benefits from FDI flows. Borensztein, Gregorio and Lee (1998), studied the effect of foreign direct investment on economic growth in a cross-country regression using data on FDI flows from developed to developing countries for over two decades. The authors found that FDI is an important channel for the transfer of technology and contributes more to growth than domestic investment. The study also found that FDI contributes to economic growth only when the country has sufficient stock of human capital that enhances the absorptive capacity of recipient countries especially in the diffusion of new technology.

The effect of FDI on the economic growth of the recipient country depends on the absorptive capacity of the recipient. Of particular importance is human capital, fundamental elements of freedom such civil rights and political rights, and political stability. In a study of the determinants of foreign direct investment on a sample of 29 SSA countries from

1980 to 2003, Suliman and Mollick (2009) found that human capital measured with literacy rates, political and civil rights have positive effects of the flow of FDI. Their results also show that civil war has a negative impact on the flow of FDI to the region. These results are consistent with results obtained by Borensztein et al., (1998) that availability of human capital enhances absorptive capacity of the recipient country of FDI. The contribution of education and FDI to economic growth in Sub-Saharan Africa has also been investigated by Anyamele (2010) with results that show a significant relationship between FDI and output growth in sub-Saharan African countries. It is important to emphasize that human capital formation is not only an input into the production process it also enhances the absorptive capacities of SSA economies.

Promoting and sustaining economic development in SSA requires the mobilization of domestic and external investments. Unfortunately, aid flows to the region has dwindled and the export share of SSA countries is low requiring an increase in foreign direct investments to finance economic development .The improvement in economic policies and the adoption of outward-looking development strategies by Sub Saharan Africa countries has rekindled economic growth and created an environment that attracts foreign direct investment to the region. There have been a large increase in foreign direct investments to sub-Sahara Africa in recent years and despite this growth, the share going to the region is only a small proportion of the total direct investment going to developing countries. In 2008, sub-Sahara Africa received a total of $64 billion compared to only $2.2 billion and $15 billion in 1980 and 2004 respectively. Foreign direct investment to sub-Sahara Africa is projected to more than double in the next few years and this growth in optimism and confidence has led to a surge in the flow of FDI to the region from the United States, China and South Africa. The growth in intra-African investment flow has also been a key driver of this growth. In addition, FDI especially in the service sector have received a boost from an emerging middle class in Africa countries while FDI to the extraction industries are also attracting huge attention.

Since 2007, foreign direct investment projects from emerging countries where SSA countries heavily rely on for their capital needs grew at a rate of 21 percent. This can be compared with investments from developed countries, which grew at only 8 percent. The top contributors to SSA direct investment from emerging countries include: India with 237 FDI projects, South Africa (235), UAE (210), China (152), Kenya (113), Nigeria (78), Saudi Arabia (56), and South Korea (57). While investments into North Africa have stagnated, foreign direct investment flows into SSA grew at a rate of 22 percent since 2007 indicating a high potential for growth in the region. Ernst and Young (2013) have reported based on IMF data that the GDP in SSA is estimated to reach 6.4 percent growth in 2014.

The pattern of the flow of USA direct investment to sub-Sahara Africa is similar to the flow of US direct investment to developing countries as a group. US direct investment to developing countries has been on the decline since the last part of the 1990s (Jackson, 2012). The share of US direct investment to developing countries declined from 37% in 1996 to 21% in 2000. By 2010, the share of total US direct investment abroad going to developed economies was estimated at 70% while Africa received barely 1.5% of the total. This pattern is consistent with the pattern of trade between the United States and African countries which accounts for only 2% of total US trade with the rest of the world despite the framework laid out in the African Growth and Opportunity Act (AGOA) enacted by the US Congress in 2000 to promote trade with African countries .Since its inception, AGOA has made remarkable contributions to African economies. However, the gain from AGOA has been quite uneven. While some countries have substantially benefited from this initiative, there has been no remarkable transformation of African economies arising from this partnership (Kimenyi 2013).

As regard US direct investment in SSA countries, a bulk of the total flow of US direct investment to Sub Sahara Africa is concentrated in mining and extractive industries and less is allocated to manufacturing. The total US stock of investments in Africa in 2011 was $57 billion while $33 billion was in the extractive industries alone. Even when the US invests in manufacturing industry, most of it is received by a few countries notably South Africa with 67 percent of total US trade with Africa. In 2011, US direct investment to SSA was only $3.4 billion and muck of these flows is concentrated in a few countries. The three major recipients are Mauritius, a tax haven with favorable financial institutions with very low taxes, South Africa and Angola. With the US selecting which SSA to invest and concentrating these investments in extraction sector, the question which remains unanswered is whether US direct investment has had any impact on economic growth in SSA countries and whether it a valuable source of funds to fill the capital-gap that exists in these countries because of their lack of access to international capital markets. The study should also investigate why US companies are less interested in locating their businesses in SSA even when the growth prospects in the region are attractive.

International comparable data for capital stock is generally not available for all Sub-Saharan African countries and will be estimated using the perpetual inventory method as the first step in studying the impact of US foreign direct investment on Sub-Saharan Africa economics. The study utilizes panel data for the period 1996 to 2013 to investigate the effect of US direct investment on per capita income growth in Sub Saharan Africa. We estimate two separate

equations in order to isolate the effect of US direct investment on real GDP growth. The first equation considers domestic stock of capital in SSA as one of the covariates in the regression while the second equation includes US foreign direct investment data to the capital stock variable. The estimations are based on the random and fixed effects models and on the generalized methods of moments (GMM).

Economic Performance and US Trade and Investment in Sub-Saharan Africa

The pattern of US trade with Sub Saharan Africa and US foreign direct investment in Sub Saharan Africa are inextricably related. With regards to trade, AGOA has provided benefits to both the United States and Sub-Saharan African countries through expanded access to markets and investment opportunities. US foreign direct investment to SSA has been on the rise since 2000 until recently when it started to slow down with US being outpaced in investments by the BRICS countries.

2.1 Economic Performance of Sub Saharan Africa

Most SSA countries experienced strong economic growth shortly after independence in 1960s, until the 1973 to 1974 oil crisis which adversely affected these countries in unprecedented proportions. The crisis originated from the decision by OPEC Arab countries to restrict oil production to raise prices. During the crisis the modest growth enjoyed by SSA countries eroded and aggregate capital growth dropped. SSA countries stagnated during the 1980s when earnings from nonoil exports plummeted combined with other structural difficulties with the impact heavily felt by nonoil exporting countries. With the decline in the terms of trade and a shrinking of markets for exports, SSA entered into a prolonged economic stagnation and decline until the mid-1990s when most countries experienced resurgence in economic performance.

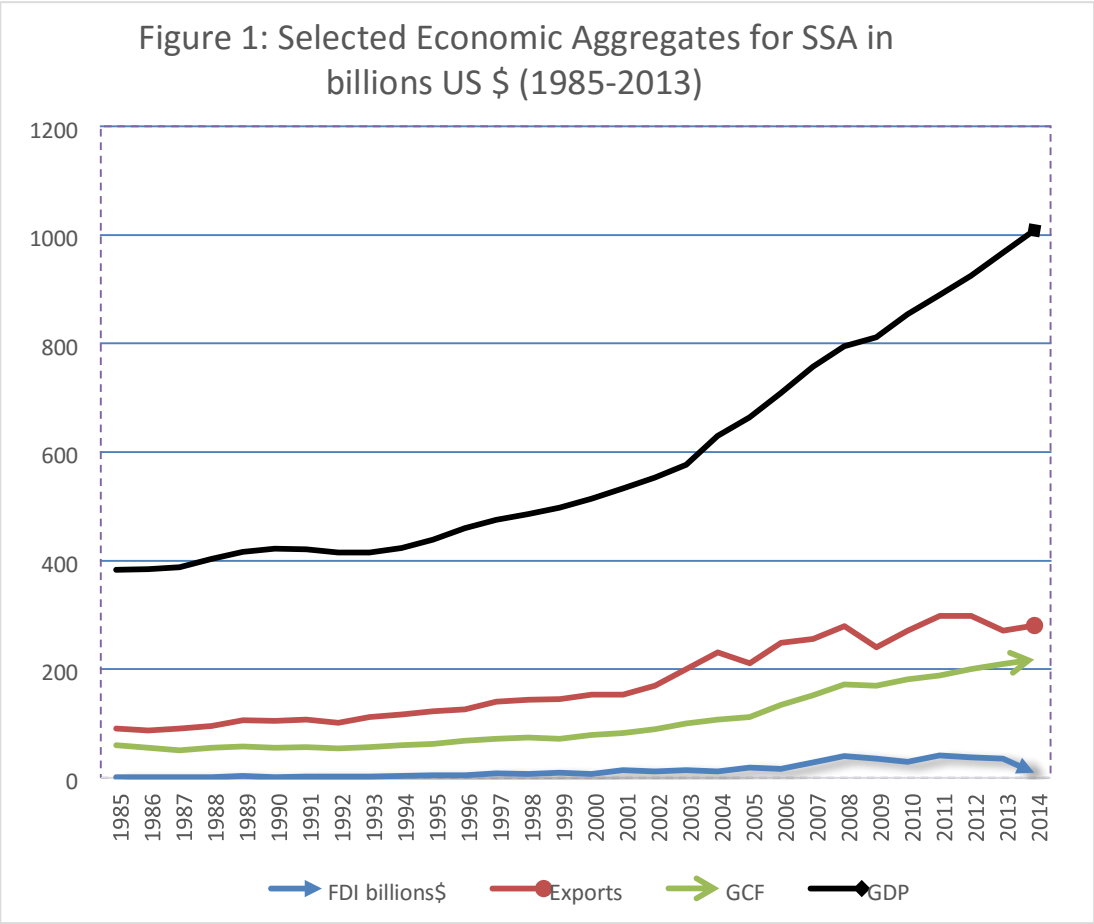
Economic growth of SSA countries has been historically volatile and this tends to dampen investments and even obscure years of high performance (Langton, 2003). However, since 1995, growth rates became less volatile and evenly distributed among countries. Based on World Bank African Development Indicators, 2007 data, the average growth rate of SSA was 4 percent between 2000 and 2005 compared to less than 1 percent during the first half of the 1990s. The IMF World Economic Indicators estimates show an estimated growth rate of 5 percent between 1997 and 2006 (Table 1). Several factors account for the resurgence of growth and spectacular economic performance of the region in particular and Africa in general since the mid-1990s.

Table 1: Growth Rates of GDP by Country Economic Groups (Percentage change)

Country Groups	1997-2006	2007	2008	2009	2010	2011	2012	2013	2014
Sub-Saharan Africa	5.0	7.6	6.0	4.1	6.6	5.0	4.3	5.2	5.0
Advanced economies	2.8	2.8	0.2	-3.4	3.1	1.7	1.2	1.1	1.8
United States	3.3	1.8	-0.3	-2.8	2.5	1.6	2.2	1.5	2.4
Latin America and the Caribbean	3.1	5.7	3.9	-1.3	6.1	4.9	3.1	2.9	1.3
Low income developing countries	6.0	7.4	5.9	5.9	7.1	5.3	5.2	6.1	6.0
Middle East and North Africa	4.9	6.4	5.2	2.2	5.2	4.6	5.0	2.1	2.6
World economic growth	4.0	5.7	3.1	0.0	5.4	4.2	3.4	3.3	3.4

Source: IMF, World Economic Indicators database.

According to a report by McKinsey Global Institute (MGI) published in 2010, the key factors that explains Africa growth surge are macroeconomic stability, political and microeconomic reforms implemented across various countries of the region. SSA countries have understood that political conflicts, civil unrest and deadly hostilities impede economic progress and most countries have resolved to put an end to these. More prudent macroeconomic policies such as low inflation, lower budget deficits and lower debts can stir economic growth and most countries have doubled efforts in maintaining stable macroeconomic policies. Finally, most countries have implemented market friendly reforms as well as legal and regulatory systems that foster trade and exchange of goods and services (MGI, 2010). In addition to markets and macroeconomics reforms, many SSA and some countries have benefited from debt forgiveness under the highly indebted poor country initiatives.



Source: Constructed based on World Bank Development Indicators 2015

Sub-Saharan Africa has continued to grow despite the gloomy global economic environment according to the International Monetary Fund Regional Economic Outlook published in 2013 and World Bank Development indicators, 2012. Since the beginning of the global economic meltdown in 2008 and the weak global economic environment that persist, high commodity prices and the strong domestic demand have continued to sustain output expansion. As depicted in Table 1, the region grew at 5 percent in 2011 and exceeded that rate in 2012 and 2013 respectively was higher than the World average. The growth has been largely fueled by increases in commodity prices, new resource exploitation and improved domestic policies that ensued strong growth even in low income countries. This performance has not come without variations across the region. The sustained growth is also attributable to sound macroeconomic policies implemented across the region (IMF, 2013). An increase in commodity prices, increase export diversification to fast growing Asian markets and stable financial markets that were more or less shielded from the global financial meltdown fueled the growth of SSA countries.

The most important source of growth for SSA was the export of natural resources which contributed significantly to exports and revenue for most of the countries. Figure 1 shows the evolution of selected economic aggregates for sub Saharan Africa from 1985 to 2013. Sound economic policies in most countries in the region are yielding results that are deemed commendable. Exports revenue is on the rise, aggregate output is also rising for most countries and foreign direct investments are also rising. Output growth in most middle income countries in Sub-Sahara Africa was adversely affected and decline as a result of the global slowdown. Exports were slightly affected by the global economic meltdown of 2008 to 2009 but have picked up again (Figure 1).

2.2 US Trade with Sub Saharan Africa

The African Growth and Opportunity Act, or AGOA is a legislation approved by the United States Congress in May 2000 to encourage export-led growth and economic development in Sub-Saharan economies and to improve economic relationship between the United States and the region. The legislation which is scheduled to expire in 2015 unless reauthorized is a non-reciprocal unilateral trade preference program that allows certain products to be imported duty-free from eligible Sub-Saharan African countries to the United States. Since its enactment, AGOA has contributed to

expansion of SSA economies, increased the volume of trade, reduced poverty and created jobs (Kimenyi, 2011). In an NBER working paper titled, "Trade Growth under AGOA" Frazer and Biesebroech (2007), found that AGOA and the removal of tariff restrictions that came with it, had a significant effect on the apparel imports and other agricultural and manufactured products from SSA into the USA. This conclusion has been corroborated by other studies on the effectiveness of AGOA on trade.

Condon and Stern (2011) in a study of the effectiveness of the African Growth Opportunity Act, found that AGOA has had a positive impact on apparel exports from a small number of countries but that outside the apparel sector, there is no evidence that any other sectors benefitted from AGOA. They further argued that the inclusion of agricultural commodities to the preferences covered under AGOA could broadly improve the economic impact of AGOA on SSA economies. In a Brooking Institute report "AGOA, Looking back, Looking forward", Some studies have also provided evidence that exports under AGOA have increased more than 500 percent, from $8.15 billion in 2001 to $53.8 billion in2011. About 90 percent of these exports were from the oil sector, which underscores Africa's growing strategic importance to the U.S. Under AGOA, the volume of non-energy exports to the U.S. has increased by 275 percent, from $1.2 billion to $4.5 billion between 2001 and 2011. The number of countries exporting nonenergy products under AGOA has also increased, from 13 to 22 during this period. The authors strongly advocate extending the AGOA beyond 2015 to the current 40 Sub-Saharan countries covered.

Despite the contributions of AGOA to economic growth and development in SSA countries, there are concerns over the effectiveness of this legislation, and particularly on the fact that the legislation has not contributed to any discernible transformation of the economies of the region, (Kimenyi, 2011). However, the gains from AGOA could be maximized through significant reforms that include inter-alia, reauthorize the legislation beyond the September 2015 expiration date, create certainty with regards to the duration of the AGOA preferences to avoid reauthorizations and periodic reauthorizations that hinders investments in SSA, expansion of AGOA to include agricultural products other than sugar in which SSA countries have a comparative advantage in supply, set a longer and uniform reauthorization of AGOA preferences and to include the "third-country fabric provision" which benefits SSA cotton-producing countries, and increase greater engagement and commitment by settling for a twoway trade in AGOA with US products having preferential access to SSA countries.

2.3 Pattern and composition of US foreign direct investment to SSA

The flows of US direct investment to Sub-Saharan Africa closely follow the pattern of the total world direct investment to Africa and to the region. The total amount of foreign direct investment to Africa and Sub-Saharan Africa based on UNCTAD data were respectively 9.5 and 6.2 percent respectively in 1970 corresponding to the period when the newly independent African economies recorded high but transient gains in output growth. From the mid-1970s, onwards, we see a pattern of both significant decreases with a drastic fall in 1980 when FDI to SSA represented barely 0.5 percent of world total. While there were gains in the size of FDI flows from 2000 to 2012 respectively as shown on Table 2 below, in relative terms, this was only about 2 percent and 3 percent of world total respectively compared to other regions of the world.

Table 2: Foreign Direct to Selected Regions as a Percentage of Total

YEAR	Developing economies	Developed economies	Africa	Sub-Saharan Africa
1970	28.88	71.12	9.49	6.23
1975	36.55	63.45	3.41	4.91
1980	13.81	86.14	0.74	0.48
1985	25.37	74.61	4.37	1.77
1990	16.76	83.20	1.37	0.80
1995	34.04	64.76	1.72	1.37
2000	18.72	80.78	0.68	0.48
2005	33.80	62.80	3.12	2.12
2012	52.03	41.51	3.70	3.04

Source: Authors calculations using UNCTAD database

The total amount of US overseas direct investment estimated at slightly less than 70 percent are in developed countries with Europe accounting for over half of US investments abroad. While 15 percent and 20 percent of US direct investment abroad went to Asia and Latin America respectively during 2012, investments in Africa and Middle East accounts for only 1.4 percent, and 1 percent respectively (Table 3). An earlier study of the determinants of foreign direct investment in SSA by Asiedu (2002) show that compared to Europe and Asia, U.S. direct investment to SSA has been quite small and supporting this assertion with data, the study show that the increase has been 5200 percent for Europe and Central Asia between 1980-89 and 1990-98, 942 percent for East Asia and Pacific, 740 percent for South Asia, 455 percent for Latin America and Caribbean, and 672 percent for all developing countries. However, the BEA has suppressed most data for SSA to avoid disclosure of data of individual companies; there is insufficient detail to break out SSA countries from Africa as a whole. For the latest year for which data is available, the outflows of US direct investment to Sub-Saharan Africa was estimated at $3.4 billion.

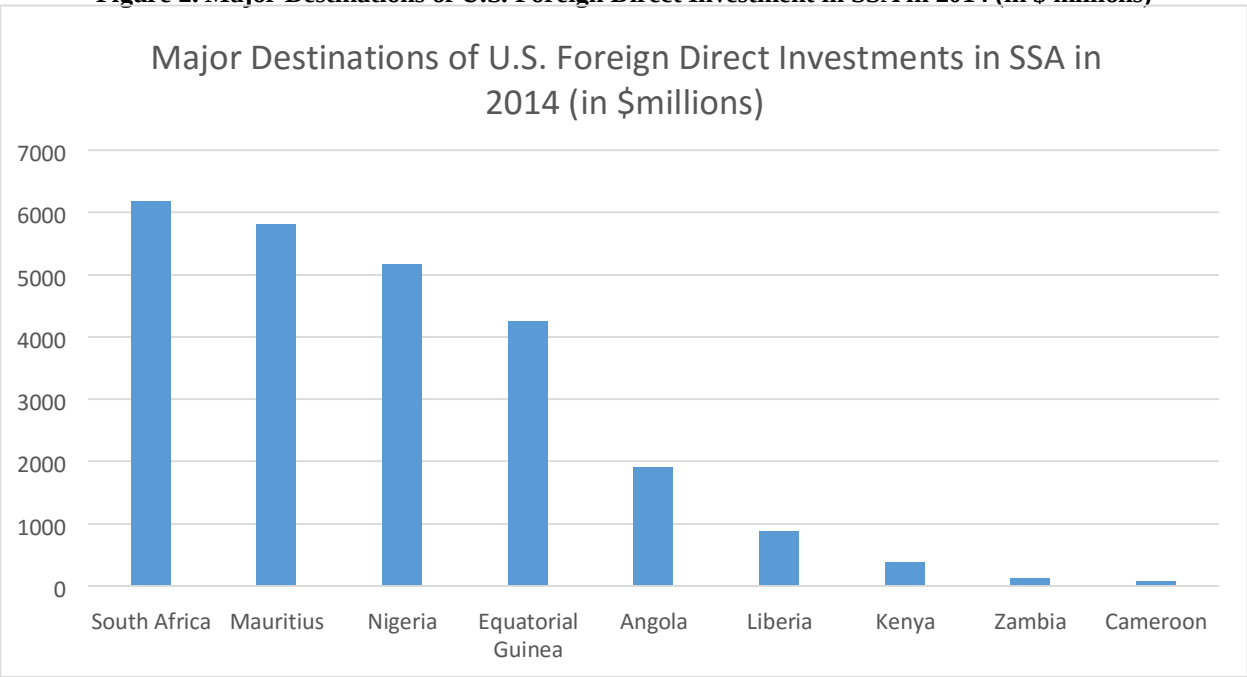
Table 3: U.S. Direct Investment to Major Regions as a percentage of total

	1985	1990	1995	2000	2005	2010	2012	2014
Canada	20.1	16.1	11.9	10.1	10.3	7.9	8.3	7.8
Europe	45.6	49.9	49.3	52.2	54.0	54.4	55.5	56.5
Latin America	11.8	10.1	11.8	12.0	7.0	6.3	5.9	5.2
Africa	**2.6**	**0.8**	**0.9**	**0.9**	**1.0**	**1.5**	**1.3**	**1.3**
Asia and Pacific	1.9	0.9	1.0	0.8	0.9	0.9	0.9	1.1
Australia	14.8	15.0	17.6	15.7	16.8	15.2	15.3	15.0
Asia and Pacific	14.8	15.0	17.6	15.7	16.8	15.2	15.3	15.0
China	3.8	3.5	3.5	2.6	3.4	3.4	3.7	3.7
Hong Kong	0.1	0.1	0.4	0.8	0.8	1.6	1.2	1.3

Source: U.S. Bureau of Economic Analysis

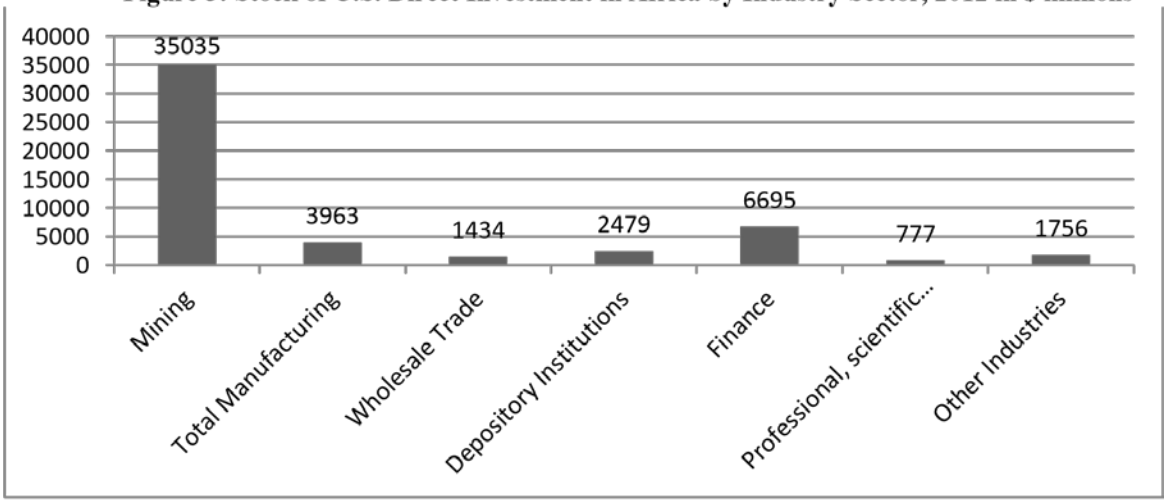
The fact that the low share of US direct investment going to SSA is minimal to have any meaningful impact in the growth of the region is further exacerbated by the concentration of the investments in mining and extraction industries, which makes up about $33 billion of the $57 billion total stock of US direct investments in Africa. Of the total US direct investments in Africa, South Africa alone received a lion share of 67 percent of the investments directed towards the manufacturing sector. A bulk of the stock of US foreign direct investment to SSA were in Mauritius, a tax-haven where US companies pay low or no taxes to do business, South Africa, and Angola. The stock of US investments actually represents accumulation of investment over time and in terms of flows, South Africa, Ghana, Angola and Liberia were the largest recipients in 2011 (Table 4).

Figure 2. Major Destinations of U.S. Foreign Direct Investment in SSA in 2014 (in $ millions)



In the past, SSA countries were characterized as countries in civil unrest, famine, disease and poverty. This characterization gave investors a negative image of Africa and discouraged the flow of foreign capital into the region. While the characterization cannot be completely denied, the truth is that not all SSA countries can be identified with these circumstances and the dynamics is fast changing with only pockets of countries trapped in conflicts. Given the perception that Africa is a risky investment environment, private investors have been quite reluctant to provide lending for foreign direct investments and this to a larger extent explains the low level of US foreign direct investments in Sub-Saharan Africa. Except additional incentives are provided to U. S. firms to invest in SSA, investments by US firms in SSA will remain low.

Figure 3: Stock of U.S. Direct Investment in Africa by Industry Sector, 2012 in $ millions



Source: Authors Calculations based on data from *U.S. Bureau of Economic Analysis*

2.4 Factors affecting flows of US FDI to SSA

The reasons for the sluggish flow of U.S. FDI to SSA has been attributed to causes which inter-alia include; political unrest, infrastructure, openness of the host country, geographical location, and lower returns on capital invested. Using a dummy variable for Africa, Asiedu (2002), found that there is a negative impact on FDI for being an African country which is a pretty interesting result. She also found that because of inherent riskiness of Africa, higher returns are not necessarily inducing bigger FDI as is evident in non-SSA countries. This higher riskiness may be coming from

uncertainty of government policy in the face of frequent regime changes. She suggested that Africa has been less consistent on trade reform and this has also impacted FDI as foreign investors have been wary of many African countries sometimes using trade liberalization as a tool to secure foreign aid and then discontinuing on its path. Lack of infrastructure is also a significant driving force behind less FDI flowing into SSA. Asiedu's paper seems to suggest that Africa and especially SSA is different from the rest of the world receiving FDI.

Model Specification

This study uses panel data for the period 1996-2013 to investigate the effects of United States foreign direct investment on per capita income growth in Sub-Saharan Africa. The expectation is that United States investments in Sub-Saharan Africa add to domestic capital which is expected to raise output growth in the host countries. To achieve this objective, we specify and estimate two growth equations with the first equation with no US capital added to capital variable while the second equation has US FDI added to the capital variable. The expectation is that this addition will make a difference in the estimations. Panel data analysis unlike the traditional least squares regression analysis allows the researcher to model differences in country-specific characteristics. This study adopts a variant of growth models applied in recent studies (De Mello 1999; Tiwari and Mutascu, 2010) to specify a relationship between per capita income and capital investments as follows:

$$y_{it} = \beta_0 + \beta_1 k + \beta_2 x_{it} + \alpha_i + \varepsilon_{it} \qquad (1)$$

where Y is the logarithm of real GDP per capita, i represents cross-sectional units with $i = 1,.....N$, and t denotes time period with $t = 1,.....T$. k denotes the logarithm of capital at 2005 constant US dollars with the exclusion of US FDI and x_{it} is a vector of other variables that affect economic growth. ε_{it} is the random error with $E(\varepsilon_{it}) = 0,$ and $E(\varepsilon_{ij}\varepsilon_{js}) = \sigma_{\varepsilon}^2$ while α_i is an unobservable country specific growth determinants that account for unobservable differences across countries. α_i is also assumed to have the properties of zero mean, independent of the random term ε_{it} and the regressors, and assumed to have a constant variance. To determine the impact of US foreign direct investment, we augment equation (1) to include US FDI as follows:

$$y_{it} = \beta_0 + \beta_1 k_{with} + \beta_2 x_{it} + \alpha_i + \varepsilon_{it} \qquad (2)$$

where k_{with} is host country capital augmented with US foreign direct investment. We test for evidence of correlation between the unobservable country specific effects and the determinants of economic growth. In the absence of such correlations, the appropriate specification of the regression equation will be a fixed effect panel model. However, rejecting the null hypothesis of no correlation between unobservable country-specific effects and the determinants of growth implies that the random effect will be the most appropriate for our analysis.

The estimations based on either the random or the fixed effect may tend to be inconsistent in the presence of endogeneity of per capita income or capital including other variables. Capital for instance can determine the growth of the host economy and economic growth can also determine capital. In response to such concerns we also use a dynamic panel model particularly the generalized method of moments (GMM) which has become popular for estimating panel data with small time period and large observations. The GMM model can well handle lagged dependent variables, unobservable country-specific fixed effects, endogenous independent variables, heterosdasticity and autocorrelation across and within countries (Arellano and Bond 1991). Given the dynamic nature of panel data we can start by specifying the following dynamic panel data regression model:

$$y_{it} = \alpha + \beta_1 y_{i,t-1} + \beta_2 k_{it} + \beta_2 x_{it} + \eta_i + \varepsilon_{it} \qquad (3)$$

Arellano and Bond (1991, propose the transformation of equation (3) into first differences to eliminate country specific effects α_i as follows:

$$(y_{it} - y_{i,t-1}) = \gamma(y_{i,t-1} - y_{i,t-2}) + \beta_1(k_{it} - k_{i,t-1}) + \beta_2(x_{it} - x_{i,t-1}) + (\varepsilon_{it} - \varepsilon_{i,t-1}) \qquad (4)$$

Arellano and Bond (1991) proposed the use of lagged levels of the explanatory variables as instruments to address the possible simultaneity bias of the explanatory variables and the correlation between $y_{i,t-1} - y_{i,t-2}$ and $\varepsilon_{it} - \varepsilon_{i,t-1}$. To operationalize the above specification, we perform the Arellano and Bond tests of the null hypothesis no second order serial correlation in the error term of the difference to get rid of country specific fixed effects.

The estimation of the GMM model is done in two steps (Arellano and Bond 1991). Step one estimators applies weighting matrices that are independent of the estimated parameters while step two estimator uses the optimal weighting matrices in which the moment conditions are weighted by a consistent estimator of the covariance matrix thus making the two-step estimator asymptotically more efficient than the one-step estimator. In addition to fixed and random effect estimators, this study will also employ the one-step and the two step estimators.

3.3 Data, Variables Definitions and Estimation

The data for this study is obtained from the World Development Indicators published by the World Bank and the US Bureau of Economic Analysis. The dependent variable for this study is the log of real GDP per capita of SSA countries. We capture the effect of population growth on the flow of FDI and including RGDP per capita as the dependent variable which allows us to control for the effect of population growth. The study also includes the following control variables: capital, openness, inflation, human capital accumulation, terms of trade, and political instability.

The data for capital is estimated based on ADI data of the World Bank using the perpetual inventory method. The key variable is the stock of capital which is calculated to include the flow of US FDI to SSA in the first equation and a second specification which excludes the flow of FDI from the US. The role of openness as a determinant of economic growth has been a debatable issue in several studies. While this role has been doubtful in some studies (Krugman, 1994; Rodrick and Rodriguez, 2001), openness has been found in other studies as a significant determinant of economic .In the current study, openness (OPEN) will be measured as the sum of exports and imports as a percentage of GDP at constant prices. The study also includes inflation (INF) as an indicator of macroeconomic stability. A stable macroeconomic environment attracts foreign direct investments and stimulates economic growth, and price stability in particular is a key measure of macroeconomic stability. Several studies have found that an increase in inflation result in the reduction of economic growth (Andres and Hernando, 1997). The variable is defined by the CPI of various countries in the sample and is obtained from the IMF World Economic Outlook database.

Human capital has been found in several studies as an important source of economic growth. While measures of human capital such as years of schooling have been used as proxy for human capital, public expenditures on education will be used for the present study based on the availability of data (Primary enrollment is considered a measure of human capital in which case higher level of primary enrollment implies higher level of human capital and this is expected to have a greater impact on economic growth.

The study also includes a set of institutional variables and these variables have been widely used in previous studies. A key institutional determinant of economic growth is political instability. There is a strong connection between economic growth and political instability. Unstable political environments create uncertainty in the economic environment which may reduce investments and economic growth. The measure of political instability used for this study is the propensity of government changes. The number of times a government changes in a year during which a new prime minister is appointed or half of the cabinet members are replaced by new members is a measure of political instability .Some studies have found that economic growth is lower than it would be in countries where there is a high propensity of government collapses.

Brambila-Macias and Massa (2010), used the bias-corrected least squares dummy (LSDV) to estimate the relationship between economic growth and four different types of capital flows into sub-Saharan Africa and arrived at the conclusion that FDI and cross-border bank lending exerted a significant impact on a sample of 15 SubSaharan African countries over the period 1980-2008. The results of their study found that a 10 percent fall in FDI could result in a 3 percent decrease in the growth of per-capita income in sub-Saharan Africa highlighting the role of private foreign capital flows in the development of the continent.

EMPIRICAL RESULTS AND DISCUSSION

In this section, we present the empirical findings of the study using two different estimated equations to determine whether United States Foreign direct investment has any positive impact on economic growth is Sub Sahara Africa. The study uses panel data from a sample of fourteen Sub Saharan African countries for the period ranging from 1996 to 2013. The dependent variable selected for the study is the logarithm of per capita while the covariates include capital

with the absence of United States direct investment in these countries in one equation and capital including US direct investment in the second equation.

Table 5: Econometric results without US Foreign Direct Investment

Variable	RE	FE	GMM One-step	GMM Two-step
GDP(t-1)			0.7411*** (0.0792)	0.4697** (0.1638)
$K_{\text{(without USFDI flows)}}$	0.3762*** (0.1122)	0.4164*** (0.1319)	0.0710* (0.0354)	0.2514*** (0.0803)
hc	0.1282 (0.1402)	0.08714 (0.1549)	0.1162** (0.0536)	0.1209* (0.0663)
Open	0.0008** (0.0004)	0.0007** (.0003)	-0.00026 (0.0002)	0.0003 (0.0004)
Inflat	-0.0016** (0.0007)	-0.0015* (0.0007)	0.00013 (0.0009)	1.41e-06 (0.0009)
Infra	0.0071** (0.0029)	0.00514 (0.0034)	-0.0015 (0.0022)	-0.0211 (0.0243)
polstab	0.3141* (0.1651)	0.35294* (0.1684)	0.0852** (0.0370)	0.3287 (0.1990)
$K_{\text{without}} * polstab$	-0.0594* (0.0360)	-0.0689* (0.0367)	-0.0167* (0.0087)	-0.0777 (0.0475)
cons	0.9704 (0.4029)	0.8790 (.4313)		
Hausman		35.79 (0.0000)		
A-B test for Ar(1)			-1.96 (0.050)	-2.19 (0.029)
A-B test for Ar(2)			2.69 (0.007)	-1.76 (0.078)
Hansen test			7.47 (.880)	5.69 (1.000)
No. of observations	210	210	154	154

Standard errors of coefficients are in brackets below the value of the coefficients.
For specification tests, the p-values are in brackets under the computed statistical tests.
The A-B tests are the Arellano-Bond test of serial autocorrelation.
*** 1% level of significance ** 5% level of significance * 10% level of significance

Table 5 presents the results of the regression including the various estimators. The random effect model was rejected in favor of the fixed effect model using the Hausman test which tests the null hypothesis of the correlation among countries in the sample against the alternate hypothesis that there is correlation between the unobservable individual effects and the determinants of growth. Columns 4 and 5 of Table 5 also present results based on one-step estimator and two-step estimator respectively. The Arellano-Bond tests also indicate no evidence of serial correlation of order 1 or 2 for both equations. Generally with the random and fixed models we have the expected sign for all the variables. Domestic capital was found to be a robust determinant of growth in these countries while human capital was not a significant factor of growth. The results from the fixed effect model also show that open economies are more likely to grow faster. Inflation was found to have a negative impact on economic growth in SSA. High level of inflation in SSA highlights the macroeconomic weaknesses of SSA countries. Also, accordingly, political stability would imply more economic growth, however, the coefficient has the expected sign and is only significant at 10 percent. The study included an interaction term ($K * polstab$) following as suggested by Azman-Saini et al. (2010), Borensztein et al. (1998). This variable implies that the marginal effect of capital on growth depends on political stability. The variable was not found to be significant in the random nor the fixed effect model. The onestep and the two-steps estimators indicate that domestic capital had a positive and significant effect on economic growth is SSA. Both the one-step and the two-step models also found a significant and positive relationship between human capital and economic growth in SSA. Political stability was also found to have a positive and significant impact on economic growth in SSA. Although

the marginal effect of capital with no foreign investments weakly depend on the extent of political stability in these countries, the coefficient of this variable is negative in the various estimators.

Table 6 below estimates the impact of US foreign direct investments on economic growth in a sample of Sub Saharan African countries. The results from the random and fixed effect models are presented in the second and third columns while four and five show the one-step and the two-step generalized methods of moment estimators. Although the Hausman test choose the random over the fixed effect model, the panel structure helps in capturing countries specific effects that are unobservable. The results obtained from the GMM are almost consistent with the results from the random and the fixed effect models with the exception of human capital. The GMM specification tests were satisfactory for the Arellano-Bond AT (2) tests for autocorrelation and the Hansen J-test was used to test whether the instruments as a group are exogenous. As the results indicate and surprisingly capital augmented with US foreign direct investment is not a significant determinant of growth in Sub Saharan Africa. However, the variable has a positive sign as expected in the fixed and random effect model but not in the GMM models. The results from the GMM models also indicate that human capital have a significant positive effect on economic growth in SSA. The coefficient attached to the logarithm of initial GDP per capita suggests evidence of growth convergence. Political stability was found to be a statistically significant determinant of economic growth in Sub Saharan Africa countries. To determine the marginal effect of political stability on capital investments including US foreign direct investments, an interaction term was include in the estimated equation. The results show that the marginal effect of capital with US foreign direct investment largely depended on political stability of these countries suggesting that an increase in political instability will negatively affect capital investment including US capital investments. Macroeconomic economic stability measured with inflation was found to be positively and statistically significant related to economic growth in SSA. Infrastructure was only found to be significant in the random effect model.

Table 6: Econometric results with US Foreign Direct Investment

Variable	RE	FE	GMM One-step	GMM Two-step
Gdp(t-1)	-	-	0.8001*** (0.0859)	0.6097*** (0.0999)
$K_{(with)}$	0.2627 (0.1917)	0.2838 (0.2518)	-0.0391 (0.0497)	-0.0983 (0.0692)
hc	0.2087 (0.2169)	0.1775 (0.2563)	0.1692* (0.0847)	0.3319*** (0.0891)
open	0.0009**	0.0009*	0.0004 (0.0004)	0.0006** (0.0003)
	(0.0004)	(0.0004)		
inflat	-0.0016*** (0.0006)	-0.0016*** (0.0005)	-0.0001 (0.0007)	-0.0009** (0.0003)
infra	0.0072** (0.0029)	0.0049 (0.0036)	-0.0012 (0.0025)	-0.0015 (0.0017)
polstab	0.0347 (0.0223)	0.0399* (0.0215)	-0.0545 (0.0316)	-0.0798*** (0.0257)
$K_{without}$ *polstab*	0.0002 (0.0004)	0.0001 (0.0004)	0.0007* (0.0003)	0.0009*** (0.0002)
const	1.317425 (0.5255)	1.3008* (0.6956)		
Hausman		10.27 (0.1739)		
A-B test for Ar(1)			-2.54 (0.011)	-1.02 (0.306)
A-B test for Ar(2)			-2.36 (0.018)	-1.52 (0.128)
Hansen test of overid. restrictions			5.62 (0.71)	5.62 (0.64)

Number of observations	210	210	154	154

Standard errors of coefficients are in brackets below the value of the coefficients.
For specification tests, the p-values are in brackets under the computed statistical tests. The A-B tests are the Arellano-Bond test of serial autocorrelation.
*** 1% level of significance
** 5% level of significance
* 10% level of significance

CONCLUSION

This principal goal of this study was to investigate the impact of United Sates foreign direct investments on economic growth in Sub Saharan Africa for the period 1986 to 2013. Panel data was used as the appropriate data structure that accounts for the heterogeneity among countries. The results found significant effect of domestic capital stock on the growth of SSA countries but found no evidence that United States direct investments have any direct effect on the growth in the per capita income in these countries. The results obtained for equation 2 for both the fixed and the random effects on one hand and on the one-step and two-step GMM models are rather mixed because of the negative sign of the "capital with" variable in the latter group of models.

In both equations, political stability was found to have a significant effect on the dependent variable. Political stable could attract more foreign direct investments and grew faster while politically unstable countries attract less investment and grew less. It's a two-way relation which could either result in a negative coefficient or positive one. The GMM models in both equations found human capital to be significantly related to output growth in SSA countries. Also, openness plays a key role in the growth of SSA countries. This is not surprise as more opened countries tend to be more competitive and more efficient in the use of resources which in turn affect output growth. The non-significant impact of United States foreign direct investment in SSA can be explained by the concentration of US investment on mineral extractions and petroleum whose proceeds end in the pockets of the ruling elite common in most SSA countries. Investments in extractive sectors are not an effective way of transferring skills to the locals. Besides, United States companies investing in SSA often concentrate in few countries either because they have fewer taxes or simply because the procedures for doing business in these countries are more simplified. The United States is capable of doing more in SSA especially at this time that this region has the fastest growth rates and has the potential to do better. US businesses could also benefit from the cheap labor and the nearness to source of raw materials and a growing potential market for finished products.

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DETERMINING ADEQUATE CONTROL AND TEST GROUP SIZES IN RETAIL DIRECT CUSTOMER PROMOTIONS

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ABSTRACT

During a recent consulting project for a major women's fashion accessory chain, the company tasked this researcher to evaluate the success of campaigns conducted during the previous year. However, this researcher was unable to provide any concrete conclusions due to the small size of the control customers excluded from the campaigns and the small number of customers offered the alternative test versions of the campaign offers. Not only were the samples too small to determine any significance of difference between the groups, but there were also too few responders in the groups for the modeler to build a response model for the upcoming campaign. This inappropriate sizing, therefore, wasted the funds expended for the campaign versioning, missed the opportunity of income from the withheld control customers, and provided little or no insight into the appropriate campaigns for the present year's campaigns. This paper examines the examines an appropriate control and test group sizing methodology to ensure desired degree of confidence in final results and includes desired degree of power for of tests to provide results accurate within specified ranges of error. The paper will present an Excel-based model enabling nonstatistician business professionals to determine appropriate control and test group sizes to fit their particular business needs.

INTRODUCTION

To evaluate the effectiveness of a direct customer contact marketing campaign, retailers need to have control groups against which to compare the performance of the customers contacted through their campaigns to measure the incremental return from the campaign. In a simple form, this may entail selecting a group of customers to receive a direct mail piece and withholding that promotional piece from a similar group of customers. However, retailers are faced with a dilemma of how many include in the not contacted control groups because every customer not contacted potentially means lost sales. Conversely, if the object of a marketing campaign is to test the customers' responses to a new promotional piece, then the retailer is incurring an expense for each piece mailed. In both cases, adequate groups must be selected to ensure a desired degree of accuracy in the conclusions regarding the profitability of the campaign or the successfulness of the test campaign.

The impetus for this case study came from a recent project undertaken by this researcher to build the customer selection model and determine appropriate customer quantities for several direct mail campaigns for a large retailer. The campaign was to be built based on learnings and results of similar campaigns with similar objectives built and executed during the prior year. However, this researcher deemed that conclusions based on results of previous similar previous year's campaigns unreliable because of the small control and test quantities of customers selected for those campaigns. Therefore, the new campaigns lacked accurate critical historical information upon which to base assumptions regarding expected performance of control and test customers to assist with building the new campaigns.

This researcher could not determine the reason for the previous inadequate quantities, but one reason may have been projected costs and lost income resulting from larger test and control customer groups. However, given that the results of prior campaigns were not usable and resulted in no learnings, the funds expended for creating and delivering test mailpiece versions and the missed profit from customers withheld from mailings reduced the earnings from those campaigns reduced earnings with no benefit. In essence, the time and expense invested in creating delivering test versions and the sales opportunity lost from control customers not mailed was wasted.

DISCUSSION

Relevance of Direct Mail

Often, the first response to direct mail is that it is an obsolete or dying mode of communication with customers, asserting that e-mail or social media is a better channel for communicating with customers. However, evidence fails to support such claims for retail brick and mortar direct marketing. Stevens (2014) claimed that customer response to direct mail communications is 4.4% versus .12% for e-mail communications. Stevens concluded that the sheer daily volume of e-mail received by many consumers likely diminishes the significance of the channel, and may bury important e-mails within the bulk of insignificant ones. According to Stevens, 50% consumers trust and prefer direct mail over e-mail, a statistic including 18-24 years-olds, a younger demographic that is often purported to be influenced primarily by electronic communications. Further, the US Postal Service and commercial vendors such as Epsilon and Acxiom can easily and routinely verify the accuracy and currency of direct mail addresses.

Sample Sizes

Comparisons between test customers, customers receiving the main treatment, and customers receiving no communications ultimately evaluate the differences between the net margin per customer, but the calculations begin with the differences between the response rates of the groups. Those comparisons of differences, then, are comparisons between proportions. Basic statistical concepts inform us that three values are required to determine an appropriate sample size: degree of confidence required, some measure of data dispersion, and a degree of accuracy required. Further, population size should be considered to adjust the results. (Tan, Machin, & Tay, 2012)

Direct Mail Campaign Building Process

This researcher's 15 years of personal direct mail marketing experience reveals that, quite typically, direct mail campaign mail quantities are determined at a macro level well prior to the building and execution of individual campaigns. The retailer may determine annual mail quantities many months before the beginning of the new fiscal year, based on predicted annual sales, using a baseline of prior year mail quantities and the forecasted marketing budget. Because of such early determination of mail quantities, marketers tend to build specific direct mail campaigns to reach a predefined, rather than an optimal, quantity, varying the depth of customer selection to maximize a combination of customer response, average sale, or average profit, depending on the campaign goal. Goals might vary from increasing store traffic, to maximizing market share, of maximizing margin. Regardless of the goal, customers are typically ranked based on their probability of helping the retailer reach the stated goal and then stopping customer selection at the n^{th}-ranked customer at the predefined mail quantity. However, an optimal quantity may actually be at a higher or lower mail quantity.

If all customers were the same then a simple overall ranking would suffice, but typically, marketers often group customers into several major homogenous segments and then rank the customers within each group. Analysts then establish a customer rank cutoff within each segment. Retailers often assign segments monikers like "Brand Loyal", "Young & Trendy", "Holiday", etc. to more easily visualize customers in each segment. Retailers may categorize customers into such segments from internally captured customer purchase activity, customer-identified and appended customer demographics and psychographic attributes, with the goal of determining the combinations of each that may reflect common shopping or response behavior, and develop customer contact tactics applicable to each segment.

Addressing Retailers' Concerns

Perhaps the greatest concern of the retailer is the lost or diminished sales of those customers either withheld from the campaign control customers or mailed an alternative test version of the direct mail piece. Fearing such lost sales, retailers may be hesitant to remove significant numbers of their customers, especially some of their better customers, from direct mail campaigns. Also, retailers may fear the additional cost to create, produce, and distribute test mail pieces. The argument has merit, but the impact may not be quite as significant as retailers might initially think.
Miles (2014) stresses the importance of using analytics to determine, "when, how, and on whom to spend" (p. 146). The first concern, that creating control and test groups will result in lower profit, may be valid, but most likely not to the magnitude retailers believe. The exclusion of customers for control purposes in each segment should not result in a net loss equal to the total loss of the sales for the control customers, as each customer is replaced by a another, albeit lower value, customer. Figure 1 provides simplistic example of the net impact. Although $570 in sales is lost in deciles 1 through 3, $378 of that loss is offset by increased sales in decile 4, for a net loss of $192. Although beyond the scope of this paper, an argument could be made that penetration into a segment of customers not typically mailed might increase the lifetime sales of such customer, while not negatively impacting the better deciles from which the random controls were withheld.

***Figure 1*: Comparison of Gross Sales**

		Mailing All Available Customers				Holding Out 10% Control Customers					
Decile	Available	Mailed	Response Rate	Average Sale	Gross Sales	Control Group	Mailed	Response Rate	Average Sale	Gross Sales	$ Diff
1	1,500	1,500	5.0%	$30	$2,250	150	1,350	5.0%	$30	$2,025	($225)
2	1,500	1,500	4.5%	$28	$1,890	150	1,350	4.5%	$28	$1,701	($189)

3	1,500	1,500	4.0%	$26	$1,560	150	1,350	4.0%	$26	$1,404	($156)
4	1,500	500	3.5%	$24	$420	150	950	3.5%	$24	$798	$378
5	1,500	0					0				
6-10	15,000	0					0				
Total		5000			$6,120		5000			$5,928	($192)

Unless control groups are held out of a direct mail campaign, success cannot be measured at a customer or segment level. Success can be measured on a macro level, based on the overall change in sales or change in a merchandise category targeted. Retailers target customer segments because they understand this. However, unless a sufficient number of customers are withheld from the segment, thus receiving no communication, accurate measurement of the communication's impact on that segment may not be possible. Kahn (2011) stresses the importance of testing to determine the effects of marketing's experimentation. Some portion of shoppers will shop during a direct mail promotion even if they are not mailed. Therefore, measuring the response rate of only those customers mailed does not measure incremental response. To accurately measure incremental response mailed customer response for a segment, the segment's response rate must be compared to a statistically appropriate not mailed control portion of that customer segment. Without such a process a retailer will not have a valid basis upon which to make customer selections for future campaigns. Retailers must decide if the lost revenue opportunity for not mailed control customers is offset by the value of accurate measurement of the incremental response and sales and the resultant ability to improve the customer selection process.

The second valid concern of retailers, the additional costs incurred in versioning for testing, likewise, may be overstated. First, the costs of versioning may be virtually nil, depending on how much difference exists between the versions. Versioning, or testing, most typically are in the form of varying the offer, varying the creative graphics, wording, or display, or varying the physical attributes of the mail piece. The first of these, varying the offer and varying content, should result on virtually no additional in-house production costs, and minimal print total print costs, given today's variable print technology. Even older technology requiring plate changes should not be much more than one-time fixed plate change costs, often negotiable with lettershops based on overall campaign quantities printed and long-term relationships. Even potential higher USPS postage costs should be offset by comingling the versioned pieces when delivered to the USPS, a common lettershop practice to reduce costs. This, then, leaves the cost associated with a physically different piece, such as a postcard v. a folded piece v. a catalog, or a variation of each. However, marketers may be able to minimize this potential increased cost by planning.

One of the problems with varying the direct mail communications with a customers is that if multiple changes are made to a communication, the retailer may not be able to determine which of the changes most influenced the change in customer behavior. For example, if an offer was changed from $15 off a $50 purchase to $30 off a $100 purchase, and the mailpiece promoting that offer was changed from a postcard to a folded piece, then which change resulted in the changed customer behavior? Perhaps the offer change increased customer response, while the format reduced response, or perhaps each increased response but not with a cumulative effect. Or, perhaps they both increased response with a synergistic effect. Without sophisticated techniques involving even more test groups, marketers may be left with even more questions.

A more appropriate approach to testing may be to vary only one attribute of a mailpiece at a time. For example, just varying the discount offer should be inexpensive, and it would create a baseline for further testing. The downside of such an incremental approach is that the process of identifying an optimal combination of changes may take longer. However, such an approach may also enable marketers to discard changes with minimal or negative results, and it may also allow them to, potentially, eliminate any combinations including that discarded change. By planning variations to coincide with creatives already scheduled for a campaign, a marketer may avoid additional costs. If the goal is to test a physically different mailpiece for a segment, then perhaps that test can be scheduled to coincide with a campaign that already had the two different treatments planned. Perhaps a campaign that planned a folded mailpiece for a better customer segment and a postcard for a weaker segment may provide an marketers with a testing opportunity of mailing each piece to a portion of the segment not scheduled for that piece.

A Testing Plan

Testing must be based on a plan, rather than an ad-hoc addendum to a campaign. Much as retailers plan out their direct mail campaigns a year in advance, so must they plan their testing goals within those campaigns. The direct mail process is lengthy compared to e-mail, social media, and phone campaigns. The customer selection, the printing process, and mail delivery process can rarely be completed in less than three weeks, and it more commonly takes four to six, or

even eight weeks, from the time the customer selection process begins until the mailpiece arrives in the customers' mailboxes. Also, the length of retail brick and mortar direct mail campaigns typically run from one to four weeks, meaning that final results may not be measurable until more than two months after the mail list leaves the retailer. Meanwhile, the retailer has already begun, or even completed, the selection of customers for the next campaign, thus precluding the use of conclusions from the first campaign being used to improve the customer selection for the next campaign. In some instances this lag in using results from one campaign to effect another campaign may span several campaigns. Therefore, marketers must build a testing timeline covering multiple campaigns. Figure 2 shows an abbreviated version of how such a timeline may appear, and it shows when results from one campaign should be available for use in subsequent campaigns.

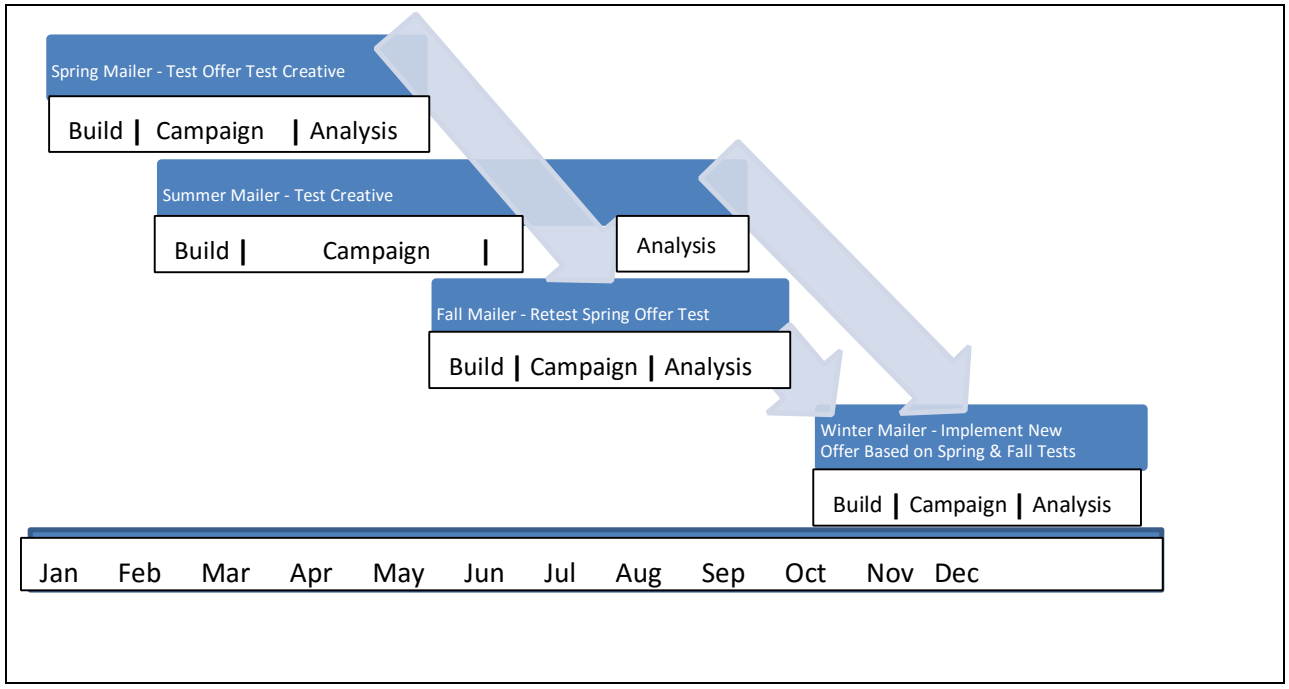


***Figure 2*: Testing Timeline**

The timeline needs to identify what tests will be conducted in each campaign, when the results of those tests will be available, and when the conclusions from those campaigns may be used in future campaigns. Sometimes the action taken is a simple decision, but more likely, the actions are more complex, perhaps more like an investigation. The use in future campaigns may be retesting to confirm the original conclusions, follow-on testing to vary a communication based on the original conclusions, or rollout of a test to the population.

Determining Appropriate Test and Control Group Sizes

As the underlying key to a successful direct mail campaign is customer response rate, use of the formula for calculating the sample size of a proportion is appropriate. However, virtually all business applications involve a finite population. Therefore, results from the basic formula should have the finite population correction factor (FPC) applied. Figure 3 shows both formulae, with n from the first formula becoming n_0 in the second, and Figure 4 shows these formulae as Microsoft Excel calculations.

Basic Sample Size for a Proportion Formula

$$n = \frac{Z^2_{\alpha/2}\,\pi(1-\pi)}{e^2}$$

Application of Finite Population Correction Factor

$$n = \frac{n_0 N}{n_0 + (N-1)}$$

***Figure 3*: Sample Size Formulae**

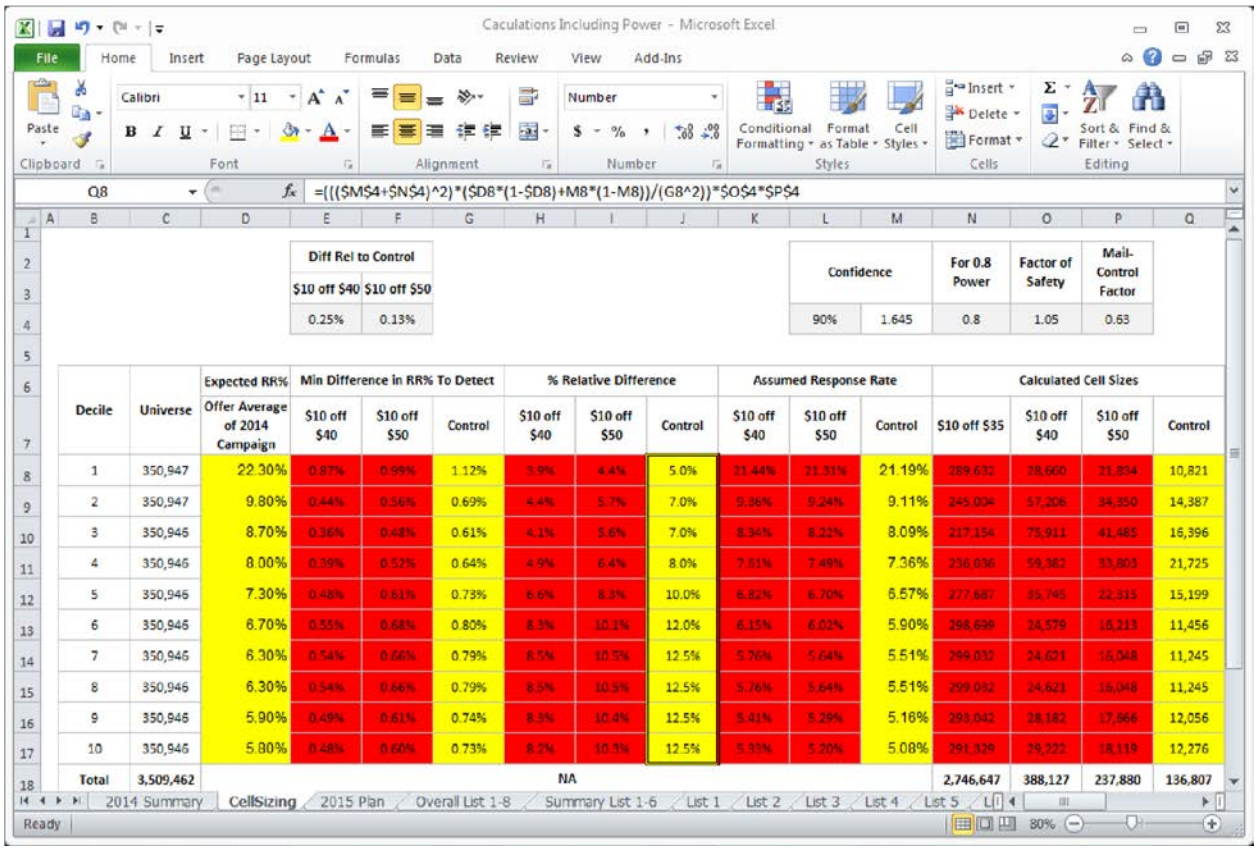
The basic formulae shown in Figure 3 and the Excel solutions in Figure 4 only take into account the desired degree of confidence in final results. However, more complex formulae also adjust results for the desired power, the ability of a test to reject a false null hypothesis, and compensate for expected differences between various test and control groups. Figure 5 shows a spreadsheet that allows a marketer to simultaneously calculate multiple test and control quantities, and includes the capability to include subjective criteria to determine "what if" estimates of test and control quantities.

These examples show that the mathematical process to determine appropriate test and control quantities is not complicated. With basic Excel skills a marketer can build a spreadsheet allowing simple entry of the four basic variables to calculate sample sizes, and with a little more expertise, the marketer can build a comprehensive spreadsheet including all test offers and control groups, allowing for subjective inputs to adjust results to fit unique circumstances. Even someone lacking Excel skills can easily find sample size calculators on the internet. A search using "sample size calculator proportion" yields many easy to use calculators providing simple instructions and accurate results. Therefore, even a novice can determine appropriate quantities.

Calculations

	A	B	C	D	E
3	Estimate of True Proportion	0.05			
4	Sampling Error	0.0025			
5	Confidence Interval	95%			
6					
7	Z Value	-1.960	=NORM.S.INV((1-B5)/2)		
8	Calculated Sample Size	29,195.09	=(B7^2*B3*(1-B3)/B4^2)		
9					
10	Sample Size Needed	29,196	=ROUNDUP(B8,0)		
11					
12	**FPC Adjustment**	**FPC Adjustment**			
13	Population Size	25,000			
14					
15	Calculated Sample	13467.84	=(B8*B13)/(B8+(B13-1))		
16					
17	Sample Size Needed	13,468	=ROUNDUP(B15, 0)		
18					

***Figure 5*: Sample Size Calculation Including Power**
***Figure 4*: Excel Calculations**



CONCLUSION

Without testing, changing direct communications to customers becomes a process of taking a chance with an entire segment or population of customers. Testing allows a trial and error process with a small portion of customers and

then application of learnings to the larger universe. This approach does involve costs, and retailers need to determine if such costs are offset by later increased earnings resulting from the learnings. An inherent problem with direct mail campaigns is the lengthy process from the beginning the campaign build process to the conclusion of the campaign and analysis of results. Evaluation and application of testing results from a campaign developed in one month may not be possible until several months, and possibly several campaigns, later. Such expected delays require marketers to manage the expectations of senior leadership. Therefore, a testing plan showing what results will available and when those results can be used to influence future campaigns is essential.

Not mailed control groups have a similar lag in when conclusions can be applied, but they also have an immediate impact of enabling retailers to accurately measure the performance of a current campaign. Although control groups provide useable results sooner, this initial value relates to the accuracy of campaign measurement. Here, marketers can exercise judgement by modifying the amount of error and degree of confidence used in calculating sample size. *What if* scenarios can easily be developed for leadership to show the resulting level of accuracy and amount of error based on choosing one control group size over another. Presented with options, leadership can make educated judgement calls while fully aware of the consequences.

Sample size calculators are easily built in Excel and are readily available online. Once built in a spreadsheet, marketers can replicate calculations to show the effects of varying confidence intervals and amount of error or difference to detect. The simpler models include only confidence interval, population proportion or expected response rate, and amount of error or expected difference, but power, multiple test offers, and other user variables be added easily.

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THE ANALYTICS TEAM: CONTRIBUTIONS OF THE BUSINESS AND TECHNICAL STAKEHOLDERS

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ABSTRACT

Advanced analytical tools and techniques, known as business analytics, are changing the decision-making environments in many business domains; particularly marketing and human resources. The use of business analytics is becoming highly effective in today's data-driven decision-making environment. The advanced nature of these tools require a skill set beyond many of today's marketing and human resource professionals. Therefore they must work as part of team with quantitative professionals—known as quants—to utilize these tools most effectively. This paper outlines the roles and responsibilities for each of these two professional groups. The roles and responsibilities at each stage of a standard analytic problem solving process known as CRISP-DM.

INTRODUCATION

Advanced analytic tools and techniques, known as business analytics, are changing the decision making environment that business stakeholders, namely human resources and marketing stakeholders, work to an environment where data-driven decision making is the norm. Both human resources (HR) and marketing personnel have had access to data about employees and consumers respectively for many years. However, the recent advent of data analytic tools has caused a fundamental shift to occur in these professions. In this new data-driven environment, HR and marketing stakeholders are making more complex decisions requiring the knowledge and understanding of a new set of analytic models in order to leverage the data.

Analytics, as defined by Davenport, is "the extensive use of data, statistical and quantitative analysis, explanatory and predictive models, and fact-based management to drive decision and actions" (Davenport & Harris, 2007, p. 7). In order to utilize effectively these tools both HR and marketing professionals need a basic knowledge and understanding of the tools used to collect, assimilate, and leverage data to model decisions in their respective professions.

The good news is that HR and marketing personnel will not have to know all the ins and outs of every analytic technique, however, they will need enough knowledge about analytic techniques to converse with "quants" that are performing this analysis to use the outcomes properly in their decision making. Quants are people who can perform the detailed analysis on the data (Davenport & Harris, 2007). The role of the quant is much like that of the systems analyst in the development of a database project. The systems analyst must understand the problem and create the requirements for the given problem. The analyst then turns the requirements into a design which in turn is submitted to the technical analysts (programmers) to provide the finished product.

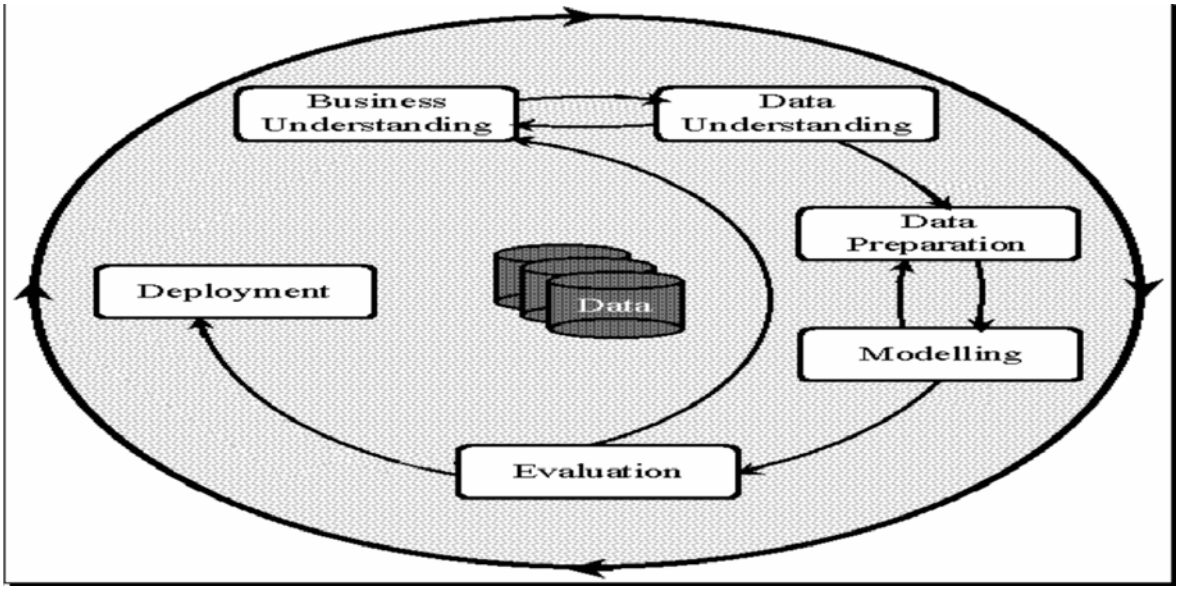
The analytics process, for both the HR and marketing environment, is well defined. The development of an analytic solution is similar to the systems development process and is, ideally, a team-based effort. The "business stakeholders"—namely the HR and marketing stakeholders—provide the domain knowledge by playing the role of subject matter specialist and final evaluator of the results of the development effort, while the "technical stakeholders"—the quants—provide the skills necessary to select and utilize specific analytic tools. In this paper, the analytics process is defined and the roles played by both the business and technical stakeholders are examined. In addition, the level of knowledge necessary for each stakeholder in the development of the solution is proposed.

In the next section, the general analytics problem solving process is introduced; the CRISP-DM model (IBM Corporation, 2010) is used in this paper. The next six sections discuss the individual stages of the CRISP-DM process and defines the major roles played by both the business and technical stakeholders. The next section describes the three major iteration areas within the CRISP-DM model. It is in these three key places that a high degree of cooperation between the stakeholder groups is exhibited. A summary of the key roles of both the business and technical stakeholders is provided in the next section. The final section states the conclusions of this work as well as pointing to areas for potential future work.

THE GENERAL ANALYTICS PROCESS

The CRISP-DM methodology was developed by a consortium of firms in late 1990's and was tested and proven as an effective model for development of analytic solutions of all kinds. The basics of the CRISP-DM methodology is shown in Figure 1. Each of the major stages are summarized below:

Figure 1: The CRISP-DM Methodology



First of all the outer loop shows the iterative nature of the analytic process. The CRISP-DM methodology is described in six distinct stages: Business Understanding, Data Understanding, Data Preparation, Modeling, Evaluation, and Deployment.

Business Understanding

The CRISP-DM methodology begins similar to the initial stages of many other standard problem solving processes (Polya, 1957). This phase lays out the project's objectives and requirements from the business perspective. It then converts the business problem into plan for solving the problem using data mining or another analytics technique. The technical stakeholders create the technical objectives in this stage.

Data Understanding

Data understanding begins with the data identification and collection process. In this phase an assessment of the data, its fit, quality, and potential usefulness are determined.

Data Preparation

Making the data useable and effective for the particular analytic tools is an extremely time consuming and important task (Kerravala, 2015). The transformation and cleansing of data is important to ensure an accurate and useable result.

Modeling

Modeling consists of the final selection of analytic techniques and tools used to perform the analysis. In addition, the building and application of the model using the data is performed.

Evaluation

Assessment and evaluation of the modeling results is necessary to ensure that the solution is viable and feasible. "A key objective is to determine if there is some important business issue that has not been sufficiently considered" (IBM Corporation, 2010, p. 6)

Deployment

The final phase consists of implementing the findings (solution) found through the use of analytics. Robinson (2004) states that implementation is interpreted in three ways: implementation of the findings, implementation of the model and/or implementation of knowledge gained through the study. The type of implementation and carrying out of that implementation is the responsibility of the business stakeholders.

There is more to the CRISP-DM model, however, than the individual stages. There are three key areas of iteration: (1) between the business understanding and data understanding phases, (2) between the data preparation and modeling phases, and finally, (3) between the evaluation and business understanding phases. Each of these phases are discussed in further detail when describing the individual roles of the business and technical stakeholders.

BUSINESS UNDERSTANDING

Defining the business problem(s) is the single most important activity in this and any problem-solving methodology. Without the proper definition and description of the problem any analysis or solution may leave the existing problem unaddressed.

The primary responsibility for formulating and stating the business problem and the objectives of the work lies with the business stakeholders. They are considered the domain experts and therefore they know and can describe the problem the best. The role of the technical stakeholder at this stage is to refine the problem statement to one that is addressable through the use of analytics. At the end of this stage, a definitive agreement on the problem and its scope must exist.

As a part of stating the business problem, the business stakeholder must assess the situation. This includes stating the assumptions and constraints of the study, along with the risks and the feasibility of the study in terms of the costs and benefits. The formulation of the assumptions, risks, costs and benefits are done in concert with the technical stakeholder.

Once the business problem is stated in concise terms the technical stakeholder is then responsible for developing the goals and objectives for the analytic modeling effort. In setting these goals and objectives, the technical stakeholder needs to ask questions like: 'by the end of this study what do you hope to achieve?' and 'what constraints are limiting this analysis?' (Robinson, 2004).

In addition to the goals the technical stakeholder must develop a preliminary project plan and the success metrics to assess the effort. The business stakeholders need to see that the metrics chosen to measure the success of the study are line with other similar projects.

DATA UNDERSTANDING

This is a crucial stage in the analytics process. It is here that the business stakeholders, in a joint effort with the technical stakeholders, attempt to identify what particular data sources are needed to address the business problem expressed in the previous stage. The technical stakeholder becomes involved in using their knowledge of the various databases and other storage areas for data. If an enterprise has a good data governance program (Ladley, 2012; Benson. & Dubov, 2011), then the work to locate the data is straightforward. However, given the absence of many of these programs the work of locating these data sources will fall on both the business and technical stakeholder.

In addition to locating the particular data sources the business and technical stakeholders must describe and then attempt to assess the quality of the data under consideration for the study. Together, both parties must begin to explore the data for some initial insights in order to formulate initial hypotheses.

One problem that might arise at this stage is that the data just does not exist or the data is found not useful due to low quality. In this case the business stakeholders will have to make a choice as to proceed with the analysis without this data. If the work proceeds then the business stakeholder will have to deal with an analysis with a higher degree of uncertainty on the outcome due to missing or inadequate data. One major outcome is the development of a data quality report that details the data being used and the potential issues that might arise from using particular data sources.

Data understanding is a shared responsibility between the business stakeholder and the technical stakeholder but it is one that normally requires a higher degree of input from the business stakeholder due to their knowledge of the problem domain.

DATA PREPARATION

The data preparation stage is a pre-requisite step to any modeling activity. The primary person responsible for leading the activities of this stage is the technical stakeholder. There are multiple activities in the data preparation stage that a technical stakeholder is involved in; these include selection, cleansing, integrating, and formatting the data. Each of these activities vary based on the modeling techniques employed. The technical stakeholder must understand the input structure for the chosen modeling techniques and ensure the quality, proper format, and amount of data is placed into the model, in order to make the modeling activity valid in terms of the results. The outcome of the data preparation stage is a dataset description document that provides the metadata analysis of the data used in the modeling effort.

While the type of data (financial, human resources, marketing, etc.) is not important, the technical stakeholder needs to know how to get the most information out of the given data. Data preparation is the focus of a technical stakeholders due to their high level of knowledge of the modeling activities and issues relating to preparing and working with data. (Kerravala, 2015). Each different model has different data requirements that require adherence to assure valid results applicable to the problem domain.

While the business stakeholder has little input in this process, an understanding of the issues and stages in data preparation can help the team gain deeper insight as to what the analysis means, where the results are used and applied, and can set reasonable expectations as to the breadth and depth of the analysis.

MODELING

"Data modeling refers to the mathematical steps that are taken to transform empirical observations into a form that is useful for decision modeling" (C.Weinstein, et al., 2003, p. 13). The modeling effort in analytics involves the selection and application of various modeling techniques. Multiple techniques are often used and tested to find the "best" model to solve the business problem.

Each of the various modeling techniques have specific requirements on the form of the data. In addition, lack of data may render a technique as invalid as some techniques require a significant amount of data. These two conditions, if not meet, may mean that certain models are eliminated from consideration based on the data understanding stage and each of the techniques under consideration may require the iteration back to the data preparation stage to reformulate and reevaluate the data (IBM Corporation, 2010).

In addition to finding the correct modeling techniques the technical stakeholder must generate a test design plan, build the model, and then assess the model performance. The assessment of model performance may also include an examination of the confidence that the modeler has in the approach (Gass & Joel, 1981).

This stage is led by the technical stakeholder because of the high degree of knowledge needed of the various modeling techniques. The business stakeholder must develop at least a cursory understanding of the various techniques under consideration and the more knowledge they have about the modeling effort the more they can contribute to this stage.

EVALUATION

Evaluation considers the major question: 'Have we solved the business problem?'. Since the data analytic modeling effort is complete and the validation of the model performed, concerns focus on the assessment of the results to see if they are suitable for the specific problem domain. A key point in the analysis is to make sure that all of the objectives set forth in the Business Understanding stage are met. If outstanding issues with the business problem remain then the analysis is not complete and further work is required. A review of the process that led to this result should indicate which area of the CRISP-DM process that needs further evaluation and possible rework.

If it is determined that the results do in fact satisfy the business stakeholder then a list of possible actions are drawn up based on the results of the modeling effort. Among the actions considered at this stage are: (1) the implementation of the findings, (2) the implementation of the model, and/or (3) the implementation of the learning (Robinson, 2004); these are completed in the final stage; deployment.

DEPLOYMENT

In the implementation of the findings, the results from the modeling effort are put into a set of plans to make changes to address the business problem. The business stakeholder, in conjunction with other business professionals must

decide which of the recommendations to put into practice and assemble a project team to plan the changes to the existing system.

In the implementation of the model, the technical stakeholder will relinquish the control of the model to the business stakeholder for either similar decision-making activities or further experimentation. If the model is passed on to the business stakeholder, it is the duty of the technical stakeholder to see that adequate documentation on the use, including all assumptions and constraints, of the model is also passed on the business stakeholder or whoever might use the model in the future.

Finally, in any modeling effort, vital knowledge and insights are gained through the modeling effort. Even if the modeling effort is unsuccessful the lessons learned from going through the CRISP-DM process can impact both the business and technical stakeholders. It could lead to a better understanding of the data, of the problem domain, or of the development of analytic models in the future. While this learning is often intangible it is often not a formally documented outcome of the project, but still can have a substantial impact on both the business and technical stakeholders.

With any of these three types of implementations, a formal report is often produced which documents, as best as possible, the process that was undertaken as well as any lessons that were learned from this effort.

KEY ITERATIONS

As seen in Figure 1, there are three points in the CRISP-DM process where iteration back to a previous step is called out. In this section those three iterations points are discussed and the rationale for including these iterations is also examined. These three iteration points become opportunities for greater teamwork between the business and technical stakeholders. The CRISP-DM guide (IBM Corporation, 2010) makes very little mention of these iterations, but they are important in the interactions between the business and technical stakeholders.

Iteration between Business Understanding and Data Understanding

As stated above the business understanding stage develops the problem statement that is addressed by the analytic modeling process while the data understanding stage is where the identification and cleansing of the data is undertaken. In the business understanding stage, the business stakeholder describes the problem under consideration. In addition, a needs assessment is performed to justify the use of analytic techniques for the solution of the problem. In the data understanding stage, the business and technical stakeholder identify and examine the data needed to solve the stated problem.

Oftentimes the business stakeholder would like to solve a large, broad problem, however the data needed to address this problem is unavailable or may exist but in a low quality form that it is deemed unusable. In this case the business stakeholder must iterate back to the business understanding and modify the problem given the unavailability of data needed to address the problem.

While the business stakeholder may settle for solving a smaller, more restrictive problem, both the business stakeholder and technical stakeholder should begin to develop a plan to either acquire the data necessary to solve the less restrictive problem or work to increase the quality of the existing data source to make it suitable for use on the original problem.

Iteration between Data Preparation and Modeling

The iteration between data preparation and modeling is a natural occurrence for any technical stakeholder. Each different modeling technique has unique data requirements in terms of both form and data size in order for the results to have some level of credibility. For example, many data mining techniques require two very large data sets; one for training the model and the other for testing the model. In addition, careful selection of the mix of input variables is often a time consuming activity that impacts model selection.

While this iteration is usually led by the technical stakeholder the business stakeholder should verify whether the existing data meets the requirements of the chosen model. Similar to the previous iteration the lack of conformity of the data may impact the range of choices available to the technical stakeholder.

Iteration between Evaluation and Business Understanding

This final iteration step is part of nearly every problem solving endeavor in making sure the results solve the business problem(s). The solution that is generated from the modeling effort is tested and reviewed in terms of the stated business objectives in the business understanding stage. This evaluation is performed to ascertain if further analysis is necessary because the solution is deemed unacceptable to the business stakeholder. If further analysis is necessary, then the business objectives are either restated or rewritten and the process may begin again; although in an abbreviated manner.

If the solution is considered acceptable to the business stakeholder the final deployment stage is begun and the work of the technical stakeholder is nearly complete.

SUMMARY OF ROLES

Table 1 summarizes the roles and responsibilities for both the business and technical stakeholders. This table describes the leadership roles, tasks, and knowledge contributed by each team member in the various stages of the analytic modeling process.

Table 1: Summary of Roles and Knowledge

Stage	Primary Leadership Role	Participants	
		Business Stakeholder	**Technical Stakeholder**
Business Understanding	Business Stakeholder	Fundamental/Working Knowledge of the Problem Domain	Knowledge of the Viability of the Analytic Modeling Applied to the Problem Domain
Data Understanding	Shared	Fundamental/Working Knowledge of the Problem Inputs/Outputs	Fundamental Knowledge of the Availability and Quality of Data Sources
Data Preparation	Technical Stakeholder	Basic Knowledge of the Stages of the Data Preparation Process	Fundamental/Working Knowledge of the Stages of the Data Preparation
			Process
Modeling	Technical Stakeholder	Basic Knowledge of the Models and their Underlying Assumptions	Fundamental/Working Knowledge of the Analytic Models
Evaluation	Business Stakeholder	Fundamental Knowledge of the Problem Domain	Basic Knowledge of the Problem Domain
Deployment	Business Stakeholder	Fundamental Knowledge of the Problem Domain	Fundamental Knowledge of the Modeling Outcomes

As seen in Table 1 in only one of the six stages do the business and technical stakeholder share nearly equal responsibility. In all of the other stages, a single individual leads the effort. For the majority of the stages, the business stakeholder leads the effort; this is in keeping with the fact that this is a business problem solving endeavor.

Table 1 also indicates the level of knowledge necessary for each of the major stakeholders; this table indicates three levels of knowledge: basic, fundamental, and fundamental/working. A basic knowledge level is the lowest level of knowledge necessary for the stakeholder in that stage. A basic knowledge level indicates that the stakeholder is aware of the work being performed by the other stakeholder and only needs to know that the steps in that process are followed in the prescribed order. In this case, the stakeholder trusts that the process is carried out to the highest standard. For example, the business stakeholder, in the data preparation stage, needs to only know what steps the technical stakeholder should perform and the prescribed order of these steps. The business stakeholder in not expected to have the knowledge and level of understanding to check the work of the technical stakeholder.

Having a fundamental knowledge means that the stakeholder is knowledgeable enough about the process to ask questions as to the choices made by the other party. For example, in the business understanding stage, the technical stakeholder may not have an in-depth knowledge of the problem domain therefore the viability of modeling efforts is unclear and further clarification on the problem domain is necessary in determining viability. In other words, at this early stage, the technical stakeholder is still learning about the problem domain but should have enough experience with modeling efforts to have a reasonable assurance that analytic modeling is a reasonable solution path.

Finally, having a fundamental/working knowledge means that true interaction between the business and technical stakeholder can take place. Each person has in-depth knowledge in their particular area but they need to a solid understanding of the other party's activities to contribute to the overall success of that stage. By having both parties reach the level of fundamental/working knowledge the effort is then assured success because a true collaborative partnership is possible.

CONCLUSIONS AND FUTURE WORK

Data-driven decision making environments require a team effort. Both business and technical stakeholders need to work together to solve complex, data intensive problems. Understanding the roles and responsibilities of each of the stakeholder groups is paramount to building a collaborative partnership. In addition, knowledge of the activities of both stakeholder groups is important in many of the stages; that is where this paper begins to make a contribution.

One focus of future work is on the further identification, definition, and analysis of each stakeholder's role, responsibilities, and level of knowledge. An investigation of how obtaining a higher level of knowledge contributes to the overall project success. A seocnd future focus will concentrate on an examination—from both stakeholder's perspectives—of the ethical questions related to decisions within the analytic process.

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HOBBY OR BUSINESS? THE CLASSIFICATION CAN BE COSTLY

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ABSTRACT

Business activities that resemble a hobby or recreational activity often receive close scrutiny by the IRS when reported on tax returns. Normally, a taxpayer engaged in a "for profit" activity is entitled to deductions against income for a variety of expenses. However, the deductibility of hobby related expenses is much more limited. This paper will discuss the potential tax consequences of the alternative classification of a "for-profit business activity" versus a "hobby activity". Additionally it will analyze the tax regulations of Section 1.183 that provide a non-exclusive nine factor list of considerations. The Internal Revenue Service and the courts utilize these factors in determining whether an activity is engaged in "for profit". This paper will also examine recent Tax Court cases in which the Court employed the nine factor analysis. Conclusions and practical steps will be presented from these cases to assist taxpayers in avoiding the costly pitfalls of Section 183.

INTRODUCTION

The popular adage "Do what you love and you will never work a day in your life" appeals to all. Oftentimes, a business based upon a passion has its roots in a recreational activity or hobby. While such businesses may hold a high intrinsic value for their owners, profits may be insubstantial. Furthermore, economic realities may require that the owner engage in the business activity on a limited basis only, or defer its start until the owner has additional means of support such as another job, a pension or an inheritance. For instance, an aspiring pro golfer may work four mornings a week as a college professor and pursue a golf career in the afternoons and weekends. Or, a wealthy horse enthusiast may extend their love of horses into a working horse farm. Unfortunately, the unwary golfer or horse enthusiast may find that the Internal Revenue Service ("IRS") views their business pursuits as mere recreational activities or hobbies rather than legitimate for profit businesses, which can result in a significantly larger tax bill for the taxpayer due to the limited deductibility of hobby losses.

While there is not a rigid, bright-line, exclusively applied test used to distinguish between a for profit business activity and a hobby/recreational activity, the taxpayer should be alert to the provisions as well as the interpretations concerning Section 183 of the Tax Code and Section 1.183 of the Code of Federal Regulations. This article will initially discuss the potential tax consequences of the alternative classifications of a for-profit business activity versus a hobby. Recent court decisions as well as the Internal Revenue Service criteria for distinguishing between the two will then be reviewed. The article will conclude with some thoughts on how to avoid unfavorable tax treatment of for-profit business activities that may otherwise resemble a hobby or recreational activity.

THE STATUTE AND ITS MEANING

Internal Revenue Code ("IRC" or "Code") sections 162 or 212 permit a business activity which possesses a profit motive to deduct ordinary and necessary expenses to off-set revenues and unrelated income of the taxpayer in the current year, or to carry the expense forward and possibly backward to off-set income of future or prior years. In contrast, IRC Section 183 generally prohibits the deduction of expenses related to activities not engaged in for profit unless the expense is statutorily permitted as an allowable hobby loss deduction (26 U.S.C § 183(a)). Allowable hobby loss deductions include certain expenses that are generally allowable deductions (26 U.S.C. §182(b)(1)). For example, certain interest expense and property tax expense of the activity that may have otherwise been deductible will be deducted as first tier deductions. The Code then allows deduction of certain other expenses of the activity as second tier deductions, but only to the extent the gross income for the taxable year exceeds first tier expenses (26 U.S.C.§183(b)(2)). Significantly, except for those deductions allowed to the full extent by other relevant sections of the Code, the second tier deductions would be a Schedule A miscellaneous itemized deduction, subjecting these deductions to a reduction equivalent to two percent (2%) of adjusted gross income.

The Code clearly limits deductibility of expenses to the amount of gross income derived from the hobby activity for the taxable year. This both prohibits the offset of income from other sources in the current year, and further prohibits the carryover or carry back of excess expenses. The excess expense deduction from the activity is effectively lost to the taxpayer forever. In addition, if the taxpayer elects to take the standard deduction rather than itemize deductions,

the taxpayer will not be able to utilize any of the hobby-associated expenses. In this case revenue would be recorded as Other Income (line 21), but no deductions would be taken on Schedule A since the taxpayer utilized the standard deduction. With the possibility of such serious consequences, the taxpayer must be mindful of the nine factor test used to assist in determining if an activity is a for-profit motivated activity or a hobby/recreationally motivated activity and be prepared to provide documentation of the profit motive.

THE REGULATION AND ITS APPLICATION

Applying the Nine Factor List of Considerations of Treasury Regulation §1.183

In order for an activity to be classified as a for-profit business activity rather than a hobby, the taxpayer must have, as the primary purpose for engaging in the activity, an income or profit motive (*Whipple v. the Commissioner, 1963).* The IRS has promulgated regulations providing a nine (9) factor, non-exclusive list of considerations to assist in ascertaining whether the taxpayer possessed the requisite profit intent (Treas. Reg. §1.183). No single factor or specific number of factors is determinative. Rather, courts have considered each factor individually and in their totality to gain a comprehensive understanding of the taxpayer's intent with regard to the activity. A 2015 United States Tax Court decision in a horse related matter clarified the test of intent as being focused on the taxpayer's subjective intent as opposed to whether a reasonable person would have anticipated a profit. In that case the Court found in favor of the taxpayer (Metz v. Commissioner, 2015). In 2013 the United States Tax Court rendered a decision, also in a horse related matter, again applying the nine factor test, but found in favor of the IRS (Craig v. Commissioner, 2013). While both cases dealt with horse farming, an examination of the nine factors clarifies why one taxpayer was entitled to the for-profit activity classification, and the other taxpayer was not.

Analysis of the Relevant Factors by the Tax Court

Factor 1: Manner in which the activity is conducted (Treas. Reg. §1.183-2(1)):

In the Metz case, the Court focused on the fact that the taxpayer used accounting software in their bookkeeping, hired a CPA firm to perform monthly reconciliations, hired a law firm to prepare contracts, prepared an annual business plan including business goals, and developed job descriptions, policies and procedures. In addition, the taxpayer assessed the actual results in relation to the business plan and modified the plan in an attempt to improve results. These practices led the Court to determine that the activity was operated in a business-like manner (Metz v. Commissioner, 2015).

In the Craig case, the Court noted that the taxpayer commingled personal and horse related activity and funds, using their personal bank account for both personal and business purposes. The taxpayer did not retain experts to assist in determining how to maintain records for their horse activity, did not have a written business plan at the time, and did not modify their method of conducting the activity, even though they consistently generated losses. These observations led the court to determine that the activity was not conducted in a businesslike manner (Craig v. Commissioner, 2013).

Factor 2: The expertise of the taxpayer or the taxpayer's advisors (Treas. Reg. §1.183-2(2)):

The Court found that both Mr. and Mrs. Metz showed knowledge of and leadership in the horse industry. They were both very involved in their industry's society, serving on the society's board, and as speakers at society events. Mrs. Metz studied horse bloodlines and pedigrees as well as the management and veterinary care of horses. The taxpayer also turned to a number of professionals to handle aspects of horse breeding that were not part of their expertise. The Court concluded that the taxpayer demonstrated expertise in the field and plainly met the intent of the second factor (Metz v. Commissioner, 2015).

Conversely, Mrs. Craig testified as to her lifetime love of and interest in horses as well as her discussions with friends and acquaintances who owned horses to exchange information about their respective experiences. The Court found Mrs. Craig's testimony to be general, vague, and/or 'conclusory' (Craig v. Commissioner, 2013).

Factor 3: The time and effort expended by the taxpayer in carrying on the activity (Treas. Reg. §1.183-2(3)):

Evidence was provided that both Mr. and Mrs. Metz worked regularly and continuously on a full time basis at the horse ranch for the years at issue. In addition, Mr. Metz testified that he withdrew from his career as the operator of a successful baking company at approximately the time he and his wife began breeding and selling horses. From this evidence the Court concluded that the taxpayer had satisfactorily established that -they worked personally and with great effort on the activity (Metz v. Commissioner, 2015).

In contrast, Mr. Craig worked full time as a high voltage electrician/engineer and Mrs. Craig worked full time as a real estate agent and part time as an employee of H&R Block during the time at issue. While the Court found Mrs. Craig devoted a substantial amount of time to the activity, the Court ultimately concluded that this time commitment was attributable to and consistent with her lifetime love of and interest in horses rather than related to a profit motive (Craig v. Commissioner, 2013).

Factor 4: Expectation that assets used in the activity may appreciate in value (Treas. Reg. § 1.183-2(4)):

In Metz, the Court considered not only the land on which taxpayer conducted the horse activities, but also at the individual horses and the frozen sperm used for breeding as assets which could appreciate in value. Further, the Court found that the activity was a single activity; that is, the operation of the ranch, the ownership of the land, and the breeding of the horses constituted one related activity such that the anticipated appreciation of the land and horse related assets were evidence of a subjective profit motive intent. In addition, the taxpayer had purchased and sold assets at a substantial profit and continued to hold other assets which had appreciated in value. Although the appreciated value was not yet sufficient to overcome the total losses to date, the taxpayer evidenced a belief the asset would continue to increase in value, thereby establishing a subjective profit motive (Metz v. Commissioner, 2015).

In Craig, Mrs. Craig asserted in her brief that she expected the value of her horses to appreciate as a result of the training, breeding and show competition reputation developed by her horses and also expected the value of her real property to increase as the result of her development of a reputation as the primary supplier of her special "paint" horse breed. However, the Court found that the taxpayer failed to establish that the increase, if any, in the value of the farm property would exceed the expenses that had been incurred or be sufficient to recoup the aggregate losses sustained since 2005 (Craig v. Commissioner, 2013).

Factor 5: The success of the taxpayer in carrying on other similar or dissimilar activities (Treas. Reg. §1.183-2(5)):

The record in the Metz matter showed, and the IRS conceded, Henry Metz had previously helped turn around an unprofitable business in an unrelated field. Metz took Metz Baking from a business that lost about $1 million a year to a business profitable enough to draw corporate suitors (Metz v. Commissioner, 2015).

The Court found that Craig had not engaged in any activities similar to her horse activity. Mrs. Craig asked the Court to conclude that, because of her success as a real estate agent, Mrs. Craig has the potential for success in other fields. The Court found it was unable to conclude that her abilities and skill as a successful real estate agent would be helpful in horse breeding (Craig v. Commissioner, 2013).

Factor 6: The taxpayer's history of income or losses with respect to the activity (Treas. Reg. §1.183-2(6)):

In Metz, the taxpayer experienced a series of losses beyond the period which is customarily necessary to bring the operation to a profitable status. In fact, significant losses averaging around $1 million each year were sustained for all the years except one when the taxpayer sold a Florida farm property. However, the taxpayer took refuge in the safe harbor permitted under the regulations, bringing forth evidence of causes beyond their control that contributed to losses. Depressed market conditions were one such cause. Consideration of this evidence led the Court to find that the continued losses were explainable and did not result from a lack of profit motive (Metz v. Commissioner, 2015).

In Craig, the taxpayer reported no income at all in six of the seven years under review, and reported a very modest income of $950 in the remaining year. With no reasonable evidence of circumstances beyond the control of the taxpayer to explain the lack of profit, the Court found the record failed to establish a profit making motive (Craig v. Commissioner, 2013).

Factor 7: The amount of occasional profits, if any, which are earned (Treas. Reg. §1.183-2(7)):

In analyzing the Metz matter, the Court noted that the losses in 2005 through 2009 were not small; nor, the Court noted, was the profit in 2004 small (taxpayer sold property connected with the horse activity). Metz did not fit squarely into either of the two scenarios laid out in the regulations (occasional small profit with regular large losses, or occasional large profit with regular small losses). Rather, there was a large profit in one year and the remaining years experienced large losses. The Metz court considered this set of facts and concluded that the final sentence in the regulation was more at play. Horse farming is a speculative venture; a few horses do command multimilliondollar fees. While hoping for a windfall is not the best business plan, an investor who incurs very substantial expenditures could be in the activity for profit even though the expectation of a profit might be considered unreasonable. The Metz

court focused on the taxpayer's subjective intent and found that the taxpayer actually – perhaps unreasonably, but actually – intended to make a profit (Metz v. Commissioner, 2015).

The Craig court focused on the fact that the taxpayer never generated a profit. In fact, the Court pointed out that except for 2007, the taxpayer never even reported any gross receipts for taxable years 2005 through 2011. The Court therefore had no hesitation in determining the record failed to support a profit motive (Craig v. Commissioner, 2013).

Factor 8: The financial status of the taxpayer (Treas. Reg. §1.183-2(8)):

Again, the Metz facts pose a mix in that the taxpayer had substantial income from other investments up until 2008. During that period, the horse activity incurred losses which sheltered the substantial other investment income. But in 2008 the taxpayer's other investment income was, as the Court put it, "wiped out". In 2008 and 2009 the taxpayer continued the horse farm, supplementing the farm's revenues with lines of credit. The facts pointed to continued large personal investment by the taxpayer in the horse activity despite no other substantial income (Metz v. Commissioner, 2015).

However, the Craig's financial resources throughout the entire period were attributable to Mrs. Craig's work as a real estate agent and Mr. Craig's work as an electrician. In fact, except for 2007, the taxpayer never reported any gross receipts from the activity. Again, the Court found factor eight weakened the argument that the taxpayer engaged in horse activity with an actual and honest objective of making a profit (Craig v. Commissioner, 2013).

Factor 9: Elements of personal pleasure or recreation (Treas. Reg. §1.183-2(9)):

In both cases it was clear to the Court that the taxpayers derived personal pleasure from their horse related activities. The Court in Metz noted that the taxpayer clearly found personal satisfaction operating the horse farm, and especially enjoyed the trips to horse show events and riding the horses. The Court reiterated that suffering has never been a prerequisite to deductibility, and found that while elements of personal pleasure exist for the taxpayer, such personal pleasure alone does not render the horse activity a hobby. The Metz Court found factor nine did not persuade the Court either way in its consideration of business or hobby (Metz v. Commissioner, 2015).

The Craig Court noted Mrs. Craig's lifelong love of horses and riding as well as the significant amount of time she spent in less pleasant horse activities such as cleaning the horses, stalls, and water troughs, exercising the horses and transporting hay and other supplies. However, the Craig Court found the record was not persuasive in establishing an actual and honest objective of making a profit (Craig v. Commissioner, 2013).

CONCLUSION AND PRACTICAL STEPS TO ASSIST IN AVOIDING THE PITFALLS OF SECTION 183

As the Metz and Craig cases illustrate, one person's hobby may be another person's business under the Code. While both taxpayers engaged in activities related to horses, only the Metzs were able to produce sufficient evidence of their subjective profit motive intent to benefit from the more favorable tax treatment afforded business expenses. The difference, as evidenced in the above nine factor analysis, centered in large part on the businesslike manner in which Metzs approached the activity contrasted against the lack of a businesslike approach the Craigs took in their activity. While the nine (9) factors are non-exclusive, and no one factor is determinative, some factors are more within the taxpayer's control and therefore the taxpayer should be very mindful of them. These factors are highlighted and discussed below as planning points.

Conduct the Activity in a Businesslike Manner

The taxpayer should, at a minimum, segregate personal assets from business assets, maintain separate and detailed accounting records for those business activities (preferably employing a commonly used computerized software), prepare a budget, and document and analyze performance by examining variances from budget and the steps taken to mitigate negative variances. The lesson – treat the activity in a businesslike manner and Document, Document, Document.

Develop Expertise and Seek Expert Advice

In an audit in which Section 183 is implicated, the revenue agent will seek to determine the taxpayer's expertise and training in the industry. From the viewpoint of a potential customer or client, if the operator does not have superior

knowledge in the industry, there is no reason for a potential customer or client to seek out the offered services. Before starting a business, the taxpayer should assess his or her knowledge and experience of both the scientific practices in the field and the business aspects of the activity. The taxpayer should engage an advisor for supplemental expertise and document steps taken to obtain additional knowledge in the field. In addition, the taxpayer should become active in the related business and industry societies.

Expend, and Document the Taxpayer's Time and Effort

The taxpayer must be prepared to provide documentation of the time and effort committed to the business as a forprofit endeavor. Is the activity the taxpayer's primary focus and commitment? Does the taxpayer maintain a "second career"? Is the effort expended on the activity equivalent to the effort others in this industry expend in pursuit of profit? A wise taxpayer will consider, and be prepared for the revenue agent's point of view. Does the time and effort expended look more like that spent by a hobbyist or a businessperson?

The importance of documentation cannot be overstated. While the taxpayer may have had a subjective for-profit motive, the taxpayer must be prepared to prove this intent. If the gross income derived from an activity for three or more of five years is less than the deductions attributable to the activity, the taxpayer will be required to produce evidence of a profit intent using the facts and circumstances analysis in regulation Section 1.183. If the taxpayer's activity has been profitable in three out of the five years (two of seven years if the activity is related to horse breeding, training, showing, or racing), the burden of proof will shift to the Internal Revenue Service to disprove profit intent.

Lastly, the taxpayer should be mindful of the Internal Revenue Service's skeptical outlook on what may be considered a personal hobby or recreational activity as opposed to a for- profit business activity. See Table One below which provides a listing of the most scrutinized categories of activities by the Service. Documentation and retention of evidence of the taxpayer's profit intent, consistent with and mindful of the nine factor test of Section 1.183, will go a long way in deflating the Service's skeptical outlook.

Table One

Activities Most Scrutinized As Possible IRC §183 Activities

The below listing provides an indication of those types of activities which the IRS has identified internally as those which contain Section 183 implications and may be ripe for analysis:

Fishing	Horse Racing	Horse Breeding
Farming	Motorcross Racing	Auto Racing
Craft Sales	Bowling	Stamp Collecting
Dog Breeding	Yacht Charter	Artists
Gambling	Fishing	Bowling
Direct Sales	Photography	Writing
Entertainers	Airplane Charter	Rentals

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UNRAVELING THE MYSTERY OF SPIRITUAL INTELLIGENCE

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ABSTRACT

Research has expanded our understanding of intelligence beyond the traditional cognitive realm to include multiple intelligences, emotional intelligence, and, more recently, spiritual intelligence. Spiritual intelligence is key in effectiveness in business leadership both in for-profit and not-for-profit sectors. This research project investigates spiritual intelligence within a variety of demographics utilizing the Integrated Spiritual Intelligence Survey developed by Dr. Joseph Amram. Definitions of spiritual intelligence vary according to researchers, yet in connection to his survey, Dr. Amram defines spiritual intelligence as "the ability to apply and embody spiritual resources and qualities to enhance functioning and wellbeing." Relationships around various demographics and spiritual intelligence are observed through the survey data. This paper contains the analysis of the data collected from over 100 participants to validate the hypotheses that there would be differences in aspects of spiritual intelligence across age, gender, education level, and career sector (specifically for profit and nonprofit distinctions). Many of the expected differences were substantiated.

This paper explores the presence of spiritual intelligence in variables such as age, gender, education, and the sectors of for profit and nonprofit. Research of the presence of spiritual intelligence within the sectors of nonprofit and for profit, as well as the demographics of age, gender and education will broaden our basic understanding of spiritual intelligence and its presence and validity within the workplace and daily interactions.

INTRODUCTION

Spiritual intelligence is a construct which moves beyond traditional mental intelligence and acknowledges how our deep self-awareness affects our interactions with others both in daily life and the workplace. Various authors and researchers have explored, broadened, and defined the meaning of spiritual intelligence and its connection within our daily lives. Danah Zohar and Ian Marshall (2000), early identifiers of the spiritual intelligence concept, offer this description:

> Unlike IQ, which computers have, and emotional intelligence, which exists in higher mammals, spiritual intelligence is uniquely human and the most fundamental of the three. It is linked to humanity's need for meaning, an issue very much in the forefront of people's minds…Spiritual Intelligence is what we use to develop our longing and capacity for meaning, vision, and value. It allows us to dream and to strive. It underlies the things we believe in and the role our beliefs and values play in the actions we take. It is, in essence, what makes us human. (Zohar and Marshall, 2000).

The construct of emotional intelligence has grown in popularity and understanding of its integral nature in the success of one's career and life, and paralleling that interest is the growing exploration of the construct of spiritual intelligence which demonstrates competencies that serve to enrich our lives and our interactions with others (Amram, 2007; Emmons, 2000a; Vaughn, 2002; Wigglesworth, 2012; Wolman, 2001; Zohar and Marshall, 2000). Just as emotional intelligence is not equivalent to emotionality (Salovey & Mayer, 1990 as cited by Amram), spiritual intelligence is not equivalent to spirituality (Amram, 2007). Spiritual intelligence draws on traits associated with spirituality and applies the traits to tasks involved in living in order to enhance functioning, adaptation, and well-being, to produce products that are valuable within a cultural context of community (Emmons, 2000a).

Spiritual intelligence is also not integrating one's intelligence with one's spirituality; rather, spiritual intelligence is a combination of personality characteristics, neurological processes, specialized cognitive capabilities, and spiritual qualities and interests (Hosseini, et al, 2010, p. 429). Spiritual intelligence allows us to live life at a deeper level of meaning as we draw on capabilities which can be developed with practice. Spiritual intelligence draws deeply on our inner awareness. Individuals, leaders and non-leaders alike, need to develop self-awareness, and develop an understanding of how we can live up to our highest potential. Barry Posner (2003) encouraged leaders to draw on the inner awareness and understanding when he stated: "Where leaders must go to find their voice is within. You have to explore your inner territory. You have to take a journey into those places in your heart and soul where you hide your treasures and then let them out to play." (xii). Spiritual intelligence allows us to reach beyond our immediate ego self and access those "deeper layers of potentiality that lie hidden with us, and helps us to live life at a deeper level of meaning" (Hosseini, 2010, p. 429).

UNDERSTANDING SPIRITUAL INTELLIGENCE

Our understanding of intelligence beyond IQ has been widened to include emotional, social, creative, and spiritual intelligences in recent years (Amram, 2007, Bar-On, 2000; Gardner 1983, 2000; Emmons, 1999; Goleman, 2001; Salovey & Mayer, 1993). Spiritual intelligence, while there may be some intersection into spirituality and religion depending upon personal interpretation, remains a separate construct. Several researchers have conducted work on spiritual intelligence and promote its acceptance as a valid skill set and intelligence aiding in leadership, service, interactions with others, and most aspects of daily life (Amram, 2007; Emmons, 2000a; Howard, 2009; Nasel, 2004; Noble, 2000; Vaughn, 2002; Wigglesworth, 2012; Wolman, 2001; Zohar & Marshall, 2000). Spiritual intelligence does not refer to religion, rather it is the interconnectedness of affective orientations and meaning making though connecting ideas, events, and persons (Dent, Higgins, & Wharff, 2005; Fry, 2003). These connections result in both personal and organizational transformations (Howard, 2009). The driving hypothesis of spiritual intelligence, summarized Howard (2009), is that it is not dependent upon organized religious orientation, but rather it is dependent on the values and ethics of individuals as they contribute to organizational health and wellbeing.

Early identifiers of the construct of spiritual intelligence were Zohar and Marshall (2000). Zohar first introduced the term spiritual intelligence in 1997 (as cited in Wigglesworth, 2012, p. 30). Zohar and Marshall (2000) defined spiritual intelligence as "the intelligence with which we address and solve problems of meaning and value, the intelligence which we can place our actions and lives in a wider, richer, meaning-giving context, the intelligence with which we can assess that one course of action or one life-path more meaningful than another (Zohar & Marshall, 2000).

Amram (2007) defined spiritual intelligence as the "ability to apply and embody spiritual resources and qualities to enhance functioning and wellbeing" (p. 2). Amram conducted research interviewing and analyzing results from interviews with 71 participants who demonstrated application and embodiment of spirituality in their daily life. Through qualitative analysis of the interviews, Amram identified seven major themes and several subthemes and became the first researcher to develop an ecumenically grounded spiritual intelligence theory. Amram continued his research by developing a tool to measure spiritual intelligence: The Integrated Spiritual Intelligence Scale (Amram, 2007, 2008) which is the tool used in this research project.

Spiritual intelligence enables us to develop an inner knowing and deep intuition (Sisk, 2002, p. 210). Another benefit of spiritual intelligence, suggested by Dorothy Sisk, is the ability to see the big picture, to "synthesize our actions in relation to a greater context" (p. 210). The ability to take a step back and view a situation will allow us to proceed with a calmer, more integrated response.

Cindy Wigglesworth (2012) defined spiritual intelligence as the ability to behave with wisdom and compassion, while maintaining inner and outer peace, regardless of the situation (p. 8). Wigglesworth concurred with Covey's observation that spiritual intelligence is "the most fundamental of all of the intelligences and is the source of guidance" (Covey, 2008, p. 53). Wigglesworth viewed spiritual intelligence as an "integrating intelligence –a capstone—that links and amplifies our rational and emotional capacities" (p. 31).

The potential for well-developed spiritual intelligence exists within all people. The definitions and descriptions of spiritual intelligence are varied among the researchers, but the presence of spiritual intelligence aids in our approach to the varied situations faced daily in all areas of life.

SPIRITUAL INTELLIGENCE IN VARIOUS DEMOGRAPHICS

Spiritual Intelligence in the Workplace

The investigation of spirituality and spiritual intelligence represents a growing area of research and has extended beyond the personal to the professional arena including the workplace (Giacalone and Jurkiewicz, 2010). People work for a variety of reasons: income to provide for basic needs and wants of life, social contact, and the sense that their contribution is making a difference in the world (Paloutzian, Emmons, and Keortge, 2010). The presence of spiritual intelligence within the workplace allows employees to be motivated internally rather than only externally (Chin, Anantharaman, and Tong (2011). When work is seen as a calling rather than a job, work takes on a larger significance and meaning rather than simply being a source of income (Paloutzian, Emmons, and Keotge, 2010).

Studies on workplace spirituality note the benefits to organizations in greater productivity (Giacalone and Jurkiewicz, 2004); motivation (Fry, 2003); commitment (Milliman, Czaplewski, and Ferguson, 2003); and ethical conduct (Mitroff, 2003). Alexander cited Harris, Kacmar, and Zinuska as naming that "the meaning people make of their work

is considered one of, if not the strongest, predictor of employee outcomes" (Alexander, p. 292). The increased research in both workplace spirituality and spiritual intelligence affirms the assumption that "employees have an inner life that nourishes and is nourished by meaningful work that takes place in the context of community" (Ashmos and Duchon, 2000).

Spiritual intelligence, this "new yet ancient intelligence" (George, 2006, p. 3), is present within each person, and each sector, but manifests itself in varying degrees according to personal development. Wigglesworth (2012) noted that "spiritual intelligence is not something we are born with; it must be developed (p. 35). The cultivation of spiritual intelligence may be more easily accomplished in some workplaces rather than others.

Regardless of the venue, whether for profit or nonprofit, the presence of spiritual intelligence will increase the health of a workplace environment (Paloutzian, Emmons, and Keortge, 2003). Emmons (2000a) included virtuous behavior as one of his five dimensions of spiritual intelligence (p. 10). The virtuous behavior includes acts such as showing forgiveness, expressing gratitude, being humble, displaying compassion, and demonstrating wisdom Paloutzian, Emmons, and Keortge, 2003 p. 78). While Gardner (2000) and Mayer (2000) viewed virtue perceived as intelligence controversial, Emmons concluded that exercising these virtues in daily life, both within and outside of the workplace, is an intelligent course of action (Paloutzian, Emmons, and Keortge, 2003 p. 78). Utilizing these aspects of spiritual intelligence will increase organizational health regardless of the sector.

Numerous studies highlight the importance of a healthy work environment and the benefits workers contribute when they sense their job is contributing to the common good. Houston and Cartwright (2007) state that love and compassion for others and the experience of the interconnectedness of life meaning is greater for those in public service occupations than for non-public service employees. Therefore, we hypothesize that spiritual intelligence exists in a higher level in nonprofits than in for profits (H1).

Spiritual Intelligence in Age and Gender

Danah Zohar, an early identifier of the spiritual intelligence concept, was quoted in an interview ten years after the initial naming of spiritual intelligence as saying: "I now see spiritual intelligence as emerging from our most basic and primary need for and experience of deep meaning, essential purpose, and our most significant values and how these lead to a deeper, wiser, more questioning life and affect our decisions and experiences" (Zohar, 2010, p. 2). Through her ongoing study of spiritual intelligence, Zohar defined an outcome of spiritual intelligence as spiritual capital which is the "wealth and influence we gain by acting from a deep sense of meaning, our deepest values, and a sense of higher purpose" (Zohar, 2010, p. 3). Through experience, maturity, and intentionality, we cultivate spiritual intelligence. Our interior sense aids this maturation. As Wigglesworth noted, "We have the amazing capacity, the inner drive, and the interior compass to help us grow up" (Wigglesworth, 2012).

Based on the above work, we hypothesize that spiritual intelligence exists at a higher level in mature persons in contrast to younger persons (H2). In addition, we hypothesize there will be a significant difference of spiritual intelligence between genders (H3).

Spiritual Intelligence and Education

Zohar asserted that the purpose of education is to "fully develop human beings who are good people, good citizens, good parents, and good servants to whatever they choose to pursue" (Zohar, 2010, p. 4). Education offers the opportunity to draw on the innate knowledge and potential within each person, and educators can encourage students to ask good questions and become critical thinkers (Zohar, 2010, p. 5). Lifelong learners develop the ability to access inner knowing and higher consciousness which are traits of spiritual intelligence (Sisk, 2002). Zohar argued that there is a difference between instruction and education: instruction comes from the Latin word *doctrina* which means "to put into" where education comes from the Latin word *educare* which means "to draw out." Developing

spiritual intelligence through educational experiences is opening minds rather than filling them (Zohar, 2010, p. 5). Spiritual intelligence grows of out the basics of human striving: find deep meaning in life, grow into greater understanding, and use these in service to others. Zohar asserted this is the "project of becoming a fully effective and responsible adult ever open to new experiences and opportunities" (Zohar, 2010).

Our research hypothesizes that spiritual intelligence will exist to a higher degree in persons with advanced education (H4).

THE STUDY

Participants

Respondents were 103 individuals involved in either for profit or nonprofit work. Some of the respondents were paid in the sector; others served as volunteers. Sectors were for profit, NP-education, NP-ministry, NP-social service, NP-health care, NP-government, and NP-other.

Age, gender, education level, organization size, and salary range were also tracked. The age levels were split 50 years and younger verses 51 and older. The education level was split college and less verses some graduate school and above.

Basic Demographic Descriptive Statistics

		Gender	Age	Sector	Education	OrgSize	Salary
N	Valid	103	103	103	103	103	103
Mean		1.61	2.32	2.95	3.86	3.01	3.46
Median		2.00	2.00	2.00	4.00	3.00	4.00
Mode		2	2	2	3	4	4
Std. Deviation		.490	.782	1.795	1.253	1.150	1.101
Range		1	3	6	5	3	4
Minimum		1	1	1	1	1	1
Maximum		2	4	7	6	4	5

Gender Frequency Table

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 (male)	40	38.8	38.8	38.8
	2 (female)	63	61.2	61.2	100.0
	Total	103	100.0	100.0	

Age Frequency Table

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 1=18-30	16	15.5	15.5	15.5
2=31-50	42	40.8	40.8	56.3
3=51-65	41	39.8	39.8	96.1
4=65 and older	4	3.9	3.9	100.0
Total	103	100.0	100.0	

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Figure 1

Sector Frequency Table

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 1-For profit	25	24.3	24.3	24.3
2-NP--edu	28	27.2	27.2	51.5
3-NP-ministry	17	16.5	16.5	68.0
4-NP—social service	13	12.6	12.6	80.6
5-NP—health care	4	3.9	3.9	84.5
6-NP—Gov't	12	11.7	11.7	96.1
7-NP--Other	4	3.9	3.9	100.0
Total	103	100.0	100.0	

Education Level Frequency Table

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 1=High school	3	2.9	2.9	2.9
2=Some college	9	8.7	8.7	11.7

3=College	35	34.0	34.0	45.6
4=Some grad school	16	15.5	15.5	61.2
5=Master's degree	32	31.1	31.1	92.2
6= Doctorate degree	8	7.8	7.8	100.0
Total	103	100.0	100.0	

Employment Organization's Size Frequency Table

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 1-5 or less employees	17	16.5	16.5	16.5
2-6-20 employees	16	15.5	15.5	32.0
3-21-100 employees	19	18.4	18.4	50.5
4-100 or more employees	51	49.5	49.5	100.0
Total	103	100.0	100.0	

Integrated Spiritual Intelligence Scale

The measurement used in this study was the Integrated Spiritual Intelligence Scale developed by Dr. Joseph Amram (2007). Amram developed an ecumenical grounded theory of spiritual intelligence based on interviews with 71 people from a variety of spiritual traditions who were designated as spiritually intelligent by their associates. Preliminary themes of spiritual intelligence were identified through the interviews. Amram refined, expanded, and clustered the themes into seven major themes which emerged as nearly universal across the spiritual traditions and participants (Amram, 2007, p. 8). The themes are: (1) *Consciousness*, (2) *Grace*, (3) *Meaning*, (4) *Transcendence*, (5) *Truth*, (6) *Serenity*, (7) *Inner-Directedness*. (Amram, 2007, p. 8-9). This study utilized the short form consisting of 45 questions, of the Integrated Spiritual Intelligence Survey tested five of the seven themes: Consciousness, grace, meaning, transcendence, and truth. Serenity and Inner-directedness are measured when the long version of the scale is used.

RESULTS

Preliminary Analysis

Data analysis was accomplished by using SPSS version 22. We used Weka version 3.6 for the data mining cluster analysis. Table version 9 was used for data visualization. The following table describes the basic statistics across the five domains.

Descriptive Statistics on the Domains

	N	Minimum	Maximum	Mean	Std. Deviation
Consciousness	103	3.333333333	5.666666667	4.45436893205	.524331513216
Grace	103	3.166666667	5.833333333	4.37790526627	.588978958622
Meaning	103	2.500000000	6.000000000	4.41585760517	.767275187036
Transcendence	103	2.000000000	6.000000000	4.22168284795	.710900611538
Truth	103	2.750000000	5.500000000	4.08679023248	.591690123954
Overall	103	2.883333333	5.466666667	4.31132097679	.488651737466

The correlation matrix below contains the demographic variables of potential interest on the rows and the five spiritual intelligence domains and overall average of the five domains on the columns. The significant correlations are bolded and tagged with **. These relationships between the demographics of interest and the five domains and overall are explored and supported by t-tests, K-means cluster analysis, and additional visualizations.

Correlation Matrix of Demographics and Spiritual Intelligence Domains

		Conscious-ness	Grace -	Mean-ing	Transcend-ence	Truth -	Overall
	Correlation						
FP-NP	**Coefficient**	**-0.104**	**0.034**	**-.336****	**-.297****	**0.043**	**-.242****
1=FP	Sig. (2-tailed)	0.219	0.678	0	0	0.603	0.003
0=NP	N	103	103	103	103	103	103
	Correlation						
Gender	**Coefficient**	**-0.033**	**-0.059**	**0.083**	**0.126**	**-0.116**	**0.01**
1=M	Sig. (2-tailed)	0.691	0.471	0.33	0.129	0.162	0.898
2=F	N	103	103	103	103	103	103
	Correlation						
Age	**Coefficient**	**-0.083**	**0.151**	**.190***	**0.139**	**.164***	**0.141**
	Sig. (2-tailed)	0.298	0.051	0.018	0.074	0.036	0.066
	N	103	103	103	103	103	103
	Correlation	**-**	**-**				
Sector	**Coefficient**	**0.004**	**0.018**	**.176***	**0.125**	**0.075**	**0.115**
	Sig. (2-tailed)	0.953	0.802	0.02	0.09	0.307	0.111
	N	103	103	103	103	103	103
	Correlation						
Education	**Coefficient**	**.208****	**0.117**	**0.146**	**0.088**	**0.103**	**.173***
	Sig. (2-tailed)	0.006	0.12	0.058	0.243	0.173	0.019
	N	103	103	103	103	103	103
	Correlation		**0.073**		**0.014**	**0.044**	**0.13**
OrgSize	**Coefficient**	**-0.037**		**-.232****			
	Sig. (2-tailed)	0.633	0.338	0.003	0.851	0.563	0.085
	N	103	103	103	103	103	103
	Correlation		**0**			**0.028**	**0.117**
Salary	**Coefficient**	**0.051**		**-.230****	**-.172***		
	Sig. (2-tailed)	0.512	0.998	0.003	0.023	0.714	0.118
	N	103	103	103	103	103	103
	Correlation					**0.055**	
EducOther	**Coefficient**	**0.164**	**0.083**	**0.1**	**.191***		**0.131**
1-Ed	Sig. (2-tailed)	0.052	0.316	0.237	0.021	0.504	0.108
0=other	N	103	103	103	103	103	103
	Correlation						
Min-Other	**Coefficient**	**0.022**	**0.014**	**.292****	**.186***	**0.028**	**0.145**
1=Min	Sig. (2-tailed)	0.796	0.866	0.001	0.024	0.732	0.074
0=other	N	103	103	103	103	103	103
	Correlation						
Young-Old	**Coefficient**	**0.06**	**-0.122**	**-.189***	**-.175***	**-.169***	**-0.152**
1=young	Sig. (2-tailed)	0.473	0.14	0.026	0.034	0.042	0.061
0=old	N	103	103	103	103	103	103

The following regression analysis used the four primary demographics cited in the hypotheses as independent variables and the *overall average* as the dependent variable. The first analysis of Simple Linear Regression shows gender as not significant, while age, education level and sector met the 0.05 significance level.

Simple Linear Regression

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	3.911	.268		14.595	.000
	Gender	-.079	.099	-.079	-.800	.426
	Age	.143	.058	.229	2.470	.015
	Education	.072	.036	.184	1.982	.050
	FP-NP	-.334	.112	-.294	-2.993	.003

a. Dependent Variable: Overall

Stepwise Linear Regression

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	4.385	.054		81.807	.000
	FP-NP	-.302	.109	-.266	-2.775	.007
2	(Constant)	4.063	.146		27.882	.000
	FP-NP	-.302	.106	-.266	-2.837	.006
	Age	.139	.059	.222	2.368	.020
3	(Constant)	3.769	.201		18.751	.000
	FP-NP	-.303	.105	-.267	-2.899	.005
	Age	.141	.058	.225	2.439	.017
	Education	.075	.036	.192	2.083	.040

a. Dependent Variable: Overall

Excluded Variables[a]

Model		Beta In	t	Sig.	Partial Correlation	Collinearity Statistics: Tolerance
1	Gender	-.088[b]	-.863	.390	-.086	.885
	Age	.222[b]	2.368	.020	.230	1.000
	Education	.189[b]	1.997	.049	.196	1.000
2	Gender	-.100[c]	-1.002	.319	-.100	.883
	Education	.192[c]	2.083	.040	.205	1.000
3	Gender	-.079[d]	-.800	.426	-.081	.873

a. Dependent Variable: Overall

b. Predictors in the Model: (Constant), FP-NP

c. Predictors in the Model: (Constant), FP-NP, Age

d. Predictors in the Model: (Constant), FP-NP, Age, Education

The second analysis shows a stepwise regression producing models that each take out a demographic variable. Gender was first removed in this process, then education level and then age, leaving sector as most significant. This highly suggests that workers in nonprofit organizations have higher presence of spiritual intelligence than for profit organizations. The following discussion supports these hypotheses with further statistics.

SUPPORT OF THE HYPOTHESIS

Spiritual Intelligence in Nonprofit and For-profit Organizations

Nonprofit participants in the survey numbered 78 while for profit participants were 25. The data indicates that nonprofit participants scored significantly higher in the domains of *meaning*, *transcendence*, and *overall*. The *meaning* domain, which includes the capabilities of *purpose* and *service*, scored at 4.59 as compared to 3.88 for profit. The *transcendence* domain, which includes capabilities *higher self, holism, practice, relatedness* and *sacredness,* demonstrated clear differences at 4.38 in nonprofit and 4.08 in for profit. The overall average of the five domains scored higher in nonprofit: 4.38 as opposed to 4.08. Even though the numbers were higher in nonprofit than for profit in the domains of *consciousness*, *grace*, and *truth*, their differences were not significant.

Our conclusion is that hypothesis H1, *spiritual intelligence exists at a higher level in nonprofits rather than for profits,* is supported. In the statistics tables that follow, note that 0 = Nonprofit and 1 = For profit.

Group Statistics

	FP-NP	N	Mean	Std. Deviation	Std. Error Mean
Consciousness	0(NP)	78	4.49529914531	.542952336565	.061477246133
	1(FP)	25	4.32666666668	.447420590958	.089484118192
Grace	0	78	4.39112276614	.558142460353	.063197188964
	1	25	4.33666666668	.687386354230	.137477270846
Meaning	0	78	4.58760683760	.686645630208	.077747307768
	1	25	3.88000000000	.770957197255	.154191439451
Transcendence	0	78	4.34926184935	.683711286804	.077415058803
	1	25	3.82363636360	.655859371525	.131171874305

Truth	0	78	4.09965034972	.543093732431	.061493256062
	1	25	4.04666666668	.734437300389	.146887460078
Overall	0	78	4.38458818960	.472706740220	.053523498584
	1	25	4.08272727280	.475427328578	.095085465716

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means	
		F	Sig.	T	Df
Consciousness	Equal variances assumed	2.768	.099	1.406	101
	Equal variances not assumed			1.553	48.626
Grace	Equal variances assumed	2.750	.100	.401	101
	Equal variances not assumed			.360	34.732
Meaning	Equal variances assumed	1.202	.276	4.351	101
	Equal variances not assumed			4.098	37.009
Transcendence	Equal variances assumed	.000	.997	3.377	101
	Equal variances not assumed			3.451	42.041
Truth	Equal variances assumed	3.139	.079	.388	101
	Equal variances not assumed			.333	32.835
Overall	Equal variances assumed	.009	.926	2.775	101
	Equal variances not assumed			2.766	40.356

Independent Samples Test

		t-test for Equality of Means		
		Sig. (2-tailed)	Mean Difference	Std. Error Difference
Consciousness	Equal variances assumed	.163	.168632478628	.119932592698
	Equal variances not assumed	.127	.168632478628	.108567302631
Grace	Equal variances assumed	.690	.054456099461	.135923850090

	Equal variances not assumed	.721	.054456099461	.151307252609
Meaning	Equal variances assumed	.000	.707606837603	.162623523050
	Equal variances not assumed	.000	.707606837603	.172683652571
Transcendence	Equal variances assumed	.001	.525625485746	.155638196219
	Equal variances not assumed	.001	.525625485746	.152312678193
Truth	Equal variances assumed	.699	.052983683038	.136556256703
	Equal variances not assumed	.741	.052983683038	.159239902252
Overall	Equal variances assumed	.007	.301860916803	.108789740006
	Equal variances not assumed	.009	.301860916803	.109114667625

Independent Samples Test

		t-test for Equality of Means	
		95% Confidence Interval of the Difference	
		Lower	Upper
Consciousness	Equal variances assumed	-.069281523773	.406546481028
	Equal variances not assumed	-.049584142713	.386849099969
Grace	Equal variances assumed	-.215180256003	.324092454925
	Equal variances not assumed	-.252798860761	.361711059683
Meaning	Equal variances assumed	.385005513118	1.030208162087
	Equal variances not assumed	.357719524339	1.057494150866
Transcendence	Equal variances assumed	.216881170662	.834369800830
	Equal variances not assumed	.218254932390	.832996039102
Truth	Equal variances assumed	-.217907197031	.323874563107
	Equal variances not assumed	-.271054055539	.377021421615
Overall	Equal variances assumed	.086051336749	.517670496856
	Equal variances not assumed	.081392487206	.522329346400

Spiritual Intelligence and Age Differences

The survey data for age is combined into two categories age 50 and below is categorized as young while 51 and above is categorized as mature. The young category consists of 58 respondents while the mature category has 45 participants. The data indicates that spiritual intelligence is higher in mature participants in the domains of *meaning, transcendence, truth,* and *overall*. The *meaning* domain, which includes capabilities of purpose and service, scored 4.61 in mature as compared to 4.27 in young. The *transcendence* domain, which includes capabilities of higher self, holism, practice, relatedness, and sacredness, scored 4.40 in mature compared to 4.09 in young. The *truth* domain, which includes capabilities of egolessness, equanimity, inner wholeness, openness, presence, and trust scored 4.22 in mature compared to 3.98 in young. The overall average of the five domains scored 4.43 in mature compared to 4.22 in young. While there is a slight difference in the domains of *consciousness* and *grace,* the difference is not significant.

Our conclusion is that hypothesis H2, *spiritual intelligence will exist at a different level between young and mature individuals,* is supported. In the statistics tables that follow, note that 0 = 50 and older and 1 = younger than 50.

Group Statistics

	Young-Mature	N	Mean	Std. Deviation	Std. Error Mean
Consciousness	0 (mature)	45	4.41037037038	.539023725654	.080352912803
	1 (young)	58	4.48850574714	.514755064868	.067590651364
Grace	0	45	4.49377104380	.689795483119	.102828639388
	1	58	4.28800940440	.484398655359	.063604659517
Meaning	0	45	4.60555555556	.767761076577	.114451063847
	1	58	4.26867816091	.740278631399	.097203346411
Transcendence	0	45	4.39777777789	.754757402158	.112512590516
	1	58	4.08505747128	.648962224143	.085212914713
Truth	0	45	4.22037037040	.671891353596	.100159649342
	1	58	3.98315047029	.502985630999	.066045248986
Overall	0	45	4.42556902362	.554517026057	.082662517663
	1	58	4.22268025079	.414284570533	.054398229145

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means	
		F	Sig.	T	Df
Consciousness	Equal variances assumed	.287	.593	-.749	101
	Equal variances not assumed			-.744	92.534
Grace	Equal variances assumed	7.009	.009	1.777	101
	Equal variances not assumed			1.702	75.571
Meaning	Equal variances assumed	.095	.759	2.254	101
	Equal variances not assumed			2.243	93.012
Transcendence	Equal variances assumed	.060	.807	2.258	101
	Equal variances not assumed			2.216	86.886
Truth	Equal variances assumed	5.432	.022	2.050	101
	Equal variances not assumed			1.977	79.046
Overall	Equal variances assumed	3.335	.071	2.126	101
	Equal variances not assumed			2.050	78.934

Independent Samples Test

		t-test for Equality of Means		
		Sig. (2-tailed)	Mean Difference	Std. Error Difference
Consciousness	Equal variances assumed	.456	-.078135376760	.104386045467
	Equal variances not assumed	.459	-.078135376760	.105000413084
Grace	Equal variances assumed	.079	.205761639403	.115784841888
	Equal variances not assumed	.093	.205761639403	.120910222028
Meaning	Equal variances assumed	.026	.336877394642	.149462582547
	Equal variances not assumed	.027	.336877394642	.150158371626
Transcendence	Equal variances assumed	.026	.312720306613	.138467726654
	Equal variances not assumed	.029	.312720306613	.141139377420

Truth	Equal variances assumed	.043	.237219900107	.115739916818
	Equal variances not assumed	.051	.237219900107	.119974706793
Overall	Equal variances assumed	.036	.202888772829	.095440425464
	Equal variances not assumed	.044	.202888772829	.098955844499

Spiritual Intelligence and Gender

Women completing the survey numbered 63 while men completing the survey numbered 40. Analysis for gender alone shows no significant differences in any of the categories without investigating it alongside other demographic categories. While there are differences, they may be exposed within age, for example.

Hypothesis H3, regarding the *differing degree of spiritual intelligence within gender* is not supported. In the statistics tables that follow, note that 1 = Male and 2 = Female.

Group Statistics

	Gender	N	Mean	Std. Deviation	Std. Error Mean
Consciousness	1	40	4.46583333335	.534799666937	.084559251971
	2	63	4.44708994710	.521771002670	.065736967352
Grace	1	40	4.43030303033	.619371598362	.097931248442
	2	63	4.34463684465	.571396693405	.071989216701
Meaning	1	40	4.31875000000	.818432483941	.129405538016
	2	63	4.47751322751	.732961530444	.092344472863
Transcendence	1	40	4.10568181822	.724673933489	.114581009539
	2	63	4.29533429540	.697782107553	.087912282186
Truth	1	40	4.19886363645	.610036371898	.096455219537
	2	63	4.01563251567	.573259928669	.072223962279
Overall	1	40	4.30388636368	.510151058281	.080661964746
	2	63	4.31604136606	.478608338697	.060298982838

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means	
		F	Sig.	t	Df
Consciousness	Equal variances assumed	.012	.912	.176	101

	Equal variances not assumed			.175	81.630
Grace	Equal variances assumed	.029	.866	.718	101
	Equal variances not assumed			.705	78.178
Meaning	Equal variances assumed	1.781	.185	-1.024	101
	Equal variances not assumed			-.999	76.375
Transcendence	Equal variances assumed	.509	.477	-1.324	101
	Equal variances not assumed			-1.313	80.815
Truth	Equal variances assumed	.258	.612	1.542	101
	Equal variances not assumed			1.521	79.310
Overall	Equal variances assumed	.364	.548	-.122	101
	Equal variances not assumed			-.121	79.209

Independent Samples Test

		t-test for Equality of Means		
		Sig. (2-tailed)	Mean Difference	Std. Error Difference
Consciousness	Equal variances assumed	.861	.018743386255	.106511654995
	Equal variances not assumed	.862	.018743386255	.107105629967
Grace	Equal variances assumed	.475	.085666185674	.119358356272
	Equal variances not assumed	.483	.085666185674	.121544134958
Meaning	Equal variances assumed	.308	-.158763227508	.155084113777
	Equal variances not assumed	.321	-.158763227508	.158975768398
Transcendence	Equal variances assumed	.188	-.189652477172	.143194940428
	Equal variances not assumed	.193	-.189652477172	.144420833352
Truth	Equal variances assumed	.126	.183231120783	.118822534536
	Equal variances not assumed	.132	.183231120783	.120498589632
Overall	Equal variances assumed	.903	-.012155002388	.099271585502
	Equal variances not assumed	.904	-.012155002388	.100709085429

Spiritual Intelligence and Education

Education and the presence of spiritual intelligence were specifically explored to investigate if spiritual intelligence was present to a higher level according to advanced degrees. For research purposes, education was divided in the following segments: high school, some college, college, some graduate school, master's degree, and doctorate degree. Data analysis was accomplished by grouping the responses into categories of lower and higher with lower being bachelor degree and less and higher being all education beyond a bachelor degree. The lower segment contained 47 respondents while the higher segment contained 56 respondents. The data indicates that respondents in the education demographic scored significantly higher in the domains of *consciousness*, *truth* and *overall average*. The *consciousness* domain, including the capabilities of *intuition*, *mindfulness*, and *synthesis*, scored at 4.58 for advanced education and 4.58 for lower education. The *truth* domain, including the capabilities of *acceptance* and *openness*, demonstrated clear differences at 4.20 for advanced education and 3.95 for lower education. The overall average was 4.41 for advanced education and 4.20 for lower education. The domains of *grace*, *meaning*, and *transcendence* were also higher for advanced education but not high enough for a statistical difference.

Our hypothesis H4 that *spiritual intelligence exists to a higher level with education* is supported. In the statistics tables that follow, note that 0 = College and below and 1 = Graduate level.

Group Statistics

	EdLowHi	N	Mean	Std. Deviation	Std. Error Mean
Consciousness	0	47	4.30141843972	.456618396175	.066604638476
	1	56	4.58273809525	.546540675490	.073034569844
Grace	0	47	4.28658929721	.544138451962	.079370750669
	1	56	4.45454545459	.618540583603	.082655962274
Meaning	0	47	4.28368794326	.767245287020	.111914227268
	1	56	4.52678571429	.756304669592	.101065462630
Transcendence	0	47	4.15473887823	.657447151198	.095898523120
	1	56	4.27786796539	.754121129148	.100773674764
Truth	0	47	3.95293359128	.564493819553	.082339886190
	1	56	4.19913419920	.595482258266	.079574663941
Overall	0	47	4.19587362989	.458277357179	.066846622809
	1	56	4.40821428579	.496215002178	.066309518869

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means	
		F	Sig.	T	Df
Consciousness	Equal variances assumed	2.213	.140	-2.802	101
	Equal variances not assumed			-2.846	100.999

Grace	Equal variances assumed	1.218	.272	-1.449	101
	Equal variances not assumed			-1.466	100.760
Meaning	Equal variances assumed	.085	.772	-1.614	101
	Equal variances not assumed			-1.612	97.428
Transcendence	Equal variances assumed	2.315	.131	-.875	101
	Equal variances not assumed			-.885	100.841
Truth	Equal variances assumed	.158	.692	-2.140	101
	Equal variances not assumed			-2.150	99.477
Overall	Equal variances assumed	.376	.541	-2.239	101
	Equal variances not assumed			-2.255	100.048

Independent Samples Test

		t-test for Equality of Means		
		Sig. (2-tailed)	Mean Difference	Std. Error Difference
Consciousness	Equal variances assumed	.006	-.281319655527	.100407851520
	Equal variances not assumed	.005	-.281319655527	.098844454871
Grace	Equal variances assumed	.150	-.167956157377	.115889841668
	Equal variances not assumed	.146	-.167956157377	.114593735261
Meaning	Equal variances assumed	.110	-.243097771030	.150603652865
	Equal variances not assumed	.110	-.243097771030	.150794635188
Transcendence	Equal variances assumed	.384	-.123129087159	.140794550398
	Equal variances not assumed	.378	-.123129087159	.139110963846
Truth	Equal variances assumed	.035	-.246200607920	.115048320774
	Equal variances not assumed	.034	-.246200607920	.114507571798
Overall	Equal variances assumed	.027	-.212340655892	.094818097980
	Equal variances not assumed	.026	-.212340655892	.094156376701

DISCUSSION

The goal of this study was to explore the degree to which spiritual intelligence was present in various demographics. Participants totaled 103 with 25 in the for profit sector and 78 in the nonprofit sector across the various segments of

education, ministry, healthcare, social service, and government. The research was conducted to investigate if spiritual intelligence is:

- present at a higher level in nonprofit than for profit sectors.
- present at a higher level in older individuals than younger individuals.
- present at a higher level in women than in men.
- present in a higher level in those with advanced education than lower education.

From this research, we have verified that spiritual intelligence can be developed throughout the lifespan with experience, age, and education. The hypothesis that spiritual intelligence tends to exist to a higher degree in the nonprofit sector rather than for profit has also been verified. However, there does not appear to be a significant difference in the level of spiritual intelligence between genders.

Domains Summary

The instrument for this research was the Integrated Spiritual Intelligence Survey, which was developed by Dr. Joseph Amram. This tool tested the five domains of spiritual intelligence, namely, *consciousness, grace, meaning, transcendence,* and *truth.* Statistically significant differences were found in four of the five domains within the demographics as discussed earlier. There are distinctions in *meaning* and *transcendence* in the nonprofit and for profit hypothesis. Distinctions in *meaning, transcendence,* and *truth* in the mature category of age were also observed. Distinctions in *consciousness* and *truth* were evident in the education level demographic. However, the domain of *grace* did not indicate any significant statistical measure in the demographics.

K-means Cluster Analysis of the 5 Domains

```
Scheme:weka.clusterers.SimpleKMeans -N 5 -A "weka.core.EuclideanDistance -R
first-last" -I 500 -S 10
Relation:     SIsumm-weka.filters.unsupervised.attribute.Remove-R2-12,14-
15,24-53
Instances:    103
Attributes:   10
              Gender
              FP-NP
              Young-Old
Ed-Low-Hi
              Overall

Number of iterations: 4
Within cluster sum of squared errors: 39.79047244453981
Missing values globally replaced with mean/mode

Cluster centroids:
                        Cluster#
Attribute    Full Data          0          1          2          3          4
                 (103)       (32)       (12)       (16)       (11)       (32)
=============================================================================
Gender          1.6117      1.625          1          1          2          2
FP-NP           0.2427     0.0625          1     0.3125          0     0.1875
Young-Old       0.5631          1     0.9167          0          0     0.4688
Ed-Low-Hi       0.5437       0.75        0.5     0.9375          1          0
Overall         4.3113     4.3599     3.9617     4.5303     4.3884     4.2579
```

Consciousness

Number of iterations: 6
Within cluster sum of squared errors: 40.85836074968416
Missing values globally replaced with mean/mode

Cluster centroids:

		Cluster#				
Attribute	Full Data	0	1	2	3	4
	(103)	(47)	(11)	(17)	(11)	(17)
Gender	1.6117	1.7447	1	1	2	2
FP-NP	0.2427	0.0851	0	1	0	0.2353
Young-Old	0.5631	1	0	0.6471	0	0
Ed-Low-Hi	0.5437	0.5106	0.9091	0.6471	1	0
Consciousness	**4.4544**	**4.5284**	**4.6636**	**4.3137**	**4.5**	**4.2255**

Grace

Number of iterations: 3
Within cluster sum of squared errors: 42.984973427397506 Missing values globally replaced with mean/mode

Cluster centroids:

		Cluster#				
Attribute	Full Data	0	1	2	3	4
(103)	(32)	(11)	(6)	(21)	(33)	
Gender	1.6117	1.625	1	1	1.5238	1.9697
FP-NP	0.2427	0.0625	1	1	0	0.1818
Young-Old	0.5631	1	1	0	0	0.4545
Ed-Low-Hi	0.5437	0.75	0.5455	0.8333	1	0
Grace	**4.3779**	**4.3371**	**4.2652**	**4.8056**	**4.4726**	**4.317**

Meaning

Number of iterations: 5
Within cluster sum of squared errors: 38.54912610922665
Missing values globally replaced with mean/mode

Cluster centroids:

		Cluster#				
Attribute	Full Data	0	1	2	3	4
	(103)	(43)	(16)	(15)	(11)	(18)
Gender	1.6117	1.7209	1.25	1	2	1.9444
FP-NP	0.2427	0	1	0.3333	0	0.2222
Young-Old	0.5631	1	0.9375	0	0	0
Ed-Low-Hi	0.5437	0.5116	0.5	1	1	0
Meaning	**4.4159**	**4.5019**	**3.625**	**4.8167**	**4.4318**	**4.5694**

Transcendence

```
Number of iterations: 3
Within cluster sum of squared errors: 39.062379756383514  Missing
values globally replaced with mean/mode

Cluster centroids:
                          Cluster#
Attribute    Full Data          0          1          2          3          4
                 (103)       (24)       (11)        (6)       (21)       (41)
=============================================================================
Gender            1.6117     1.8333          1          1     1.5238     1.7805
FP-NP             0.2427     0.0833          1          1          0     0.1463
Young-Old         0.5631          1          1          0          0      0.561
Ed-Low-Hi         0.5437          1     0.5455     0.8333          1          0
Transcendence     4.2217     4.3192     3.5702     4.2652      4.439     4.2217
```

Truth

```
Number of iterations: 4
Within cluster sum of squared errors: 39.04331698214097
Missing values globally replaced with mean/mode

Cluster centroids:
                        Cluster#
Attribute    Full Data          0          1          2          3          4
                 (103)       (24)       (12)       (15)       (11)       (41)
=============================================================================
Gender            1.6117     1.8333          1          1          2     1.7805
FP-NP             0.2427     0.0833          1     0.3333          0     0.1463
Young-Old         0.5631          1     0.9167          0          0      0.561
Ed-Low-Hi         0.5437          1        0.5          1          1          0
Truth             4.0868      4.041     4.0278     4.4167     4.2424     3.9684
```

The K-means cluster analyses show clear groups of participants' similar demographics but are distinct in their domain measures. Each of the five domains and overall average has a separate cluster analysis as printed below. The Weka data mining tool was used to identify five clusters or similar groups of observations using the same demographics as above using K-means Euclidean distances as the clustering measure. For example in the *overall average* analysis, cluster #3 had an overall average 4.39 for 11 participants all of whom are female, nonprofit, mature and high education. Cluster #1 had an average of 3.96 for 12 participants all of whom are male, for profit, 11 of 12 are young, and education was evenly split. The two clusters with clear differences in the overall average were distinct in gender. Gender was not statistically significant in earlier t-test analysis. However, it is likely the nonprofit and for profit aspects are what made these clusters different.

For the domain of *meaning,* we saw significant differences in for profit versus nonprofit and in the age demographic. In the *meaning* cluster analysis, we can see three distinct clusters for comparison. Cluster #1 was the lowest in average *meaning* at 3.63 and had 16 participants who all were for profit, and all but one were young. Clusters #2 and #3 together with higher *meaning* of 4.82 and 4.43, respectively, was higher cluster #1. This cluster had 26 participants of which 21 were nonprofit and all were mature.

For the domain of *transcendence,* we saw significant differences in for profit versus nonprofit and in the age demographic, as was also found with the *meaning* domain. In the *transcendence* analysis, we can again see three distinct clusters for comparison. Cluster #1 was the lowest in average *transcendence* at 3.57 and had 11 participants who all were for profit and all were young. Clusters #0 and #3 together had higher *transcendence* of 4.32 and 4.40,

respectively, over cluster #1. The two clusters had 45 participants of which 43 were nonprofit but evenly split in age. However, cluster #3 of 21 participants were all mature. Cluster #0 of 24 participants were young, for profit, and mostly women. This is one indication that there could be some gender differences, although not evident when just considering the separate demographics.

For the domain of *truth*, we saw significant differences in education level and in the age demographic. In the *truth* cluster analysis we can see four distinct clusters for comparison. Clusters #0 and #3 are distinct in age. Cluster #0 has 24 participants, all of whom are young and had a truth average of 4.04, while cluster #3, with 11 participants are all mature and had a *truth* average of 4.24. Clusters #2 and #4 are distinct in education level. Cluster #2 with 15 participants (and all mature) and high education level had a *truth* average of 4.42, while cluster #4 with 41 participants and low education level had *truth* average of 3.97.

For the domain of *consciousness*, it was significant in the education level demographic. In the *consciousness* cluster analysis, we three distinct clusters for comparison become apparent. Clusters #1 and #3 together had 21 participants and 20 had a high education level. These clusters had a *consciousness* average of 4.66 and 4.50, respectively. Cluster #4 with 17 participants and all with a low education level, had a distinctly lower *consciousness* average of 4.23.

Finally, for the domain of *grace*, no cluster stands out with distinctive averages. Cluster #2 had a much higher average of 4.81, but there were only 6 participants. This is consistent with correlation matrix and other statistical significance tests.

CONCLUSIONS

This research has supported three of the four hypotheses.

Supported

H1 - spiritual intelligence will exist in a higher level in nonprofits than in for profits
H3 - a different level of spiritual intelligence will exist between young and mature individuals with mature individuals demonstrating a higher level of spiritual intelligence than younger individuals.
H4 - advanced education may help foster spiritual intelligence due to the opportunity for increased experience and critical thinking.

Not supported

H2 - spiritual intelligence will exist to a differing degree in women than in men.

The research demonstrates the validity of spiritual intelligence and its existence within the demographics.

Because this is not a longitudinal study, we cannot say definitively whether persons working in a nonprofit chose to work in that setting because of preexisting spiritual intelligence, or whether their spiritual intelligence was developed because of the atmosphere of the nonprofit. Likewise, we cannot say whether spiritual intelligence existed in persons with advanced education because they pursued education due to the existence of spiritual intelligence, or if their spiritual intelligence increased due to education.

Future research could include longitudinal studies to investigate the existence or development of spiritual intelligence in the various demographics. A deeper investigation of spiritual intelligence differences within gender can also be investigated. The cluster analysis alludes to correlations among more complex interactions of the demographic variables. For example, gender was not observed to be statistically different on its own, but the cluster analysis indicated certain clusters in which gender was a differentiating factor. Further investigation of these more complex interactions is possible.

As the many definitions convey, spiritual intelligence carries an air of mystery and presents a challenge when one attempts to define and explain it. However, this research does illuminate the fact that spiritual intelligence exists to varying degrees within demographics, and that spiritual intelligence can be developed with intentionality and experience.

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Spiritual Intelligence Domains and Capabilities

Domain	Capability	Question
Consciousness	Intuition	I listen to my gut feeling or intuition in making important choices.
		I listen deeply to both what is being said and what is not being said.
	Mindfulness	I look for and try to discover my blind spots.
		In meetings or conversations, I pause several times to step back, observe, and re-assess the situation.
	Synthesis	Even in the midst of conflict, I look for and find connection and common ground.
		I can hold as true and integrate seemingly conflicting or contradictory points of view.
Grace	Beauty	I notice and appreciate the sensuality and beauty in my daily life.
		I find ways to express my true self creatively.
	Discernment	My actions are aligned with my values.
		I have a hard time standing firm in my inner truth--what I know inside to be true.
	Freedom	I have a hard time going against conventions, expectations, or rules.
		Because I follow convention, I am not as successful as I could be.
	Gratitude	My life is a gift, and I try to make the most of each moment.
		I remember to feel grateful for the abundance and positive things in my life.
	Immanence	In my daily life, I am disconnected with nature.
		I am mindful of my body's five senses during my daily tasks.
	Joy	Even when I seem to have very few choices, I feel free.
		I bring a feeling of joy to my activities.
Meaning	Purpose	I derive meaning from the pain and suffering in my life.
		I see advancing my career as the main reason to do a good job.
	Service	My work is in alignment with my greater purpose.
		In my daily life, I feel my work is in service to the larger whole.
Transcendence	Higher-self	I am aware of a wise--or higher self--in me that I listen to for guidance.
		My goals and purpose extend beyond the material world.
	Holism	I strive for the integration or wholeness of all things.
		To gain insights in daily problems, I take a wide view or holistic perspective.
	Practice	In difficult moments, I tap into and draw on a storehouse of stories, quotes, teachings, or other forms of time-proven wisdom.
		I have daily and weekly times set aside for self-reflection and rejuvenation.

		I have a daily spiritual practice--such as meditation or prayer-that I draw on to address life challenges.
	Relatedness	I draw on my compassion in my encounters with others.
		I enhance my effectiveness through my connections and receptivity to others.
	Sacredness	In my day-to-day tasks, I pay attention to that which cannot be put into words, such as meaningful spiritual experiences.
		I live in harmony with a force greater than myself--a universal life force, the divine, or nature--to act spontaneously and effortlessly.
Truth	Egolessness	Being right is important to me.
		I want to be treated as special.
	Equanimity	I get upset when things don't go the way I want them to go.
		Even when things are upsetting and chaotic around me, I remain centered and peaceful inside.
	Inner wholeness	I don't know how to just be myself in interactions with others.
		I am my own worst enemy.
	openness	I hold resentment towards those who have wronged me.
		I strongly resist experiences that I find unpleasant.
	presence	I tend to think about the future or the past without attending to the present moment.
		My mind wanders away from what I am doing.
	trust	I am driven and ruled by fears.
Self monitoring		I often adjust my behavior and attitudes to meet the expectations of others.
		I am attentive to the feelings of others and how they act.
		I am aware of how I feel and understand why I feel that way.

PATTERNS OF INNOVATION IN NORWEGIAN FIRMS: A COMPARISON OF SMALL AND LARGE BUSINESSES

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ABSTRACT

Innovation is a key element in business growth and success. Business growth and employment are especially important in Norway, where the drop in global oil prices is said to have provoked increased unemployment and economic decline. Cooperative relationships between different parties are often essential to product development in that innovation is a social process. This study examines data from Eurostat's 2012 Community Innovation Survey to determine the types of innovations introduced by small and large businesses in Norway and the cooperative partnerships in which they engage. The results show that small businesses (10-49 employees) far outnumber large businesses (250 or more employees), but a lower proportion of them are involved in innovative activities. Small businesses are also less likely to partner with other companies to develop new goods and services. This suggests that increased cooperation with others in the supply chain could be an avenue for enhanced innovation and business growth among small businesses.

INTRODUCTION

Creativity and the resulting innovation are vital elements in the success of businesses in today's competitive global environment (Australian Institute for Commercialisation, 2011; Charan & Lafley, 2008; Clegg, 2012; Kuratko, Goldsby, & Hornsby, 2012; Pink, 2006; Proctor 2014). Developing creative ideas leads to new products and processes that help companies survive and thrive, especially among small and medium-sized business (SMEs) that can take advantage of new opportunities (Ehrenberger, Koudelkova, & Strielkowski, 2015). Small businesses can have an advantage due to their flexibility, and some small firms are major players in innovation (Iturrioz, Aragon, & Narvaiza, 2015; Maula, Keil & Salmenkaita, 2006; Nieto & Santamaria, 2010). A disadvantage for SMEs is that they are usually limited in their resources, including financial resources and the human resources from whom innovative new ideas flow (Mahnnak, 2007; Nieto & Santamaria, 2010).

The economic crises of the past years have "led to a new interest in the relationship between innovation, economic growth and the impact of economic recession on innovation" (Skaholt & Thune, 2014, p. 1993). In Norway, the economic recession that influenced much of the world had a lessened effect on Norway. The current drop in the price of oil, however, has now become a problem that has rippling effects on this oil-rich country, which earns approximately half of its export revenue from oil (Milne, 2015; Mohsin, 2015). Firms in the oil industry have cut over 20,000 jobs, and the value of the Norwegian krone has decreased significantly. With oil becoming a smaller part of the overall economy, entrepreneurship will become increasingly important in the coming years. In the past, self-employment and business start-ups have been relatively low in Norway, where risk-taking is less attractive due to the country's wealth, generous welfare system, and more evenly distributed income (OECD, 2014, p. 79). Innovation can lead to the establishment and growth of small and medium-sized businesses as well as large businesses, if the economic climate entices more people to take the chance of starting and growing firms. Given that displaced workers are more likely than other workers to take the entrepreneurial plunge, the economic problems related to the oil industry may lead to a surge in business start-ups (Roed & Skogstrom, 2010; OECD 2014).

This study examines the types of innovation engaged in by small and large businesses in Norway, as well as the types of cooperative partners who provide ideas or assistance in innovation. The results show that the number of small businesses engaged in innovation surpass the number of large businesses, just as small non-innovative businesses out-number large businesses. The proportions of large businesses that are innovative or use particular types of innovation generally, but not always, exceed those of small businesses. The following section provides a brief background on innovation and small business. The methodology and results of this study are then presented.

INNOVATION AND SMALL BUSINESS

Innovation can be the key to business success as new products are offered to new customers in new markets. A central theme in innovation is change because developments in goods and services lead to new offerings that provide value

to the customer as well as knowledge to the company (O'Sullivan & Dooley, 2009). These changes may represent incremental innovation, radical innovation, or disruptive innovation (Couger, 1995; Kuratko et al., 2012).
Gradual incremental changes may also follow a large-scale radical or disruptive change. Change and innovation are important factors in business success today due to the rate and pervasiveness of change in today's global business environment.

Change can be a two-edged sword as innovation is risky, without guaranteed success (OECD, 2014). Projects may be abandoned before they are completed, with little, if any, return on the investment. Research comparing large and small businesses has shown that large companies are more likely to begin innovation projects, but they are no more likely than small businesses to see projects through to completion (Robinson & Stubberud, 2012). It is possible that small businesses are more careful in the innovation activities they start, only choosing the ones that have the greatest chances of success.

Large businesses would seem to have both more to gain from innovation, given greater production levels, and more resources that can be devoted to innovation (Eurostat, 2009; Millard, 2011). Cost-cutting innovations help firms make the most of their revenue and increase overall profits. Naturally, firms with greater production have more to gain from cost reductions and economies of scale (Millard, 2011). The potential savings may not outweigh the cost of innovation for small firms with limited resources. Studies of innovation in environmentally-friendly products and processes among German companies have shown that large businesses with more than 250 employees were more likely than SMEs to engage in innovations that primarily benefited the manufacturer, such as reduced energy and materials use during production (Robinson & Stubberud, 2012). SMEs were less likely than large businesses to engage in most types of environmental innovation, but the differences were relatively small when it came to innovations involving end-user benefits such as reduced energy use and improved recycling after use. A study in Taiwan reached similar conclusions (Chen, 2008). Overall, large businesses logically have more to gain from cost savings in production, but SMEs can find a niche if they use environmental innovations that benefit end-consumers and thus, provide marketing advantages (Anderson, 1998; Bansal & Roth, 2000; Cohen & Winn, 2007; Isaak, 2002; Kirkwood & Walton, 2010; Millard, 2011; Schaper, 2002; Schaltegger, 2002; von Weltzien Høivik & Shankar, 2010).

Innovation itself is said to be a social process regardless of business size as cooperative relationships provide support and ideas (Australian Institute for Commercialisation, 2011; Charan & Lafley, 2008; Edwards et al., 2005; Eisingerich, Bell, & Tracey, 2010: OECD, 2010; Raposo, Ferreira, & Fernandes, 2014; West, 2009), but obviously larger businesses with more employees naturally have more people who can cooperate and share ideas. For smaller businesses with fewer human resources, participating in a network can allow SMEs to gain wider markets, access additional resources and better compete with large firms (Lee , Park, Yoon, & Park, 2010; Mohnnak, 2007; Skalholt & Thune, 2014). Because innovation success is not guaranteed for any project, a long-term view of cooperation is necessary (Iturrioz, et al., 2015).

This study takes a closer look at the partners with whom innovative Norwegian companies cooperate. Special attention is paid to the comparison of small, medium-sized and large businesses. The results are presented in the following section.

METHODOLOGY, RESULTS AND ANALYSIS

This study examines data from the Eurostat 2012 Community Innovation Survey, which includes the innovation activities of businesses during the 2010-2012 time period (Eurostat, 2015). Eurostat included in this survey many types of innovation, from developing new products to creating new processes, whether successful or unsuccessful, without regard for implementation status (implemented, underway, abandoned). Firms that stated they had no innovation activities during the period of the study were considered non-innovative. In the Community Innovation Survey, small businesses were those with 10-49 employees. Firms with 50-249 employees were categorized as medium-sized. Companies with 250 or more employees were classified as large businesses. Micro-businesses and non-employer firms are excluded in this study as only enterprises with 10 or more employees are included.

The total number of Norwegian firms with innovation in their core activities is shown in Table 1. The percentages shown represent the proportion of small (10-49 employees), medium-sized (50-249 employees) and large (250 or more employees) businesses in the study overall and with innovative activities. For example, 31.2% of surveyed companies stated that they have innovation in their core activities and were therefore considered innovative. While small businesses accounted for over 68.9% of all companies in the innovative category, only 27.8% of all small firms

were innovative. In contrast, only 6.7% of all innovative firms had 250 or more employees, but over half (53.4%) of all innovative firms were large.

Table 1

	Total	10-49 emps	50-249 emps	250+ emps
Total number of enterprises	8948	6935	1661	352
Proportion of total enterprises	100%	77.5%	18.6%	3.9%
Number of enterprises with innovation in core activities	2796	1925	682	188
Proportion of total innovative enterprises	100%	68.9%	24.4%	6.7%
Proportion of enterprises with innovation in core activities	31.2%	27.8%	41.1%	53.4%

Number and Proportion of Total Businesses and Innovative Businesses

Small businesses clearly outnumbered medium-sized and large businesses, as over three-quarters of total firms had fewer than 50 employees. This proportion dropped to 68.9% when looking at the distribution of businesses involved in innovative activities. While large businesses account for just under 4% of total enterprises, the proportion involved in innovative activities was 6.7% of innovative enterprises. There was therefore a greater number of small businesses involved in innovative activities, but large businesses were almost twice as likely to engage in innovative activities (53.4% vs. 27.8%). Medium-sized enterprises represented roughly one-fourth of businesses, with 41.1% of them involved in innovation.

The most popular type of innovative activities was in-house R&D (see Table 2). The relative rankings (shown in parentheses) show that this was the most commonly named method among businesses of every size. While 71.3% of businesses overall engage in R&D, large businesses (83.5%) were more likely than small business (67.6%) to invest in internal R&D. This may be a result of larger businesses having more resources to devote to research. Large businesses were also more likely to engage in external R&D (58.5% compared to 41.8% and 30.3%). External R&D was the third most used source for large businesses, but only fifth for medium-sized and seventh for small businesses. This may indicate that while SMEs probably have more to gain from cooperation with other parties, large businesses are more willing to cooperate with others outside the firm on R&D projects.

Small businesses were the least likely and large businesses were the most likely to provide training for innovation activities, but this activity was the second most commonly named activity for each size of business. The same pattern held for market introductions of innovations and other innovation activities. This pattern did not hold for every activity, showing that it cannot be assumed that large businesses always engage in various innovation activities at higher levels than small businesses. For example, medium-size businesses were the least likely to acquire machinery, equipment or software and to acquire other external knowledge. Small businesses were the most likely of all three groups to engage in design activities to improve or change the shape or appearance of goods or services. Small businesses were therefore not always the least involved in innovation.

Table 2

	Total	10-49 emps	50-249 emps	250+ emps
Engaged in in-house R&D	71.3%	67.6% (1)	78.6% (1)	83.5% (1)
Provided training for innovation activities	53.9	51.6 (2)	56.0 (2)	69.7 (2)
Acquired machinery, equipment or software	46.5	46.7 (3)	42.8 (3)	57.4 (4)
Design activities to improve or change the shape or appearance of goods or services	42.1	43.0 (4)	39.7 (7)	41.5 (7)
Market introduction of an innovation	39.9	37.6 (5)	42.7 (4)	54.8 (5)
Other innovation activities	38.0	35.5 (6)	41.2 (6)	52.1 (6)
Engaged in external R&D	35.0	30.3 (7)	41.8 (5)	58.5 (3)

Acquired other external knowledge	26.8	27.2 (8)	23.5 (8)	34.6 (8)

Innovation Activities in Product and Process Innovative Enterprises

Small businesses were also the most likely to innovate with new methods of pricing as shown in Table 3. Mediumsized businesses were the least likely to engage in this activity, as well as five others: innovating through new methods of organization work responsibilities and decision-making, making significant changes to aesthetic packaging designs, introducing new media or promotion techniques, new methods for product placement and new methods of organization external relations. For each of these, large businesses were the most likely to innovate, but the proportions between large and small business participation were very close for significant changes to aesthetic designs and new methods of product placement. The higher relative ranking (5) for new methods of organizing external relations again shows that large businesses seem to place more emphasis on cooperating with outside sources and partners despite their assumed greater level of internal resources available for use.

Table 3

	Total	10-49 emps	50-249 emps	250+ emps
New methods of organizing work responsibilities and decision-making	35.6%	35.2% (1)	33.0% (1)	48.9% (1-2)
New business practices for organizing processes	30.4	27.8 (3)	32.6 (2)	48.9 (1-2)
Significant changes to aesthetic design in packaging	30.2	31.5 (2)	26.0 (3)	31.9 (3)
Introduced new media or techniques for product promotion	25.9	26.9 (4)	21.8 (4)	30.9 (4)
New methods for product placement	19.4	20.6 (5)	15.5 (5)	21.3 (6)
New methods of pricing	16.6	18.0 (6)	12.9 (7)	15.4 (7)
New methods of organizing external relations	15.7	15.5 (7)	13.9 (6)	23.9 (5)

Organizational and Marketing Innovation in Product and Process Innovative Enterprises

Just as innovation does not happen in a vacuum, it seldom develops on its own, but is a social process involving various partners. Collaboration with other parties may seem counterproductive if partners are suspected of stealing ideas or products, but cooperation is often the necessary key to successful innovation. One form of collaboration is the exchange of information. No single person or company has all the information needed for developing new goods and services that solve customers' problems and fill their needs.

Table 4 shows the sources of information that were deemed highly important by businesses. Large businesses would naturally have the most opportunity to gain ideas from others within the same enterprise or enterprise group, but even small businesses named this as the most commonly used source with 60.7% of them stating this was a highly important source of information and all business types ranked it number one. Private sector clients/customers were the next most popular source, with very similar proportions of small businesses (39.7%), medium-sized businesses (40.9%) and large businesses (42.6%) naming them as a highly important source. Public sector clients/customers were more popular with small businesses (17.4%, ranked 5th) and the least popular with large businesses (11.2%, ranked 11th). At the other end of the supply chain, suppliers of equipment, materials, components or software were named as highly important sources of information by 32.4% of large businesses, 29.5% of small businesses and 27.7% of medium-sized businesses, ranking third for all business types. Similar proportions of businesses named conferences, trade fairs and exhibitions as highly important sources of information, although they ranked 4th for small businesses. Large businesses were the most likely, and small businesses were the least likely, to name professional associations, consultants/commercial labs, scientific journals and trade publications, government and research institutions, and universities as sources of information.

Table 4

	Total	10-49 emps	50-249 emps	250+ emps

Others within the same enterprise or enterprise group	62.4%	60.7% (1)	64.5% (1)	72.9% (1)
Private sector clients/customers	40.2	39.7 (2)	40.9 (2)	42.6 (2)
Suppliers of equipment, materials, components or software	29.3	29.5 (3)	27.7 (3)	32.4 (3)
Competitors/others in the same sector	18.8	16.2 (6)	24.8 (4)	24.5 (4)
Conferences, trade fairs, exhibitions	18.7	18.5 (4)	19.4 (5)	18.1 (5)
Public sector clients/customers	16.3	17.4 (5)	15.0 (6)	11.2 (11)
Consultants/commercial labs	10.9	9.9 (8)	11.6 (8)	18.1 (6)
Professional associations	10.8	9.8 (9)	11.9 (7)	17.6 (7)
Scientific journals, trade/tech publications	10.7	10.6 (7)	10.4 (9)	13.3 (10
Government, public or private research institutions	8.4	7.7 (10)	7.8 (10)	17.0 (8)
Universities and higher education institutions	7.5	7.3 (11)	5.7 (11)	16.0 (9)

Highly Important Sources of Information for Enterprises

The pattern of large businesses being more likely to cooperate with others was also evident in Table 5, where it is clear that large businesses were more likely to state they cooperate with every given partner. Others within the same enterprise or enterprise group and suppliers of equipment, materials, components or software were the most popular cooperative partners with 41.5% of them naming these sources as highly important, thus creating a tie for the top ranked partner. The proportions were approximately or less than half of this for small and medium-sized businesses. For each and every partner, small businesses were the least likely to cooperate and large businesses were the most likely to cooperate. The lowest proportion among large businesses, public sector clients/customers (19.1%) was greater than the most commonly named sources among small and medium-sized businesses. Small businesses were most likely to cooperate with private sector clients/customers (14.1%), suppliers (13.0%) and consultants/commercial labs (12.1%). Medium-sized businesses also had these sources in their top three, but were most likely to name suppliers (21.8%), followed by consultants/commercial labs (20.5%), and private sector clients/customers (20.2%).

Table 5

	Total	10-49 emps	50-249 emps	250+ emps
Suppliers of equipment, materials, components or software	17.1%	13.0% (2)	21.8% (1)	41.5% (1-2)
Private sector clients/customers	17.0	14.1 (1)	20.2 (3)	35.6 (6)
Consultants/commercial labs	16.0	12.1 (3)	20.5 (2)	39.4 (3)
Others within the same enterprise or enterprise group	14.6	10.4 (4-5)	18.9 (4)	41.5 (1-2)
Government, public/private research institutions	14.1	10.4 (4-5)	17.4 (5)	39.9 (4)
Universities and higher education institutions	13.1	9.5 (6)	16.4 (6)	37.2 (5)
Competitors/other in the same sector	8.9	6.8 (7)	11.6 (7)	21.3 (7)
Public sector clients/customers	7.5	5.9 (8)	9.1 (8)	19.1 (8)

Highly Important Sources of Cooperative Partners

Taken as a whole, large businesses were usually, but not always, more likely to engage in each type of innovation, to obtain information from various partners and to cooperative with various partners. Medium-sized businesses were generally the least likely to engage in marketing and organizational innovations, with developing new business practices for organizing processes being the only item for which small businesses were the least likely to use. Large businesses would be expected to have greater resource to their own internal R&D, but these findings show that large businesses are also more likely to work with other companies and organizations to innovate. Parties in the supply chain, such as customers and suppliers, were generally the most commonly used source of information and partnership.

DISCUSSION AND CONCLUSIONS

Investing in innovation is only a step towards successful innovation. Simply spending on projects does not ensure their successful completion. However, investing is a necessary step. Companies that are worried about costs and concentrating on survival may not consider innovative projects to be a good use of resources or deem them unaffordable (Ehrenberger et al., 2015). The tax deduction for R&D expenses provides a subsidy for firms, which could encourage internal innovation (OECD, 2014). This may explain why investing in R&D was the most commonly named type of innovative activity. Large businesses with higher pre-tax revenue might be more eager to invest in R&D and take advantage of this subsidy. In an unanswered question of cause and effect, a study of businesses in the Czech Republic determined that larger target markets lead to more innovation or conversely, more innovation leads to larger target markets (Ehrenberger et al., 2015).

Although small businesses in this study of Norwegian firms far outnumbered medium-sized and large businesses, they were the least likely to engage in innovation overall, and were frequently the least likely to state that they have used a particular form of innovation. One exception to this was marketing and organizational innovation activities, in which medium-sized businesses had the lowest proportions of participation for all but one type of activity in this category. Medium-sized businesses may find they have processes in place from when they were on the upper-end of the small category (that is, 49 employees) that are still effective. Once a business has reached the next threshold of 250 employees, the need for organizational innovation may again be necessary. Small businesses may also be flexible enough to experiment with marketing innovations such as pricing and design. Large businesses with high sales volumes may reap greater benefits from marketing innovation. In addition, large firms that compete internationally need innovative marketing to be successful in a global economy.

Innovation is commonly thought of as a social process that is improved through collaboration with partners with different points of view and information they can provide. Cooperating with external firms may seem undesirable if the partners do not trust each other and suspect they may be taken advantage of as a result of sharing information, ideas and entire projects. Research has shown, however, that collaboration is often a key element in innovation success. Partnering with others has come to be a recommended strategy to help overcome the challenges of innovation (Edwards, et al., 2005: OECD, 2010). In a study of Portuguese businesses, cooperation with suppliers was found to be popular among SMEs (Raposo et al., 2014). Staying in the value chain, customers were found to be important to innovation in the Czech Republic (Ehrenberger et al., 2015). Similar trends were apparent in this study of Norwegian businesses, with approximately 40% of businesses of all sizes naming customers and clients as a highly important source of information. This is logical given that innovations are intended to better fill the needs and solve the problems of customers and clients, and knowledge of their needs is vital to success. Suppliers were also popular partners, hovering around 30%, and ranking third among each size of business. For suppliers, this represents a process of working with customers, just as the businesses in this study were found to collaborate with customers.

As Norway attempts to deal with the economic repercussions of low oil prices, innovation will be necessary for new businesses to start up, and for established firms to grow. The Norwegian university system, which is supported by the government, offers practically free education to students. This improves the human resources of the nation. Universities have much room to grow in technology transfer to businesses (OECD, 2014). Large businesses are 2-3 times more likely to collaborate with universities and higher education institutions. Increasing the opportunity for small businesses, which far outnumber large businesses, to collaborate may be a direction for future development.

Small businesses face many disadvantages due to their lower levels of financial and human resources, but they also can exploit their small size and flexibility (Iturrioz, Aragon, & Narvaiza, 2015; Mahnnak, 2007; Maula, Keil, & Salmenkaita, 2006; Nieto & Santamaria, 2010). SMEs may look to large businesses for the most commonly used types of innovation, and then follow suit or pursue other directions in order to differentiate themselves. Future research should follow the development of entrepreneurs in Norway to assist with business establishments and growth as the economy changes from being heavily oil-based to a more diversified portfolio of businesses.

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AN INNOVATION BUSINESS MODEL FOR SUPERIOR MANAGEMENT AND COMPETITION: PROCESS AND IMPLEMENTATION

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ABSTRACT

The dynamic of competition forces firms to change their strategy in doing business. This paper addresses the impact of multiple drivers on business management. An innovation business model is presented for superior management and competitive advantage. This paper employs e-research, survey of literature, and case studies as research methodologies. Key constructs are defined by their essential characteristics and propositions development articulate relationships between key constructs. This study indicates that logistics firms display superior performance when the innovation business model is implemented with proper knowledge management, technology utilization, and management involvement. Solutions and relevant outcomes are discussed in order to respond to the concern of business community and academic community accordingly

INTRODUCTION

Today's global market is more competitive than yesterday. Customer demand, regulatory requirements, and technological change force firms to change the way they do business. The dynamic advantage of competition could be the factor that shape strategic interactions and often determine which firms succeed and which firms fail in business. Recently, several issues on operations management were developed. Unnecessary cost, expenses, and penalty also occurs in the process due to lack of the accurate and relevant information in the logistics integration. The operational problem has an urgent need for efficient and flexible integration of information and logistics system. Emphasis needs to be placed on the provision of relevant and timely information, throughout the operational procedure, to allow participants to have improved knowledge about what is happening at each stage and control what happens to their goods or services. The performance of the transport carrier may influence the effectiveness of the entire logistics function of a company. According to Meixell and Norbis, the process of selecting an appropriate transport carrier is important to the firm's success (Meixell and Norbis, 2008).

It is difficult to deny that innovation improves firm performance. Logistics firms display superior performance when the innovation is implemented properly. An innovation can also provide firms with competiveness. Execution of logistics innovation enhances customer value and logistics executives believe that it adds value to a firm's output. Much of this value is generated from the ability to reduce costs and provide delivery solutions according to customer needs accurately. According to Mentzer, an effective logistics operation can provide a competitive advantage for a firm and increase a firm's profit and market share (Mentzer et al., 2001).

This paper addresses the impact of multiple drivers on business management. An innovation business model is presented for superior management and competitive advantage. This paper employs e-research, survey of literature, and case studies as research methodology. The case studies demonstrate the implementation of innovation in their operational process that led firms to superior management.

The specific research questions in this study are:

(1) What are the external drivers of the innovation business model?
(2) What is the process of implementation of the innovation business model that is essential for firms to maintain competitive advantage?
(3) What is the impact of innovation on logistics firms after implementation?

METHODOLOGY

Current business research has been influenced by several factors such as increased globalization, rapid growth of the internet and information technology. These trends will continue, and likely accelerate, as the 21st century progresses. Therefore, the methodology used in this research was based on e-research, case study, and a survey of the literature in the field. According to Zikmund, (2003), e-research encapsulates research activities that use a spectrum of advanced information communication technology capabilities and embraces new research methodologies emerging from

increasing access to research instruments and facilities, sensor networks and data repositories, software and infrastructure services that enable secure connectivity and interoperability. E-research capabilities serve to advance and augment, rather than replace traditional research methodologies. Improved access to knowledge and information will enable researchers to perform their research more creatively, efficiently and collaboratively across long distances and disseminate their research outcomes with greater effect. To cover all researches and literature related to business models, innovation, competitive advantage in logistics, and issues in logistics. We conducted several comprehensive searches on International Journal of Operations & production Management, Journal of Product Innovation Management, European Journal of Innovation Management, Journal of Operation Management, Journal of Supply Management, Journal of Logistics Information Management, International Journal of Production Economics, International Journal of Physical Distribution & Logistics Management, Journal of Business Logistics, International Journal of Logistics Management, and Transportation Journal. These journals were specifically selected for the review as they represent significant research in logistics. This paper also employed a case study.

According to Zikmund (2003), case study method is an exploratory research technique that intensively investigates one or a few situations similar to the research's problem situation. The primary advantage of the case study is that an entire organization or entity can be investigated in depth and with meticulous attention to detail. The highly focused attention enables the researchers to carefully study the entire case properly. According to Bonoma (1985), case study research is particularly useful when the phenomenon under investigation is difficult to study outside its natural setting and also when the concepts and variables under study are difficult to quantify. Case study is based on a process model and it is a description of a management situation. It is particularly well-suited to this research paper since existing concepts in logistics innovation seems inadequate (Yin, 2008).

Figure 1(Model for Innovation) presents a research model that defines the nature of problems and issues that this paper is addressing. This research model identifies external pressures, strategic action, integration of logistics innovation, and key performance outcomes. The concept of innovation is valued in most organizations in order to respond to the external pressure from competition, regulatory requirement, and customer pressure. Firms need to have strategic responses in place in order to facilitate the innovation process. Firms are also experiencing the internationalization of technology, globalization of manufacturing and increasingly sophisticated customers need and a greater integration of technologies. These challenges have compelled organizations to develop innovative strategies and processes. It is very important for firms to seek ways of adding value through innovation in order to create a better performance. This model displays the factors that are driving logistics process globally. It is important for firms to implement the proper logistics innovation in organizations including knowledge management, IT utilization, and top management involvement in order for firms to be able to create an effective function that results in superior operational performance and superior financial performance such as competitive advantage, delivery performance, customer satisfaction, cost reduction, operational income, and sales growth. It will finally in turn lead firms or organizations to superior management and operation.

Figure 1: Research Model for Innovation

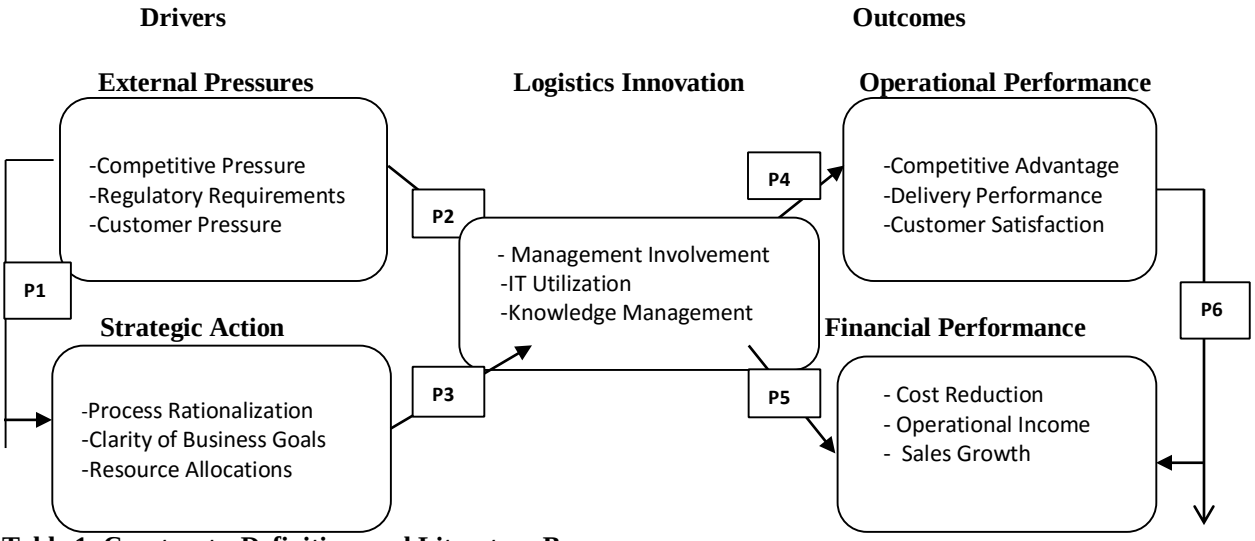

Table 1: Constructs, Definition, and Literature Base

Constructs	Definition	Literature Base
External Pressures	The extent of perceived impact of the environmental drivers in terms of competitive pressure, regulatory requirements and customer pressure	Hunt and Morgan (1996), Barney (1991), Bitner (2000), Haughton, (2006), Gronroos (2000), Bowerox (2000), Cannon & Homburg (2001), Mentzer et al., (2001), Hill (2014), Czinkota (2004), Woodrumff & Gardial (1996), Morash et al., (1996) Rese (2006), Drucker (1993), Sheppard (1995), Sakchutchawan, (2012), etc.
Strategic Action	The firm's long-term and organization-wide responses in terms of process rationalization, clarity of business goals and effective resource allocations	Flint et al., (2005), Ouchi (1979), (2006), Siquaw et al., (2006), Davenport (1002), Crawford & Bryce (2003), Murmann, (1994), Bonner et al., (2002), Wanstrom et al., (2006), Christopher (1998), Eisenhardt and Tabrizi (1995), Barney (1991), etc.
Logistics Innovation	The extent of logistical response practices in terms of management involvement, IT utilization, and knowledge management	Feeny, D. F., & Ives, B. (1990). Vargas and Bruque, (2003), Closs and Xu, (2000), Stock (1990), Kerr, A. (1989), Swierczek, F. W., & Shrestha, P. K. (2003), Closs et at, (1997), Stock Fox (1990), Closs, D.J. and Xu, K. (2000, Langley et al,(1998), Barney (1991), Tarafda, M. and Gordon, S. R., (2007), Turner, K.L. and Makhija, M.V. (2006), etc.
Operational Performance	The extent of logistical process outcomes in terms of competitive advantage, delivery performance and customer satisfaction	Tersine and Hummingbird (1995), Dornier et al. (1998), Jayaram et al., (2000), Sauvage (2003), Daugherty et al., (1998), Innis and La Londe (1994), Mentzer et al., (2004), Stank et al., (2005). Tarafda, M. and Gordon, S. R., (2007), Christopher (1998), Turner, K.L. and Makhija, M.V. (2006), etc.
Financial Performance	The extent of financial performance indicators in terms of cost reduction, operational income, and sales growth.	Lambert (1993), Morash et al., (1996), Fawcett (1991), Bowersox, D.J. and Daugherty, P.J. (1995), Hennart, J. (1994). Gunasekaran, A. & Ngai, E. (2003), Lai et al (2005), Soosay et al. (2004), Mentzer et al., (2004), etc.

LITERATURE REVIEW AND DEVELOPMENT OF PROPOSITIONS

Competitive Pressure

Competition is a fact of life for today's business. It is important that firms must sustain competitive positions in order to keep their market share. Competition within the global logistic industry is intense with many competitors. The ability of a firm to survive depends on how the firm takes advantage of the opportunities in the market place to satisfy its customers. Many companies have demonstrated their capabilities of being been sensitive to their customers by trying to understand customers' needs, customers' complaint, and planning long-range marketing programs to meet those needs. According to resource-advantage theory, firms also seek to use their resources gain a competitive

advantage in the market, which will ultimately lead to superior financial performance. Resourceadvantage theory suggests that a comparative advantage in resources results in a competitive advantage in the marketplace (Hunt and Morgan, 1996). Resources include a firm's assets, processes, information, and knowledge that help a firm improves efficiency and effectiveness (Barney, 1991).

The goal for firms as directed by the resource-advantage theory is superior financial performance, which can only be attained by achieving a competitive advantage in the marketplace. As proposed by Hunt and Morgan (1996), innovation plays a key role in resource-advantage theory. Firms will innovate to improve their resource position. Firms occupying positions of competitive advantage can maintain such positions by engaging in proactive innovation to ensure that their resources are comparatively better than the resources of competing firms. Firms occupying positions of competitive disadvantage can attempt to surpass advantaged firms by engaging in reactive innovation (Sakchutchawan, 2012). To stay ahead in the current global marketplace, logistics firms must constantly look for innovative strategies to improve their competitiveness. Logistics market competition has forced firms to incorporate modern technology into their key offerings to discerning customers who might have or might not have service loyalty. It is important to keep up with customer demand, otherwise the firms risk losing out to competitors with logistics innovation and technology (Bitner et al., 2000). Service innovations are non-technical in nature, although technology might act as the vehicle that activates and enhances the process. Innovation in services is essentially a value-creating activity that drives business performance. It is imperative that firms plan and operate with a new logistics innovation. The factors that contributed to success of firms in the past might no longer be relevant in today's turbulent business. The changing in technology has compelled many firms to think about new method in the pursuit of innovation.

Regulatory Requirements

Regulations may hinder business growth and economic activities. Regulation has been a major barrier for logistics and global trade for decades. The impact of trade regulation on the procedure of custom and documents is exporters and importers always face voluminous paperwork, complex formalities, and many potential delays and errors (Hill, 2014). Likewise, Czinkota (2004) mentioned a firm must deal with numerous forms and documents when exporting and importing to ensure that all goods meet local and foreign laws and regulations. The principle of the trade facilitation rationale is to reduce unnecessary customs scrutiny that impedes the movement of shipments. However, many countries still lack of information communication technology system to facilitate speedy and cost-effective custom processing of importers and exporters. In countries that innovate their custom procedure, this procedure relies on information communication technology system to gather and study the relevant data and intelligence on each shipment. Thus, the custom department is able to expedite clearance to the low-risk shipments. However, all import shipment is subject to a possible random physical inspection. By law, each importer's international trade accounts are subject to random post-clearance audits to determine whether the correct duties were paid and if any trade regulations were breached.

In North America, the impact of innovation and automation and regulatory initiatives affect the information communication technology decisions of customs brokers in terms of three general sets of processes: the preparation of shipment documentation for submission of documents to the Canada Border Services Agency, actual document submission, and processes following a shipment's clearance or release. The importance of the link between information communication technology and document preparation can be related to, for example, the steep increase in fines that importers incur for breaching customs regulations. The punitive fines for underpayment of customs duties (whether resulting from inadvertent or deliberate misclassification of imported products) increase the desirability of customs brokers that have systems to minimize errors. These systems automate processes such as product classification and shipment data entry and without them a broker may be competitively vulnerable (Haughton, 2006). According to Sheppard (1995), the country that has high level of custom innovation would allow importers to use software for self-perform classification without customs broker assistance and attain significant cost savings.

Customer Pressure

Successful firms know how to operate to meet customer demand. According to Gronroos, firms must compete on the basis of better services for customers (Gronroos, 2000). The global marketplace has compelled every industry to transform itself into a truly customer-oriented, service-focused enterprise, irrespective of the products and services it sells. Most logistics firms need to be aware of the service aspects of their product-service mix, because the service component of their offerings offers the best chance of gaining sustainable competitive advantage, or, conversely, the

greatest chance of losing customers through poor levels of service or reluctance to innovate. Cannon and Homburg found a supplier that enhances customer value increases its "share of customer" at the expense of suppliers who do not provide such benefits (Cannon and Homburg 2001). Beyond financial benefits, neither profit nor the firm's survival can last long by manipulating customers as competition increases. Consequently, market offerings are abundant: customers want to deal with a firm that is responsive to all their needs (Woodruff and Gardial, 1996).
Thus, success in the market place rests on a firm's ability to attract, satisfy, and retain its customers by creating customer value. According to Bowersox et al., they addressed the goal of integrated logistics, both inside and outside a firm within a supply chain, are to enhance end-customer value (Bowersox et al., 2000). Rapidly changing global customer demands and expectations lie behind firm's intense need to continuously search for differential advantage. The processes of gaining customer insights, learning, and innovating are critical. None of them are merely one department's responsibility. Responsibility, roles and awareness span functions (Flint et al., 2008). Peter Drucker, suggested firms to continue create customer value to satisfy customer demand. It will result in profits and long term survival for the firms (Drucker, 1993). The result of customer value is superior customer services which will become the recognized firms' success in the marketplace.

According to Mentzer et al, logistics quality is a component of overall customer service (Mentzer et al., 2001). It is defined as the ability to distribute products or materials in conformance with customer requirements (Morash et al., 1996), and consists of four dimensions: timeliness, availability, delivery quality, and related communication with customers. It is important to keep up with customer demand, otherwise the firms risk losing out to competitors with logistics innovation and technology (Bitner et al., 2000).

The following proposition was developed from the above discussion:
P 1 Greater external pressure leads to greater strategic action
P 2 Greater external pressure also leads to greater logistics innovation

Process Rationalization

Firms will have to undertake rationalization to put them in a better position to succeed in the long term. Better business processes lead to an implementation of best process practices and helps in delivering ability, innovation and specialization. Process rationalization refers to a multidimensional knowledge structure composed of a learning project mission, strategic direction, and trans-functional beliefs that, in turn, guide and direct all organizational strategies and actions, including those embedded in the formal and informal systems, behaviors, competencies, and processes of the firm to promote innovative thinking and facilitate successful development, and execution of innovations (Siquaw et al., 2006).

According to Flint et al., (2005), process rationalization appears to be essential to long-term organizational success. They viewed this process as a repetitively used network of orderly linked activities using information and resources for transforming "object in" into "object out," extending from the point of identification to that of the satisfaction of the customer's needs and organizational mission. Davenport (1992) presents a similar input/output view of processes. A process rationalization can be viewed as the acceptance of the process definition and organization-wide efforts towards its adoption. Within our context, it means having logistics innovation relevant processes. According to Ouchi (1979), it is important to extend the acceptance of the new project mission by the cross functional team. Once the new project innovation has been aligned with the business strategy, the project mission is then usually articulated in the early stage of the project to provide team members with an identity and overall direction of the project innovation. It is hard to disagree that the mission of new project innovation or development should be provided with clear direction to employees in organization. Crawford and Bryce (2003), also point out that the project mission provides the team with understanding and appreciation of its fundamental reason for existing. This can help project innovation accepted and commitment among the cross functional team members. Clarity of Business Goals

It is hard for business to survive without having clear goals. Clear goals and objectives are essential to the success of any business. Top organizations expect to get their people closely aligned to their business goals. These organizations are more successful by getting everyone moving in the clear direction. Clarity of project goals refer to the extent of communication, understanding, and acceptance of a set of project mission and goals that guide development efforts (Bonner et al., 2002).

According to Marquardt and Reynolds (1996), clear project goals require unambiguous definition, rich communication, and common understanding of business targets among team members. In order to avoid any conflicts

and to enhance work integration within the cross-functional team, clarity of project goals need to be established in the early stage of the innovative process. Having clear project goals from the early stage may be critical in improving cycle time, team work, and overall process productivity because it enables members to focus faster and more effectively (Murmann, 1994). According to Eisenhardt and Tabrizi (1995), clarity of project goals for a cross-functional team can ensure that no functional goals and objectives take precedence over the project's need. Lack of clarity of project goals can lead to several problems for the cross functional team, including lack of engagement, difficult in resolving conflict, lack of commitment, and difficulty in reaching closure in a timely fashion (Harrison, 1996).

Resources Allocations

A key component of business goal and planning is the allocation of resources. In logistics business, resource allocation is a plan for using available resources to achieve goals for the future. It is the process of allocating resources among the various project or business units. The main objective is to smooth resources requirements by shifting slack jobs beyond periods of peak requirements (Wanstrom et al., 2006). Resource allocation can also refer to distribute limited resources among activities so as to achieve certain objectives. The fact is the relation among the lines of business of diversified firms result in higher performance.

Christopher (1998) suggests that all logistics strategies and systems should be developed into three steps as identification of customer service needs, definition of customer service objectives and design of the logistics strategy. This structure can be adapted for the development of a procedure for differentiating between items in order to allocate materials planning resources in change occasions. From a resource-based view, business executives should manage diversified resources so as to achieve a sustainable competitive advantage (Barney, 1991) which should lead to short- and long-term financial gain and productive operations. Resource allocations across business units can be a source of strategic information. A key proposition of this view is that resources that are valuable, rare, and costly to imitate or substitute can be sources of sustainable competitive advantage (Barney, 1991). Among various types of firm resources, innovative knowledge assets, because of their novelty and firm specificity, are often regarded as possessing such strategic characteristics, thus offering the possibility of significant performance advantages (Coff, 1999).

The following proposition was developed from the preceding research:

P 3 Greater strategic action leads to greater logistics innovation

Logistics Innovation

Innovation can boost firms' success. A firm with a high level of innovation means a firm has a superior management. As the world moves from the industrial economy to the global competitive economy in form of information technology system capability, it is very important for firms to maintain their competitive advantage. In response to this challenge, firms are seeking the proper logistics innovation that will enable them to meet an increasing variety of customer expectations while keeping costs, delays, problems, disruptions, and performance losses at or near zero because it helps firms achieve competitive advantage by enabling rapid and cost-effective responses to specific customer requests. This research bases upon concept of logistics innovation of firms in order to be able to maintain competitive advantage. Logistics is a channel of the supply chain which adds the value of time and place utility. It is defined as the management of the flow of goods, information, service and other resources between the point of origin and the point of consumption in order to meet the requirements of consumers. According to Lin (2006), logistics involves the integration of information, transportation, inventory, warehouse, material handling, security, and packaging. He also pointed out that it is the supply of service or product to the demander or demanding unit at the right time, with the right quantity, in the right quality, with the right cost and at right place. Innovation can occur within services, processes, or any business system. It does not only emerge from the realms of logistics, supply chain management, computer science, or manufacturing.

Innovation could be an idea, practice, or object that is perceived as new by an individual or other unit of adoption Roger (1995). Logistics innovation refers to any logistics-related service that is seen as new, better, and helpful to a particular focal audience. Logistics innovations can be very basic to very complex and can be applied to internal operations or services with business partners (Flint et al., 2005). According to Eisenhardt and Martin (2000), innovation includes new product and service development. It is characterized as a dynamic capability. The dynamic capabilities framework examines the sources of wealth creation and caption by firms in an environment characterized

by rapid technological change (Teece et al., 1997). Practically, an innovation does not need to be totally new to the business society. To customers, new, better or improvement service is innovative. In order to stay ahead in the global competition; firms must consistently look for innovative strategies to improve their competitiveness in logistics. According to Benner and Tushman (2002), exploratory innovations are radical innovations that are designed to meet needs of new markets and require new knowledge or a departure from existing knowledge within a firm. On the other hand, exploitative innovations are innovations that are incremental and designed to meet the needs of existing customers or markets.

Management Involvement

The impact of management involvement and support on innovation process is absolutely important. Management is a major determinant of successful logistics innovation. According to Schilling and Hill (1998), management is a senior executive with substantial expertise and formal and informal influence in a product development project in that organization. Its plays a very important and critical role in direct supervision, planning and implementation of certain policy and serves as important support for the entire organization. Management is responsible for the creation of climate that ascertains the success of the program (Brah and Lim, 2006). Thus, strong leadership quality is a critical component in the implement of logistics innovation. Practically, top management focus on devising processes to create powerful product concepts, and making sure that the concepts are translated into design and processing.

The influence of management in organization includes product innovation (Koufteros and Marcoulides, 2006); internal coordination, product planning, and concept development (Zhang and Doll, 2001) and reduced ambiguity and uncertainty (Koufteros et al., 2005). According to Clark and Fujimoto (1991), management possesses both position and seniority along with specific skills and experience developed while working in cross-functional teams. They also have extensive cross-functional communication skills and influence in the team. Mmanagement become the guardian of the concept and not only reacts and responds to the interests of others, but also see that the choices made are consistent and in harmony with the basic concept (Clark and wheelwright, 1992).

Information Technology Utilization

Information technology (IT) is the use of computers, physical devices, networking, and related infrastructure. It intends to create, store, process, secure and exchanges all forms of electronic data. Information technology (IT) has long been recognized for its potential role in contributing to sustained competitive advantage for logistics firms (Barney, 1991; Feeny & Ives, 1990; Swierczek & Shrestha, 2003; Vargas, Hernandez, & Bruque, 2003). Information technology is sweeping through logistics innovation. To be able to compete, logistics firms must keep pace with the information change. There is no doubt that the proper implementation of information communication technology system (ICTS) can be a significant source of competitive advantage to firms. It is beneficial to the logistics industry since its dependence on information for efficient operations. Logistics information communication technology system include but not limit to hardware, software, and network design required to facilitate processing and exchange. ICTS also includes related components in the supply chain, such as satellite transmissions, Webbased ordering, electronic data interchange, bar-coding, systems for order entry, order processing, vehicle routing and scheduling, inventory replenishments, automated storage, and retrieval systems (Closs and Xu, 2000). According to Langley, logistic firms that adopt and creatively deploy proper technology, through the collective use of mind and knowledge, are able to implement innovative methods and gain superior competitive advantage (Langley et al. 1988). He argued the application of ICT as an effective means to enhance the strategic significance and operational effectiveness of firms. Information technology is advancing faster than technologies for physical processing. Kerr (1989) has addressed how logistics ICT can contribute to the overall strategy of the firm, and that this might involve various activities outside the traditional logistical task. Stock (1990) has shown how logistics firms can effectively use technology and gain competitive advantage through automated systems, stock picking and bar-coding. Additionally, Closs et al. (1997) have offered an empirical of evidences that firms innovating through the development of IT capabilities can positively influence overall logistics competency. According to LaLonde and Auker (1973), they argued that the use of technology can enable logistics firms to transform themselves from being an enabler of operational and material-handling functions to being an enabler of decision-making and activityplanning functions within the supply chain. This progressive transformation of firms from transportation services to logistical solutions requires innovation beyond traditional business capabilities. Innovation thus transcends the mere use of technology. Rather, technology makes creative use of the knowledge and relationship networks.

We have seen the steam engine, containerization, electronic data interchange (EDI), cross-docking, radio frequency identification (RFID), and many other innovations in the field of logistics. However, the use of radio frequency identification (RFID) continues to see increased attention in logistics operations since it allows customers and shippers to virtually retrieve data about products throughout the shipping process. RFID tags carry tracking devices that uniquely identify each individual item, allowing a client and/or the 3 Party logistics providers to identify the exact location of any product and the time of delivery for every shipment. The use of wireless networks in the warehouse is a technological upgrade that can have excellent results when implemented correctly. In the warehouse, the productivity improvements from wireless networks come from substituting technology for potentially errorprone human activities, such as order processing, inventory control or picking. The data sent from hand-held wireless scanners or RFID tags that update stock information in real time, thus eliminating the need for costly and timely manual inventory counting. As technologies advance, the 3 Party logistics providers have remained abreast of the ever-improving ways to manage supply chain operations through high-tech systems (Cain, 2010).

Knowledge Management

Knowledge management involves a multi-disciplined approach to achieving organizational objectives by making the best use of knowledge. Knowledge management is defined as its facility for developing and exploiting its knowledge assets with a view toward furthering its objectives (Tarafda and Gordon, 2005). According to Chapman and Soosay (2002), knowledge management is an essential component in the flow of material, information, and services for logistics. The amount of data and information available to firms is at unprecedented levels in today's economy, and firms need to transform this information and these data into knowledge and action to be effective in innovation. Thus the establishment of effective knowledge-management processes is an essential part of successful innovation. Knowledge in logistics incorporates two key aspects. First, Information communication technology system (ICTS) create a basis for knowledge sharing within and among the organizations involved. Second, people are involved as individual actors within these organizations. Knowledge networks in logistics allow firms to create, share, and use strategic knowledge to improve operational efficiencies and to assist customers better. According to many scholars, the knowledge-based view of the firm centers on knowledge as the most important resource of the firm. The uniqueness of a firm's knowledge is fundamental in the firm's ability to develop a sustained competitive advantage (Grant, 1996; Turner and Makhija, 2006). The knowledge management competency is very important to successful innovation because the innovation process is, by its nature, knowledge intensive (Gloet and Terziovski, 2004). Firms with a knowledge management competency are able to capture knowledge and related information and make them accessible to knowledge workers and innovators. Services are becoming increasingly complex and customer requirements are extending far beyond traditional transportation needs. Logistics firms therefore have to seek knowledge and expertise outside the realm of their traditional operations to effect the organizational transformation required to serve the entire logistical needs of the customer. The above evidence leads to the following proposition:

Competitive Advantage

Competitive advantages provide a firm an edge over its rivals and an ability to generate greater value for the firm and its stakeholders. The more sustainable the competitive advantage, the more difficult it is for competitors to compete and gain market share. In a highly competitive logistics industry, a major concern of logistics management in particular is the strategic use of firm, innovation and distinctive competencies for competitive advantage. Logistics innovation and capabilities are those things that a firm does especially well that allow it to compete successfully and prosper in the business environment. Logistics process includes customer service, product, time advantages, low cost distribution and financial gain. Logistics innovation can make major contributions to overall firms' performance and provide the core competitive advantage by creating differentiated customer value and superior performance. This will surely lead to sustain competitive advantage over competitors. From an operational performance perspective, Fawcett pointed out that technological innovation and logistics capabilities were positively related to the ability of firms to coordinate production activities (Fawcett, 1991). Farris and Welch proposed transit times on the water could be cut in half using new vessel technology (Farris and Welch 1998). While transportation costs were expected to nearly double, it is suggested that the time savings will offset the additional cost. In their empirical study on reverse logistics innovation, Richey posited that innovation would be positively related to operational responsiveness (Richey et al., 2005). According to Mentzer, his study indicated that there is a relationship between innovation and operational service quality. The findings highlighted a positive relationship between logistics innovation and the development of a competitive advantage. (Mentzer et al., 2004). Richey et al., (2005) agreed that there was positive relationship between logistics innovation and a firm's performance. His research suggested that logistics innovation should improve a firm's market effectiveness and internal cost efficiency. Likewise, Persson argued that logistics service innovation can provide firms with a competitive advantage (Persson, 1991).

Delivery Performance

A firm that adopts and uses information technology maintains an advantage over its competitors. Today's competitive landscape places a substantial premium on the types of value it delivers. The important of calculation speeds and data storage capacity have increased significantly in logistics industry. A major consequence of this is technology, by accelerating the data preparation and transmission times, has increased the reaction speed to market needs. Delivery speed refers to ability to reduce the time between order taking and customer delivery to as close to zero as possible. Logistics firms must be able to respond to the needs and wants of customers as demanded. Delivery reliability is another important function for the firms to perform to exactly meet quoted or anticipated delivery dates and quantities. Logistics innovation will enable firms to be able to distribute accordingly. The research of Lai et al., (2008), confirmed there was a great positive impact on logistics firms that use information technology for innovation. Likewise, Morash et al., (1996) tested and proved that logistic firms with oriented capabilities or innovation will able to effectively provide widespread and intensive distribution coverage and target selective exclusive distribution outlets, and minimize total cost of operation. Practically, logistics innovation through information technology has been a superior tool to manage and control the delivery system. Therefore, this has become a key to differentiating between timely services and to creating a competitive advantage for firms (Christopher 1998).The innovation helps user firms achieve and service advantages from logistics processes. With rising customer expectations of logistics services in timeliness and delivery speed, many logistics service providers in many countries have been looking for ways to improve their services. Thus, it is essential that timely and easily accessible information that facilitates physical product flows be made available for decision making (Kumar 2001). Proctor & Gamble's status as a key Wal-Mart supplier required shorter delivery lead times and a generally much higher level of logistics service than Proctor & Gamble had previously envisioned. This emphasis on reducing cycle times has become preeminent across a variety of industries and has led to the adoption of just-in-time or quick response delivery systems (Fawcett et all, 1997).

Customer Satisfaction

Customer satisfaction is about a firm that is able to provide product or service has met or exceeded customers' expectations. Customer satisfaction provides a leading indicator of consumer loyalty. There is no doubt that quality of service or product is the factor that draws and maintains customers. According to the research of Tersine and Hummingbird, firms need to have a proper time-base management in order to reduce lead times that relates to better products and superior delivery (Tersine and Hummingbird, 1995). Reduction of cycle times assumes close collaboration with suppliers that can ease the cost of the innovation process. Dornier and his team explored the diffusion of technological knowledge with dominant suppliers. They concluded that the suppliers selected must be managerial, innovative and reactive (Dornier et al., 1998). Superior customer service is a key integrated strategic processes contributing to Logistics supply-chain time-based performance. The processes selected add value along the supply chain from the supplier to the end customer and include activities such as design of new products and processes, procurement, assembly or manufacturing, distribution and customer support. Sauvage also confirmed that the critical operational objective assigned to the logistics service provider by the majority of shippers is to improve the punctuality of delivery (Sauvage, 2003). Accuracy and standardization of firms also increased customer satisfaction. Standardization simplifies, thus engendering cycle time reduction (Jayaram et al., 2000). Standardization can also create focused expertise with documents, materials and processes to a point where it is much easier to identify sources of delay, discrepancies, unnecessary steps and opportunities for parallelism. The fact is the importance of logistics service quality (LSQ) has long been recognized because of the role that it plays in customer satisfaction. A number of empirical studies provide strong support for the link between improvements in logistics service quality and improvements in customer satisfaction (Daugherty, Stank, and Ellnger 1998; Innis and La Londe 1994; Mentzer, Flint, and Hult 2001; Stank, Goldsby, and Vickery 1999). Furthermore, LSQ has also been linked to market share through customer satisfaction and loyalty (Daugherty, Stank, and Ellinger 1998). The above evidence leads to the following proposition:

P 4 Greater logistics innovation leads to greater operational performance

Cost Reduction

Practically, firms compete over time by expending resources with the purpose of reducing their costs. In many instance, they take the form of innovative products that deliver what customer need more cheaply (lambert, 1993). Therefore, product or service innovation can have the same ultimate effect as direct cost reduction. The strategic of logistics had developed from the cost minimization of one company to the value added maximization of the production

networks and further to a more adaptable and flexible direction. This flexibility can be focused to achieve a variety of operating attributes such as the ability to respond to special service requests, or it can be focused by the range of innovative services offered to target customers (Bowersox and Daugherty, 1995). Before 1990 and in several papers from the first half of the 1990s, logistics was defined as a function that was minimizing total distribution costs and logistics costs or maximizing profit, while achieving desired levels of service performance (Gustin et al., 1995).

According to Clark (1989), cost reduction measures the success level of the development team to reduce product cost. A low product cost signifies efficiency in the innovative process of the product, in handling uncertainty, and in efficient problem solving by the cross functional team members. Lower glitches can help the process in minimizing the consumption of resources in terms of the cost of materials, labor, and overhead (Garrison and Noreen, 1997). In the study of Kengpol and Tuominen (2009), they found that the implementation of automated information system in a logistics company in Thailand supported cost reduction in the innovative process. According to the research of Cooper (1993), the innovative process reshaped the logistics operations and strategies in term of reduction of transport cost, achieving economics of scale in logistic business, and reduction of cost of communication.

Logistics innovation has clearly become a key to differentiating between products and services and to providing lower cost of operations (Christopher 1989). Additionally, the innovative process helps firms achieve cost and service advantage. According to the research of Lai et al.,(2005), the implementation of e-logistics benefits firms in Hong Kong such as reduction of manpower, reduction of paper work, and reduction of cost of transportation. Elogistics is the most efficient and effective way of this process. Morash et al., (1996) employed the quantitative methods in studying of innovative logistics capabilities and firm performance in the United State of America. The finding from their study indicates that there is a correlations between firms implemented logistics innovation and firm performance which results in lower cost operations accordingly.

Operational Income

Operational income are an internal performance measurement driver as the organizations focus on reducing costs and finding ways such as using technology to reduce costs in innovative ways (Gunasekaran and Ngai, 2003). According to the research of Jean et al., (2010), better logistics capabilities lead to higher operational income.
Likewise, Morash et al., (1996), confirms that successful logistics firms recognize that consistently providing superior value to customers is critical to long-term success and operational income. Practically, the shareholder view of the business is part of the performance measurement driver and is an external driver of innovation.
Shareholders always look for high returns of their investments in the firms. That is why financial performance has led firms to minimize their costs and maximize their profits.

Superior logistics capability for competitive advantage is a major concern for many firms. Logistics capability can make major contributions toward the achievement of better performance and sustained competitive advantage that lead to operational income. According to Choi et al., (2008), the ability to minimize the total cost of distribution has correlation with the increasing of operational income of logistics firms. To stay ahead in the business, firms must have successful financial performances and find innovative ways to become the best in the industry. According to Hauknes, (1999), service firms innovate because they want to improve their operational income. He point out that firms reduce cost in line with better quality products and services as empirically proven in the changes in nature and structure of competition in the service sector. Hennart (1994), pointed out that firms exist because they organize production at a lower cost by using organizational modes superior to those used by competitors. He suggested, minimizing the variable costs associated with the movement and storage of goods and minimizing the level of investment in the logistics system may lead to the increasing of operational income.

Sales Growth

Sales growth is the increase in sales over a specific period, used in measuring the performance of a new firm or new product. A firm's logistics capability has been perceived as one way to exceed customers' expectations and enhance financial performance and sales growth (Hayes and Pisano 1994). Furthermore, financial performance can be classified as part of firm's performance (Venkatraman and Ramanujam, 1986). The financial performance approach examines indicators such as sales growth, profit margin, return on investment, return on sales, return on equity, and earnings per share. According to the study of Lu and Yang, (2006), they found that successful logistics firms in Taiwan recognize that consistently providing better logistics value to customers is critical to long-term sales growth operational income. Soosay et al. (2004) studied the relationship of innovation and financial driver in logistics firms

and revealed that to become an industry leader firms must have highly effective and often innovative internal operational systems. Three firms interviewed rated financial driver and sales growth as one of the most important factors. The managers interviewed stated that they either wanted to lower operating costs or gain higher sales growth in the long run, as a result of innovating. In the research of Mentzer et al., (2004), he points out that supply management interface capabilities are operational capabilities that include total cost minimization and efficient logistics processes. Total cost minimization is at the core of supply-management interface capabilities, and is the ability to minimize total system costs so that cross-functional cost tradeoffs are explicitly considered supplymanagement interface capabilities are also a firm's ability to find proactive, timely, and creative logistics solutions to situation emergency or customer-specific problems, as well as the ability to simplify and standardize key logistics activities in various supply chain flows. This process led to the better sales growth for logistics firms. Likewise, Lambert (1993) referred logistics as a function that was minimizing total distribution costs and logistics cost or maximizing profits, while achieving desired levels of service performance and sales growth.

It is clear that many researchers agreed on cost, operational income, and sales growth as crucial factors in any logistics firms. Firms innovate to improve cost efficiency. To manage and maintain a reasonable margin with the operations of the firm, firms must have proper innovative systems. This will provide a sound and productive outcome of practice. This also will enable the firms to be able to reap the financial benefits in the process, reducing costs and red tapes. This innovative process will in turn provide a good return on investment for the shareholders.

The following propositions were developed from the preceding research:

P 5 Greater logistics innovation leads to greater financial performance
P 6 Greater operational performance also leads to greater financial performance

CASES AND IMPLEMENTATION OF LIGISTICS INNOVATION

This section demonstrates the application of logistics innovation. Specific services characteristics of two logistics firms are identified through on line search. The information of cases is as follows:

(a) http://www.onlinedistribution.co.nz/case-studies/loreal-reverse-logistics;
(b) http:// http://www.cardinallogistics.co.nz/logistics-info/electronic-data-interchange-edi ;

In analysis of the cases, the logistics providers respond to external pressures and competitions well. Those companies endeavored to improve their delivery performance of products and services through the implement of elogistics system which involves information communication technology as a tool for innovation into the logistics process. This process enabled the company to gain market shares and the communication network with customers. The companies provide a full service in customer care, warehousing, order processing, transportation and logistics, seamless real-time data management and provision of technology expertise to meet the varied needs of each link in the supply chain from suppliers through to manufacturers, distributors, direct marketers and consumers. Their transportation operations are well integrated with their web-based information system which has reduced the safety stock level. This represents a significant improvement in operational performance. Financial transactions have also become much easier and more secure. The incoming and outgoing of their cash flow are well managed. Furthermore, the companies improved integration with its partnering firms. The wide applications of information and communication technology (ICT) for logistics and freight transportation have resulted in great process rationalization and integration of network business processes across supply chains. The information and communication technology helps firms to overcome the complexity and ambiguity of rules and regulations. Firms' Responsiveness in this process is improved and innovative, which thus improve the overall supply chain performance. Information technology is a tool of innovation that enables firms to get the right products or service to the right place in the right quantity at the right time, and to provide quality services to satisfy the customer's needs. It changes and redefines some traditional roles in a logistics system from cargo ordering, invoicing, payments, global cargo tracking, monitoring, etc. Below is the table demonstrates the superior capacity of the innovative logistics providers.

Table 2: Service Characteristics of Innovation Logistics Providers

Description	Characteristics of Superior Management after Logistics Innovation Implementation
Competitiveness	Better facilities & space to perform all tasks from heavy transport to warehousing effectively, Real Time order & Tracking visibility, and Cooling Supplies distribution, and linking to supply chain.
Customer Satisfaction	On Line distribution, fulfill requirements & goal of multiple clients at a time, E-commerce, better order & return handling, and Electronic Data Interchange.
Delivery performance	Accurate-moving stocks & delivery at very rapid-pace, reduce safety of stock, re-barcode and pallet management.
Regulatory Requirements	Ability to solve problems of governance & complexity of rules and regulations with information technological application to keep discrepancies free
Financial benefit	Transactions have become much easier, fast, and more secure, lower lead times & cost, cash flow effectiveness, and sales growth.

LIMITATION OF THE STUDY AND FUTURE RESEARCH

Quantitative method is recommended for future research. In this connection, services or product development as dependent variable should be measured accordingly. Therefore, future research should be involved in collecting large scale data for empirical study in order to compare with this study which is on multiple case studies. It should be noted that this research has tackled and investigated the issues on innovation of third party logistics and regulations involved major carriers and customers for the first time in the global logistics field. This should be a challenge for replication in the future.

CONCLUSION

This paper responds to the concern of business community and academic community on improving of firm performance and innovation application. The propositions of this study revealed that proper implementations of logistics innovation benefited firms in term of competitive advantage, delivery performance, customer satisfaction, cost reduction, operational income, and sales growth as highlighted in the model of innovation. The case studies demonstrate issues and innovation application that led firms to superior management and a better firm performance.

The result of this study should be a contribution for business firms in seeking an innovation business model to maintain their competitive edge. Additionally, the usage of information technology will create a powerful network communication between business firms and customers. Customers will be able to track their transactions on real time visibility and web-based monitoring. Firms are also able to provide on line distribution, Cooling Supplies distribution, and linking to supply chain effectively. Lastly, this research framework enables future researchers to examine more closely of the nature of external pressure and firm performance. As a result, the concept presented and discussed in this paper could provide a foundation for both the business communities and academic communities to gain insight relevant information.

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STUDENT RIGHTS IN HIGHER EDUCATION

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ABSTRACT

When a student is accepted and enrolled at one of the many colleges or universities in the United States, their primary focus is on the pursuit of a degree in higher education. Upon admission, the next several years will be spent enrolled as a student engaged in that pursuit. Little concern, if any, is given as to how that student might face severe sanctions by their institution as a consequence of their deeds, whether on or off the college or university campus. For the most part, students do not realize that upon admission to an institution of higher education, certain commonly assumed civil liberties and rights may no longer exist in the relationship with their institution. Rights such as free speech, expression, association, procedural due process, and others, may be limited as a result of the institutional rules and regulations.

In recent years, several cases involving universities taking disciplinary action against students have brought attention to this issue. In light of these cases, and others, a debate has emerged as to the rights of students in relationship to the institutions of higher education in which those students are enrolled.

This paper will review the current law in the United States with respect to the issue of student rights in higher education. It will conclude with some recommended changes that universities could easily implement.

INTRODUCTION

Amid the modern university culture of championing diversity, civility, and sensitivity to the rights of minorities on college campuses, it is surprising that today's universities do not always support traditional human rights as guaranteed under the Bill of Rights of the United States Constitution—especially the First, Fifth, Sixth, and Fourteenth amendments. In growing numbers, college campuses are restricting free speech if it is "hurtful", often at the expense of intellectual inquiry. Of particular focus in this paper are the assaults on the Fifth, Sixth, and Fourteenth Amendments, as it relates to disciplinary proceedings for student conduct violations, both on and off campus. While the rules and procedures for taking disciplinary action may be clearly communicated, common civil liberties outside the university context do no function with the same power and authority within the university. These common civil liberties as established in the Bill of Rights include the right of representation by another during a disciplinary hearing, the right to avoid self-incrimination, the right to face and question the accusers, the presumption of innocence until proven guilty, and the right of an unbiased hearing.

This paper is a case study that examines the rights of the student in a student conduct hearing. It more broadly examines student rights in general public institutions. The scope of the paper is limited to the laws applicable to public institutions. Private colleges and universities are not bound by the dictates of our Bill of Rights since their actions are not state actions. Through this paper we hope to educate public universities about their obligations under the constitution to our students. After all they are paying our bills and they deserve to be treated with respect and afforded the rights of humanity that are guaranteed to them in our constitution.

BACKGROUND ON THE CASE

It was a typical early fall evening in Middle America in the backyard of an off campus home rented by some university students. With permission of the owner of the property these students had a bon-fire and decided to burn some trash. Unfortunately, the bon-fire got bigger than normal and the heat caused some minor damage to the vinyl siding on the neighboring property—also a student rental. Ironically, it was the trash from that neighboring property that caused the excess heat. The student who was at the bonfire contacted the owner of the adjacent property and arranged and made satisfactory restitution. One of the tenants of that adjacent property contacted the local police the next day. At a time later a public police officer investigated the event and interviewed only people who, although not present, had heard of the event from others. The local police officer filed a criminal complaint against the student. However, at the preliminary hearing, the court properly dismissed the complaint as unfounded and no further action was taken.
Upon learning of the criminal complaint, the University Student Conduct officer filed a disciplinary complaint against the student and brought the student before the student conduct board the following semester—almost four months

later. By this time, the student was in the last semester of his senior year. At the hearing, the student was allowed to have an "advisor" at the hearing but the advisor was not allowed to speak during the proceedings. During the hearing the student was questioned and the police officer who conducted the investigation subsequent to the event "testified" as to what others had reported to the officer. It is important to note that one of the most damaging reports given the officer was from someone who was not present but told the officer what he had heard from someone else. During the hearing, a letter from the adjacent property owner stating that he was pleased with the restitution made by the student and had no complaint about what had transpired. Direct testimony was also given that the student did not start the fire nor had the student been present when the trash from the neighboring property was added to the fire. Upon presentation of the evidence, the student was dismissed from the hearing while the Conduct Board and the Student Conduct officer deliberated as to the guilt of the student and as to the penalty to be assessed if found guilty. The student was called back into the hearing and was told of his immediate expulsion from the university.

Following the expulsion of the student he reached out to faculty members, explaining his side of the story, and providing those faculty members a recorded transcript of the hearing. These faculty members attempted to communicate with the appeal officer assigned to the case, however, in a complete misreading and misapplication of the law of confidentiality and privilege the university refused to discuss the matter. The privilege and the confidentiality belongs to the student, not the university. It is the student's right to waive confidentiality. Confidentiality is a shield to protect the student, the university subverted confidentiality by using it as a sword to punish the student.

EXAMINATION OF APPLICABLE LAW

Over the years law has developed which lays out bright lines as to what must be afforded to students before the state takes their property. The language of these bright lines are used by university administrations. The problem is that administrations do not use personnel who understand the definitions of the bright lines. In a university setting we do not allow PHDs in sociology to teach micro-biology for the obvious reason that it is out of their field and they would have no understanding of the terms used in such a class. As academicians we do this to ensure that our students are truly learning micro-biology. However, we allow PHDs in Sociology or Biology or History to apply terms and principles they don't understand and therefore our students are not truly receiving due process. It is obvious that we care about academic integrity in the class room halls, but not so much about integrity when seeking justice. As educators we need held to a stronger standard.

The sentinel case in this area is Goss V Lopez[1] a 1975 case challenging the constitutionality of an Ohio statute that allowed public school administrators to suspend students for a period of time up to ten days without a prior hearing. The Court ruled that any school suspension from a public institution required that the due process clause of the Fourteenth Amendment be adhered to. Clearly the Ohio statute was unconstitutional in that it deprived the students of "…life, liberty, or property without due process of law".[2] The Court found the students to have a property interest in Ohio's decision to provide free public education and a liberty interest in their reputations. At a minimum due process requires prior notice of the charges against the students and an opportunity to be heard and to confront one's accusers.

There is a bright line that has logically been drawn between disciplinary punishments and academic failure. In University of Michigan v Ewing[3] the United States Supreme Court was faced with an issue where a student was dismissed for academic reasons. He was enrolled in a six year program that provided a B.S and an M.D. at completion. At the end of his first four years he failed an examination that would have allowed him to complete his final two years. Other students had been given the opportunity to retake the exam, however, Scott Ewing was not. The University of Michigan argued that the student had a number of incomplete classes, poor grades generally, and on a number of semesters was reduced to less than full time study. The student was allowed to appeal his dismissal and his academic dismissal was upheld. Although the court reasoned that Ewing had a due process right to his education they would not second guess an academic decision. "When judges are asked to review the substance of a genuinely academic decision… they should show great respect for the faculty's professional judgment. Plainly, they may not override it unless it is such a substantial departure from accepted academic norms as to demonstrate that the

[1] Gross v Lopez, 419 US 565 (1975)

[2] U.S. Constitution, Fourteenth Amendment

[3] University of Michigan v Ewing, 474 US 214 (1985)

person or committee responsible did not actually exercise professional judgment." [4]

The Third Circuit Court of Appeals in Hankins v Temple University summed up precisely the state of the law regarding academic discipline by stating that "an informal faculty evaluation is all that is required."[5] This demarcation line between academic and conduct discipline was a crucial issue discussed in Valentine v Lock Haven University of Pennsylvania.[6] The court had to determine if a dismissal for plagiarism was academic or conduct. "The Defendants' argument relies on the assumption that Valentine's dismissal for plagiarism was "academic" in nature; Valentine disputes this assumption, arguing that her dismissal was "disciplinary," and with good reason because the distinction has implications for the process due before a student can be expelled. Disciplinary dismissals must be preceded by, at least, notice to the student of the charges against her, an explanation of evidence underlying the charges, and an opportunity for the student to present her side of the story." [7]

These rights are non-existent if the institution is a private one. Without state action there are no due process requirements. [8] With public institutions a limited form of due process is required. This limited amount of due process results in limited accuracy. At the end of the day the goal of all educational institutions should be accuracy in disciplinary determinations. Currently the systems of determination being used are a hindrance to accuracy. The courts have allowed this lack of accuracy to prevail because of the perceived cost of conducting legitimate hearings and because the loss of liberty and property, school expulsion, is less than the loss of liberty and property in typical criminal hearings.[9] However, any definition of "fundamental fairness" which is the lynch pin of any due process analysis requires some basic fundamentals regardless of balancing of constitutional rights with cost due to the perceived lesser penalties involved in public education disciplinary procedures.

The first is a fair and impartial tribunal. Under any logical analysis the tribunal should be independent from the prosecution. In our case study, the prosecutor brought the charges, presented the evidence, ruled on the admissibility of his own evidence and then deliberated *with* the hearing board while the defendant was relegated to another room. Following the determination of guilt the University's prosecutor (titled Coordinator of Judicial Affairs) then met with the jury to determine a sentence. It is often said as joke that someone wants "to be judge, jury, and executioner". That joke is a reality in many of the nation's public universities.

The lack of legal expertize at the conduct board hearings, and more importantly the denial of a right to affective assistance of counsel, end up being a double-edged sword that cuts both ways against the student. Ruane v Shippensburg University[10] found that charged students have no right to legal representation. However, the same courts use the back side of the sword against students by denying them their day in court because of their failure to make timely objections at a disciplinary board hearing. As an example in Jackson v Indiana University of Pennsylvania,[11] the student attempted to argue in Commonwealth Court that the procedures violated due process because the tribunal and prosecutorial duties were comingled. The argument was blocked by the court because the student "failed to preserve the second issue for appeal, whether prosecutorial and adjudicatory functions were commingled, because she failed to raise the matters before the governmental agency." [12] It is highly doubtful that any undergraduate or member of a disciplinary board understands the concept of preserving an issue for appeal. However, it is beyond any doubt that the impermissible comingling of duties creates the impossibility of an accurate fact finding tribunal.

One of the most troubling areas in any due process analysis of higher education is the actual use of evidence in reaching a decision. University administrators are almost proud of the fact that the rules of evidence are not followed. This is

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[4] Ewing at 225

[5] Hankins v Temple, 829 F2d 437, 445 (3rd Cir. 1987)

[6] Valentine v Lock Haven University, 2014 WL 3508257 (M.D. PA 2014) Slip Opinion

[7] Valentine

[8] Althiabat v Howard University, 76 F .Supp 3d (D.C. 2014)

[9] Mathews v. Eldridge, 424 U.S. 319 (1976)

[10] Ruane v Shippensburg University of Pennsylvania, 871 A.2d 859 (Com. Ct. 2005)

[11] Jackson v Indiana University of Pennsylvania, 695 A.2d 980 (Com. Ct. 1997)

[12] PA Code § 505.6

troubling because the rules of evidence have been developed over hundreds of years with one purpose in mind-the finding of truth. The abandonment of such tried and true methods in and of itself makes the accuracy of university tribunals necessarily error prone. Many states have taken the step of outlining hearing requirements for state institutions of higher education. Pennsylvania forbids the use of hearsay evidence[12] but that law was of no effect in our case study since the concept of hearsay was not something understood by the prosecutor or the person who reviewed the case on appeal.

In Coulter v East Strousburg[13] University the federal district court issued an injunction blocking the suspension of a student because the procedures at East Strousburg University did not allow for active cross-examination of witnesses against the student/defendant. East Strousburg is exactly on point as the university involved in our case study also violates the student's constitutional right to confront witnesses against him. In the case study all of the evidence presented by the university was wholly unreliable because no one who witnessed any of the events was on hand to testify. The entire presentation by the university prosecuting the student was from a police officer testifying what someone had told him that somebody else had said. The right to confrontation of witnesses was denied to the student in the case study. According to East Strousburg University, this problem could have been completely resolved and truth could have been ascertained if the student "… could have had counsel or some other representative, Chief Olson could have been cross-examined to disclose his lack of personal knowledge of the situation." [14]Since this right to confrontation was denied the injunction against the discipline of the student was issued.

Our system of government, including the freedom of the press and free speech, start from the premise that free and open debate will allow us to reach truth through the market place of ideas. Our court system is premised on the ideal of giving a fair and impartial hearing where allegations are tested by vigorous debate before a fair and open tribunal. The allegations presented against a student should be able to stand the test of accuracy. Without allowing a representative of the student, or the student himself, to cross examine the actual witnesses against him there is no way to establish truth or accuracy. Lay people, which includes those on university discipline tribunals, have a strong misconception of cross examination and its rule in determining truth. Perhaps through fictional television and movies lay people believe that cross examination is a shouting match or an effort to belittle a witness or an effort to cause them to misstate something. Nothing could be further from the truth.

Proper and effective cross-examination delves into five, and five only, specific areas. Very few witnesses take the stand in a court room with the intention of deceiving. However, it is very likely that their testimony is not completely accurate. To test this accuracy and insure the discovery of truth every witness must be challenged in regard to the following issues:

1. Problems with perception: This delves into mistakes in perception that the witness may have had. Was the witness wearing her glasses? Was it dark out? How far away was the witness? Was the witness sober? Was the witnesses view obstructed? All areas that affected the witness's ability to perceive an event must be delved into. This can only be done through effective cross examination. Effective cross-examination can only be completed by someone educated in trial practice.
2. Defects with memory: Time passes and details tend to be forgotten. Interviews and retelling of events tends to adjust a person's remembrance to what the listener wants to hear. Psychologists have long told us that honest eyewitness testimony is suspect.[15] Often good cross-examination questions will jog a person's memory.

   "The courts' reliance on witnesses is built into the common-law judicial system, a reliance that is placed in check by the opposing counsel's right to cross-examination—an important component of the adversarial legal process—and the law's trust of the jury's common sense. The fixation on witnesses reflects the weight given to personal testimony. As shown by recent studies, this weight must be balanced by an awareness that it is not necessary for a witness to lie or be coaxed by prosecutorial error to inaccurately state the facts—the mere fault of being human results in distorted memory and inaccurate testimony."[16][17] Without effective cross-

[13] Coulter v East Strousburg University, 2010 WL 1816632 (M.D.PA 2010)

[14] Strousburg at 1816632

[15] Sporer, et. al, Psychological Issues in Eyewitness Identification, Psychology Press, 2014

[16] Fisher and Traversky, The Problem with Eyewitness Testimony, Stanford Journal of Legal Studies, Vol 1:1, December 1999, page 29. (emphasis added)

[17] PA. Code § 505.6 (2015)

examination there is no way that the university tribunals are conducting effective truth determining procedures.

3. Defects in Veracity: There are also times when people simply do not tell the truth. It may be that they are hiding their own complicity or protecting another. The list of possible motivations to not tell the entire truth are as long and wide as the human condition.
4. Defects in Transmission: Slang terms, misstatements, failures to be clear and concise are all problems that every nervous witness confronts and yet only effective cross-examination can correct.

Of course if the university tribunal allows hearsay evidence to be introduced any right to cross-examination is by definition absent since the actual person who is testifying is not present. In the case study at the center of this paper no one who actually witnessed the events was present to testify. Pennsylvania, like many other states, has created a short series of regulations dealing with a few of the issues present in public university discipline procedures. Pennsylvania specifically states that "Hearsay evidence may not be used to establish a fact necessary to establish guilt or innocence in a case."[17] However, this regulation provides no protection for the student if those conducting the hearing are unaware of what hearsay is. In the case study a police officer testified as to what others had told him and as to what others had told others. No one who actually witnessed the events in question were present. Therefore the board was prevented from doing their job. They had no idea if the statements were credible because they could not judge any of the issues that may have made their statements believable. If Bob tells Linda something and Linda tells a police officer and the police officer testifies to Bob's statements in court all of the problems with accuracy are multiplied again and again. The tribunal in the case study had to blindly believe that Bob, Linda and the police officer had no defects in perception, memory, veracity, or transmission. What if Bob and/or Linda had simply made it up? There is no way for the tribunal to perform their function of seeking accuracy.

Hearsay is " statement (either a verbal assertion or nonverbal assertive conduct), other than one made by the declarant while testifying at the trial or hearing, offered in evidence to prove the truth of the matter asserted."[18] If the police officer testifies that Linda told Bob the car was dark blue, the information is coming from the perceptions of Bob. The accuracy of Bob's statements can only be accurately assessed if Bob is there to answer the questions. When he is not, it is inadmissible hearsay.

In the case study the only evidence presented was hearsay. Therefore the procedure violated both the Fourteenth Amendment's Due Process clause and the Confrontation Clause found in the Sixth Amendment. The Sixth Amendment gives everyone in a hearing the right "…to be confronted with the witnesses against him…." Clearly when those testifying against the student are not present at the hearing there is no right to be confronted with those witnesses.

The law does not require strict enforcement of due process principles at an academic disciplinary hearing. However it does require a balancing test between the need for accuracy and the burden on the educational institution. In Matthews v Eldrige,[19] the United States Supreme Court laid out the balancing test that courts need to apply in determining how much process is due.

First, the private interest that will be affected by the official action; second, the risk of an erroneous deprivation of such interest through the procedures used, and the probable value, if any, of additional or substitute procedural safeguards; and finally, the government's interest, including the function involved and the fiscal and administrative burdens that the additional or substitute procedural requirement would entail.[20]

The first issue is a determination of how damaging to the student's property interests an adverse decision would be. Will the student be expelled, will the student's reputation be harmed, and will there be a substantial financial burden? An answer of yes to these questions necessitates a greater degree of safeguards to insure accuracy. The second question asks if additional procedural safeguards would in fact insure accuracy while the third ask how much improving the accuracy of the tribunals would cost.

In this case at the public university the student was initially permanently expelled. Following an appeal process the punishment was reduced to an expulsion of one year. A one-year loss in education is a significant loss of a property

[18] Black's Law Dictionary

[19] Matthews v Eldridge, 424 US 319 (1976)

[20] Nash v Auburn University, 812 F.2d 655, 660 (11th Cir. 1987)

interest. Further the stigmatism of such a decision may well follow the student through a significant portion of his working life. As to the second issue accuracy of the tribunal could have easily been assured by simply not allowing hearsay evidence to be used as the basis for the adverse decision.

Another difficulty with the administering of justice in student conduct hearings is that the standard of proof is set at the lowest level of a burden of proof. The policy at the state institution of higher education in question establishes a standard of the preponderance of the evidence when identifying truth. This standard is identified as a fact being more probable than not. This is the standard in civil court in litigation between two parties. The presumption behind this standard is that neither party's interest supersedes the other. For example, if "A" sues "B" for breach of contract, the standard is appropriately a preponderance of the evidence. If, however, the government is attempting to deprive an individual of liberty or property, the burden of proof requires a higher standard—either "clear and convincing evidence" or the highest burden of proof, "beyond a reasonable doubt."

A standard of proof of the preponderance of evidence might be appropriate for a private university where the relationship between the student and the university more closely resembles a bilateral contract. As a private university, students can be required to give up many of the freedoms allowed by students at public institutions. An extreme example would be Bob Jones University where students are prohibited from listening to any radio station other than the university station. Religious colleges can allow professors to engage in public prayer in the classroom. Public colleges and universities must adhere to the doctrine of the separation of church and state. As a public institution, the requirement should be higher. The United States Supreme Court case *In Re Winship*,[21] identified three compelling public interests in using the reasonable doubt standard of proof—the defendant's liberty, to protect the innocent from the stigma of conviction, and to give confidence that the procedure protects the presumption of innocence.

We currently have a situation where if one is charged with a minor traffic offense which risks one hundred dollars in fines, the state must prove its case beyond a reasonable doubt. However, if a public university wishes to deprive a student of thousands of dollars in tuition, fees and room and board by expelling that student from the university only a preponderance of the evidence is required. This problem becomes even more critical as public universities have now taken it upon themselves to discipline students for conduct that occurs off campus whether school is in session or not. We have created a situation where egregious deprivations of basic legal rights are forced on citizens, in the guise of student discipline, for actions totally in the realm of the public police and legal authorities best equipped to handle them. This case study is an example of a public university bringing its deprivations of basic civil rights out into community law enforcement.

Often the problem lies largely in whom public institutions employ to handle their disciplinary hearings. Clearly those involved in the decision making at the public university in this case study had no idea of what hearsay was. Those conducting the hearings should have at least a one-day presentation on basic tried and true methods of testing the reliability of evidence. An understanding of the hearsay rule is simply mandatory if we, as educators, are going to provide any degree of due process in our discipline determinations.

RECOMMENDATIONS

To avoid costly civil rights suits and more importantly to be fair and accurate in our determinations public educational institutions must at a minimum:

1. Provide advance notice of the charges against a student. The charges need to be stated in sufficient specificity to allow for the preparation of a defense. Today in to many universities, including the one which produced the case study, the same person who writes the charges and the person who determines if they are of sufficient specificity is one in the same.
2. Provide adequate time between the charge and the hearing to allow the student to prepare a defense.
3. Have a mandatory process similar to a subpoena available to the charged student. Those facing discipline need to have the ability to call witnesses in their favor without fear of retribution. Some universities, including the one that produced the case study, go so far as to forbid student/defendants from speaking to potential witnesses.
4. Allow the charged student the opportunity to face his accusers.

[21] In Re Wiship, 397 US 358, 364 (1970)

5. Allow the charged student to have an active advisor, which may be an attorney to represent him. This active advisor must have the right to speak and to cross-examine witnesses so that the accuracy of the witness's statements can be deduced by the finder of fact. Without this basic right there is no opportunity for accuracy.
6. Ensure that the prosecution and the tribunal fact finder are separated. Allowing the person serving as prosecutor to be part of the panel determining liability is on its face silly.
7. Allow cross examination to test the list of hearsay dangers.
8. Allow for an accurate appeal process.
9. Change the burden of proof from a "preponderance of the evidence" to at least "clear and convincing evidence" or even the highest burden of proof, "beyond a reasonable doubt." Through all of the attempts to define the three burdens of proof known to our legal system the best simply says that with preponderance of the evidence we are "sure"; with clear and convincing we are "very sure", with beyond a reasonable doubt we are "extremely sure". Our students at least deserve that we are "very sure" before we strip them of education, take their property, and destroy their careers.

With whatever procedures are put in place they have to be enforced by someone knowledgeable in basic evidence rules to enable the university tribunals to be accurate. Ideally the person in charge of these hearings should have some minimum legal education. At least someone with a degree in paralegal studies should be the head of the judicial branch of a public university.

We typically don't ask sociologist to be experts in chemistry or accountants to be experts in physics. Yet when it comes to legal decisions universities typically entrust their appeal process to those with no education at determining whether a fair hearing was conducted or not. Since law is a part of everything in our society every university has those holding Doctors of Jurisprudence as part of their faculty. It is anathema that universities do not take advantage of this expertise by having those who process the credentials and the expertise in these matters to review the decisions. This would become a self-improving process as the attorney would be able to point out practices that do not comport with due process or other areas of the law.

These hearings should be a civics lesson for the students involved, both as members of tribunals, and as witness and defendants. Unfortunately, too often it is the university that needs the civics lesson.
Higher education should not be entirely focused upon imparting technical knowledge to be used only in the student's career path. Learning the skill sets necessary to be an engineer, an architect, a social worker, a teacher, or a business person is important, but not everything a student needs to know to become "educated." If learning skill sets was all a student needs, perhaps trade schools would be more appropriate. An important element to being an educated person is acquiring moral and ethical perspectives to assist the person in life as well as in their career.

When teaching our children we have sometimes heard the hollow words, "Do as I say, not as I do!" The institutions of higher education boast that they are teaching moral and ethical principles. Most every accreditation body for institutions of higher education has a moral and ethical component to their quality assessment. As such, institutions of higher education have a responsibility to model moral and ethical behavior. Current procedures for handling student misconduct fail in modeling the moral and ethical principles taught in the Bill of Rights and demanded by basic human dignity.

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AN INVESTIGATION OF CURRENT ACCOUNT SUSTAINABILITY OF ASEAN COUNTRIESY

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ABSTRACT

This paper examines current account sustainability of five countries in the Association of Southeast Asian Nations (ASEAN): Indonesia, Malaysia, the Philippines, Singapore and Thailand. The ASEAN was established in 1967 to speed up economic growth and to bring about cultural growth and progress, stability and regional peace among its member countries. Greater integration makes the issue of long-term sustainability of these countries critical to each other's prosperity. The paper uses the intertemporal solvency framework of Hakkio and Rush (1991) and Husted (1992) and cointegration methodology to test for a relation between exports and imports of the current account. Further, we estimate this long-run relationship using dynamic OLS. The results show that Malaysia and Thailand have sustainable current account positions. Among the other countries, Singapore has a statistically significant positive relation between exports and imports, but its weakness means that Singapore continues to have a vulnerable current account position. Indonesia and the Philippines have unsustainable current account deficits. Exchange rate adjustments and macroeconomic policy reforms may be necessary to reduce vulnerabilities in external positions for these countries.

INTRODUCTION

The ASEAN (Association of Southeast Asian Nations) is comprised of 10 countries, namely Brunei Darussalam, Cambodia, Indonesia, Laos, Malaysia, Myanmar, the Philippines, Singapore, Thailand, and Vietnam. However, due to a lack of available data, the graphs which are presented focus on eight of the ASEAN countries. Specifically, Brunei Darussalam and Myanmar are omitted.

The emblem of the ASEAN represents unity, friendship, and solidarity, of which the founding fathers dreamt when the ASEAN was first created in 1967. Its goal was to speed up economic growth and to bring about cultural growth and progress, stability and regional peace among the ASEAN nations. Greater integration makes the issue of longterm sustainability of these countries critical to each other's prosperity.

The population of the ASEAN is 670.71 million strong, and it accounted for approximately 9 percent of the total world population as of 2014, with a nominal GDP per capita of $5,593. The ASEAN countries with the highest GDP per capita are Singapore with $65,790 followed by Brunei Darussalam with $42,313. Half of the ASEAN countries have positive current account balances as a percent of GDP. These countries include: Brunei Darussalam, Malaysia, the Philippines, Singapore and Vietnam. In 2013, all of the ASEAN countries, except Brunei Darussalam, experienced growth. According to the projections for 2019 in Table 1, all countries display growth of some sort. Overall, the 10 ASEAN countries show positive average GDP growth, which is increased significantly when the Chinese and Indian economies are included.

The intent of the Bangkok Agreement, signed by the Foreign Ministers of Malaysia, Indonesia, Singapore, the Philippines, and Thailand, was originally to create a harmonic region. In 1997, ASEAN leaders adopted the ASEAN Vision 2020, wherein a peaceful and stable ASEAN community would be established by 2020. In 2003, the leaders stated that the ASEAN community would consist of three main pillars (i.e., ASEAN Security Community, ASEAN Economic Community, and ASEAN Socio-Cultural Community). The ASEAN Foreign Ministers signed a Memorandum of Understanding in 2007, which established the ASEAN Foundation. The main objectives of the ASEAN Foundation were to increase awareness of the ASEAN in order to encourage greater interaction and participation in ASEAN activities. The ASEAN Foundation has expanded since first created, gaining support from non-ASEAN countries (e.g., Japan and Korea).

The current account balances of the 10 ASEAN countries are driven by their trade balances. The trade, current accounts, and the Net Current Income from Abroad (NCIA) (all as a percentage of GDP) are mapped for the ASEAN countries from 2005 to 2013[1] (see Figures 1-8 in the Appendix).

This paper adds to the existing literature on current account sustainability by analyzing ASEAN countries over a time period that encompasses the 1997 Asian Financial Crisis and beyond. In contrast to previous studies (i.e., Yan (1999) and Baharumshah et al. (2003)), this analysis includes a longer post-crisis period, which conveys greater veracity to

its findings. Furthermore, empirical analysis of current account sustainability in developing countries has received little attention in the literature (e.g., Milesi-Ferretti and Razin (1996), Apergis, Katrakilidis, and Tabakis (2000), Arize (2002), Sohrabji (2009), Sissoko and Sohrabji (2010)), and studies of current account sustainability in the ASEAN are even more limited and dated (e.g., Yan (1999), Baharumshah et al. (2003)).

The remainder of the paper is organized as follows. The next section discusses relevant literature. Background on the ASEAN is presented in the third section, and the methodology of current account sustainability analysis is covered in the fourth section. The fifth section provides details about the data sample and results. Finally, the sixth section concludes.

LITERATURE REVIEW

Current account deficits and their sustainability have been studied extensively. Gregory and Hansen (1996) tested for structural breaks in the long-run United States money demand equation and extended cointegration analysis by allowing for a one-time regime shift of unknown timing using ADF-Z- and Z-type tests. Thus, the null hypothesis of no cointegration was tested against the alternative hypothesis of cointegration in the presence of a possible regime shift. These tests have the ability to detect cointegrating relationships when there is a break in the intercept and/or the slope coefficient whereas the conventional ADF test loses power sharply without an allowance for a regime shift.

Holman (2001) identified the potential sources of large deficits and conducted an analysis of the near-term sustainability of the current account deficit in the United States. Holman (2001) hypothesized that the rising stock market in the 1990s increased household wealth leading to greater consumer spending, which culminated in larger trade deficits. Although economists and policymakers questioned the sustainability of the United States external position, Holman (2001) found that deficits of that magnitude were sustainable in the near term and unlikely to cause any disruption of the United States economy. Mann (2002) focused on the current account deficit of the United States and provided different perspectives on its trade balance. Mann (2002) noted that continuing current account deficits in the United States would result in an increasingly negative net international investment in the United States. However, the long-term adjustment to a smaller trade deficit is possible with a set of response events or by structural change and the implementation of appropriate policy measures. In a related vein, Carranza (2002) studied 1988-1996 data on investment, saving, and capital flows for a sample of nations to assess the long-run sustainability of a given level of current account deficit using different approaches to analyzing a country's solvency.

The sustainability of current account deficits in other countries has been analyzed in the existing literature with varying results. Apergis, Katrakilidis, and Tabakis (2000) used advances in cointegration techniques to reveal the presence of possible regime changes in an investigation of the current account deficit in Greece using data on exports, imports, net transfer payments, and net interest payments from 1960 to 1994. The results favored the current account deficit sustainability hypothesis, but noted that such sustainability is neither a necessary nor a sufficient condition for the preservation of the drachma. Similarly, Kónya (2009) empirically analyzed the current account imbalances of the central European nations of the Czech Republic, Hungary, and Slovenia during the 1990-2005 timeframe using an intertemporal approach. Using data on real exports, real imports, and real GDP, Kónya (2009) determined that the Czech Republic and Slovenia were not in violation of their intertemporal budget constraints and had sustainable trade imbalances.

Leachman and Thorpe (1998) studied 1959-1996 data on net exports and net imports for Australia as an example of a small open economy. Using cointegration and multi-cointegration analyses, Leachman and Thorpe (1998) found that exports and imports were multi-cointegrated in the fixed exchange rate era, but did not share a conventional long-run equilibrium relationship in the more recent flexible exchange rate period. Similarly, Sissoko and Sohrabji (2010) used 1960-2006 World Bank data to examine the current account sustainability of countries in the Eastern African Community, Economic Community of Central African States, and South African Development Community. Sissoko and Sohrabji (2010) identified a sustainable current account position for Botswana, but statistically significant weak relationships between exports and imports for Uganda, Central African Republic, Congo, Rwanda, Lesotho, and Zambia. Alternatively, unsustainable current account deficits existed for Kenya, Cameroon, Chad, Gabon, Malawi, and Swaziland.

Ostry and Robinson (1997) used a model of optimal external borrowing and lending with 1975-1995 data to estimate an actual time series of the optimal consumption-smoothing current account for Indonesia, Malaysia, the Philippines, Singapore, and Thailand. Their findings revealed that while excessive private consumption largely was not been

responsible for widening external imbalances among these ASEAN countries in recent years (except for Indonesia and Malaysia to a small degree), there is an argument for reducing current account deficits over time in order to minimize the associated risks even in the face of sustainable external positions.

Analyzing the current account deficit sustainability from saving-investment and trade perspectives for Malaysia, Thailand, and Indonesia during 1975-1995, Sathirathai (1997) determined that the deterioration in current account balances was underpinned by imports of capital goods rather than consumption goods. Thus, the trade deficits among these ASEAN nations reflect their considerable appetites for investment rather than declining saving rates. However, Thailand is more vulnerable to shifting market sentiments than the other two countries. Guest and McDonald (1999) used 1976-1997 data on Thailand, Singapore, Malaysia, Indonesia, and the Philippines to apply a calibrated representative agent model of optimal saving and investment. Their results indicated that Malaysia, the Philippines, and Thailand had sub-optimal current account ratios to GDP, while Singapore and Indonesia's ratios were above-optimal on average due to over-saving.

Baharumshah, Lau, and Fountas (2003) tested for the sustainability of current account imbalances among Indonesia, Malaysia, the Philippines, and Thailand (i.e., ASEAN-4) in the period leading up to the financial crisis and extended the analysis to include data from the post-crisis era, which ended in 1999. Using 1961-1999 data, Baharumshah, Lau, and Fountas (2003) found that all of the sample ASEAN countries, except Malaysia, had current account deficits that were not in long-run steady state in the pre-crisis (1961-1997) era. Rather, these nations had unsustainable current account deficits and did not move toward external account equilibrium. Thus, Baharumshah, Lau, and Fountas (2003) concluded that a persistent current account deficit might serve as a leading indicator of financial crises.

BACKGROUND OF THE ASEAN

The ASEAN-10 is the largest regional cooperative in Asia including ten countries[2], with more than 630 million people and a combined GDP of over $3.5 trillion in 2014. The external debt of the South Asian countries was $94.5 billion in 2010 according to the World Bank Report (2012). The ASEAN's top three principal export destinations in 2013 were China, Japan, and the United States accounting for 12.3%, 9.4%, and 8.1%, respectively. While these three nations were also the ASEAN's principal export destinations in 2011, the shares were slightly higher. Similarly, the ASEAN's principal import sources in 2013 were China, Japan, and the United States with shares of 14.2%, 9.6%, and 7.9%, respectively. Again, these three countries also were the ASEAN's principal import sources in 2011, but the percentages were a bit larger. As a percentage of GDP, the ASEAN-10's current account balance ranged from 2.2% in 2013 to 8.4% in 2007. The average of roughly 4.5% over the 2007-2015 period falls below the threshold of sustainability of 5% of GDP as identified by Milesi-Ferretti and Razin (1996). During 2014 and 2015, individually among the ASEAN-5 members, Indonesia's current account deficit was 3%, while the remainder of the ASEAN-5 nations had current account surpluses.

The debt for the ASEAN countries is calculated as a sum of the debt service of four principal years: 2000, 2005, 2010 and 2014. The percent change is also given for the same years. The total debt for the Philippines is $21,167 million U.S. dollars with percent changes of 42% between 2000 and 2005, 45% for the 2005-2010 period, and -64% from 2010 to 2014. The total debt for Thailand is $45,923 million U.S. dollars for the period. The percent change was 84% between 2000 and 2005, -42% from 2005 to 2010, and 19% for the period 2010-2014. The total debt in Malaysia is $28,167 million for the 2000-2014 period with percent changes of 73%, -50%, and 272% for the respective three periods. Indonesia has a total debt of $71,024 million and percent changes of approximately 70%, 52%, and -8% for the three periods. Vietnam amasses a total debt of $6,267.2 million U.S. dollars and percent changes of approximately -49%, 118%, and 263% for the 2000-2005, 2005-2010, and 2010-2013 periods, respectively.

According to Table 5, over the course of the 2007-2015 time period, the ASEAN-10 experienced real GDP growth rates ranging from a low of 1.1% in 2009 to a high of 7.9% in 2010. The average real GDP growth rate was about 5% over that timeframe. Looking ahead, the real GDP growth rate for the ASEAN-10 is projected to be 5.8% in 2019 after experiencing growth rates of 5.9% and 5.4% over the 2003-2007 and 2011-2013 periods, respectively. In comparison, China and India had growth rates of 11.7% and 8.8%, respectively, in the 2003-2007 timeframe followed by 8.2% and 5.5% real GDP growth, respectively, from 2011 through 2013. China and India are projected to experience real GDP growth rates of 6.6% and 6.8%, respectively, in 2019.

In Figure 1(a), Cambodia's trade balance skyrocketed from -7.5% to -2% in 2008 from the Great Recession, while the current account balance decreased from -3% to -8%. After the Great Recession, Cambodia's current account balance

increased again until 2012, when it decreased again. Its trade deficit increased from 2009 to 2010, then stayed relatively constant.

In Figure 1(b), Cambodia's trade deficit increases overall, but has a sharp increase in 2008 from the Great Recession. Its NCIA gradually decreases from 1995 to 2013, but remains relatively constant from 2005 to 2013.

In Figure 2(a), Indonesia experiences a decrease in trade balance from 5.5% to 1% in 2008 due to the Great Recession and it continually decreases after 2009 to -2% in 2013. Its current account balance mimics the graph of trade balance and has similar outcomes throughout the period, reaching 0% in 2005, 2008, and 2011 during the periods of recession.

In Figure 2(b), Indonesia's trade balance is high in 1979, because of a recession caused by an oil shock. After 1979, there was another spike in its trade balance in 1997 from the Asian Financial Crisis. Indonesia's NCIA was lowest in 1991 due to a collapse in the Soviet Union and decreased again in 2001 after the September 11, 2001 terrorist attack.

In Figure 3(a), Lao PDR's trade balance was lower in 2008 from the Great Recession and rose in 2010 to its highest point of -2%. Lao PDR's current account was highest in 2006 and decreased because of the Great Recession in 2009. In Figure 3(b), Lao PDR's trade balance spiked in 1997 due to the Asian Financial Crisis and plummeted in 2008 when the Great Recession hit. After the recession in 2010, the trade deficit decreased to -2%. Lao PDR's NCIA gradually became negative after the Asian Financial Crisis until the Great Recession and slowly recovered in 2010-2012.

In Figure 4(a), Malaysia's trade balance gradually decreased after the Great Recession, and its NCIA mimics the same trend from 2005 until 2013. In Figure 4(b), Malaysia's trade balance was lowest in 1983 due to a recession, and skyrocketed in 1997 from the Asian Financial Crisis. The NCIA was relatively constant throughout the timeline.

In Figure 5(a), the Philippine's trade balance rose in 2007, just before the Great Recession and then slowly decreased from 2009 to 2013. The Philippine's current account saw its lowest point in 2008 because of the Great Recession. In Figure 5(b), the trade balance in the Philippines was highest in 1977 due to an economic crisis and hit its low point in 1997 from the Asian Financial Crisis. The NCIA was relatively low until the Asian Financial Crisis in 1997, and then decreased after the Great Recession in 2008.

In Figure 6(a), Singapore's trade balance decreased from 30% to 22% in 2007-2008 from the Great Recession, and recovered in 2010. Its current account balance decreased from 25% to 15% for the same reasons. In Figure 6(b), Singapore's trade balance gradually increased throughout the period with a high point in 2007, just before the recession. The NCIA was relatively constant, but it was negative in 2004 from a recession.

In Figure 7(a), Thailand's trade balance hit a peak in 2007 and decreased in 2008. In 2009, its trade balance was highest at 11% (recovery from the Great Recession). The current account balance of Thailand had the same structure, with high points in 2007 and 2009, and a low point in 2008. In Figure 7(b), Thailand's trade balance hit a peak in 1987 after a recession and spiked in 1997 from the Asian Financial Crisis. In 2008, the trade balance was 10% due to the Great Recession. Its NCIA was relatively constant throughout the graph.

In Figure 8(a), Vietnam's trade balance was lowest in 2008 from the Great Recession and has been recovering since. The current account balance was lowest in 2008 for the same reason and has been increasing since 2008. In Figure 8(b), Vietnam's trade balance was low in 1997 from the Asian Financial Crisis. The trade balance hit another low point in 2003 from the September 11, 2001 terrorist attack and again in 2008 because of the Great Recession. Vietnam's NCIA was relatively constant from 1997 until 2008 when the Great Recession hit and decreased slightly. In 1990, the NCIA decreased quite a bit from a recession.

ANALYZING CURRENT ACCOUNT SUSTAINABILITY

The theoretical model for examining current account sustainability is based on Hakkio and Rush (1991) and Husted (1992). The theoretical model assumes that the amount that a small open economy borrows or lends in international markets equals the present value of the future trade surpluses. For intertemporal solvency, deficits incurred in the present period will be repaid by future surpluses. The expectation is that imports and other debits on the current

account lead to increased exports, thus making current account deficits sustainable in the long run. Hence, the econometric equation to be estimated is given as

$$EX_t = \alpha + \beta\, IMM_t + \varepsilon_t \quad (1)$$

where *EX* are exports of goods and services and *IMM* refers to imports of goods and services, net of unilateral transfer payments and net investment income payments. Imports of goods and services net of unilateral transfer payments and net investment income payments are denoted as imports+ for the rest of the paper.

If EX_t and IMM_t are cointegrated, then the long-run relation between exports and imports can be estimated.

This relation sheds light on current account sustainability. Cointegration requires testing for stationarity. We employ several tests including Augmented Dickey-Fuller (ADF), Phillips-Perron (PP), and Kwiatkowski, Phillips, Schmid, and Shin (KPSS). If the series are integrated of order one, we can test for cointegration. Two methods for testing cointegration are used. The standard Johansen test, which employs a trace and an eigenvalue test, is first used to test for cointegration. This test assumes that the cointegrating relationship is unchanged throughout the sample period. However, it is possible that the relation between exports and imports changes over time. To allow for that, we follow Baharumshah et al. (2003), Cook (2004), Sohrabji (2009), and Oğuş Binatlı and Sohrabji (2012) and employ the Gregory and Hansen (1996) cointegration procedure for the countries in our sample. This procedure has the advantage of endogenously determining the break point in the cointegrating relation.

Gregory and Hansen (1996) consider three models with structural breaks in the cointegrating relation which we use as well. These three models are denoted as level shift, or a level shift and trend, or a regime shift. They are given as,

Model with level shift $$EX_t = \mu_1 + \mu_2\, D_t + \beta\, IMM_t + \varepsilon_t \quad (2)$$

Model with level shift/trend $$EX_t = \mu_1 + \mu_2\, D_t + \gamma\, t + \beta\, IMM_t + \varepsilon_t \quad (3)$$

Model with regime shift $$EX_t = \mu_1 + \mu_2\, D_t + \beta_1\, IMM_t + \beta_2\, IMM_t\, D_t + \varepsilon_t \quad (4)$$

where $D_t = \begin{cases} 0 \; if \; t \le \tau \\ 1 \; if \; t > \tau \end{cases}$ and τ is the structural break point.

If there is cointegration between exports and imports, the long-run relation between them can be estimated using Stock and Watson's (1993) dynamic OLS (DOLS) technique. DOLS incorporates the information regarding the structural break from the Gregory and Hansen (1996) procedure (referred to as the Gregory-Hansen test/procedure for the rest of the paper). In addition, DOLS includes lags and leads of the first difference of the regressors. Thus the estimated DOLS equation is given as

$$EX_t = \alpha + \beta\, IMM_t + \delta\left(IMM_t - IMM_\tau\right)D_t + \Phi\, d(L)\Delta\, IMM_t + \varepsilon_t \quad (5)$$

where IMM_τ is imports+ at the structural break point, $\Delta\, IMM_t$ is the first difference of imports+, and $d(L)$ captures lags and leads of the first difference of the regressors.

The relation between exports and imports+ which is captured by β sheds light on the sustainability of the currentaccount. If the relation between exports and imports is not statistically significant then the current account deficit is unsustainable. If there is a statistically significant and strong relationship between exports and imports then the current account position is sustainable. Between these two extremes there is also the possibility of a statistically significant but weak relation between exports and imports. If this is the case, we can conclude that while exports are growing in relation to imports, this growth may be insufficient to pay off accumulated debt. Thus, the current account position continues to be vulnerable. We present and analyze the empirical work on the five sample ASEAN countries in the following section.

DATA AND RESULTS

The purpose of this paper is to analyze current account sustainability in the ASEAN countries. Due to data constraints we focus on five ASEAN countries including Indonesia, Malaysia, the Philippines, Singapore, and Thailand. We use annual data between the 1960s and 2014. The sample period varies depending on data availability (carefully noted on tables with results). The relation between exports and imports+ is estimated using the methodology discussed above. The exports series includes export of goods and services and imports+ includes import of goods and services

net of unilateral transfer payments and net investment income payments. Following the literature, this paper uses real exports and real imports+ as a percentage of real GDP (base year of 2000) referred to as RXY and $RMMY$ for the remainder of the paper. All data is available from the World Bank.

The first step is to test for nonstationarity of the two series. Results of the three unit root tests employed are presented in Table 7. In general, we find that the series are integrated of order one in levels and are stationary in first differences for all countries in the sample in keeping with the results of Baharumshah et al. (2003). Nelson and Plosser (1982) aver that most macroeconomic time series are difference stationary processes. Thus, we can test for cointegration between exports and imports. As noted earlier, we use two cointegration tests, the Johansen test and the Gregory-Hansen test.

To conduct the Johansen test for cointegration, it is necessary to determine the number of lags, *k*, in the underlying VAR. We use several measures for testing lag length including likelihood ratio tests (LR), Akaike information criterion (AIC), and Schwarz criterion (SC). Based on these criteria we find the appropriate lag length for each country.

Using this lag length information, the Johansen cointegration test is conducted for no cointegrating equations as well as for up to one cointegrating equation. Since data is limited for the countries in the sample (ranging from 40 years to 55 years), this paper employs the small sample correction of Reinsel and Ahn (1988). According to this methodology, the trace and eigenvalue statistics are multiplied by $(T - p\,k)/T$ where *T* is the sample size, *p* is the number of variables, and *k* is the number of lags. The adjusted results of the trace and eigenvalue tests are presented in Table 8. The Johansen cointegration test results indicate cointegration for Indonesia, the Philippines, and Thailand, but not for Malaysia and Singapore. Baharumshah et al. (2003) obtained similar findings for Indonesia, Thailand, and Malaysia.

As noted earlier, the Johansen test assumes there is no change in the cointegrating relation, which might result in an inability to reject the null hypothesis of no cointegration. To allow for a structural break, this paper also uses the Gregory-Hansen procedure. Results for this test, including the break point for each of the models discussed by Gregory-Hansen, are presented in Table 9. In this case, all countries, except Malaysia, show evidence of cointegration with a break for at least one of the models and in some cases for two models, which is consistent with the results of Baharumshah et al. (2003). Comparing the Johansen test results with the Gregory-Hansen test results reveals that our sample countries, with the exception of Malaysia, experienced improvement in their trade positions assuming a break point. Baharumshah et al. (2003) reached similar conclusions with a smaller sample size (i.e., ASEAN-4 over the 1961-1999 period).

Given this information, we can estimate the long-run relation between exports and imports+ using dynamic OLS according to equation (5). The lag length for the differenced *RMMY* terms is determined by AIC and SC. The regression is tested for serial correlation, heteroskedasticity, non-normality, stability, and a structural break in the data. All results are reported in Table 10. These results show diagnostic problems for certain countries. If the LM test showed evidence of serial correlation, we used dynamic GLS. This was the case for all five sample countries. Heteroskedasticity was a concern for all sample countries, except the Philippines, which we corrected by using heteroskedasticity-consistent standard errors. All nations, with the exception of Indonesia and Singapore, failed the normality test, and all five countries failed the RESET stability test due to the presence of a structural break in 1997 following the Asian Financial Crisis. Chow test results confirm that all five countries experienced structural breaks in 1997.

We find a positive relation between exports and imports+ only for Singapore and Thailand as is to be expected since we find evidence of cointegration. Our results show that the positive relation between exports and imports+ is statistically significant only for Singapore, which indicates that exports in this nation grow in response to increasing imports and other debits. However, we reject the null of $\beta \geq 1$ in favor of the alternative $\beta < 1$ (Table 10) for Singapore, which indicates that its current account position is unsustainable over the sample period. Thus, while debits are not a drain on the economy in Singapore, import growth outpaces export growth making it difficult for Singapore to close the trade gap. As a result, Singapore may face jeopardy in the future without making necessary adjustments.

There is a negative statistically significant relation between exports and imports+ for Indonesia and the Philippines. We reject the null of $\beta \geq 1$ in favor of the alternative $\beta < 1$ (Table 10) for Indonesia and the Philippines, which suggests that their current accounts are not sustainable over the sample period. Therefore, Indonesia and the

Philippines are importing without adding sufficiently to their export bases. In contrast, Malaysia and Thailand have negative and positive relations between exports and imports+, respectively, but their coefficients are statistically insignificant. Furthermore, we do not reject the null of $\beta \geq 1$ in favor of the alternative $\beta < 1$, which indicates that Malaysia and Thailand's current account positions are sustainable over the sample period.

Overall, three of the sample countries suffer from weak current account positions. While the current account position for Singapore is problematic, it is less of a concern than for Indonesia and the Philippines. Based on our model, we thus conclude that Indonesia, the Philippines, and Singapore have current account positions that are unsustainable over the sample period. Thus, import growth outpaces exports, and it is an uphill battle for these three sample countries to close their trade gaps. Our results suggest a need for reforms in order to improve current account positions in Indonesia, the Philippines, and Singapore. In the following section we draw lessons for reforms based on a comparative analysis of the experiences of our sample countries.

CONCLUSION

This paper analyzes the current account sustainability of five ASEAN countries including Indonesia, Malaysia, the Philippines, Singapore, and Thailand. We examine the relation between exports and imports including net interest and transfer payments (imports+) for these countries using the intertemporal solvency framework, cointegration methodology, and dynamic OLS estimation. We find evidence of cointegration between exports and imports+ for all countries except Malaysia. In the case of Singapore, we only find cointegration when we allow for a structural break indicating a positive shift in the trade positions of this country.

Our estimation of the relation between exports and imports+ shows a statistically significant positive relation for Singapore. Guest and McDonald (1999) note that Singapore had over-saved in the 1976-1997 timeframe more than the other ASEAN countries in our sample. However, only Malaysia and Thailand have *sustainable* current account positions. Guest and McDonald (1999) found that Malaysia and Thailand ran below-optimal current account balances due to over-investing in the 1976-1997 period. Ostry and Robinson (1997) caution that reducing current account deficits over time will minimize the associated risks even in the face of sustainable external positions. While Singapore continues to exhibit vulnerability in the current account due to a weak relation between exports and imports+, the concerns for Indonesia and the Philippines are much more acute. We find the relation between exports and imports+ is negative and statistically significant for these countries, which indicates unsustainable current account positions. Guest and McDonald (1999) revealed that the Philippines had been under-saving while Indonesia had over-saved in the 1976-1997 period.

Long-run current account deficits are indicative of macroeconomic imbalances, such as excessive spending by the government or private sector, inefficient investment, or overvaluation of the currency, which portend serious problems for a nation. If these current account deficits are large and ongoing, domestic interest rates may rise relative to foreign interest rates and thereby saddle future generations with higher debt service payments and reduced standards of living. Furthermore, Kaminsky, Lizondo, and Reinhart (1998), Yan (1999), Edwards (2001), and Baharumshah et al. (2003) point out that significant current account imbalances may propagate currency crises. Baharumshah et al. (2003) assert that a failure to address such external imbalances could ultimately result in an exchange rate collapse, because foreign investors will be reluctant to finance these deficits in the long run. MilesiFerretti and Razin (1996), and Yan (1999) note ability-to-pay and willingness-to-lend constraints in these circumstances. These observations are particularly salient for the ASEAN nations following the Asian Financial Crisis in mid-1997.

Given the integrated global nature of modern-day financial markets, countries with large current account deficits may fall victim to exogenous market sentiment shocks. Yan (1999) cites evidence that nations may suffer due to the plights of nearby countries. The ongoing worldwide concern over the recent slowdown in China's economic activity and its potential impact on the vitality of other economies is indicative of the gravity of these contagion effects. Thus, the unsustainable current account positions suggested by this analysis for Indonesia and the Philippines, and to a lesser extent Singapore, may merit policy responses, such as exchange rate regime shifts and/or tighter macroeconomic policies, to avoid a crisis. In that vein, Yan (1999) argues that the International Monetary Fund and other international organizations play a pivotal role in achieving recovery from currency crises.

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APPENDIX

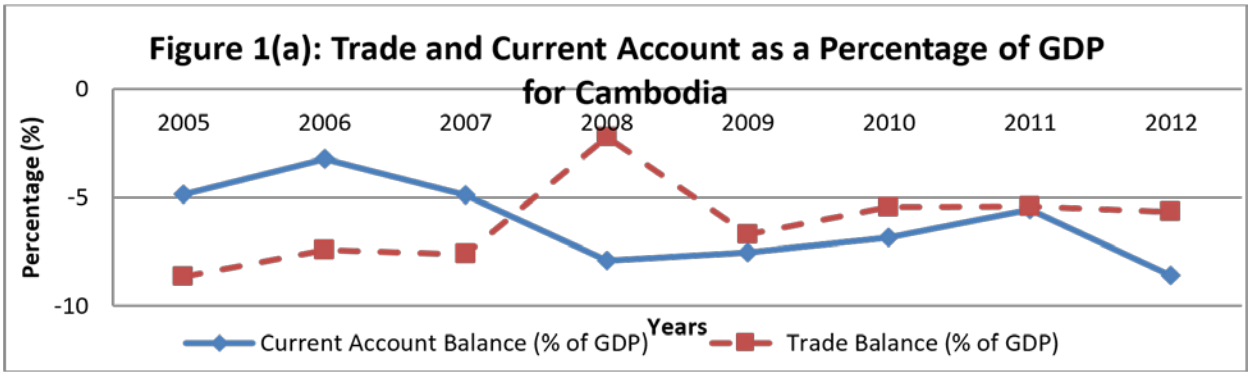
Figure 1(a): Trade and Current Account as a Percentage of GDP for Cambodia
Percentage (%)
0
-5
-10
2005
2006
2007
2008
2009
2010
2011
2012
Years
Current Account Balance (% of GDP)
Trade Balance (% of GDP)

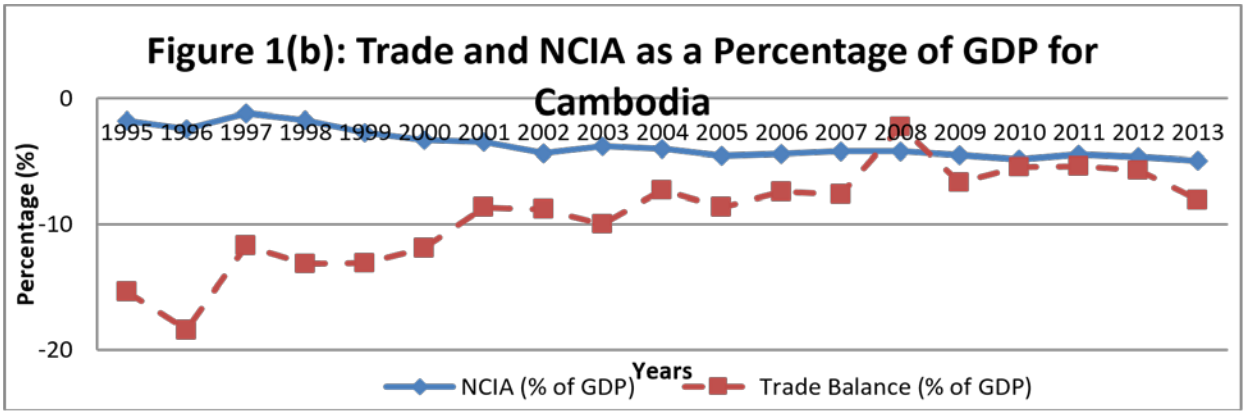
Figure 1(b): Trade and NCIA as a Percentage of GDP for Cambodia
Percentage (%)
0
-10
-20
1995 1996 1997 1998 1999 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013
Years
NCIA (% of GDP)
Trade Balance (% of GDP)


Figure 2(a): Trade and Current Account as a Percentage of GDP for Indonesia
Percentage (%)
10
5
0
-5
2005
2006
2007
2008
2009
2010
2011
2012
2013
Current Account Balance (% of GDP)
Years
Trade Balance (% of GDP)

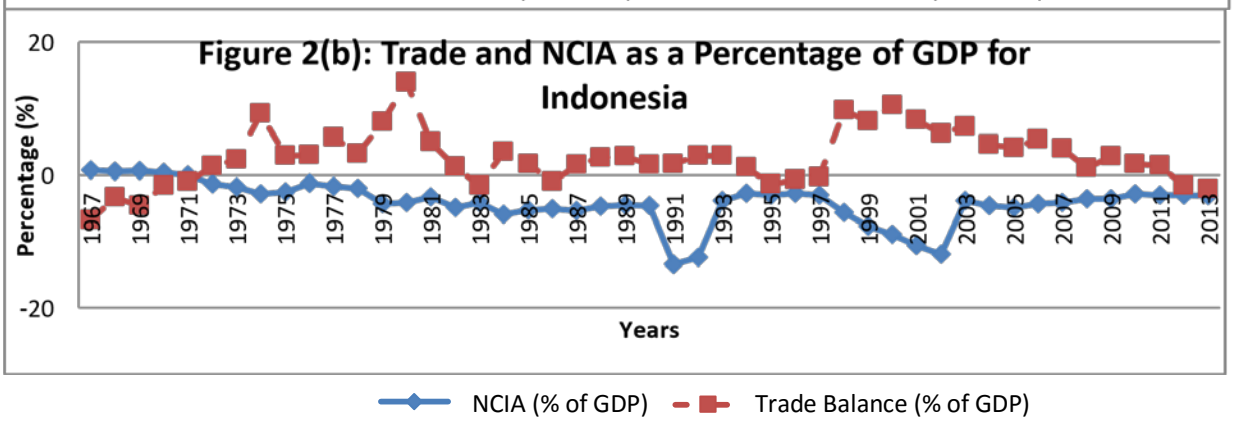
Figure 2(b): Trade and NCIA as a Percentage of GDP for Indonesia
Percentage (%)
20
0
-20
1967
1969
1971
1973
1975
1977
1979
1981
1983
1985
1987
1989
1991
1993
1995
1997
1999
2001
2003
2005
2007
2009
2011
2013
Years
NCIA (% of GDP)
Trade Balance (% of GDP)

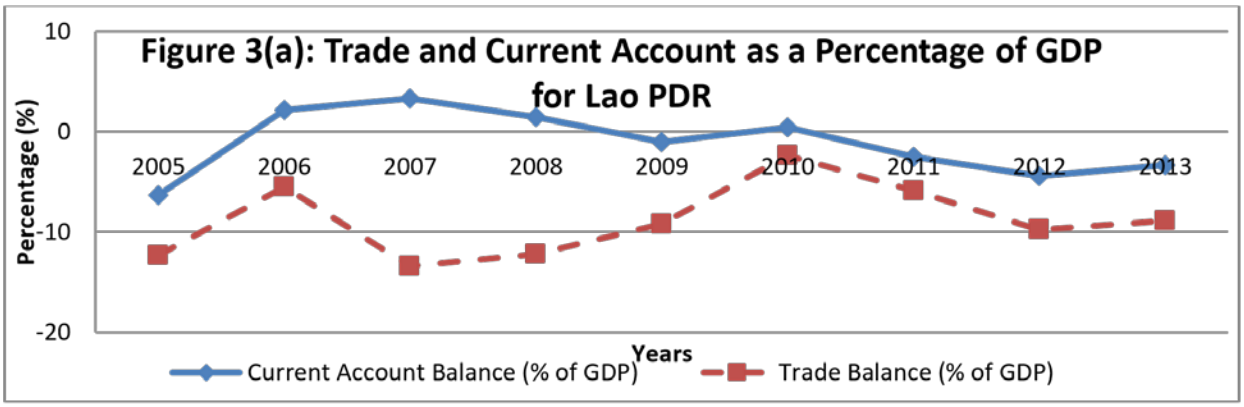
Figure 3(a): Trade and Current Account as a Percentage of GDP for Lao PDR
Percentage (%)
10
0
-10
-20
2005
2006
2007
2008
2009
2010
2011
2012
2013
Years
Current Account Balance (% of GDP)
Trade Balance (% of GDP)

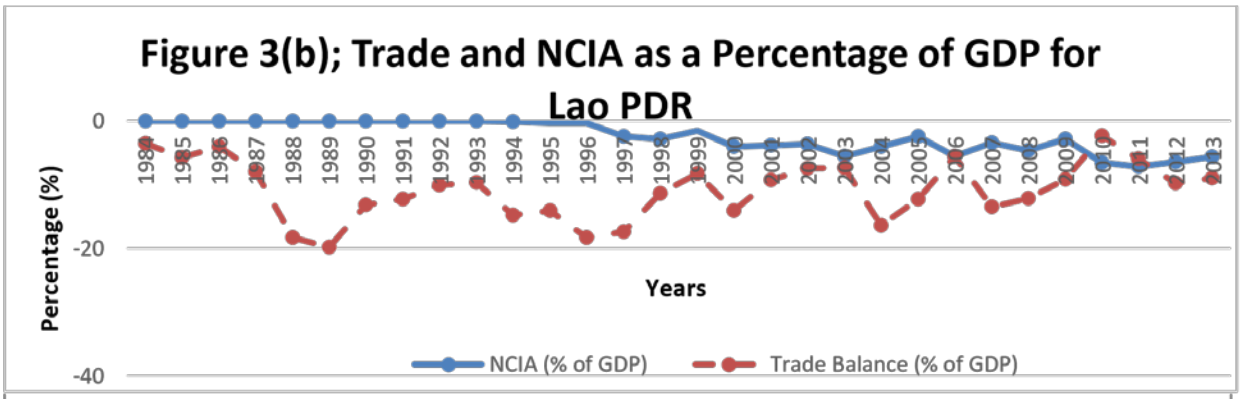
Figure 3(b); Trade and NCIA as a Percentage of GDP for Lao PDR
Percentage (%)
0
-20
-40
Years
NCIA (% of GDP)
Trade Balance (% of GDP)

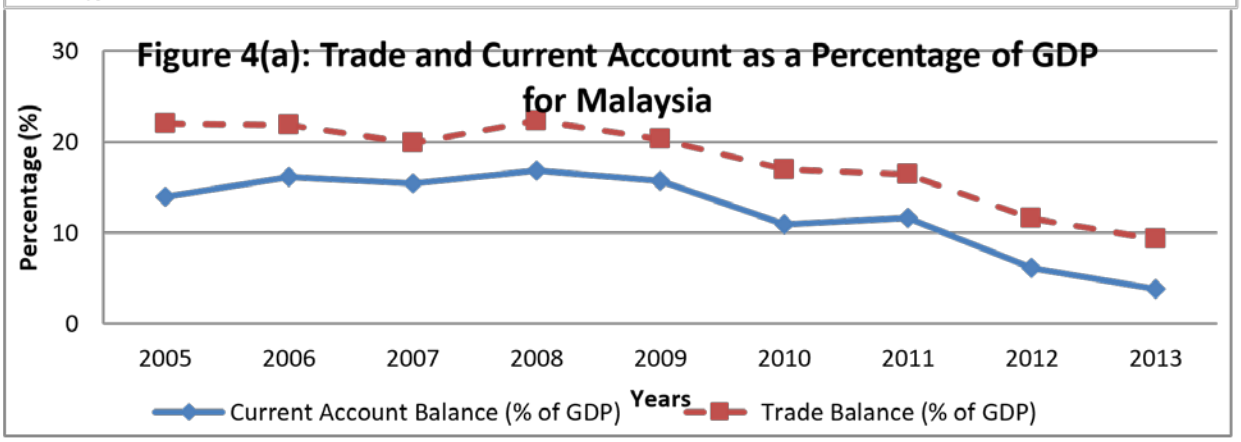
Figure 4(a): Trade and Current Account as a Percentage of GDP for Malaysia
Percentage (%)
30
20
10
0
2005
2006
2007
2008
2009
2010
2011
2012
2013
Years
Current Account Balance (% of GDP)
Trade Balance (% of GDP)

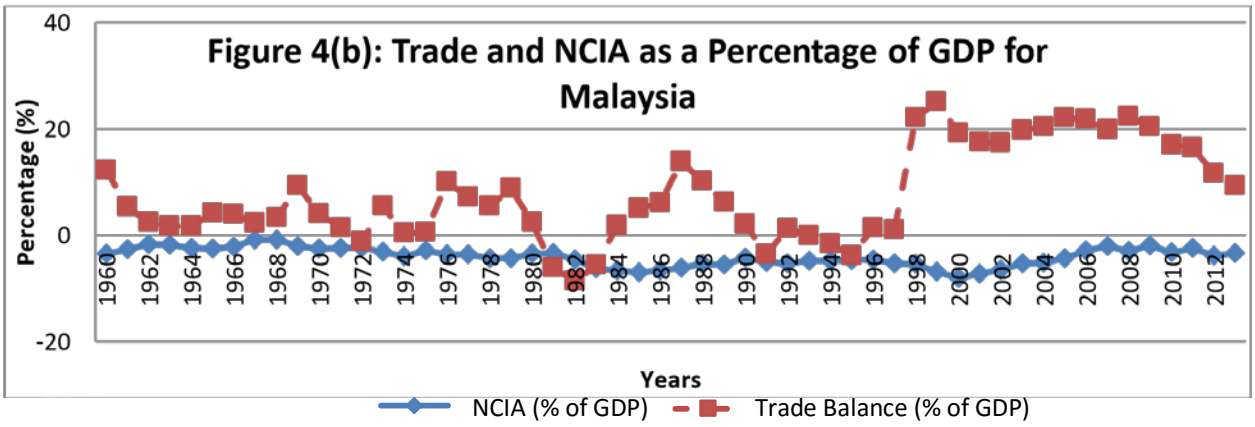
Figure 4(b): Trade and NCIA as a Percentage of GDP for Malaysia
Percentage (%)
40
20
0
-20
Years
NCIA (% of GDP)
Trade Balance (% of GDP)

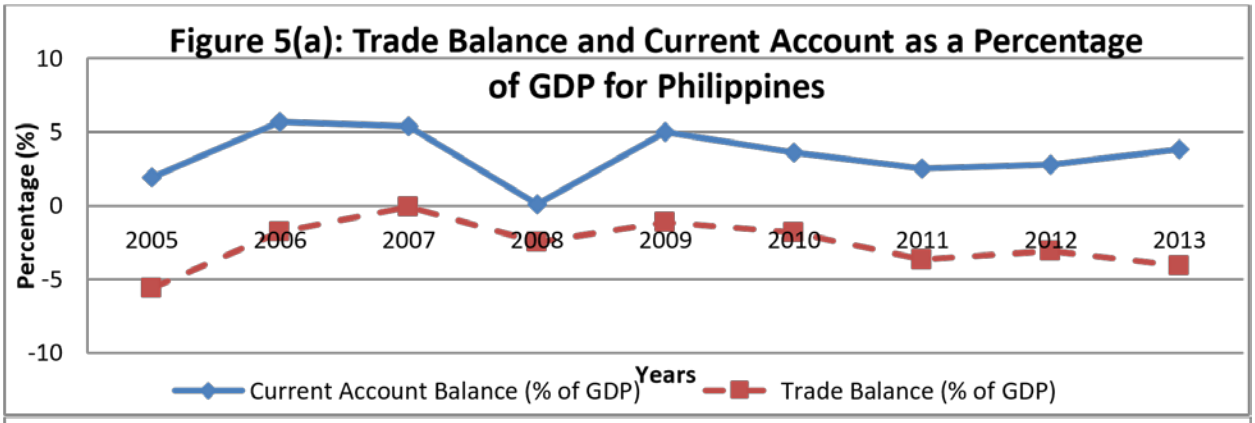
Figure 5(a): Trade Balance and Current Account as a Percentage of GDP for Philippines
Percentage (%)
10
5
0
-5
-10
2005
2006
2007
2008
2009
2010
2011
2012
2013
Years
Current Account Balance (% of GDP)
Trade Balance (% of GDP)

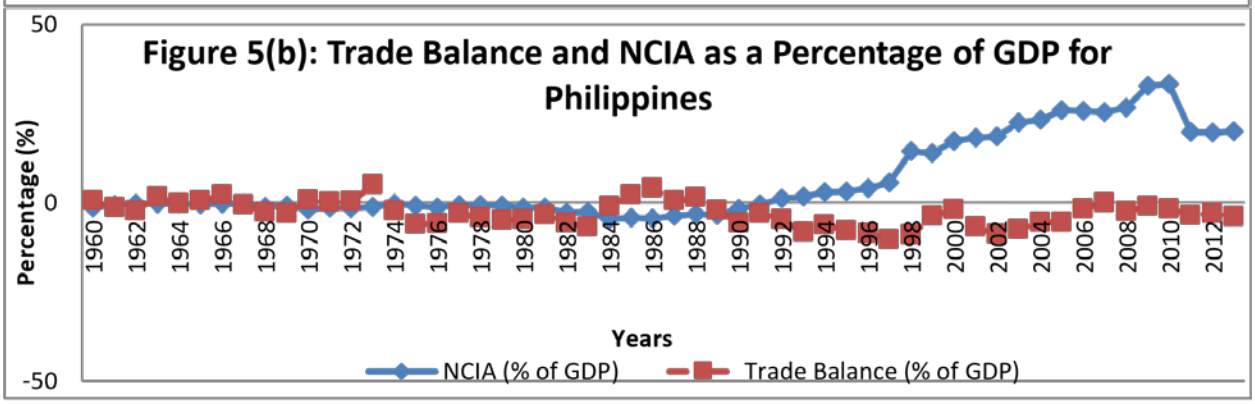
Figure 5(b): Trade Balance and NCIA as a Percentage of GDP for Philippines
Percentage (%)
50
0
-50
1960
1962
1964
1966
1968
1970
1972
1974
1976
1978
1980
1982
1984
1986
1988
1990
1992
1994
1996
1998
2000
2002
2004
2006
2008
2010
2012
Years
NCIA (% of GDP)
Trade Balance (% of GDP)

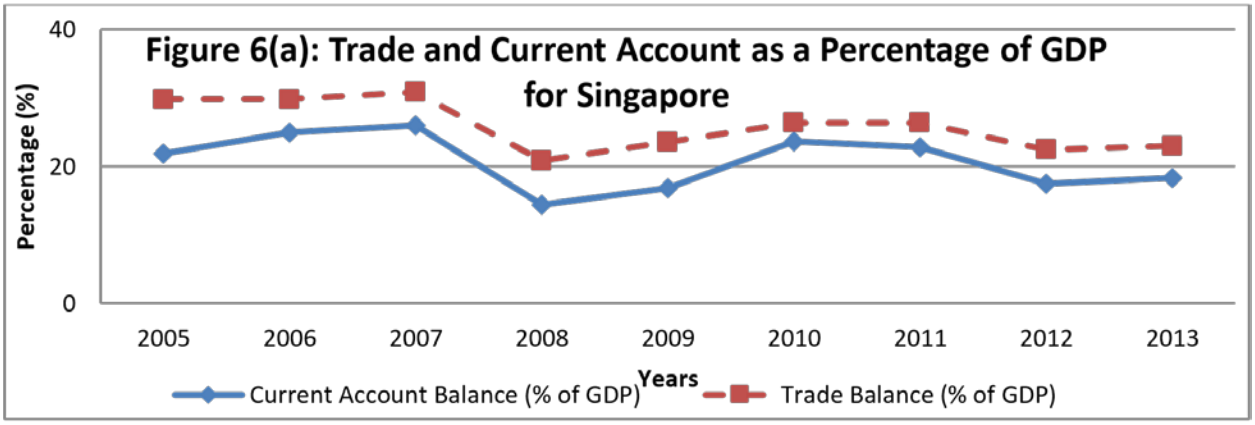
Figure 6(a): Trade and Current Account as a Percentage of GDP for Singapore
Percentage (%)
40
20
0
2005
2006
2007
2008
2009
2010
2011
2012
2013
Years
Current Account Balance (% of GDP)
Trade Balance (% of GDP)

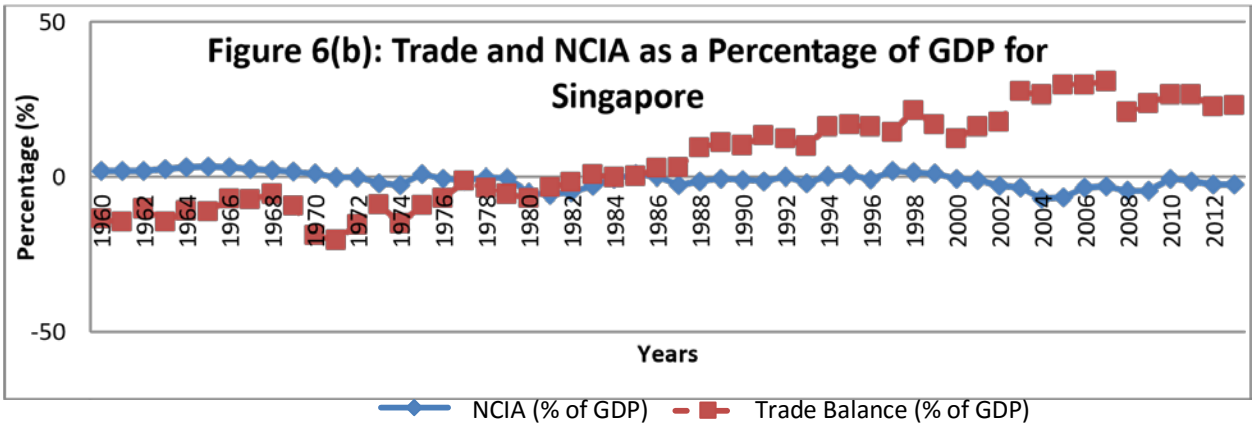
Figure 6(b): Trade and NCIA as a Percentage of GDP for Singapore
Percentage (%)
50
0
-50
1960
1962
1964
1966
1968
1970
1972
1974
1976
1978
1980
1982
1984
1986
1988
1990
1992
1994
1996
1998
2000
2002
2004
2006
2008
2010
2012
Years
NCIA (% of GDP)
Trade Balance (% of GDP)

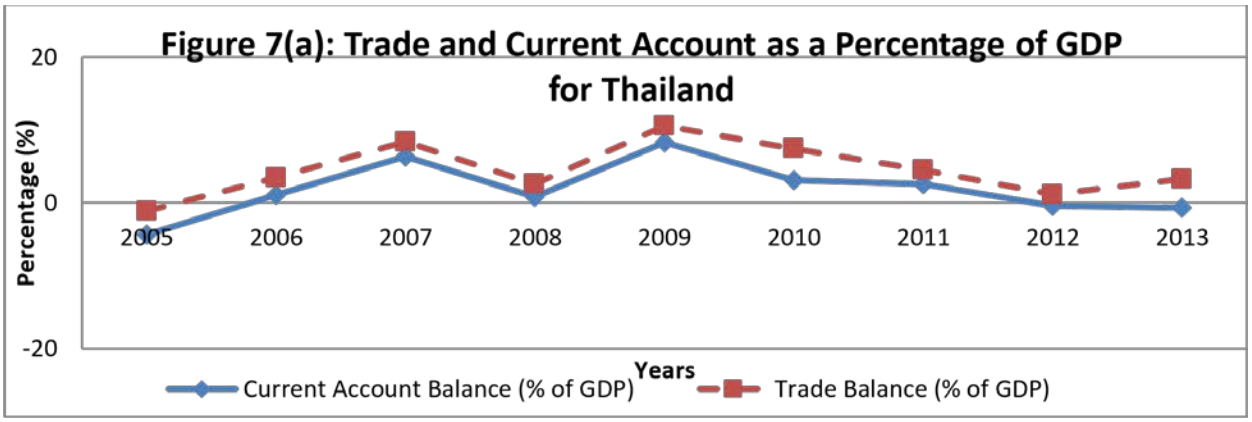
Figure 7(a): Trade and Current Account as a Percentage of GDP for Thailand
20
0
-20
Percentage (%)
2005
2006
2007
2008
2009
2010
2011
2012
2013
Years
Current Account Balance (% of GDP)
Trade Balance (% of GDP)

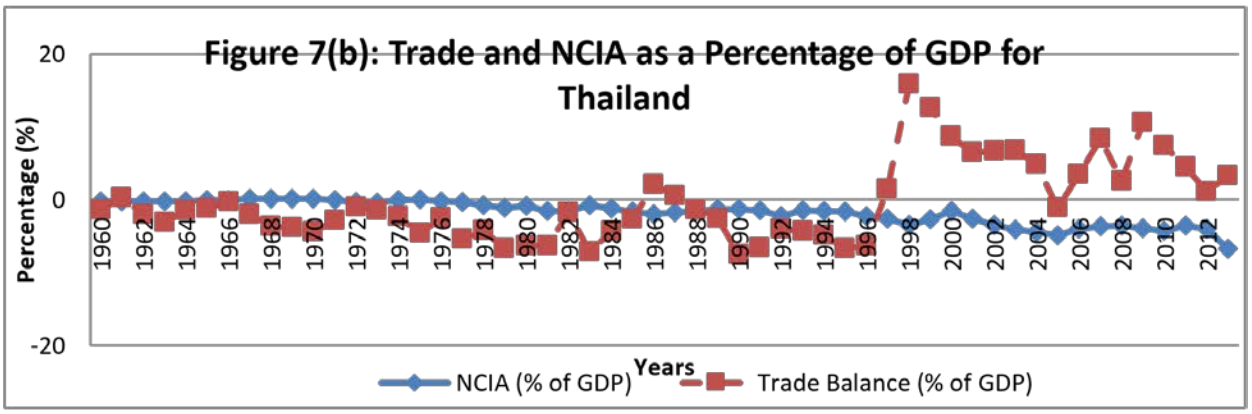
Figure 7(b): Trade and NCIA as a Percentage of GDP for Thailand
20
0
-20
Percentage (%)
1960
1962
1964
1966
1968
1970
1972
1974
1976
1978
1980
1982
1984
1986
1988
1990
1992
1994
1996
1998
2000
2002
2004
2006
2008
2010
2012
Years
NCIA (% of GDP)
Trade Balance (% of GDP)

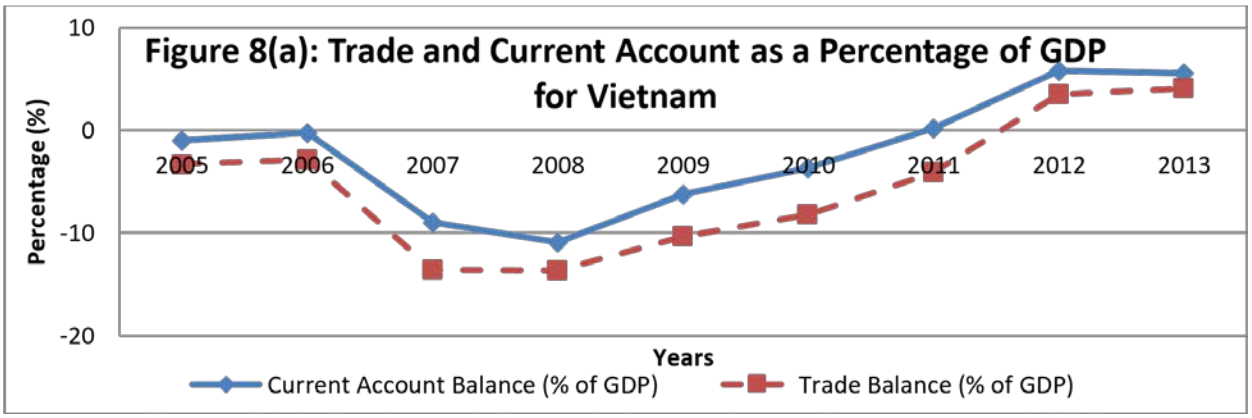
Figure 8(a): Trade and Current Account as a Percentage of GDP for Vietnam
10
0
-10
-20
Percentage (%)
2005
2006
2007
2008
2009
2010
2011
2012
2013
Years
Current Account Balance (% of GDP)
Trade Balance (% of GDP)

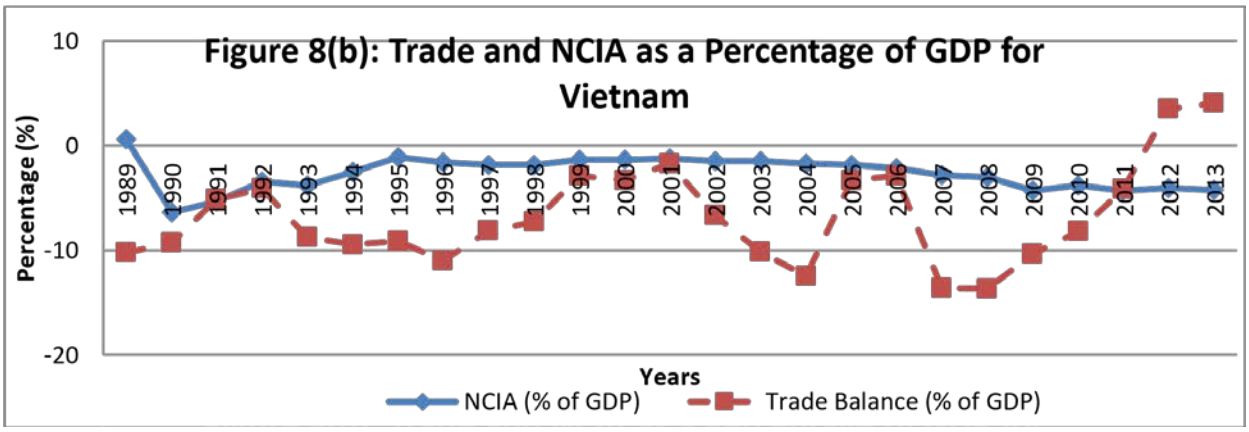
Figure 8(b): Trade and NCIA as a Percentage of GDP for Vietnam
Percentage (%)
10
0
-10
-20
1989
1990
1991
1992
1993
1994
1995
1996
1997
1998
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
Years
NCIA (% of GDP)
Trade Balance (% of GDP)

Table 1: Real GDP Growth of Southeast Asia, China and India
(Annual percentage change)

COUNTRY	2013	2019*	2003-07	2011-13	2015-19*
ASEAN-10 COUNTRIES					
- *ASEAN 5 COUNTRIES*					
INDONESIA	5.8	6.3	5.5	6.2	6.0
MALAYSIA	4.7	5.6	6.0	5.2	5.6
PHILIPPINES	7.2	6.3	5.7	5.9	6.2
THAILAND	2.9	4.6	5.6	3.2	4.1
VIETNAM	5.4	5.8	7.2	5.6	5.7
BRUNEI DARUSSALAM	-1.8	1.9	1.7	0.9	1.6
CAMBODIA	7.5	7.3	10.6	7.3	7.1
LAO PDR	8.0	7.7	7.1	8.1	7.6
MYANMAR	7.5	7.8	-	6.9	7.8
SINGAPORE	3.9	3.6	7.9	4.1	3.5
TWO LARGE ECONOMIE S IN THE REGION					
CHINA	7.7	6.6	11.7	8.2	6.8
INDIA	5.0	6.8	8.8	5.5	6.7
AVERAGE OF ASEAN-10 COUNTRIES	5.2	5.8	5.9	5.4	5.6
AVERAGE OF EMERGING ASIA	6.5	6.5	9.5	7.0	6.5

Notes: The cut-off date of the data is 6 October 2014. Emerging Asia denotes ASEAN-10 countries plus China and India. ASEAN-5 includes Indonesia, Malaysia, Thailand, the Philippines, and Vietnam.
Source: OECD Development Centre, MPF-2015 (Medium-term projection framework). For more information on MPF, please see www.oecd.org/dev/asiapacific/mpf.
**Projection*

Table 2: Countries by GDP (Nominal – 2014)

COUNTRY	**POPULATION (in millions)**	**GDP NOMINAL (millions of USD)**	**GDP NOMINAL (per capita USD)**	**GDP PPP (millions of USD)**	**GDP PPP (per capita USD)**
WORLD	7,450.00	97,598,942	13,100	119,344,057	16,000
UNITED STATES	331.39	21,101,368	63,676	21,101,368	63,676
EUROPEAN UNION	509.25	19,754,593	38,800	19,713,269	38,710
CHINA	1,394.88	14,941,148	10,711	22,641,047	16,231
INDIA	1,277.05*	2,049,501	2,049	7,375	5,855
JAPAN	125.42	5,930,147	47,281	5,619,492	44,804
SOUTH KOREA	51.42	1,729,880	33,644	2,270,913	44,167

ASEAN	**670.71**	**3,751,171**	**5,593**	**5,612,921**	**8,369**

Source: Wikipedia, the free encyclopedia. The information was last modified 2 May 2015.
**Population for India from 2015.*

Table 3: ASEAN Countries by GDP (Nominal – 2014)

COUNTRY	POPULATION (in millions)	GDP NOMINAL (millions of USD)	GDP NOMINAL (per capita USD)	GDP PPP (millions of USD)	GDP PPP (per capita USD)
INDONESIA	266.15	1,251,875	4,638	2,033,577	7,533
MALAYSIA	32.59	538,028	16,417	788,912	24,072
PHILIPPINES	107.63	522,271	4,757	732,138	6,669
THAILAND	65.94	491,520	7,023	959,722	13,712
SINGAPORE	5.99	378,191	65,790	483,686	84,142
VIETNAM	97.10	240,185	2,780	565,091	5,919
MYANMAR	71.75	96,891	1,325	197,972	2,707
CAMBODIA	16.19	26,392	1,614	68,039	4,160
LAOS	6.93	18,898	2,493	36,157	4,769
BRUNEI	0.44	18,890	42,313	31,496	70,549

Source: Wikipedia, the free encyclopedia. The information was last modified 2 May 2015.

Table 4: Asian and Pacific Economies: Real GDP, Consumer Prices, Current Account Balance, and Unemployment
(Annual percent change, unless noted otherwise)

	REAL GDP			CONSUMER PRICES[1]			CURRENT ACCOUNT BALANCE[2]			UNEMPLOYMENT[3]		
		Projections			Projections			Projections			Projections	
	2014	2015	2016	2014	2015	2016	2014	2015	2016	2014	2015	2016
ASIA	**5.6**	**5.6**	**5.5**	**3.2**	**2.6**	**2.8**	**1.6**	**2.4**	**2.2**	**…**	**…**	**…**
ADVANCED ASIA	**1.6**	**2.2**	**2.4**	**2.2**	**1.2**	**1.6**	**2.2**	**3.1**	**2.8**	**3.8**	**3.9**	**3.9**
JAPAN	-0.1	1.0	1.2	2.7	1.0	0.9	0.5	1.9	2.0	3.6	3.7	3.7
KOREA	3.3	3.3	3.5	1.3	1.5	2.5	6.3	7.1	5.2	3.5	3.6	3.5
AUSTRALIA	2.7	2.8	3.2	2.5	2.0	2.3	-2.8	-4.0	-3.7	6.1	6.4	6.2
TAIWAN												

PROVINCE OF CHINA	3.7	3.8	4.1	1.2	0.7	1.3	12.3	12.4	11.7	4.0	4.0	4.0
SINGAPORE	2.8	3.0	3.0	1.0	0.0	1.7	19.1	20.7	18.8	2.0	2.0	2.0
HONG KONG SAR	2.3	2.8	3.1	4.4	3.2	3.4	1.6	2.0	2.2	3.2	3.2	3.1
NEW ZEALAND	3.2	2.9	2.7	1.2	0.8	2.1	-3.5	-4.8	-5.2	5.4	5.3	5.2
EMERGING & DEVELOPING ASIA	**6.8**	**6.6**	**6.4**	**3.5**	**3.0**	**3.1**	**1.3**	**2.1**	**2.0**	**…**	**…**	**…**
CHINA	7.4	6.8	6.3	2.0	1.2	1.5	2.0	3.2	3.2	4.1	4.1	4.1
INDIA	7.2	7.5	7.5	6.0	6.1	5.7	-1.4	-1.3	-1.6	…	…	…
ASEAN-5	**4.6**	**5.2**	**5.3**	**4.7**	**4.1**	**4.2**	**1.3**	**1.1**	**0.6**	**…**	**…**	**…**
INDONESIA	5.0	5.2	5.5	6.4	6.8	5.8	-3.0	-3.0	-2.9	6.1	5.8	5.6
THAILAND	0.7	3.7	4.0	1.9	0.3	2.4	3.8	4.4	2.4	0.8	0.8	0.8
MALAYSIA	6.0	4.8	4.9	3.1	2.7	3.0	4.6	2.1	1.4	2.9	3.0	3.0
PHILIPPINES	6.1	6.7	6.3	4.2	2.1	2.8	4.4	5.5	5.0	6.8	6.2	6.0
VIETNAM	6.0	6.0	5.8	4.1	2.5	3.2	5.4	4.8	4.9	2.5	2.5	2.5
EMERGING ASIA[5]	6.8	6.6	6.4	3.4	2.9	3.0	1.4	2.2	2.1	…	…	…

Note: Data for some countries are based on fiscal years.
[1]Movements in consumer prices are shown as annual averages.
[2]Percent of GDP.
[3]Percent. National definitions of unemployment may differ.
[5]Emerging Asia comprises the ASEAN-5 (Indonesia, Malaysia, Philippines, Thailand, and Vietnam) economies, China and India.
Source: International Monetary Fund, April 2015.

Table 5: Recent ASEAN-10 Economic Indicators

RECENT ECONOMIC INDICATORS:	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**
GDP (US$bn) (current prices):	1,309.4	1,522.2	1,502.6	1,950.6	2,255.5	2,381.8	2,456.8	2,474.5	2,529.4
GDP PPP (Int'l $bn) (c):	2.621.4	2,798.5	2,869.2	4,915.3	5,255.6	5,666.7	6,050.2	6,419.8	6,808.3
GDP PER CAPITA (US$):	2,287	2,622	2,555	3,111	3,781	3,942	4,014	3,991	4,027
GDP PER CAPITA PPP (Int'l $) (c):	4,578	4,821	4,878	8,345	8,810	9,378	9,886	10,355	10,840
REAL GDP GROWTH (% change yoy):	6.6	4.2	1.1	7.9	4.8	5.8	5.1	4.4	4.9

CURRENT ACCOUNT BALANCE (US$m):	110,033	67,624	107,559	104,111	112,773	56,727	53,704	78,805	74,590
CURRENT ACCOUNT BALANCE (% GDP):	8.4	4.4	7.2	5.3	5.0	2.4	2.2	3.2	2.9
INFLATION (% change yoy):	4.2	8.8	2.4	4.0	5.4	3.8	4.3	4.2	3.6

(a) all recent data subject to revision
(b) IMF forecast
Source: Compiled by the Market Information and Research Section, DFAT, using the latest data from the ABS, the IMF and various international resources.

Table 6

ASEAN'S PRINCIPAL EXPORT DESTINATIONS			
		2011	**2013**
1	China	15.1%	12.3%
2	Japan	13.1%	9.4%
3	United States	11.2%	8.1%
4	Hong Kong (SAR of China)	8.7%	6.9%
5	Republic of Korea	5.6%	4.0%
6	Australia	4.4%	3.7%
ASEAN'S PRINCIPAL IMPORT SOURCES			
		2011	**2013**
1	China	17.1%	14.2%
2	Japan	14.4%	9.6%
3	United States	10.6%	7.9%
4	Republic of Korea	7.9%	5.5%
5	United Arab Emirates	4.2%	3.8%
9	Australia	2.8%	1.9%

[1]ASEAN Extra-Trade
Source: Compiled by the Market Information and Research Section, DFAT, using the latest data from the ABS, the IMF and various international resources.

ASEAN's Global Merchandise Trade Relationships[1]

Table 7: Unit Root Tests

	ADF	PP	KPSS
Indonesia (1960 – 2014)			
RXY	-0.04[0]	-0.04(2)	2.86E+09*(5)
ΔRXY	-1.23*[0]	-1.23*(1)	1.47E+08*(0)
RMMY	-0.18[0]	-0.18(3)	2.13E+09*(4)
ΔRMMY	-1.00*[0]	-1.00*(1)	9.9(1)
Malaysia (1960 – 2014)			
RXY	-0.5[0]	-0.05(3)	3.89E+09*(6)
ΔRXY	-1.00*[0]	-1.00*(3)	1.50E+08*(3)
RMMY	-0.05[0]	-0.05(5)	3.13E+09*(5)
ΔRMMY	-0.99*[0]	-0.99*(7)	1.42E+08*(7)
Philippines (1960 – 2014)			

RXY	-0.03[1]	-0.06(7)	1.19E+09*(5)
ΔRXY	-1.36*[0]	-1.36*(9)	5.8*(16)
RMMY	0.004[1]	-0.02(5)	2.18E+09*(6)
ΔRMMY	-1.40*[0]	-1.40*(3)	1.32E+08*(6)
Singapore (1975 – 2014)			
RXY	-0.06[0]	-0.06(1)	1.18E+10*(5)
ΔRXY	-1.10*[0]	-1.10*(3)	5.94E+08*(3)
RMMY	-0.09[0]	-0.09(2)	9.92E+09*(5)
ΔRMMY	-1.33*[0]	-1.33*(3)	4.65E+08*(5)
Thailand (1960 – 2014)			
RXY	-0.03[0]	-0.03(19)	3.51E+09*(5)
ΔRXY	-1.27*[0]	-1.27*(40)	1.70E+08*(53)
RMMY	-0.13[0]	-0.11(9)	3.02E+09*(5)
ΔRMMY	-1.05*[0]	-1.05*(27)	107E+08**(31)

*Notes: The null hypothesis for ADF and PP tests is that the series is nonstationary while the null hypothesis for KPSS is that the series is stationary. All tests are conducted assuming a constant and trend. Numbers in brackets for ADF test denote lag (maximum lags were set at 3 and lag length is determined using AIC). Numbers in brackets for PP and KPSS correspond to lag truncation parameter determined by Newey-West criteria. * and ** indicate rejection of the null hypothesis at 1% and 5% level of significance, respectively. Results in bold indicate unexpected results.*

Table 8: Johansen Test Results for Cointegration between *RXY* and *RMMY*

	Lags	**No. of CE(s)**	**Trace Value**	**Eigenvalue**
Indonesia (1960 – 2014)	[1]	None	16.30*	11.50
	[1]	At most 1	4.80*	4.80*
Malaysia (1960 – 2014)	[1]	None	10.56	8.32
	[1]	At most 1	2.24	2.24
Philippines (1960 – 2014)	[1]	None	26.03*	21.63*
	[1]	At most 1	4.41*	4.41*
Singapore (1975 – 2014)	[1]	None	6.75	5.55
	[1]	At most 1	1.20	1.20
Thailand (1960 – 2014)	[1]	None	30.02*	26.52*
	[1]	At most 1	3.50	3.50

*Notes: Lag length of the underlying VAR was determined by AIC and SC. The null hypothesis is that there is no cointegration. * indicates rejection of the null hypothesis at 5% level of significance.*

Table 9: Gregory-Hansen Test Results for Cointegration between *RXY* and *RMMY*

	Level Shift	Level Shift/Trend	Regime Shift

Indonesia (1967 – 2014)	-20.45 [4] 2002	-3.87 [4] 2002	-4.79* [4] 2003
Malaysia (1960 – 2014)	-27.04 [1] 1996	-4.07 [1] 1996	-4.55 [1] 1995
Philippines (1960 – 2014)	-33.52 [1] 1981	-4.95* [1] 1981	-4..87* [1] 1981
Singapore (1975 – 2014)	-36.44 [0] 1993	-5.61* [0] 1993	-5.01* [0] 2003
Thailand (1960 – 2014)	-26.87 [1] 1998	-4.18 [1] 1998	-4.82* [1] 1999

*Notes: The table provides Gregory-Hansen cointegration results for all three models. The table reports the tstatistic, lag length (in square brackets) and the endogenously determined break period for all countries. The null hypothesis is that there is no cointegration. * and ** indicate rejection of the null at 1% and 5% level of significance, respectively.*

Table 10: Dynamic OLS Results

Country	**Diagnostic test results**					**DOLS/DGLS estimation results**		
	LM test (p-value)	White test (p-value)	RESET test (p-value)	JarqueBera test (p-value)	Chow test (p-value)	Adjusted R^2	β (SE)	H_a : β<1 t-statistic
ASSOCIATI ON OF SO UTHEAST ASIAN NATIONS (ASEAN)								
Indonesia	28.366** (0.00)	5.090* (0.01)	0.896** (0.00)	5.906 (0.05)	10.472** (0.00)	0.969	-0.2** (0.004)	5.538*
Malaysia	69.359** (0.00)	21.686** (0.00)	1.416** (0.00)	8.017* (0.02)	38.248** (0.00)	0.999	-0.002 (0.169)	1.417
Philippines	34.756** (0.00)	2.538 (0.09)	0.813** (0.00)	12.292** (0.00)	39.000** (0.00)	0.993	-0.8* (0.125)	-3.952*
Singapore	7.081** (0.00)	4.299* (0.02)	1.118** (0.00)	4.743 (0.09)	8.090** (0.00)	0.999	0.1* (0.005)	3.004*
Thailand	37.482** (0.00)	8.781** (0.00)	0.873** (0.00)	6.671* (0.04)	71.944** (0.00)	0.981	0.4 (0.325)	-0.994

*Notes: For each country the break period from the Gregory-Hansen procedure was used in the dynamic OLS estimation. The lag and lead length for differenced RMMY terms were determined by AIC and SC. The appropriate lag/lead length was 1 for all countries. The table reports estimation results and diagnostic tests including LM (serial correlation), White (heteroskedasticity), RESET (stability), Jarque-Bera (normality), and Chow (stability) tests. The null hypotheses are of no serial correlation, homoskedasticity, stability and normality. * and ** denote rejection of the null hypothesis at 1% and 5% level of significance, respectively. If the LM test showed evidence of*

serial correlation, dynamic GLS was used in the estimation. If the White test revealed evidence of heteroskedasticity, heteroskedasticity-consistent standard errors were used.

BEACONS. SO WHAT? BIG DEAL!
THEY ARE A BIG DEAL AND COULD POSSIBLY HELP LEVERAGE YOUR RECRUITING EFFORTS!

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ABSTRACT

First there were coupons based on what you bought at the register, delivered to the consumer through snail mail. Later, the coupons were printed right at the register for the consumer. Next was surfing the Twitter and Facebook traffic, sending coupons to a smart phone or tablet after the purchase had been made, to be used in the future. Then real time parsing of smart phone/tablet traffic on Twitter or Facebook. Coupons were immediately sent to the consumer on their registered electronic device based on the location and content of the message they had sent. Pretty effective, but the consumer had to be physically in the building for this to work. Imagine if you could send a message and grab anyone within a certain distance to your business. They could be shopping at a retail store across the parking lot, and receive a banner ad from your business enticing them to come into your business. You could send them invitations to come shop, coupons, offers they could use immediately, announcements of special sales going on right then; the possibilities are endless. Now bring that technology to your campus. A lot of efforts are put into Open House events on the campus. If you are able to have the prospective students download your school app (you do have one don't you?!), then when they get to campus, you can send out banners highlighting the finance seminars, shouting out invitations to come see the basketball game, or watch a performance of the school jazz band. Again, the possibilities are endless!

INTRODUCTION

Customer Relationship Marketing can mean many things to various people. What it ultimately involves is finding the right mix. First, you must find a customer who will listen to your message and discover what that customer wants to hear. When you have their attention, you need to pull them into the transaction with the right amount of trade-offs which will lead to a purchasing decision on their part. How can all of this be accomplished? This paper will shed some light on a new tool in the CRM bag of tricks. An avenue of engagement we are only just starting to use and beginning to realize the full potential of for our businesses to market to the ever elusive consumer.

IN THE BEGINNING

It started with newspapers and the Sunday ads, coupons and sales information via 'snail-mail', or picking up a sales flyer at the local store. This quickly advanced to coupons being printed for you at the sales register, mostly at random it seemed. Then as technology and the database of a consumers spending habits and market basket became better, companies could actually 'pair' coupons or purchases, such as a coupon for Desitin when buying diapers. Coupons could be offered based on previous purchases. Most of these later methods involved a consumer having 'opted-in' to receive these sales notices. Then, it started to get more interesting.

About four years ago a software company called LocalResponse had a bright idea. In the infancy of social media, particularly Twitter, they developed a way to filter and 'listen' to the real-time traffic coming from Twitter and Foursquare. Twitter allows a user to reach out to their followers with small messages. Foursquare is a location-based app for smart phones and tablets. They could search for specific phrases or key words within the messages being sent out across the Twitter Universe. Walgreens engaged LocalResponse in a campaign for their in-store traffic (Taylor, 2012). A user would walk into a Walgreens, get on Foursquare, and 'checkin' to the store. That alone could get them a coupon for anything random, or a special sale item sent directly to their device they checked in with. But if they tweeted a message with certain keywords in it, such as, "…have a cold, at walgreens…", LocalResponse would 'push' out to their device specific Walgreens coupons for Robitussin, or Halls cough drops to be used that day. This brings the consumer to the world of CRM today.

BEACONS

What if an entity, a service business, a fast food restaurant, anyone, even a University, could send out a message to anyone who comes within a certain radius of that entity? Someone shopping at a mall could be sent a message from a department store like Macy's telling them of a big Holiday Sale going on in the store. Once in the store, as they pass

by the jewelry department they could be targeted with a specific sale in that department. These all arrive on the portable electronics in their hands, a tablet or smart phone. You can think of this as a spotlight sweeping the land pulling in consumers from all over or a Beacon. And, you can think of the possibilities this could mean for a college campus on visitation day when the college has this one chance to impress perspective students and get them to send in their application. So what is a Beacon and how exactly does it work?

BEACON TECHNOLOGY

Apple introduced iBeacon technology in 2013. The technology was slow to catch on. Many businesses did not understand the potential, and the technology had to be developed around the software. Near the end of this year, Apple and IBM have announced an initiative to develop new apps and technologies incorporating iBeacons and analytics. This year has seen an increase in the use of Beacons and that will only grow, with the potential of driving $44 billion in retail sales for 2016 (Maycotte, 2015). Hotel chains, airlines, retail stores, and even Major League Baseball have experimented and are increasing their use of Beacons to help them expand their market share. Apple is not the only player in the Beacon arena. Google has created their own standards for Beacon technology they call Eddystone. Neither Apple nor Google actually make the hardware. That is made by an ever-increasing list of manufacturers, such as BlueSense, Gelo, and Estimote.

Software

Known as B.L.E, or Bluetooth Low Energy, Beacons are a battery-friendly, low-energy method of delivering a pinpointed message to consumers (Molly, 2014). Another component of the technology is VLC (Visual Light Communication) which is a means of sending data using the visible light spectrum.

Hardware

The transmitter started about the size of a large apple or a router. Today, Beacons can be deployed from an actual sticker attached to a cash register or a light pole. Some examples of Beacon hardware appear below:

These are battery powered, which presents issues when they need replaced.

USB powered. Plug it in and forget about it.

Ambient Electromagnetic wave powered. Known as ‘Air Beacons’, these work by extracting power from a single source of low-current ambient electromagnetic waves. These beacons are extremely portable and convenient to use.

All-weather beacons. Initially used on indoor-only locations; their use has moved to being deployed virtually anywhere.

'Sticker' beacons. Estimote makes these thin (3mm thick) sticker beacons.

By the time this paper is published, there will be more Beacon-technology products available (Mallick, 2014).

Consumer Action

There needs to be three steps involved for the consumer to be able to consume a business's message:

1. Download the App and opt-in to receiving notifications
2. Turn on Bluetooth on their portable device
3. Activate location services on that device for your app

What Information Can Be Captured?

Because a consumer has downloaded the business application, presumably information was gathered as they signed up for the application's programs. Any of that data can now be utilized for tracking purposes within the companies software. Such information as name, email, birthday, city, brand affiliations, social networks, demographics to name just a few can be captured.

Pitfalls with Beacon Technology

Sounds perfect, right!? There can be problems with getting a program started:

1. Anyone using a pre-2007 phone will most likely not have blue-tooth technology on their phones.
2. There will be even more data coming in to the company servers, and this will need to be stored somewhere so it can be analyzed. Data warehousing needs will grow.
3. The company needs an App to drive the interaction. And, it needs to be a creative popular app!
4. Consumers can suffer from "Notification Fatigue" which can hurt more than help. Macy's department stores has pledged to not send more than two or three beacons a visit to any consumer.
5. The consumer needs to keep their Bluetooth turned on.

WHAT COMPANIES MAKE USE OF BEACON TECHNOLOGY TODAY?

There is a long and growing list of companies already using Beacon technologies. What is surprising is the innovative ways that many of them have chosen to deploy their applications.

DUANE READE (WALGREENS coupons)	**OSCAR MAYER (push notifications at deli)**
LABWERK (Museums, mApp)	BRAINITECH (Music festivals)
BEACONCRAWL (Bar crawls)	VIRGIN ATLANTIC (Airlines)
SXSW (Music and film festival, registration)	APPLE STORES
HILLSHIRE BRANDS (Sausages, Epicurious)	MACY's (Shopkick)
LORD & TAYLOR (Hudson's Bay Company)	**STARWOOD HOTELS (keyless entry)**
MAJOR LEAGUE BASEBALL (seat upgrades)	**MINGLETON (dating 150-ft)**
AMERICAN EAGLE, AERIE	JAPAN AIRLINES (improve business processes)
AMERICAN AIRLINES (closest security check)	NIVEA (StickNFind) bracelet)
WALMART (GE lightbulbs)	STARBUCKS (ads)
AUTOTRADER.COM (vehicle beacons)	MOBIQUITY-RELEVANT (banks)

APPLE (Place Tips, 8 Manhattan stores)	KOHLS
MARSH SUPERMARKETS (Indiana, Ohio)	NIEMANN FOODS (45 stores)
SEPHORA (beauty app)	SHOP ADVISOR (Mobility Networks)
REGENT STREET (London, 130 retailers)	SF 49ERS LEVI STADIUM
KENNETH COLE	WOODMAN'S FOODS (Birdzi)
TARGET (Estimote)	

BEACONCRAWL – No longer will participants get lost as Beacons direct them from bar to bar.
SXSW – This huge festival now directs fans to registration, tickets, specials appearances, VIP events and more.
MLB – Multiple major league stadiums are using Beacons for everything like seat upgrades on the spot, to where is the nearest rest room, or hot dog stand.
AMERICAN AIRLINES – Beacons are used for seat check-in, gate location, and closest security checkpoint.
OSCAR MAYER – Standing at the deli, Oscar Mayer will direct you to their products in the meat section so you do not have to wait in the deli line.
STARWOOD HOTELS – Hotels use keyless entry, registration, and more ideas coming.
MINGLETON – A Beacon-driven dating app.
WALL MART – In an initiative with GE, there are light bulbs at certain counters that will push notifications to consumers while they stand at a counter.
REGENT STREET – An entire street in London, with about 130 stores, all signed up. Consumer downloads and opts-in to the Regent Street App, and as they shop, the retail members can send them notifications about their sales. This concept is also being done in a small suburb town of Atlanta.

2015 FACTS OF LIFE

529% - Increase in amount of time spent on mobile devices since 2010.
2015 - More mobile devices and smart phone connected than the total global population. 2020 - More than 5 Billion people will be connected on more than 50 Billion things. **2015 CRM FACTS**

- 70% tried a new product after seeing a mobile ad, 21% before
- 59% use mobile phones while shopping, 43% before
- 75% store visit increase with mobile ads
- 30% who received in-store push ad bought something
  (STOP – read that again. A 30% return on an Ad!! Unheard of before mobile)
- Beacons will directly influence $4 Billion in sales for 2015. $44 Billion in 2016.

SO WHAT CAN WE DO?

Reading the above facts should make institutions, our schools, colleges, and universities think about how we will engage our prospective students, if we want to make them our future students. We will need to accomplish four things with the students when they prepare to visit us: We must have an engaging school App.

- We need to get the prospective student to download that App.
- We need to build a strong case for having the student opt-in to our App.
- We need to make sure one of those steps is turning on Bluetooth for their device.

OPEN HOUSE WITH BEACONS

As students and their families wander around campus, we can direct them to financial sessions, housing talks, student meet-n-greets, musical events, and sporting venues, and provide directions, interactive maps, and campus FAQs based on their location. As they get close to a dining hall or the bookstore, colleges can push featured menu items for that day, school apparel sales, and more. During pledge week, the sorority and fraternity houses could have Beacons for

each house, inviting new people into their gatherings. Many uses can be imagined to embrace the future and hopefully, increase the success of your recruiting efforts!

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MOBILE SECURITY: BEST SECURITY PRACTICES FOR MALWARE THREATS

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ABSTRACT

The major reason for the importance of mobile systems is the size of their market. There are seven billion wireless subscriptions in 2014. Worldwide mobile subscriptions outnumber fixed lines by seven to one (Kroenke, 2015). At the same time, there are more and more activities one can perform using mobile technology from personal uses such as communicating with friends and family via either telephone, text messaging, or engaging with others through social media platforms such as Facebook, WhatApp, or Twitter, to managing business activities such as checking bank (Kjaer, 2014). In some other countries, like China mobile Web usage is much greater than PC. Web usage is expected to occur in United States in 2015 (Kroenke, 2015). With so much data readily available to everyone, everywhere, and in between, it is no wonder that mobile devices have become a valuable target for malicious activities such as mobile device hackers and identity thieves. The potential for individual identity or financial information stolen and the potential destructive threats cause concern for harmful wireless software known as mobile malware. This research will find out various mobile malware programs and what these programs are capable of doing to a user's mobile device (Peters, 2014). It will also discuss what we, as mobile device users, can do to protect ourselves and limit mobile device risks (Editor, McAfee, 2013). It will try to explore some programs that are available to detect and eliminate mobile malware, along with the best practices to use to avoid potential harm caused by mobile malware (Harper, 2014). This research will also search what businesses need to take into consideration in regards to mobile device usage, and how these businesses can limit their risks and protect themselves from the harmful effects of mobile malware (Greiner, 2014).

INTRODUCTION

Mobile technology is a broad term used to describe cellular smartphones. Smartphone sales represented two-thirds of global phone market in 2014 (Goasduff & Rivera, 2015). Worldwide sales of smartphones to end users in fourth quarter of 2014 increased of 29.9 percent from the fourth quarter of 2013 to reach 367.5 million units. Samsung lost the No. 1 spot to Apple in the global smartphone market in the fourth quarter of 2014 (see Table 1). Samsung had been in the top spot since 2012 (Goasduff & Rivera, 2015).

Table 1: Worldwide Smartphone Sales to End Users by Vendor in Fourth Quarter of 2014 (Thousands of Units)

Company	4Q14 Units	4Q14 Market Share (%)	4Q13 Units	4Q13 Market Share (%)
Apple	74,832	20.4	50,224	17.8
Samsung	73,032	19.9	83,317	29.5
Lenovo*	24,300	6.6	16,465	5.8
Huawei	21,038	5.7	16,057	5.7
Xiaomi	18,582	5.1	5,598	2.0
Others	155,701.6	42.4	111,204.3	39.3
Total	**367,484.5**	**100.0**	**282,866.2**	**100.0**

Source: Gartner (March 2015)

The number of smartphone users also continues to grow every day. In 2015, there were 2.6 billion smartphone subscriptions globally. The growth has been levelling off in developed markets like the U.S. and Europe. It is predicted that by 2020, globally, there will be 6.1 smartphone users led by huge growth in less mature markets. By that time, smartphones will finally overtake the number of active fixed line subscriptions worldwide in 2020.

The growth will happen in the emerging markets. Predictions suggest that regions like Asia Pacific, the Middle East and Africa will account for 80 percent of all new subscriptions in the next five years. In Quarter 1 of 2015, the top five countries by net additions were India, China, Myanmar, Indonesia and Japan saw the most net adds of the 108 million new subscriptions around the world in that period (Lunden, 2015).

Our modern society depends on the use of mobile technology, and over half of the United States population owns a smartphone. Joanna Stern (2013), of ABC News, reports on a study that states that 61% of Americans own a smartphone, which increased from the reports statistics in May 2011 which suggested that 35% of Americans were smartphone users. In the Spring of 2015, nearly two-thirds of Americans are now smartphone owners, and many these devices are a key entry point to the online world. Currently, 64% of American adults own a smartphone of some kind, up from 35% in the spring 2011. Smartphone ownership is especially high among younger Americans, as well as those with relatively high income and education levels (Smith, 2015).

SMARTPHONE USAGE

A smartphone is capable of doing practically everything that a computer can do, and it is portable enough for an individual to keep on their person at all times. The activities and possibilities of mobile technology are seemingly endless, and continue to expand at any time. According to Anne Lise Kjaer (2014), "Beyond digital platforms for the transfer of money, goods and services, smartphones are an enabler of education, information, work, health, social participation and more sustainable solutions."

In the U.S., users are turning to these mobile devices as they navigate a wide range of life events as follows (Smith, 2015):

- 62% of smartphone owners have used their phone in the past year to look up information about a health condition.
- 57% have used their phone to do online banking.
- 44% have used their phone to look up real estate listings or other information about a place to live.
- 43% to look for information about a job.
- 40% to look up government services or information.
- 30% to take a class or get educational content.
- 18% to submit a job application.

Mobile technology is an ever-changing and amazingly useful technological advancement of our modern-day society. Using mobile technology enables users to view, manipulate, and store data practically everywhere they go. With so much data readily available to everyone, everywhere, it is no wonder that mobile devices have become a valuable target for hackers and identity thieves. The potential for identity or financial information stolen and the potential threats it produces are strong enough to cause concern, and calls for a deep understanding of mobile malware.

When an individual is dealing with mobile technology, malware is definitely a potential threat. Mobile technology is no exception. Mobile malware is a threat that grows and evolves with mobile technology. Molly Wood (2014) explains that the security company, MacAfee, reports a 197 percent increase in mobile malware from 2012 to 2013 As of September 2014, "Fifteen million mobile devices were infected with malware, and most of those run Android" (Peters, 2014). Mobile malware can do many things through an individual's mobile device, including texting a premium rate number, messaging your contacts continuously, or carrying out other detrimental acts without your permission (Heath, 2012). In recent news, mobile malware is being used to combat protestors in Hong Kong, possibly by the Chinese government. "The protestors are dependent on mobile apps to coordinate their huge, seemingly unstoppable uprising," and some of these apps actually contain malware capable of accessing "…a device's messages, passwords, photos, videos, and key strokes…[and can]…send messages, place calls, upload files and run other local commands" (Doctorow, 2013). Mobile malware is certainly a growing and evolving threat, and individuals and organizations which utilize mobile technologies must be educated on what mobile malware is and how to protect oneself from it.

MALWARE THREATS

While the use of mobile technology continues to expand, the threats associated with the use of mobile technology become more prevalent and advanced. The first mobile malware was detected in 2004, and came in the form of a worm that was given the name Cabir. Cabir was the "…first worm affecting Symbian Series 60 phones…[and it was discovered that it] …spreads from phone to phone by using Bluetooth OBEX push protocol" (Svajcer, 2014). "Dubbed Cabir, it was a classic proof-of-concept virus, clearly created to capture bragging rights…[and]…caused no damage to an infected device, other than running down the phone's battery as the virus tried to copy itself to another smartphone by opening a Bluetooth connection" (Hypponen, 2006). Although Cabir was not particularly harmful, it opened the door for other, more serious mobile malware programs to be developed.

Another mobile malware program was discovered in 2009 in Australia called Ikee. "[Ikee…] is capable of breaking into jailbroken iPhones…[and]…on each installation, the worm changes the lock background wallpaper to an image of Rick Astley, a 1980s pop singer, with the message: *Ikee is never going to give you up"* (Cluley, 2009). "Jailbreaking" is the act of changing the iPhone's software to remove any limitations placed by Apple. "The principal limitation is that software can only be installed from the App Store" (Mead-Green, 2014). When a hacker who goes by the name of "ikex" noticed that many individuals leave their iPhones vulnerable to various malicious malware programs by jailbreaking, he developed a program to exploit their now-vulnerable mobile devices. The source code (of Ikee) is littered with comments from the author of this malware program, and, taken directly from the source code. One of the comments reads, "People are stupid, and this is to prove it so RTFM (https://en.wikipedia.org/wiki/RTFM). It's not that hard guys, but hey who cares its only your bank details at stake" (Cluley, 2009). Again, this virus was not extremely harmful, but proves that sufficient steps must be taken to properly secure our mobile devices.

Another piece of malware that was detected in 2010 is named FakePlayer. Fakeplayer is the first malware program to infect the Android operating system, and will cost an individual with an infected mobile device money if they are not careful. FakePlayer sends "SMS messages (commonly referred to as text messages) to premium line numbers in Russia" (Svajcer, 2014). This virus, classified as a Trojan SMS, sends text messages while an individual with an infected device uses the media player application. The program is 13KB in size, and makes money for cyber criminals by charging the user's account without them noticing (Android Fake Player, 2010). The FakePlayer virus not only slows down the user's mobile device while running, but can also cost the unknowing user money. The only way for individuals to protect themselves from mobile malware such as FakePlayer is his/her knowledge of exactly what the virus is and what the virus does.

MOBILE MALWARE THREATS

The first large-scale mobile malware attack on the Google Play market was discovered in 2010. DroidDream is a malicious program that was found in over 50 apps published to the Google Play Android Market (Svajcer, 2014). "DroidDream is a mobile botnet type of malware that gained root access to Google Android mobile devices in order to access unique identification information for the phone. Once compromised, a DroidDream-infected phone could also download additional malicious programs without the user's knowledge as well as open up the phone to be controlled by hackers" (Editor, DroidDream, 2014). This application is extremely dangerous! Not only does DroidDream expose a mobile device user's personal information, but it can also give hackers in a remote location the ability to develop other malicious programs and download them directly to a user's smartphone without them even knowing their phone is infected. "DroidDream got its name from the fact that it was set up to run between 11pm and 8am when users were most likely to be sleeping and their phones less likely to be in use" (Editor, DroidDream, 2014). As the progression of time from the first discovery of mobile malware has shown, mobile malware is an ever increasing threat to mobile device users.

Another mobile malware program was discovered in 2012, and was given the name Zitmo. Zitmo is "designed to steal mTAN (mobile transaction authorization number) codes sent by banks in text messages" (Teamwork, 2011). mTANs "used to be one of the most reliable online banking protection mechanisms" until the ZeuS Trojan called Zitmo, or ZeuS-in-the-mobile, proved that mTANs "can no longer guarantee that valuable user data will not fall into the hands of cybercriminals." Zitmo is a mobile malware program that is a variant of the PC-based ZeuS Trojan, and can "forward incoming text messages with mTAN codes to malicious users, so that the (cybercriminals) can execute

financial transactions using hacked bank accounts." Zitmo is certainly one piece of mobile malware that make online banking a dangerous activity for individuals who make financial transactions on their mobile devices.

In 2013, a vulnerability in the design of the Android Operating System that causes users to unknowingly download malware was discovered called the MasterKey. The MasterKey vulnerability is a loophole in the design of Android software that allows a legitimate app to also contain another malware file. "Android apps are delivered in ZIPformat files with the extension APK" (Android Package). If you "put two files with the same name into the APK, which is normally not a useful thing to do in a ZIP-format file, Android verifies the first, but installs and uses the second. So it's like having a master key, because you can effectively 'borrow' some third party's package, program files, data, product names, icons, and digital signatures… yet install and run something that the third party has never seen, let alone tested or approved for use" (Ducklin, 2013). This vulnerability creates an immense opportunity for hackers and cybercriminals to disguise their malicious programs as legitimate apps, and it is the fault of the developers of the Google Android Operating System, not the user.

A type of mobile malware called Svpeng has made its way from Russia to U.S. soil, as reported by Kaspersky Lab. Svpeng, when on a mobile device, searches for certain banking apps. If it finds those specific apps, Svpeng locks the user out of his or her phone and demands money before it will unlock (Crosman, 2014). Money stolen this way can be sent to a digital wallet for the cybercriminal to use or retrieve cash from (Q3 2013 Sees Alarming Growth, 2013). It is alarming to think that cybercriminals can steal money from a mobile device user so easily and quickly. When executing financial transactions and storing financial data on a mobile device, users must proceed with caution. "This Trojan can easily cost its victims thousands of dollars."

Mobile malware is constantly growing in both number and potential of threat to end users. According to SophosLabs, "It's been 10 years since the arrival of the first mobile malware in 2004, but it is only within the past few years that it has become a threat to end users. Indeed, the rapid growth in smartphone and tablet usage over the past two years has led to the inevitable rise in targeting of these devices by cybercriminals" (Svajcer, 2014). Users of mobile devices must not only proceed with caution when using their devices, but must also keep a current knowledge of the latest discoveries in regards to mobile malware. With so many mobile malware with potentially devastating effects to mobile device users, the questions are: What can users do to protect themselves? What are some of the programs developed to ensure the safety of mobile device users? What can we, as mobile device users, do and avoid doing to potentially limit our risks or eliminate them altogether?

SAFE PRACTICES FOR INDIVIDUALS

There are many ways in which individuals can protect themselves from mobile malware. First, and possibly most important, precaution to consider is to always make sure that you keep up to date with any information regarding mobile malware, such as new viruses or available security updates, for your particular brand of phone. Knowing what malware is out there, what it does, how it is contracted, and what various security updates will help to alleviate the virus can certainly assist you in seriously limiting the risk of your mobile device being infected and affected by malware. If someone knew at what time a thief was going to break into their house, how he or she was going to do it, and why, chances are they could prevent it from happening, or at least minimize their losses. The same idea applies to mobile malware in that if an individual knew that someone was trying to break into their phone, how they were going to do it, and for what purpose, they can seriously limit the risk of losing their data or compromising their identity and valuable private information. A mobile device is a computer and should be protected like one. Users must recognize that applications or games could be malicious, and always consider the source. A good rule of thumb: if an app is asking for more than what it needs to do its job, you shouldn't install it.

Second, when individual is using a mobile device he or she is to be extremely cautious when utilizing public Wi-Fi hotspots. According to McAfee, "Whether you are on your computer or mobile device, it's relatively easy for hackers to access the information you type and send over an unsecured Wi-Fi network, including your login and password information (Editor, McAfee). Eric Geier (2011) tells us that, when using Wi-Fi networks, "You could lose all your contacts, calendar info, documents, and other info you store on your mobile gadget. Strangers could possibly access your email account, social network sites, or view your documents… mobile devices don't particularly include security features to directly combat Wi-Fi threats." Generally speaking, over-the-air (i.e., WiFi) networks are insecure. For example, if a user is accessing corporate data using a free Wi-Fi connection at an airport, the data may be exposed to

malicious users sniffing the wireless traffic on the same access point. Companies must develop acceptable use policies, provide VPN technology, and require that users connect through these secure tunnels.

There are many safe practices one can utilize when accessing public Wi-Fi hotspots. Some important ways to protect yourself include only connecting to Wi-Fi networks you know and trust, disabling the feature on your mobile device that causes it to automatically connect to nearby Wi-Fi networks, making sure that all data that you send over the internet while connected to a Wi-Fi network is encrypted and sent through a secure HTTPS connection, and ensuring that your mobile device is not set to automatically share access to your files (Harper).

Android is an operating system for mobile device users developed by Google. According to research conducted by Strategy Analytics, "81.3 percent, or 204.4 million, of smartphones shipped in the third quarter of 2013 were powered by Android" (Graziano, 2013). There are literally hundreds of millions of individuals who utilize the Android Operating System. With this immense amount of individuals who consistently use Android, it is no wonder that the Android Operating System falls victim to numerous attacks by hackers. "This massive user base has caught the attention of cybercriminals, who have begun to double down on their efforts to illegally obtain personal information from Android users" (Graziano, 2013). New malware is constantly being developed to exploit the Android Operating System. "To date SophosLabs has seen well over 650,000 individual pieces of malware for Android – a tiny fraction of the number of pieces of malware out there for the traditional PC, but a growing threat. Android malware has grown quickly in a short space of time and looks set to keep growing apace with our use of mobile devices" (Svajcer, 2014). Dan Graziano (2013) tells us that practices such as downloading apps from a "legitimate app store" and avoiding suspicious or pirated apps is one way to ensure the safety of your data when utilizing an Android device. Graziano goes on to tell us that Android devices running Android 2.2 or higher "have access to Google's malware scanner. Prior to installing an application you download outside of the Google Play Store, Google will scan the app and warn you of any potential threats."

Third, the individuals can also install software updates to keep their devices protected. "While this may not be an option for most users, if there is an update for your device make sure you download and install it. Manufacturers, carriers, and Google are constantly pushing out updates with bug fixes, enhancements, and new features that can make your device more secure" (Graziano, 2013).

Fourth, install anti-virus programs your mobile device to make it more secure. "Companies like Avast, AVG, BitDefender, Kaspersky, Sophos, Symantec (Norton), and TrendMicro have long and established histories as some of the most trusted brands in the industry. Newcomers Lookout and TrustGo have also made a name for themselves as some of the top mobile security providers. Earlier this year, AV-Test, an independent IT security institute that ranks anti-Virus apps based on protection and usability, rated TrustGo and Lookout as the top two anti-virus programs on the Android platform" (Graziano, 2013). At any rate, there are many steps that individuals can take to protect their Android device, and individuals must do so in order to keep their device safe.

Fifth, avoid Jailbreaking. It is the process of removing the security limitations imposed by the operating system vendor. To "jailbreak" or to "root" means to gain full access to the operating system and features. This also means breaking the security model and allowing all apps, including malicious ones, to access the data owned by other applications. In brief, you never want to have root-enabled devices in your company.

Sixth, download and install apps only from trusted sources, such as Google Play and Apple App Store.

Seventh, since the risk of losing a device is still higher than the risk of malware infection, then protecting your devices by fully encrypting the device makes it difficult for someone to break in and steal the data from a mobile device. In this case, you have to set a strong password for the device as well as for the SIM card (http://www.pcmag.com/encyclopedia/term/61745/sim-card).

Eighth, users who want to store data that they can access from any device and share with other users, then they should consider to use secure cloud-based storage services to accommodate them in a secure way.

ORGANIZATIONAL APPROACH TO MOBILE SECURITY

It is much more difficult to keep an organization safe from mobile security threats than it is for an individual user. Instead of focusing on an individual's devices and security concerns, setting an organization's policy on mobile devices and security must factor in many different variables. An organization has to secure its data and information systems while balancing the varying practices, knowledge-levels, and concerns of its employees. One weak link in the chain can cause the whole network to become infected or information to be leaked. It is troubling that the younger generations entering the workforce are less concerned with company security and more likely to deliberately break IT or security policies (Eiferman, 2014). Although it is not easy to pick what is best, organizations have many options in regard to what policies and tools to implement for their needs.

In addition to the eight safe practices for individual, the organization should consider to add the following practices:

First, **establish and enforce bring-your-own-device (BYOD) policies**, a common approach by many organizations is to implement bans and blacklists on certain types of devices and apps. Different phones or mobile devices may be more prone to infection from malware, particularly jailbroken or rooted devices. By banning these devices, a company can minimize the risk of infection spreading to their systems or information being stolen. Similarly, many companies also have a list of applications or websites forbidden from being installed or accessed at work. These apps and sites are usually blacklisted for issues about how secure the content is and for productivity concerns. Implementing this policy is generally pretty cheap and can help secure the information systems by reducing exposure to risky apps if followed. However, these kind of policies are often highly disliked by employees, especially of the younger generations. For examples: apps commonly banned for being a distraction, like YouTube and Facebook, can also be very useful for business purposes. YouTube can be used to watch a how-to video to learn something for the job; Facebook can be a valuable marketing tool for a company's product. It can alienate the workforce to ban the tools they like and sometimes need to use to accomplish their tasks. Additionally, with the countless new apps being released it can be impossible to keep up a blacklist on possible threats.

Second, implement Multiple Persona mobile application management (MAM) is a relatively new option has emerged that may allow organizations and their members and employees to find a happy medium when it comes to security of devices, functionality, and users' privacy concerns. Multiple-Persona allows a device to be split into separate modes, such as work-mode or personal-mode. This can be done at the app level or the operating system level or anywhere in between. The organization can set it so these separate 'personas' will not interact. The "work" persona could be controlled by the business and all interactions between the device and the organization's network could require this persona to be active. Since work and personal personas can be set to not see or access the data stored by the other, it minimizes risk of spreading malware through the organization, infringes less on the device's user, and alleviates some privacy concerns for both the company and the individual (Eiferman, 2014). It should be noted that this is still not as secure as total device management.

Third, based on the first and second approached above, the m**obile security policies should fit into overall security framework.** IT needs to strike a balance between user freedom and the manageability of the IT environment. If a device does not comply with security policies, it should not be allowed to connect to the corporate network and access corporate data. IT departments need to communicate which devices are allowed. And the company should enforce its security policy by using mobile device management (MDM) tools. Businesses should consider building a secure cloud-based storage service to accommodate users in a secure way.

Fourth, in addition to encourage employees to download and install apps only from trusted sources, such as Google Play and Apple App Store, Companies should also consider building enterprise application stores to distribute corporate custom apps and sanctioned consumer apps. The company should choose security vendor that can help set up an app store and advise which applications are safe.

Fifth, theft or loss of the device is still more likely to happen and can be just as much of a security risk to the company. A mobile device is an ideal target for a thief; it is small, can be worth hundreds of dollars, and can contain financial and personal information. It is estimated that $30 billion worth of mobile devices were stolen worldwide in 2012 and it is likely that number will only be growing. Organizations are looking for ways to minimize the effects of a stolen or lost mobile device and for ways to make them less desirable to thieves. Killswitches are a good way to protect the

data on a lost or stolen phone. They can disable a phone or wipe and reset the data on it, making it less useful to hackers. Additionally, a phone's data can be protected with encryption. Information removed from an encrypted device will be unreadable when ported to another phone (Kay, 2014).

Sixth, one of the most effective solutions is for an organization to provide devices to the employees that need them for business purposes. By owning the devices their employees use, a business has ultimate control on the apps, interactions, and uses allowed. In the early years of mobile devices this was one of the most common policies implemented. This allows the systems and information to only be accessed by secure, company-owned devices. Employees can still use their own personal devices however they want and don't risk infecting the company's systems with malware. The only real downside to this approach is that it carries a large cost of purchasing and maintaining all of the devices issued to the employees. However, this cost can be less than compensating employees for the cost of their phones in bring their own device plans (Greiner, 2014).

.It can be a daunting task to figure out the best mobile security policies to implement for a business or organization. Sometimes the policies that provide the most protection are also the costliest, either in monetary amount or in lost employee productivity and creativity. Ultimately, there is not a single, clear answer on how to best secure an organization from mobile security threats. All options have their pros and cons and will need to be weighed according to the needs and constraints of each individual business or agency.

CONCLUSION

As mobile technology evolves, so do the mobile malware use to steal private and important information. Mobile technology continues to grow at an ever-increasing rate. As mobile technology advances, the threats to mobile technology users increase and malware programs become increasingly sophisticated. From the first piece of malware ever discovered for mobile devices to the current malware programs mobile technology users face, the level of both the development and threat has increased at an alarming rate.

Businesses and individuals have to constantly find ways to improve their mobile security and be careful about when and how they store and send information. It is unlikely that hacking and information theft will ever be eliminated. The best anyone can do is be vigilant, stay up to date on current security practices, and keep one step ahead of those who would do harm.

Individuals must know what malware threats they are facing and how to protect themselves from it. They must also be cautious when utilizing Wi-Fi networks. Android users in particular must be extremely cautious when utilizing their mobile devices and constantly check for software security updates. Businesses are at a greater risk when using mobile devices than individuals, and must employ many various techniques to ensure their data is protected. Mobile malware is certainly a growing and evolving threat, and individuals and organizations who utilize mobile technology must be educated on what mobile malware is and how to protect oneself from it.

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Northeastern Association of Business, Economics and Technology (NABET)

38th Annual Meeting, October 22nd & 23rd, 2015

Days Inn
240 South Pugh St.
State College, PA 16801 (814)
238 – 8454

Official Program

Thursday October 22, 2015

Session 1: Sylvan Room 8:30 am – 9:30 am

Business Topics

Session Chair: John S Walker

Comparative Analysis of Fair Chance Policies

John Cameron Pennsylvania State University

The screening of employment applications is a customary practice in the private and public sectors including businesses and governmental agencies. Applicants are considered for employment opportunities in the examination and selection process based on various qualification criteria including skills, experience and background check. Employers establish hiring policies and application screening processes to recruit the most qualified candidates through suitable examination, based upon organizational needs, regulatory compliance and risk management considerations. Criminal background checks present a particular uncertainty in light of recent fair chance policy legislation. According to the National Employment Law Project, such reform legislation has been approved in many states, municipalities and counties (Greenwald, 2015). In addition, major national private sector employers have adopted similar corporate policies (Wescoe, 2015). Prior research to examine provisions associated with fair chance policies within the United States have been limited. To address this gap in the literature, this paper will examine fair chance policy trends including prohibitions, disclosure, exemptions, job relatedness, notification requirements, limitations, rebuttal and appeal opportunities and disclaimer provisions.

Shaping the U.S. Economy: United States Employment Trends (1993-2013)

Gerald Paul Wright Husson University

This paper will examine shifts in employment across several U.S. business sectors for the period 1993 to 2013 utlizing data from U.S. Census. Shifts in employment within or across sectors over a longer period of time delineate changes in the overall composition and health of an economy. Additional context is derived through comparison with other economic indicators such as U3 and U6 unemployment, manufacturing index, and GDP.

How Many Clicks Does It… Measuring the Effectiveness of Social Media Outlets in Fan Engagement

David Gargone Misericordia University

Professional sports teams are increasingly utilizing social media as a marketing strategy to promote their team and reach fans in real time. Social media outlets allow fans to engage with their favorite teams in various ways including retweets, likes, and favorites. Marketers need to capitalize on this ability and design messages that encourage fan engagement. This study measured the effectiveness of teams in building fan engagement by analyzing the type of social media message sent and the amount of fan engagement (retweets, likes, and favorites) across the platforms of Twitter, Instagram, and Facebook with the intent of establishing best practices. The findings suggest marketers have to design unique messages across each of the three social media platforms to effectively engage fans.

Session 2: Sylvan Room 9:35 am – 10:35 am

Business Topics

Session Chair: Michael J. Gallagher

Unraveling the Mystery of Spiritual Intelligence

Donna McKee Rhodes Juniata College
Marlene Burkhardt Juniata College

Research has expanded our understanding of intelligence beyond the traditional cognitive realm to include multiple intelligences, emotional intelligence, and, more recently, spiritual intelligence. Spiritual intelligence is key in effectiveness in business leadership both in for-profit and not-for-profit sectors. This research project investigates spiritual intelligence within a variety of demographics utilizing the Integrated Spiritual Intelligence Survey developed by Dr. Joseph Amram. Definitions of spiritual intelligence vary according to researchers, yet in connection to his survey, Dr. Amram defines spiritual intelligence as "the ability to apply and embody spiritual resources and qualities to enhance functioning and wellbeing." Relationships around various demographics and spiritual intelligence are observed through the survey data. This paper contains the analysis of the data collected from over 100 participants to validate the hypotheses that there would be differences in aspects of spiritual intelligence across age, gender, education level, and career sector (specifically for profit and nonprofit distinctions). Many of the expected differences were substantiated.

This paper explores the presence of spiritual intelligence in variables such as age, gender, education, and the sectors of for profit and nonprofit. Research of the presence of spiritual intelligence within the sectors of nonprofit and for profit, as well as the demographics of age, gender and education will broaden our basic understanding of spiritual intelligence and its presence and validity within the workplace and daily interactions.

Beyond the Ice Bucket Challenge: Insights into Charitable Giving

Megan Marley Widener University

Beyond the 2014 ALS Ice Bucket Challenge:Insights into Charitable Giving Megan Marley, MST Widener University September11, 2015 Abstract Thesummer 2014 Ice Bucket challenge also known as the ALS Ice Bucket challenge involved dumping ice water on someone's head to promote awareness for the disease amyotrophic lateral sclerosis (ALS, commonly known as Lou Gehrig'sdisease), and encourage donations to research. The person nominated for the challenge had the option of: making a cash donation to the ALS Association, dumping ice water on their head, or both. Most people, including celebrities and politicians opted to do both. On December 30, 2014, the ALS Association announced that this summer's "IceBucket" challenge rose over $115 million in cash donations for the largest non-profit organization that fights Lou Gehrig's disease.[i] The year 2014 was a phenomenal year for the Association due to the unprecedented social media frenzy. The ALS Association's top priority is research and drug development to help treat and find a cure for those affected by the disease.

Amyotrophic lateralscierosis is a progressive neurodegenerative disease that affects nerve cellsin the brain and the spinal cord. When the disease has progressed the brain loses the ability to initiate and control muscles. The disease leads the victim to become paralyzed and eventually leads them to death. The ALS Associations' vision is to create aworld without ALS. The Association believes that stem cell research is necessary to provide benefit to people withALS in the future. The ALS Association's mission also includes providing care services to assist people with ALS and their families through a network of chapters working in communities. The cash raised in 2014 from the Ice Bucket challenge will allow the Association to triple it's spending on research and focus on services to care for the victims living with ALS and their families. Over thecourse of the phenomenon celebrities, sports teams, corporations, executives, moms, dads and children took the ice bucket challenge. Facebook, Youtube, and Twitter were flooded with videos of everyone dumping the ice cold water over their heads. What does this mean from a tax benefit perspective? Who will actually benefit from the challenge and or the donations? Why did they choose to do this? Where will all of these donations go? As mentioned above, most people opted to dump the ice water and make a cash donation. How much of this will qualify as a donation, if at all?

This purpose of this paper is to examine the benefits of contributing cash and personal property toa qualified organization primarily from the perspective of the individual taxpayer. Using this past summer's ALS Bucket Challengeas a starting point, we will revisit the Internal Revenue Service's rulesregarding tax deductions for charitable giving. In addition to the Ice Bucket Challenge we will review some other real-life examples to apply the rules regarding the maximum amount of charitable deductions allowed in a tax year. We will also provide some taxpayer guidance regarding documentation needed they can properly capture all of their charitable giving tax benefit in 2015. In summary, we will explore some of the other types of tax benefits (i.e. State Tax and Estate Tax) as well as non-taxbenefits of charitable giving. [i] New Year, New Opportunities, by BarbaraJ. Newhouse, ALS Association President and CEO.

Green Entrepreneurship Sustainability through Schumpeterian Innovation

David Brannon Towson University Mariana Lebron Towson University

Using Schumpeter's (1934) Theory of Economic Development, we propose a Schumpeterian based view of 'green entrepreneurship'. An interdisciplinary literature review reveals a variety of interpretations relating entrepreneurship with the natural environment; however, Schumpeter's theory provides a theoretical link that bridges these concepts. We extend his five sources of innovation (creating new goods; creating new production methods; capturing new supply sources; creating new markets; or, creating new industries) to propose a typology of green entrepreneurship with examples of how entrepreneurs have implemented natural environment innovations. We contribute to the literature by clarifying green economic development in terms of Schumpeter; extending Schumpeter's work to explain how environmental progress can be made whilst maintaining economic progress; and separating the types of Schumpeterian innovation by level of analysis to provide a focus for future theoretical and empirical research.

Session 3: Willow Room 9:35 am – 10:35 am

Business Topics

Session Chair: Hideki Takei

Teaching Game Theory with Haiku

Will Delavan Lebanon Valley College
Ed Sullivan Lebanon Valley College

Most undergraduate students first encounter game theory and, in particular, the Prisoners' Dilemma in a microeconomics principles course. Typically, game theory analysis is taught so that students can grasp the somewhat difficult notion that pricing and output decisions made by firms in an oligopoly market structure are determined interdependently. In our paper, we present a novel way of introducing students to some fundamental notions of game theory, including strategic behavior, dominant strategies, repeated games (tit-for-tat strategies), and Nash equilibrium (non-cooperative equilibrium) using haiku poetry. Haiku is an ancient Japanese poetic form of seventeen syllables. In homework assignments (some are included in our paper and presentation), students are asked to construct a haiku poem employing at least one of the aforementioned game theory concepts. To test the efficacy of this teaching method, two groups of students were employed. The first group, the control group, was not given this assignment; the second group wrote game theory centered haiku poems. Next, students from both groups were asked identical questions on an exam. Our results indicate that the use of haiku as a teaching technique substantially improved students' understanding of the fundamental concepts of game theory and the Prisoners' Dilemma in particular.

Baseball's Racial "Change-Up": Economic Forces Lead to Major League Baseball's Desegregation

David Gargone Misericordia University
Zhen Ma Misericordia University
Joshua Winneker Misericordia University

Major League Baseball began to desegregate in 1947 when Jackie Robinson joined the Brooklyn Dodgers and broke baseball's unwritten color ban. This was the start of a racial shake-up in the League, but it would take another 12

years for all of the teams to integrate. There is considerable research about the positive impact from integration, but little research about the reasons that led the individual teams to desegregate. During that time period, the team owners did not feel any legal pressure to hire African-American players as there were no employment discrimination laws in existence; rather this was the "separate but equal" period in our country. Instead, we posit that it was baseball's fragile financial position following the Depression and World War II that created pressures on financially weak teams to desegregate in hopes of reviving their franchises. This relative weakness is examined in cities with more than one team (New York, Philadelphia, Boston, St. Louis and Chicago). In determining the team's financial performance prior to integration, we use attendance, on-field performance and team financial histories. Based on this, we have found that the teams that performed poorly financially integrated first out of business necessity.

Regulation of Transportation Network Companies: A Case Study of Connecticut

James A. Thorson Southern Connecticut State University

Connecticut is unique in that the taxi and livery industries are regulated on a statewide level rather than the local level which is the more typical method of regulating these industries. In order to receive a permit to operate either a taxi company or a livery company the applicant must show proof of "public convenience and necessity". The rationale for such regulation is that if entry restrictions were loosened the result would be excessive entry with deteriorating service levels and quality. On the other hand, some would argue that such a system unfairly benefits existing providers at the expense of potential entrants. Transportation network companies have been operating outside of this regulatory framework claiming that they are something other than taxis or livery services. They have defined themselves as technology companies providing technology to facilitate rides from independent contractors.

The rise of transportation network companies (TNCs) has been a disruptive force in the taxi and livery industries across many states and countries. The TNCs would argue that they are providing better service at better prices than traditional service providers. The taxi and livery industries tend to see TNCs as unregulated transportation service providers which put the public at risk. The purpose of this paper is to investigate what role, if any, TNCs should play in the transportation market and how they should be regulated.

Session 4: Sylvan Room 10:50 am – 11:50 am

Marketing & Business

Session Chair: Megan Marley

Business as the Good Life

Matt Fuss Geneva College

In the *Nicomachean Ethics* (NE) Aristotle talks about what he calls the good life and goes into great detail explaining the reasons, or goods, that compel a person to act or not act. The idea is that one engages in certain activities with the expressed purpose of attaining some good. It is to the elucidation of *eudaimonia* as applied to the marketplace, specifically organizations and organizational communication that I focus. I take the position that organizational culture and organizational communication are interdependent. Each is informed by and informs the other. Part of this discussion need to be an exploration of the areas of psychological contract theory, professional civility/virtue ethics including internal and external goods (Fritz 2013) and positive organizing (Fredrickson & Dutton 2008). I will look at branding, from a purposely internal perspective, as the policies, procedures, and marketing activities a business utilizes to create an atmosphere that values people. Schultz & Schultz (2004) add texture to the marketing discussion; companies brand themselves through coordinated communication efforts. By being informed by Aristotle's concept of a "good life", businesses can better understand how to position themselves as an integral element of a person's living the said good life.

Managers That Value Making Their Communities Better: What Differentiates Their Communities?
Ann Echols Juniata College
Nathan Elser Juniata College

The purpose of this time-series research was to explore what differentiated communities in which firms sought to better the community, from those communities where firms who did not believe in bettering them resided. That is, are firms' managers that seek to better their communities located in communities that differ from those communities where firms' managers who do not believe in bettering them locate? If so, how do the communities differ? We asked firms' CEOs the extent to which they agreed or disagreed with the statement: Companies should contribute to the betterment of their local communities. We dichotomized their responses for consistency over a two-year timeframe and regressed upon this reliable dependent variable several features of communities, defined by zip code, where these firms were located. We explored the location's crime index, unemployment, percentage of residents with a Bachelors degree or higher, the percentage annual resident turnover, population size, and percentage of residents with children. We controlled for firm size using revenues and number of employees. We found that firms seeking to better their communities resided in communities with lower unemployment, more education, and lower turnover. This exploratory research is one of the first to look at the geographic conditions where firms reside and the association of such conditions with what the firm's manager believes about the firm's role in the community.

Beacons. So What? Big Deal! They are a Big Deal and Could Possibly Help in Your Recruiting Efforts
Darrell Leslie Steckler York College of Pennsylvania

First there were coupons based on what you bought at the register, delivered to the consumer through snail mail. Later the coupons were printed right at the register for the consumer. Next was surfing the Twitter and Facebook traffic, sending coupons to a smart phone or tablet after the purchase had been made, to be used in the future. Then real time parsing of smart phone/tablet traffic on Twitter or Facebook. Coupons were immediately sent to the consumer on their registered electronic device based on the location and content of the message they had sent. Pretty effective, but the consumer had to be physically in the building for this to work. Imagine if you could send out a message and grab anyone within a certain distance to your business. They could be shopping at a retail store across the parking lot, and receive a banner ad from your business enticing them to come into your business. You could send them invitations to come shop, coupons, offers they could use immediately, announcements of special sales going on right then, the possibilities are endless. Now bring that technology to your campus. A lot of efforts are put into Open House events on the campus. If you are able to have the prospective students download your school app (you do have one don't you?!) then when they get to campus you can send out banners highlighting the finance seminars, shouting out invitations to come see the basketball game, or watch a performance of the school jazz band. Again, the possibilities are endless!

Session 5: Willow Room 10:50 am – 11:50 am

Business and Business Education Session
Chair: David Gargone

The Papal Visit: An Emergency Preparedness Perspective
Robert S. Fleming Rowan University

This paper will discuss how the City of Philadelphia and surrounding counties prepared for the recent 2015 Papal Visit. The focus of the presentation will be on how a proactive, strategic approach was utilized to prepare for the many emergency management challenges associated with one of the largest events ever held in the region. The successful outcome in managing this major event was achieved through a coordinated, collaborative effort of numerous local governmental entities and agencies, along with county governments from three states, and the federal government. Numerous business and non-profit organizations also played instrumental roles in planning for this event, as well as in implementing these plans. This case study illustrates the application of various business topics including strategic planning, contingency planning, management, and information technology. The presentation will examine how this

important event was managed effectively, efficiently, and safely, through the use of proven management principles and practices supported by the extensive use of information technology.

Is Free Cash Flow Value Relevant? The Case of the U.S. Consumer Discretionary Sector

Mostafa M Maksy Kutztown University of Pennsylvania

This study attempts to determine whether free cash flow (FCF)is value relevant for the U.S. Consumer Discretionary sector, and which FCF is the most value relevant. The results would help retail investors makebetter decisions, and may encourage accounting standards setters to require Consumer Discretionary sector companies to use a specific definition of FCF to enhance comparability. Using a sample of 11,640 observations covering the period from1988 to 2012, the study shows that FCF is not value relevant for the Consumer Discretionary sector. This result is in agreement with some prior research discussed in the literature review.

Good, Bad, & Ugly -- Share With Your Students?

Robert Derstine West Chester University of Pennsylvania
James M. Emig Villanova University
Elaine Webster Villanova University

Many accounting professors share with their students the myriad of positive things about the accounting profession via classroom discussions and/or Accounting Society and Beta Alpha Psi meetings. The concern we are investigating is whether accounting students (specifically at the Intermediate Accounting course level) also should be exposed to 'negative' views/opinions about accounting and the accounting profession.

We solicited the opinions of four groups: current Intermediate Accounting students, recent accounting interns/graduates, staff accountants with two to three years' experience, and CPA firm managers/partners. The survey instrument we sent to all four groups provided 'negative statements' concerning topics covered in Intermediate Accounting: Depreciation (duh-preciation); LIFO inventory costing method (L(l)ie-Fo); and FASB, GAAP, and Objectives of Financial Reporting (Reducing Complexity - The Latest Red Herring from the FASB). We asked each of the four groups surveyed the extent to which the negative statement should, or should not, be presented and discussed in Intermediate Accounting classes. Following the three negative statements, we presented a fourth statement – a positive statement showing the high ranking the accounting firms achieve in the area of trustworthiness. We then asked each group how their previously expressed opinions on the negative statements would have been impacted if the positive statement had been presented and discussed with students at the same time as the negative statements. Each survey instrument concluded with a request for open-ended comments.

Results indicate there were no significant differences in the responses from the first three groups surveyed. Current Intermediate Accounting students, recent accounting interns/graduates, and staff accountants with two to three years' experience each indicated they believed the three 'negative' statements should in fact be discussed in the classroom. Also there was no significant difference in these three groups' response that discussing the positive fourth statement would have impacted their views on the three negative statements. We are currently in the process of completing the collection and analysis of comments from CPA firm managers and partners.

Session 6: Logan/Harris Room 10:50 am – 11:15 am

International

Session Chair: Okan Akcay

Short-Run Initial Public Offering Underpricing and Long-Run IPO Underperformance in Tokyo Stock Exchange

Hideki Takei Central Washington University
Yoshiki Shimizu Central Washington University

The goal of this study is to explore the existence of two phenomena in Japanese stock markets. One is short-run Initial Public Offering (IPO) underpricing which refers to a phenomenon that occurs when firms go public by issuing new stocks and the offer prices of the stocks are somehow underpriced, no matter how good the future prospects of the firms are (Rock, 1986). The other is long-run IPO underperformance which refers to a phenomenon that occurs when IPO stocks underperform in the long-run compared to other non-IPO stocks that have been traded in the market for a long time. Our samples are 184 IPO firms that went public on stock exchange markets in Japan during the period from 2004 to 2011, in order to investigate the existence of these phenomena in the Japanese market. The sample IPO firms are listed on the following stock exchange markets within TOPIX, TSE-2ND, and MOTHERS in the Tokyo Stock Exchange.

This study revealed the existence of the phenomena in the Japanese market. The results will answer whether market efficiency holds well in the Japanese stock exchange markets in the short- and long-run.

Session 7: Holmes/Foster Room 10:50 am – 11:50 pm

Technology

Session Chair: Roger Hibbs

Information System Project Statuses - A Strategy for Success: Can Keeping Silent Be Good?

Alex Citurs Eastern Connecticut University

The primary objective of this study is to provide further insights and a theoretical framework into factors influencing the sharing or keeping silent on information systems projects that are being kept secret, have non-published features, or encounter unanticipated project setbacks. The study examines how a cross-functional information systems project team managed the hiding and disclosing of information concerning a multiyear international resource management systems project at a top Fortune 100 corporation. The project after implementation and completion was touted by upper management as being very successful and with saving the corporation millions of dollars. Possible implications for both successful and unsuccessful information systems projects will be outlined.

Mobile Business: Best Security Practices

Kustim Wibowo Indiana University of Pennsylvania
Azad Ali Indiana University of Pennsylvania

There are more and more activities one can perform using mobile technology from personal such as communicating with friends and family via either telephone, text messaging, or engaging with others through social media platforms such as Facebook and Twitter, to managing business activities such as checking bank and credit card statements or involve in financial portfolio trading. All of those activities include endless amounts of data, from valuable personal data to very important business data. Those data available to us almost instantly at our fingertips into our mobile devices through mobile networks and the Internet. Since those channels can be accessed publicly, we cannot assume that the data transmissions through those channels are safe.

This research will find out various mobile malware programs and what these programs are capable of doing to a user's mobile device. It will also discuss what we, as mobile device users, can do to protect ourselves and limit mobile device risks. It will explore any programs that are available to detect and eliminate mobile malware, along with the best practices to use to avoid potential harm cause by mobile malware. This research will also search what businesses need to take into consideration in regards to mobile device usage, and how these businesses can limit their risks and protect themselves from the harmful effects of mobile malware.

The Analytics Team: Contributions of the Business and Technical Stakeholders

James J Pomykalski Susquehanna University

Advanced analytical tools and techniques, known as business analytics, are changing the decision-making environments in many business domains; particularly marketing and human resources. The use of business analytics is becoming highly effective in today's data-driven decision-making environment. The advanced nature of these tools require a skill set beyond many of today's marketing and human resource professionals. Therefore they must work

as part of team with quantitative professionals—known as quants—to utilize these tools most effectively. This paper outlines the roles and responsibilities for each of these two professional groups. The roles and responsibilities at each stage of a standard analytic problem solving process known as CRISP-DM.

Session 8: Sylvan Room 1:15 pm – 2:00 pm

Accounting/Finance

Session Chair: David William Jordan

Does Your Bank's Dividend Policy Make Sense?

John S Walker Kutztown University of Pennsylvania
Jonathan K Kramer Kutztown University of Pennsylvania

There are estimates showing that the United States is losing an average of one community bank per day. A recent op-ed piece by Vernon Hill (2015), the CEO of Commerce Bank prior to its sale to TD Bank, made the point that the simple process of opening a bank branch in the U.S. (relative to the U.K.) has become so much more onerous. Regulatory pressure to raise more capital has also been an issue. Our research finds that small community banks in general and top-performing banks in particular are growing equity much faster than assets. This mismatch between equity and asset growth puts pressure on these banks to generate higher ROAs to maintain their ROEs. However, that pursuit of higher ROAs can lead to greater risk-taking, if a bank attempts to increase its net interest margin to offset the higher regulatory costs.

GPE: A Slippery Slope into a Tangled Web

Jeffrey L. Hillard Stevenson University
Ali Sedaghat Loyola University of Maryland

This is a case study regarding an international manufacturing company (GPE in the united states) based out of Europe that produces machinery used to generate electricity. The European Corporate organization is comprised of several subsidiary organizations and incorporated subsidiaries. GPE has created separate companies for the equipment manufacturing, as well as for the sale of parts and services outside of the Americas. Further, GPE Corp also consists of the US Corporate organization, which is comprised of four business units including the US Financing Division focuses on finding other corporations to provide funds as outside investors. Credit financing is obtained from the World Bank and private banks for these power plant projects. Bob Smith has been assigned to a new position working for Joe Daboss, the VP of Plant Management division of the US operations. In this case we have covered several different scenarios involving revenue recognition, consolidation, transfer pricing, forecasting and ethics. Bob's problems which are presented in the case begin with the billing that he is asked to process based on a "handshake deal", or verbal commitment, which is not confirmed by the subsidiaries. Bob is embarrassed by these scenarios, but discovers that his boss; Joe Daboss is getting bonus payments for meeting the profit budget. In our opinion, this is a multidimensional case that would be appropriate for courses in Advanced Accounting, Advanced Managerial Cost Accounting, Auditing, Accounting Ethics and a Business Strategy course for Accounting majors. Points of emphasis for Advanced Accounting and Auditing would be consolidation, revenue recognition, internal controls and ethics. In a Managerial Accounting or a Business Strategy course, the instructor should place emphasis on transfer pricing, forecasting and performance evaluation and Ethics.

Session 9: Willow Room 1:15 pm – 2:15 pm

Business Education

Session Chair: Michael J. Gallagher

The Pedagogy of a Capstone Course in an Undergraduate Business Administration Program: A Practice Oriented Approach

Mark Arvisais Stevenson University

In light of the recent publicity regarding the value of higher education, the Capstone course is taking on prominence in the success of business administration degrees. The challenge for institutions is to offer an experience that transcends esoterica and is more practical in nature. That is, too many college courses are conceptual in nature and fail to engage the students in doing something that mirrors work life after they graduate; college should not be a spectator sport. This paper outlines one approach for a Capstone course that hopes to deliver practical knowledge for the post baccalaureate.

Assessment for ACBSP Accreditation: Process vs. Panacea
Bradley C. Barnhorst DeSales University

The ACBSP, like other accrediting bodies, has placed a greater emphasis on assessment in recent years: particularly of assessment of student learning outcomes, but also of faculty and student satisfaction, professional development, faculty workload, etc. Given the increase in time and effort that must be dedicated to fulfilling the necessary requirements, are the results worth it? Some expect assessment to automatically raise a program's standards or, at the least, find a program's faults, but this is not a reasonable belief without sufficient oversight of the assessment process's design and implementation. This paper examines several shortcomings in the assessment process as implemented in many schools, as well as focusing on some better practices that can raise the level of expected results.

How to Teach Big Data Management
Jianfeng Wang Indiana University of Pennsylvania
Kustim Wibowo Indiana University of Pennsylvania

Data available for business analysis grows exponentially. Industries have spent billions of dollars in the analysis of very large amount of data, which is very challenging for traditional database technology to process and analyze. There are thousands of big data analysis jobs available in the market but not enough candidates to apply for. Current university technical infrastructure is not sufficient for professors to effectively teach big data concepts and practice. On the other hand, existing vendors in big data technology usually will charge a fee for year-long practice of big data analysis through their cloud platform. There is such a conundrum facing teaching this subject in a university setting. In this paper, we will first take a look at the status quo of the teaching and curriculum in the universities offering this class, followed by a summary of vendor-provided service for big data analysis. Finally we will make a proposal of teaching and curriculum development in the area of big data technology.

Session 10: Logan/Harris Room 1:15 pm – 2:15 pm

Information & Technology Management
Session Chair: Loreen Powell

Braving Bitcoin: A Technology Acceptance Model Analysis
Daniel Folkinshteyn Rowan University
Mark M Lennon Pennsylvania State University-Altoona

The Technology Acceptance Model (TAM) is an important analysis tool in the study of the social mechanisms of technology adoption, and has received considerable attention and study in the literature. Though empirical support for the model has varied depending on situation specifics, it remains a popular and useful conceptual framework for analysis of factors contributing to technology acceptance or rejection by the relevant constituencies. In this paper we use the TAM framework to analyze aspects of the technology acceptance process in the case of Bitcoin. Bitcoin is an entirely digital distributed currency whose disruptive and disintermediating nature has fueled the tremendous growth of the financial technology space over the past few years. Bitcoin's distributed, verifiable, and immutable public transaction ledger, the "blockchain", holds out the promise of fast, cheap, peer-to-peer financial transactions, as well as significant efficiencies in the transfer of other assets via overlay networks. In this study, we break down,

describe, and analyze the various factors affecting the past and future adoption curve for Bitcoin in the context of the Technology Acceptance Model.

Calculating Technology Base and Technology Overlap Using Patent Citations

Jan Buzydlowdski Holy Family University
Don Goeltz Holy Family University

Calculating the technology base of a firm is a critical first step in studies of the technology strategies of a single entity and in making comparisons between the technology strategies of firms. For example many studies of alliances and alliance portfolios require calculation of technology overlap between firm dyads. These studies typically use the patents of each partner dyad as the bases for the calculation.

Sampson (2007) uses the three-digit patent classifications determined for each patent by the US Technology and Patent office to determine technology overlap, calculating a weighted vector of the differences between the technology bases of a group of patents. This paper introduces a new measure of technology overlap based on the patent citations made in the patent applications. Each patent application lists the patented technologies that are being cited, much like citations in an academic paper. By examining patent citations, we can map the evolving technology base of a firm and compare that to itself and to other firms and groups of firms. This technique extends the approach used by Sampson (2007) and broadens the technology bases being compared. Data on the patent citations is obtained from the National Bureau of Economic Research (NBER), a public database.

The paper examines the current techniques for calculating technology overlap and summarizes some of the current applications. Then the new approach of using patent citations is derived and examples of the calculation are presented. Finally application examples are developed for tracking the technology evolution of a single firm and for an alliance portfolio.

Monetary Incentives for Data Collection among Future Business Leaders of America

Loreen Powell Bloomsburg University of Pennsylvania
Christina Force Bloomsburg University of Pennsylvania

Researchers are constantly trying to yield more data for research studies. One method for increasing response rates is to offer incentives. Several research studies have examined the effects of incentives and data collection methods on response rates and data integrity, in general. However, there is limited to nonexistent current literature on the monetary incentives for data collection among Future Business Leaders of America (FBLA) students. This presentation will briefly explain a recent monetary incentive data collection process at the Pennsylvania State Future Business Leaders of America (FBLA) Conference. Next, this presentation will share some interesting lessons learned from the incentive data collection at the Pennsylvania State FBLA Conference in Hershey, PA.

Session 11: Holmes/Foster Room 1:15 pm – 2:15 pm

Innovated Business Development Session

Chair: Warren Kleinsmith

Business and Society: An Analysis of Frameworks and Theories

Morgan Clevenger Wilkes University

How do businesses give back to society? All inter-organizational relationship research includes two key frames: “a set of dimensions describing the organizations and a set of dimensions describing the nature of relationships through which they are linked” (Cropper et al., 2008, p. 9). Several scholars have developed models and theories addressing the relationship between business and society (Carroll & Buchholtz, 2008; Cone, 2014; Edwards, 2008; Frishkoff &

Kostecka, 1991; Garriga & Melé, 2004; Johnson, 2011; Munilla & Miles, 2005; Saiia, 1999; Saul, 2011; Sethi, 1975; Stangis, 2007; Waddock, 2004; Young & Burlingame, 1996). This presentation reviews the depths and range of how businesses engage as corporate citizens at various levels in society.

Measuring Disruptive Innovation from the Lens of Dynamic Capabilities: A Study of the Indian Auto Sector

Maheshkumar P Joshi George Mason University
Deepak Pandit Management Development Institute (India)

Since the economic liberalization of 1991, India has witnessed a boom in the auto industry as well as the auto component industry. Such growth has resulted in the idea of innovation as an important parameter for survival and growth of firms. We argue that the organizational response requires a focus on discontinuous innovation, which has not been captured empirically in the Indian context. Disruptive Innovation (DI), a special kind of discontinuous innovations is a route for market dominance over the long term. An organization facing rapid change in the business environment, such as the Indian Auto sector, must have an ability to engage in DI. Further, we assert that the ability to adopt DI makes dynamic capability (DC) a critical requirement and as such we examine the DC-DI relationship and hypothesize it to be positive. A survey instrument is developed based on the extant literature and used to test the model with 107 responses from the firms affiliated to the Indian Auto Component Industry. The findings confirm the positive roles of DC, R&D expenditure and environmental turbulence as the antecedent to DI. Our exploratory analysis provides clarity concerning the crucial, but counterintuitive, roles played by R&D and environmental turbulence in moderating the relationship between DC and DI. The major contributions are: a) operationalization of DC and DI for the Indian context; b) sector specific study; and c) counterintuitive results pertaining to moderating roles of R&D and environmental turbulence on the positive relationship between DC-DI

An Innovation Business Model for Superior Management and Competition: Process and Implementation

Sut Sakchutchawarn Lock Haven University of Pennsylvania Clifford
Clifford Fisher Purdue University

The dynamic of competition forces firms to change their strategy in doing business. This paper addresses the impact of multiple drivers on business management. An innovation business model is presented for superior management and competitive advantage. This paper employs e-research, survey of literature, and cases study as research methodology. Key constructs are defined by their essential characteristics and propositions development articulate relationships between key constructs. This study indicates that logistics firms display superior performance when the innovation business model is implemented with proper knowledge management and technology utilization, and top management involvement. Solutions and managerial implications are discussed in order to respond to the concern of business community and academic community accordingly.

Session 12: Sylvan Room 2:20 pm – 3:00 pm

Marketing

Session Chair: Patricia Z. Galletta

Understanding of Value Marketing and Retail Practices

Okan Akcay Kutztown University of Pennsylvania

Today's consumers are well informed, individualistic and demanding. There are key factors which negatively affect the consumer market and retail business. The middle class is shrinking and has lost 40% of their financial net worth over the past five years. Income levels have stagnated and most of the growth shown has been attributed to dual income households. The cost of housing, the recession, and unemployment have caused young adults to seek the security of their families. The number of young people between the ages of 25-34, living with their parents, has risen 19% for males and 10% for females. Economic indicators in the U.S. have shown that the recession is over, but many consumers are still feeling the effects of the economic downturn because of the high cost of healthcare, education and other household expenses. Median incomes are declining and consumers are looking for ways to stretch their buying power. For a retailer to survive in this kind of economic environment, it is essential to practice value marketing to

attract and target the middle class which purchases most of household necessities. Value marketing can provide consumers with the products or services they want, which fit their lifestyle and budget, and make them feel like they are getting the best deal possible. The essence of value marketing is total customer satisfaction by adding "value" to accompany products or services-more than just low price and promotion. This commitment to quality products and services creates trust and loyalty. Most retailers utilize value marketing during a recession and when consumer buying power is declining. The consumer is looking for the best deal possible for their needs and necessities. Many consumers have become accustomed to only buying when a product or service is on sale.

This research paper will attempt to explain how important value marketing is for many consumers and retailers. A literature review will be conducted, a questionnaire will be developed and distributed among consumers. A convenience sampling will be utilized and the collected data will be analyzed using SPSS software and the findings will be presented.

Determining Adequate Control and Test Group Sizes in Retail Direct Customer Promotions
Robert John O'Connell York College of Pennsylvania

During a recent consulting project for a major women's fashion accessory chain, the company tasked this researcher to evaluate the success of campaigns conducted during the previous year. However, this researcher was unable to provide any concrete conclusions due to the small size of the control customers excluded from the campaigns and the small number of customers offered the alternative test versions of the campaign offers. Not only were the samples too small to determine any significance of difference between the groups, but there were also too few responders in the groups for the modeler to build a response model for the upcoming campaign. This inappropriate sizing, therefore, wasted the funds expended for the campaign versioning, missed the opportunity of income from the withheld control customers, and provided little or no insight into the appropriate campaigns for the present year's campaigns. This paper examines the examines an appropriate control and test group sizing methodology to ensure desired degree of confidence in final results and includes desired degree of power for of tests to provide results accurate within specified ranges of error. The paper will present an Excel-based model enabling nonstatistician business professionals to determine appropriate control and test group sizes to fit their particular business needs.

Session 13: Willow Room 2:20 pm – 3:20 pm

Education & Business Topics Session
Chair: John S. Walker

The Effectiveness of Hybrid Course Learning from Student Survey
Jui-Chi Huang Pennsylvania State University-Berks

There are at least three ways of knowing the teaching effectiveness: student's perspective, instructor's perspective and quantitative grade comparison. This study is based on a classroom survey, the student's perspective, from a hybrid delivery experiment in principles of microeconomics at Penn State Berks. The experiment for this study uses one third class time through online delivery and two third class time through face-to-face classroom hands-on activities, discussion and exercise for three sections. The technical nature of the subject makes it difficult to deliver the material online. A screen capture software system with audio (Explain Everything) is used to record the chapter material presentation. The recording chapter material mimics a face-to-face setting without the opportunity of asking questions. Students take notes from the video recording during a specified time window, such as 4 days. Students then are required to come back to classroom each week to join the hands-on activities, discussion, and exercise. In the meantime, they have the opportunity to ask for clarification from video delivered material. This study will conclude with the survey findings of student's perceptions from this hybrid course arrangement.

How Perceptions Influence Higher Education Faculty Member Willingness to Complete Information Technology Training on a Course Management System
Audrey Pereira Fitchburg State University

Research indicates that information technology (IT), including course management systems (CMSs), allows faculty to adopt improved methods for teaching and learning, and training contributes to adoption. Yet many faculty are unwilling to complete IT training on the CMS, leading to low adoption rates. However, little is known about what influences faculty to complete IT training on the CMS, even though most colleges and universities provide CMSs to faculty. The purpose of this session is to discuss a recent doctorial study aimed to address this gap in the literature. This session presents the results of a quantitative, cross-sectional study of faculty perceptions of CMS characteristics, based on Rogers' diffusion of innovations theory, which effect their willingness to complete CMS IT training. The research questions focused on how perceived relative advantage, compatibility, complexity, trialability, and observability of the CMS influenced faculty willingness to complete training. Faculty rank, tenure status, length of CMS use, level of CMS expertise, age, department, and gender were considered as potential mediating variables. Multiple regression models were developed based on data from 102 Fitchburg State University faculty collected in October 2014. Compatibility was significantly associated with online training willingness and relative advantage with in-person training willingness. This session provides strategies to higher education administrators and researchers interested in modifying IT training to better leverage technology to increase the quality of teaching and learning.

The VITA Program: Highlighting the Growth, Actual and Potential, and the Economic Benefit to the People and Economy of Butler County Pennsylvania

John Golden — Slippery Rock University of Pennsylvania
Rhonda Clark — Slippery Rock University of Pennsylvania
Sunita Mondal — Slippery Rock University of Pennsylvania
Jean Bowen — Center for Community Resources, Butler County, PA

The purpose of this presentation is to discuss the process and the importance of the Volunteer Income Tax Assistance (VITA) program at Slippery Rock University (SRU) to highlight the growth, actual and potential, and economic benefit to the people and economy of Butler County, Pennsylvania. The VITA program provides free tax service to low and moderate income taxpayers ($51,000 or less). The program also helps taxpayers with special tax credits for which they may qualify such as Earned Income Tax Credit, Child Tax Credit, etc. The VITA program is funded by the United Way, the Internal Revenue Service and the Sustainable Enterprise Accelerator at SRU. SRU students are trained and IRS certified as VITA tax preparers during each Spring semester while in the internship program. Each year since 2010, the partnership of SRU, the Center for Community Resources and SRU's Sustainable Enterprise Accelerator has provided the VITA program the opportunity to grow, improve, and expand its services to reach more people and create a greater economic impact in returning money back to the Butler County community. VITA sites are now currently in five different locations of Butler County. This research hopes to measure the economic impact of the program quantitatively.

Session 14: Logan/Harris Room 2:20 pm – 3:20 pm

Teaching Business Topics Session

Chair: Don Goeltz

Fostering Information Literacy in a Marketing Course: Integrating Electronic & Traditional Sources

John M Zych — University of Scranton

Marketing requires the effective use of a complete range of sources to inform decision-making. Among today's students, the typical approach to research is to rely heavily on readily available electronic sources. Students who have developed this habit aren't aware of what they are missing. For students to gain a facility with the wider range of available sources they must have hands-on experience in digging for information. To afford students the opportunity to acquire this skill, classroom examples have been designed that show students how to link electronic and traditional sources. The examples demonstrate the additional depth of information that can be found by researching beyond electronic sources. This conference presentation will discuss how the examples were developed and implemented in the classroom. A range of recent examples will be presented, along with students' reactions.

Early Business Career Success Leveraging Spreadsheet Skills

Nicolai Soendergaard — Eastern Connecticut University
Alex Citurs — Eastern Connecticut University

Spreadsheet tools such as MS Excel are extensively leveraged computer tools in the business world. However, in many academic settings they are often viewed as just another basic computer skill set for new business students. Based upon a combination of a modified action research study utilizing an eight month internship of a business department student at a global company's Americas headquarter and surveys of regional employers, the potential early career benefits of possessing certain strong spreadhseet skills was explored. A combination of observation logs, interviews as well as surveys were used to examine which spreadhseet features and functions were perceived as being valuable across numerous functional areas of organizations. The study also looks at the widespread integration of spreadheets and applications like MS Excel with many organizational information systems and database platforms. Findings from this study suggest that students entering the business workforce may benefit early in their careers by leveraging well developed spreadsheet skills.

Session 15: Holmes/Foster Room 2:20 pm – 3:20 pm

Business Pedagogy Topics & Panel Discussion Session

Chair: Andrea Bianca Francis

Impact of Supplemental Learning Materials in the Form of YouTube Videos on Student Test Scores in Undergraduate Operations Management Course

Lisa Bussom — Widener University

The operations management course is a required course in most business schools. For many students this course is extremely challenging. It requires students to think about businesses in a holistic fashion and then apply critical thinking and mathematics to solve problems. Typical problems involve business process modeling, process flow analysis, capacity analysis, inventory theory and tools of Six Sigma.

Studies have provided specific analysis that led to the conclusion that on-line video can improve grades and knowledge retention. This research blends well with research from communication, psychology and cognitive science fields that discuss lectures, retention and pacing of reviews, which indicates that not only is review of material integral to understanding, but that the timing of the review may have a direct impact on the length of retention. This paper demonstrates how the provision of supplemental review material in the form of on-line YouTube tutorials affected students in an undergraduate operations management class.

Determining Accounting Students' Seminal Technology Knowledge, Skills & Abilities

Robert L Kachur — Stockton University
Leo Previti — Stockton University
Warren Kleinsmith — Stockton University

Accounting majors are increasingly impacted by amplified formal education burdens. These are imposed by the complexity of their technical accounting education and potential employer demands for greater “hard and soft” skills. Additionally, there is a constant metamorphosis of the information systems (IS) environment that accountants need to embrace in both public and private firms presenting a challenge to academics. Accounting programs examine requisite accountant’s KSA’s, i.e. technology knowledge, skills and abilities necessary in the curriculum. This paper examines the KSI’s proclaimed as necessary by employers and academics. Accountants need to generate reports, audit data and procedures, have daily interface with AIS supporting functions, and manipulate data sets for management needs. In response we delineate: productivity software (MS Office), DBMS, AIS, ERP and data manipulation skills for potential expertise. Furthermore, we address the issue of “should accounting majors master programming capabilities” for graduation.

South Pacific Blues: Challenges and Opportunities facing Small Island States in the South Pacific

Archish Maharaja Point Park University
Mohammed Sidky Point Park University

This paper examines the effects and consequences of imported food and its displacement of local products on public health and the natural environment facing the small island nations of the South Pacific region. As economically and politically weak members of the global system, South Pacific nations have been extremely vulnerable to the sociopolitical, cultural, and environmental challenges of rapid, and for the most part, unregulated globalization. Our focus will be on the following:

1. The effects and consequences of imported food and its displacement of local products on public health and the natural environment.
2. The underlying socio-economic, political, cultural, and historical forces impacting changes in this area, namely, colonialism and modern globalization.
3. What reform efforts have been proposed, and how effective have they been?
4. Do the demands and needs of a healthy society contradict the realities of modern globalization and its transformation of consumption and production patterns?

The focus of this study will include countries such as Vanuatu, Kiribati, Tuvalu, Fiji, and the Solomon Islands.

Session 16: Sylvan Room 3:35 pm – 4:35 pm

Health Care & Other Business Topics Session

Chair: John Golden

Ethical Conundrums in Health Care: Access to Care and the Right to Know the Cost

Archish Maharaja Point Park University
Gita Maharaja Point Park University

Health Care is one of the important aspects of everyone's life. Everyone wants the best in health care, yet we all keep creating impediments as to how to receive it or how much it costs. In United States of America, health care has gone through a period of instability caused by disagreements from various levels of the government and from health delivery institutions regarding the service mechanism to patients. Our presentation will shed light and discuss some of the following issues:

- Overall ethical conundrums in health care focusing on the access to care and right to know the cost.
- Is access to care a right or just another way of rationing care?
- What is the cost of access to care? Who pays for it?
- Is rationing of care disguised as access to care? Who needs it? What do they need? Who monitors access? What is the cost of health care as well as access to care?
- Why can't a patient know the cost? Is this a way to hide the revenue and profits?
- If Electronic Health Record is here to stay, why do patients need to wait for information?
- Will the information empower patients or make payers accountable?
- What are the best practices for providing access to care and inform patients about its costs?

The above list of issues is not exhaustive. It is attempt to open a discussion which can generate further opportunities for joint research to contribute to education and the health care sector.

Prior Out-of-Pocket Spending Versus Health Status & Consumer Directed Health Plans

David William Jordan Slippery Rock University of Pennsylvania

Health Reimbursement Accounts (HRAs) and Health Savings Account (HSA) eligible health plans emerged as new health care insurance models referred to as Consumer Directed Health Plans (CDHPs) in the early 2000s. Factors that

determine enrollees' plan choice can influence the distribution of socio-economic, health risk, and behavioral characteristics across plans. These factors in turn can affect the financial costs, risk pools, and long-term solvency of such plans. Prior out-of-pocket spending may have a different association with plan choice than health risk scores relative to Consumer Directed Health Plans choice. This study examines differences in the possible influence between health status and out-of-pocket spending on health care needs on health care plan choice between Managed Care and CDHPs.

Valued Partners for Success: Student Clubs and Case Competitions
Christine Marie Lombardo-Zaun — Cedar Crest College

The presenter's best practice of achieving collaborative learning is shared from a sample taken from presenter's teaching experience. The presenter used one of her student clubs to strengthen students' professionalism skills and entered them into an ethics case competition. The presentation will demonstrate that participating in a case competition through the use of student clubs can blend classroom learning while helping students gain real life experience, and improve their interpersonal skills. The students embraced the case competition challenge. In addition to learning how to prepare for a case competition, they learned how to give a timed presentation using visual aids. The students learned how to network as they were provided business cards by the professor and instructed how to network during club meetings. Although the work was challenging, the students thoroughly enjoyed this experience.

The information in this presentation is applicable to any professor seeking to learn creative teaching styles or for any student club advisor looking to share fun educational activities with their students. All institutions have student clubs, and this presenter made efficient use of her student club's time and is delighted to share this best practice with her colleagues.

Session 17: Willow Room 3:35 pm – 4:35 pm

Education Topics & Panel Discussion Session
Chair: Bradley C. Barnhorst

Enhancing the College Scorecard: A Higher Education Perspective
Kathleen Houlihan — Wilkes University

Starting in the 2015-16 academic year, IPEDS will be collecting data on student outcomes for four-year non-profit institutions. This new reporting mechanism could be the beginning of the end for academic freedom in program development. The intention of this new reporting area is collect longitudinal data for college graduates so that prospective students can make better decisions about which school to choose. The IPEDS data will be used to populate the College Scorecard being developed by the Department of Education. This paper will present an actionbased research study, which will provide a portal solution to these new government regulations. Prospective students will get the information they need about the schools, but government will not "own" student data. The implementation plan will include college control of the student data and a better connection with careers for alumni. The major implication is that colleges will be able to maintain academic freedom; while being in compliance with this regulation.

Student Rights in Higher Education
Jerry Douglas Belloit — Clarion University of Pennsylvania
Frank Shepard — Clarion University of Pennsylvania
John Eichlin — Clarion University of Pennsylvania

When a student is accepted and enrolled at one of the many colleges or universities in the United States, their primary focus is on the pursuit of a degree in higher education. Upon admission, the next several years will be spent enrolled as a student engaged in that pursuit. Little concern, if any, is given as to how that student might face severe sanctions by their institution as a consequence of their deeds, whether on or off the college or university campus. For the most part, students do not realize that upon admission to an institution of higher education, certain commonly assumed civil liberties and rights may no longer exist in the relationship with their institution. Rights such as free speech, expression,

association, procedural due process, and others, may be limited as a result of the institutional rules and regulations or a lack of understanding of the legal priciples involved in the institutional rules and regulations. In recent years, several cases involving universities taking disciplinary action against students have brought attention to this issue. In light of these cases, and others, a debate has emerged as to the rights of students in relationship to the institutions of higher education in which those students are enrolled. This presentation will review the current law in the United States with respect to the issue of student rights in higher education and institutional responsiblilities.

Student Engagement – The Ultimate Student Experience

Audrey Guskey Duquesne University

The marketing programat Duquesne University's School of Business has embarked on an aggressive program of Student Engagement. In the classroom and outside the classroom, students are encouraged to take a very active role as students, interns, and young marketing professionals. The process of going through the AACSB accreditation motivated the marketing faculty to improve Duquesne University marketing majors' total student experience. Within the marketing department at the Palumbo/Donahue Business Schools, the goal is to: 1.Create a "climate of learning" through a cohesive experience in order to build stronger social bonds among the students. A vibrant learning environment involves closer mentoring, outside of classroom opportunities, and activestudent engagement. Opportunities andrewards for student excellence are key. 2.Create a rigorous, relevant four year curriculum which features signature assignments and experiential learning in a deliberate and organized fashion. Active learning is common at all levels of the program. Field based classroom projects representbusiness problems identified through advisory board and industry leader input. AMA Student Planned and Run Events Students have numerous opportunities to build strong social bonds with each other and with the faculty. One such opportunity is the Duquesne chapter of the American Marketing Association (AMA) which has been very active over the past twenty five years. It allows students to develop leadership skills as well as event planning experience. Membership has topped over80 students. Duquesne's AMA sponsorsvarious annual professional events including the Marketing Mixer networking night, a Dress for Success Fashion Show, a weekly Marketing Speakers' Series,and social events such as a Scavenger Hunt, Light Up Night at Christmas, and participation in home coming. Duquesne'sstudent chapter of the AMA also has developed a strong relationship with the AMA Pittsburgh professional chapter. The AMA Duquesne student chapter has, for 20years, sponsored the Marketing Mixer, a career focused networking night. The average attendance is 150 Duquesne business students and twenty marketing professionals. This is structured similar to a "speed-dating" event, only students are talking to marketing professionals and not potential dates. For the past 25 years, the AMA has sponsored the Dress for Success Fashion Show. A team of about twenty five faculty and students participate as event planners and models. The average student audience has been about 100 and money raised is donated to the St. Anthony Program, alocal charity which assists youth with special needs.

The purpose of the dress for success fashion show is to acquaint students with what is appropriate professional dress thatis still trendy. There is also a lesson on business etiquette. A Scavenger Hunt has been sponsored by the Duquesne AMA for the past ten years. Participants dash for cash across the campus and the city with the goal to complete about 25 different activities and document the completion of theseactivities with a digital camera. The learning objective is for students to become more familiar with the Duquesne campus and the city of Pittsburgh. Many of the activities are marketing related which allows students to experience marketing in action. One of the Scavenger Hunt events had over 80 participants. Student engagement counts for 10% of the gradefor the Introduction to Marketing class. This includes class attendance, participation, and attendance at outside professional marketing events. Students are required to attend two events toearn participation credit, but are encouraged to attend more. These can include, but are not limited to: AMA Marketing Mixer/Networking Night,
Duquesne's Career Fair, Dress for Success Fashion Show, and marketing guest speakers in the weekly Marketing Speakers' Series. Marketing principles state there are "FOUR P's of MARKETING". This presentation shares the Duquesne student AMA chapter's "FOURTEEN P's of MARKETING". Ways to motivate students, guide them as a faculty sponsor, and ideas to generate exciting activities and events will be discussed at this presentation.

Session 18: Logan/Harris Room 3:35 pm – 4:35 pm

Finance & Strategic Planning Session

Chair: Lisa Bussom

The Role of Strategic Planning in Meeting the Emergency Service Needs of the Baby Boomer Generation
Robert S. Fleming Rowan University

This paper will examine how contemporary emergency service organizations are utilizing strategic planning to prepare for success and survival in times of unprecedented changes, including meeting the ever increasing service needs of the aging baby boomer generation. While the utilization of strategic planning has been growing within emergency service organizations, a number of new challenges are serving as catalysts for these organizations to transition from a traditional reactive approach to the proactive approach that has been utilized successfully in many other industries for a number of years. While there are certainly unique challenges that impact particular emergency service organizations, a number of challenges now confront the majority of these organizations. Meeting the emergency medical service needs of a community with an aging population is a major challenge that most communities are facing, particularly in light of reductions in funding, difficulty in recruiting and retaining personnel, and changing laws and regulations. The presentation will advocate the use of community risk reduction initiatives as part of the solution to addressing this mission-critical problem. While the primary focus of the presentation will be on strategic planning, it will also consider the role that supply chain management plays in service delivery that meets and, ideally, exceeds stakeholder expectations.

Excess Reserves and the Zero Interest Rate Bound: Again
Conway Lackman Duquesne University
William Carlson Duquesne University

The liquidity and solvency panic of 2008 led to a rescue effort by the Federal Reserve System (Fed) with three stages of "quantitative easing". The Fed purchased enormous amounts of Treasury and mortgage securities from banks. The result is that the Fed has $4,100 billion in Treasuries and mortgage backed securities (MBS) and the banks have $2,400 billion in excess reserves (up from only $2 billion in 2007). It is important to note that the excess reserves are due to the rescue effort to counter the bad behavior of the big financial institutions that caused the panic. The huge amount of excess reserves and the severe recession drove short term interest rates to zero in 2008 where they remain today. Various officials and others say it is time for the Fed to raise interest rates even though the economy has not reached a sustainable 3% or so growth rate and inflation is not yet a problem. The question is how and when the Fed is going to do it. Selling the Fed's huge holdings of securities in the open market could cause a bond market crash.

The Fed has a new tool for managing interest rates put into action in 2008, paying interest on excess reserves (IOER). If Janet Yellen's June 17 conference long run fed funds projection of 3.75% is correct the IOER expense to the Fed (and loss of revenue to the Treasury) could be $100 billion per year. The banks would be getting a risk free $100 billion as a reward for their bad behavior which generated the huge excess reserves in the first place.
The problem of high excess reserves and interest rates at the zero bound has occurred before, from 1934 to 1942 with lingering effects past 1960. This period has some lessons that could be useful regarding the current situation. In 1936-7 the Fed doubled reserve requirements to get rid of excess reserves. The result was a disaster. Hopefully, the Fed will not commit another 1936-7 type mistake again.

Planning for Retirement
Patricia Z. Galletta College of Staten Island

This paper discusses the different plans which exist to save for retirement and other methods to consider in saving for retirement such as reverse mortgages, home equity loans and annuities. Contribution limitations, required minimum distributions and catch up distributions for the current tax year related to each of the plans are discussed. Several legal cases dealing with fraud against retirement savings are examined for purposes of determining lessons learned.

Session 19: Holmes/Foster Room 3:35 pm – 4:15 pm

Panel Sessions

Session Chair: Sut Sakchutchawarn

Supplanting Strategic Management Case Studies with Integrated Service Learning Projects

Ron Petrilla Misericordia University

This is a proposal for a workshop presentation involving a work in progress. The project replaces textbook "boilerplate" case studies in a senior level Health Care Strategic Management course with real-life experiences involving small, local non-profit organizations. The justification and major issues to be addressed include:

> Non-profit organizations are coninually challenged by the need to increase public awareness, build their donor base, attract quality board members, recruit qualified and well-prepared job applicants.

> Small non-profit health care organizations are particularly vulnerable to a rapidly changing industry and geopolitical forces.

> Strategic Management courses have traditionally relied upon case analysis simulation to reinfoce concepts of environmental scanning, identifying industry opportunities and threats, assessing internal strengths and weaknesses, scenario planning, etc.

> Health care administration majors often lack experience necessary for acceptance in entry level positions unless they have had internships, yet these have become increasingly competitive, even in an unpaid voluntary capacity.

> Students are frequently limited to faculty in regard to cultivating working and mentoring relationships.

> This presentation will report on two semesters of a senior level strategic management class where students were assigned teams with the purpose of performing a strategic management case analysis in order to formulate recommendations for agency management. Case subjects were small, local non-profit organizations whose mission included some type of health care services or programs.

> The purpose of the workshop will be to report on outcomes of these previous attempts, as well as to solicit feedback in continuing to develop the program and set realistic expectations in terms of beneficial outcomes for the agencies.

Hobby or Business? The Classification Can Be Costly

Leo Previti Stockton University
Robert Kachur Stockton University
Warren Kleinsmith Stockton University
Michele Previti Stockton University

Business activities that resemble a hobby or recreational activity often receive close scrutiny by the IRS when reported on tax returns. Normally, a taxpayer engaged in a “for profit” activity is entitled to deductions against income for a variety of expenses. However, the deductibility of hobby related expenses is much more limited. This paper will discuss the potential tax consequences of the alternative classification of a “for-profit business activity” versus a “hobby activity”. Additionally it will analyze the tax regulations of 1.183 that provide a nonexclusive nine factor list of considerations. The IRS and the courts utilize these to determine whether an activity is engaged in “for profit”. This paper will also examine recent Tax Court cases where the Court employed the nine factor analysis. Conclusions and practical steps will be presented from these cases to assist taxpayers in avoiding the pitfalls of Section 183.

Session 20: Sylvan Room 4:40 pm – 5:20 pm

Session Chair: Marlene Burkhardt, NABET President

****Best Paper Presentation****

Homeownership and Income Inequality

LiJing Du Towson University
Michael Dewally Towson University
YingYing Shao Towson University
Daniel Singer Towson University

The incidence of homeownership is examined in an analysis of local real estate markets that parses the causal relationships among labor market conditions, education, family structure, income, housing costs and the amenity value of homeownership. Inequality in the distribution of income in the housing market is found to have a negative impact

on homeownership. This effect is thought to result from a disruption of the normal progression from rental housing to homeownership. The policy implications of this finding are explored.

Friday, October 24, 2014

Session 21: Sylvan Room 8:20 am – 9:20 am

Discussion of the NABET Conference Proceedings and the NABET Journal

Jerry Belloit — Clarion University of Pennsylvania
Norman Sigmond — Kutztown University of Pennsylvania
Melanie Anderson — Slippery Rock University of Pennsylvania
Kurt Schimmel — Slippery Rock University of Pennsylvania

Session 22: Willow Room 9:30 am – 10:45 am

Accounting & Discussion Panel

Session Chair: Daniel Folkinshteyn

Effects of Accounting Regulations: FAS 137 and IAS 39

Jorge Romero — Towson University

This study explores the link between accounting regulations and market inefficiencies, focusing on the U.S. market in years 2007 and 2008. Specifically, this study examines the effectiveness of U.S. GAAP Fair Value Measurements (FAS 157) and Financial Instruments: Recognition and Measurement (IAS 39), which is an international accounting regulation. Some research questions of interest explored in this study are the following: did these accounting regulations work effectively during a period of market inefficiencies? What was the difference in performance between firms that applied FAS157 and IAS 39 during the period of study and those that did not? Moreover, this study also looks at the effects of conservative accounting during a period of market inefficiencies.

The Impact of CPA Exam Changes on Accounting Education and How to Train Accounting Students to Think Critically

Ermira Mazziotta — Muhlenberg College

Accounting profession like any other profession is constantly evolving and changing to better serve the business community and protect the interests of the public. To ensure that the accountants are adequately prepared to fulfill the tasks required by ongoing changes in the business world and advancement in technology, American Institute of Certified Public Accountants (AICPA) proposed changes to the uniform Certified Public Accounting (CPA) exam. The draft was issued by AICPA first on June 4, 2015 and it was an Invitation to Comment (ITC) addressing all parties interested and impacted by changes on the uniform CPA exam. This paper is going to explain in detail the proposed changes; however, the main focus is the impact of these changes in the accounting curricula and how accounting educators can prepare students to fulfill these skills.

CPAs and Continuing Professional Education: Exploring Their Perceived Values in Undergraduate Accounting Programs

Sean Andre — York College of Pennsylvania
Aaron Pennington — University of Cincinnati
Becky Smith — York College of Pennsylvania

Colleges and universities often strive to include accounting faculty who are licensed Certified Public Accountants (CPAs), partly based on the perception that those with CPA licenses will enhance classroom discussions by being

current in the profession and drawing on personal experiences. Although requirements vary by state, a key component of maintaining an active CPA license is engaging in continuing professional education (CPE). Because maintaining an active license is an ongoing process, it is possible that licensed CPAs who also teach at a college/university may find themselves unwilling or unable to maintain their active CPA status or devote the time needed to engage in CPE. If this is the case, then these academics risk not staying "current" and losing touch with their profession, thereby imparing that aspect of their teaching effectiveness. This paper will explore how active CPAs, inactive CPAs, and those who have never been a CPA at various institutions feel about maintaining an active CPA license and engaging in CPE.

Session 23: Sylvan Room 9:30 am – 10:30 am

Leadership & Technology in the Classroom Session

Chair: Marlene Burkhardt

Authentic Leadership in the Classroom

Cori Myers — Lock Haven University of Pennsylvania
Marcia Kurzynski — Lock Haven University of Pennsylvania

From glamour and glitz to graphics and gadgets, popular trends emerge constantly becoming all the rage. Likewise, emergent trends in social media and mobile devices have spurred on the Selfie trend among the younger generation portraying to the world how they look, where they are, and what they are doing, but not who they are as individuals. This paper suggests that faculty reach future leaders as undergraduates and discusses how the undergraduate teaching/learning process can initiate a distinguishing, more introspective Selfie framework/process. The paper considers how faculty can model attributes as authentic leaders who provide learning experiences that elicit awareness in students of self and key areas that characterize authentic leaders.

The Buzz on Tablets in Higher Ed

Jennifer Edmonds — Wilkes University

Over the past few years, iPads and other tablet devices have become increasingly utilized in college classrooms. These tablets trials occur across a variety of disciplines and levels of education worldwide. This research project will serve as an aggregation of findings of tablet trials, in an effort to summarize the purpose, methods and major results of trials in college classrooms. Preliminary findings show that the majority of these trials seek increased student engagement, enhanced classrooms and increased student learning. Few studies have been able to document such increases, but many provide recommendations and a vast set of best practices. In general, tablet devices are seen to contribute to teacher efficiency and the development of students' IT skills. This study will not only summarize trends in the literature, but also provide recommendations for future (and successful) applications and research on the viability and usefulness of tablets in college classrooms.

Implementing Scrum in a Software Development Course

Peter Huegler — Lock Haven University of Pennsylvania

This paper reports on the implementation of Scrum within a traditional semester-based software development course. Scrum is an agile methodology used for project management. Scrum is used in the software industry for software development projects because it excels when project requirements change rapidly or cannot be identified at the beginning of a project. Anecdotal evidence shows students graduating with Scrum experience differentiate themselves from other candidates when seeking employment. Limitations imposed by the class meeting times, student time availability, and course learning objectives impact the implementation of Scrum in the classroom. The implementation described in this paper adheres to the basic Scrum framework but with modifications made for time and evaluation reasons. The modifications include changes to the sprint review and retrospective and the submission of Scrum artifacts for assessment against course learning objectives. Observations on the results of incorporating Scrum into the course are included.

Session 24: Logan/Harris Room 9:30 am – 10:30 am

Marketing

Session Chair: Yaya Sissoko

Using Initial Treatment Methods to Measure Technical Inefficiency in Private and Public Hospitals

Kerry Adzima Pennsylvania State University-Erie

The debate over how to solve the problem of rising healthcare costs has produced a vast amount of literature in many different fields. In particular, economists have developed a method known as stochastic frontier analysis which can be used to estimate how inefficiencies within the health care industry can contribute to rising health care costs. Most studies of this nature estimate a best practice frontier focusing only on the long-run outcomes of hospitals, using variables such as patient days and mortality rates as proxies. In this study I approach the issue of hospital efficiency differently by estimating the best practice production frontier for the initial treatment of patients admitted for heart attack, heart failure, or pneumonia. I am particularly interested in analyzing what role (if any) hospital ownership plays in determining technical inefficiency. According to bureaucracy theory, it is hypothesized that non-profit hospitals will exhibit greater efficiency relative to public hospitals. The results reveal some evidence that private hospitals are in fact than public hospitals in two out of three medical conditions analyzed.

Emotional Intelligence: A Review of the Literature

Justin C. Matus Wilkes University

The purpose of this paper is to review the literature in thefield of Emotional Intelligence (EI). The EI construct first appeared in the literature in Wayne Payne's Ph.D. dissertation in 1986. Since thatthe EI construct has gained traction in both academic circles as well asmainstream media. In 1996 Daniel Goleman's book entitled Emotional Intelligence became a wildly popular book inbusiness and management circles as the latest management innovation. However, several academics have questionedthe validity of the EI construct and several studies have produced someinteresting and conflicting results. Adiscussion of the definition of EI, its measurement and a review of several studies will be discussed.

Session 25: Holmes/Foster Room 9:30 am – 10:30 am

Information Technology

Session Chair: Mark Choman

Increasing Originality of Students' Ideas: The Effect of Restricting Viewing Capabilities in Online Asynchronous Discussions

Denise T. Ogden Pennsylvania State University-Lehigh Valley
James R. Ogden, Professor Emeritus Kutztown University of Pennsylvania

Asynchronous online discussions are an accepted part of the design of online courses. In many online discussions students are allowed to enter the discussion after reading the discussions already posted by other students. This allows students to expand upon or add to the discussion. In many instances this also allows students to consciously or subconsciously borrow from or copy the ideas of other students when forming their own discussions. In this study the originality of discussion posts are compared between two scenarios. In the first scenario, students can view other students' discussion posts prior to adding their own. In the second scenario, students cannot view other students' discussion posts until he/she formulates his/her answer to the discussion question and posts it in the online discussion forum. Of interest is the originality of the discussion posts between the two scenarios and how much students are borrowing ideas from other students.

Bridging the Gap between Theory and Practice – Information Security Awareness

Taghreed Faydi Marywood University
Ahmed Gomaa Marywood University

Cyber Security Awareness is becoming an important topic for most organizations today, especially with the rise of attacks to cripple network services, or to steal confidential information. There are four main behavioral theories with twelve independent variables that are used sixty one (61) times in the literature in the context of information security awareness. In order to prevent an emerging gap between theory and practice, this paper uses empirical data. Specifically, this paper uses empirical data to map and prioritize the most common variables that influence the employees' security and awareness based on existing theoretical knowledge. This paper focuses on four main independent variables that directly lead to an actual behavior that may cause security vulnerability. Those variables are: Behavioral Intention, Coping Appraisal, Threat Appraisal and Sanctions. Once those variables are identified, the paper presents a priority list of what organizations should focus on first in a security awareness program.

Big Data Ethics: A Novel Approach for Supporting Ethical Standards

Carolyn LaMacchia — Bloomsburg University of Pennsylvania
Loreen Powell — Bloomsburg University of Pennsylvania

Ethics help to define a business model that will thrive even in adversity. Strong ethical policies that go beyond upholding the law can add great value to a brand, whereas a failure to do the right thing can cause social, economic, and environmental damage that undermines a company's long-term prospects. Therefore, ethics should be embedded in business models, organizational strategy, and decision-making processes. Once adopting an ethical approach, companies often find there are financial benefits from demonstrating high ethical standards. Big Data refers to extremely important techniques and tools to advance an organization and even society in finding hidden relationships within a large data set. Big data has transformed how we live, how we work and how we think. The strategic value of Big Data for business and government is unquestioned. The negative ethical issues associated with Big Data including privacy concerns, predictive profiling, and an increasing reliance on algorithmic decision– making is an active area of research. However, Big Data can play a positive role when incorporated in the decisionmaking process to support an individual's or an organization's ethical code. This research describes a novel approach for incorporating ethical considerations in individual and enterprise decision-making scenarios.

Session 26: Sylvan Room 10:45 am – 11:45 am

International

Session Chair: Jennifer Edmonds

Current Account Sustainability of ASEAN Countries

Yaya Sissoko — Indiana University of Pennsylvania
James Jozefowicz — Indiana University of Pennsylvania

This paper examines current account sustainability of five countries in the Association of Southeast Asian Nations (ASEAN): Indonesia, Malaysia, Philippines, Singapore and Thailand. The ASEAN was established in 1967 to speed up economic growth and to bring about cultural growth and progress, stability and regional peace among the ASEAN countries. Greater integration makes the issue of long-term sustainability of these countries critical to each other's prosperity. The paper uses the intertemporal solvency framework of Hakkio and Rush (1991) and Husted (1992) and cointegration methodology to test for a relation between exports and imports of the current account. Further, we estimate this long-run relationship using dynamic OLS. The results show that only Malaysia and Thailand have sustainable current account positions. Of the others, Indonesia, Philippines and Singapore have a statistically significant relation between exports and imports although it is not strong enough, and thus they continue to have vulnerable current account positions. The paper argues that monetary, trade and political reforms are necessary to reduce vulnerabilities in external positions.

Patterns of Innovation in Norwegian Firms: A Comparison of Small and Large Businesses

Sherry Kay Robinson — Pennsylvania State University-Hazleton
Hans Anton Stubberud — Buskerud and Vestfold University College (Norway)

Innovation is a key element in business growth and success. Business growth and employment are especially important in Norway, where the drop in global oil prices is said to have provoked increased unemployment and economic

decline. Cooperative relationships between different parties are often essential to product development in that innovation is a social process. This study examines data from Eurostat's 2012 Community Innovation Survey to determine the types of innovations introduced by small and large businesses in Norway and the cooperative partnerships in which they engage. The results show that small businesses (10-49 employees) far outnumber large businesses (250 or more employees), but a lower proportion of them are involved in innovative activities. Small businesses are also less likely to partner with other companies to develop new goods and services. This suggests that increased cooperation with others in the supply chain could be an avenue for enhanced innovation and business growth among small businesses.

University Economic Development: The Case for an Entrepreneurial and Innovation Ecosystem

Kevin Jay Roth — Clarion University of Pennsylvania
Cindy Nellis — Clarion University of Pennsylvania

The economic impact that a college or university has on a respective regional economy is well documented. This impact is normally demonstrated through studies that show spending patterns and multiplier effects from employment, operations and student influence. In addition, regonal impact is shown through contributions to workforce development and fullfillment of employment needs.

Beyond these direct economic effects, many universities today are considering the role they should play in facilitaing innovation, business development and entrepreneurial activitiy through direct interaction with individuals and business throughout the regional economy. While this approach extends beyond the mission or scope of a traditional education and adcademic emphasis, this area is ripe with opportunities to extend university impact, provide "high impact" learning and educational opportunities and assist in improving the economic health of the surrounding region.

This paper explores the formation of a "center based" model for the development of an entrepreneurial and innovation eosystem at a small, state-owned university in western Pennsylvania. A structure is is presented that reinforces existing ecosystems elements and proposes new initiatives to establish a more conprehensive approach and system. It is belived that such a structure can offer significant contributions to regional prosperity while enhancing academic, learning, programming and funding opportunities. Emphasis is placed on the need for cultural change and "buy-in," collaboration, partnerships, technical assistance, and the apporpriate linkage to educational outcomes.

Session 27: Willow Room 10:45 am – 11:45 am

Entrepreneurship, Marketing & Panel Discussions

Session Chair: James A. Thorson

A First Look at the Relationship of Emotional Intelligence, Business Aptitude and Emotional Intelligence among a Population of MBA Students

Justin C. Matus — Wilkes University

The purpose of this presentation is to present preliminarydata of a research investigation into the relationship of EmotionalIntelligence, Business Aptitude and Emotional Intelligence among a population of MBA students. The study uses threekey measures: the Business Field Exam, the EQ-I (a measure of emotionalintelligence), and the Business Strategy Game (used as a proxy measure of astudent’s business/managerial prowess). Descriptive and parametric statistics will be presented.

An Exhaustive Personality Traits Inventory Questionnaire to Assess Entrepreneurship Facets in Individuals' Psyche

Philip Van Berten — Stevenson University

Taking a cognitive psychology measurement tool like the PID-5 used by psychiatrists to assess personality disorder traits, this working paper aims to build such tool in order to visualize, for any individual their entrepreneurial personality facets, earlier described and validated in the management literature.

Family Business in the 21st Century: A Grounded Theory, Ethnographic Case Study in NEPA

Morgan Clevenger Wilkes University
Ellen Newell Wilkes University

Wilkes University's ENT 395 Research in Entrepreneurship: Family Business in the 21st Century students present preliminary findings from a mixed-method study conducted in 8 counties in NEPA. This project collaborated with Dr. Morgan Clevenger, Assistant Professor of Entrepreneurship; Dr. Jeffrey Alves, Dean and Professor of Entrepreneurship; Dr. Ellen Newell, Assistant Professor of Psychology; and Lanie Jordan, Executive Director of the Family Business Alliance (FBA).

This research combines online and hard surveys using the Dillman, Smyth, and Christian (2009) mixed-mode method and face-to-face interviews. Family-owned business participants had to have 2 or more full time employees and $10,000 or more in capital investment; the study excluded franchises and national brands. A 15-question 1:1 interview of FBA members, lapsed members, and prospects was conducted in fall 2014 in ENT 201 Nature & Essence of Entrepreneurship. Additionally, a survey was sent to 10,000 randomly selected businesses. Pre-liminary results share interesting findings dealing with organizational culture, family dynamics, and generational transfer.

Session 28: Logan/Harris Room 10:45 am – 11:45 am

Business Education & Panel Discussion Session

Chair: Marcia Kurzynski

When It Comes To Cell Phone Marketing, One Size Does Not Fit All

Jefrey R Woodall York College of Pennsylvania

Much is written about the need to develop marketing programs that attract and retain Gen X, Gen Y and Millennial cell phone users. However, that strategy belies what we know about those targets and others. Recent research of cellular customers in the Mid-Atlantic region suggest that the focus should be on Baby Boomers – they have more money, they are more likely to be loyal to brands they like, less likely to rely on price as a primary attribute and therefore more likely to build a long-term relationship with the suppliers. This paper presents highlights from the research and suggests better tactics to reach and retain customers likely to be loyal to their provider.

Using the Balanced Scorecard to Enhance Undergraduate Education in a First Year

Irma Hunt Shippensburg University of Pennsylvania

First year undergraduate business classes include several functional subjects including accounting, finance, marketing, information technology, management, entrepreneurship, etc. without regard to how each area contributes and benefits the organization as a whole. This article both informs foundational business or survey course faculty on the effectiveness of a Balanced Scorecard (BSC) project to connect these functional areas of business as well as offers recommendations to guide the implementation of a BSC project into their course. The article deals with pertinent issues such as: BSC project design and development, in-class execution, and post-project evaluation and reflection. We also discuss how utilizing the BSC project helped the course to align with the mission of our College and help meet the revamped accreditation standards of AACSB.

Becoming a Connected Educator: Building Your Own Personal Learning Network

Mark Choman Marywood University
Rex Dumdum Marywood University

This session provides an overview of various strategies and online resources that help faculty members stay current in their respective teaching disciplines. Social media tools as well as additional assets are explored. Participants gain an understanding of what a Personal Learning Network (PLN) is and why it can be beneficial to their teaching and learning. A variety of technologies are identified to help build, modify, and interact with a PLN.

Session 29: Holmes/Foster Room 10:45 am – 11:45 am

Data Science & Technology

Session Chair: Darrell Leslie Steckler

Data Science: Integral to Information and Technology Management Curriculum

Loreen Powell — Bloomsburg University of Pennsylvania
Carolyn LaMacchia — Bloomsburg University of Pennsylvania

Today, data is inexpensive and explosive. Almost every sector of business has access to more data than they did years ago. In fact, businesses have more data then they know how to use. As a result, businesses need and want to capitalize on the value of their data and public data. This upsurge in "Big Data" has business in need of data science professionals.Data Science draws upon many fields including information technology (IT), management, statistics, and social science. In an effort to fill the need for IT professionals within the Data Science field, higher education institutions are beginning to develop Data Science programs. However, many of these programs lack a strong emphasis on technology and security. This presentation will explain the redevelopment of an Information and Technology Management (ITM) curriculum to place emphasis of Data Science, technology, and security.

Faculty Collaboration in Online Course Development

Denise T Ogden — Pennsylvania State University-Lehigh Valley
Shruti Gupta — Pennsylvania State University-Abington

Online learning continues to grow as universities look for ways to use technology in course delivery. In general administrators have been more excited about online learning options than faculty. Many faculty members have doubts about course content and quality and believe teaching online takes longer than a face to face course. Thus, many have resisted the online format. Specifically, many are afraid of the technology, the time commitment and that he/she would not be as effective in an online environment. While much research on online development is devoted to collaboration between instructional designers and the faculty member in developing online courses, there has not been much research concerning two or more faculty members collaborating in developing online courses. In 2013 two faculty members from different branches of Penn State developed an online Introduction to Marketing class together and each taught the class separately at their perspective campuses. The experience reduced the time to develop and provided another person to share ideas and best practices. This paper will share what was learned to help those wishing to collaborate in the development of an online course.

Teaching Writing in a Business Curriculum

Mark Usry — Bloomsburg University of Pennsylvania
Michael Martin — Bloomsburg University of Pennsylvania

It is argued that students today write more (albeit texts and posts) than any previous generation, it is also argued that the writing is not what is needed in the professional world. These same students often find the task of a professional report or research paper daunting. While the reasons for this difficulty are myriad both in cause and scope, the more important question is what can be done to assist students with a Business College in obtaining the necessary writing skills? The authors, one from the College of Business and one from an English Department present a 'project management' model to assist students in thinking through the process of writing. The model could be used in multiple classes in the undergraduate business curriculum to reinforce this important skill set. Their understanding is based on 5 years of working cooperatively with FYW classes and other classes in a Business LLC.

Session 30: Sylvan Room 1:15 pm – 2:00 pm

Business Research

Session Chair: Joan M. Blewitt

A Time of Crisis is a Time of Opportunity for Organizations: A Strategic Examination of Managerial Response and Stakeholder Perception

John Charles Blewitt King's College

This article helps to bridge the gap between the literatures in crisis management and strategic management. The direct link between managerial response and firm performance has received limited attention in crisis management literature, while the literature surrounding stakeholder theory has emphasized the importance of perception as a key determinant of strategic future action. What has gone mainly unexamined is the role of the stakeholder in the dawn of an organizational crisis. According to numerous studies in marketing and psychology, researchers repeatedly find that reality is not reality; rather, perception is reality. Thus, while an organization may make a completely appropriate response to a crisis in terms of policy and communication, if that response is not accepted and evaluated positively by stakeholders, the response is as good as a poor response or even no response at all. In bridging the gap in these conversations in crisis management and stakeholder theory, this article provides a holistic framework for understanding the implications of an organizational response to crisis.

Organizational crisis is something that all organizations deal with at some point in their history. At times, a major crisis can be the fatal blow to an organization. Other times, crises provide opportunities for organizations to display their gumption, communicate appropriately with their stakeholders, and move forward, potentially with an enhanced reputation and promise of future success. The critical link in the process is the ability to act and communicate with stakeholders, have the stakeholders perceive the response as positive, and allow the positive perception to lead to improved or recovered performance.

This article empirically supports a conceptual model of the relationship between an organization's response to a crisis and stakeholders' perceptions of that response. Data from three organizations (N=505) were obtained through a survey of stakeholders in the higher education industry. The results render support to the central hypothesis that stakeholder perception of the response strategy is a critical factor in an organization's legitimacy following a crisis.

Predicting Performance in a Senior Operations Management Course

Tony Johns Clarion University of Pennsylvania

Many colleges of business use a required level of performance in freshmen and sophomore courses as a screening mechanism to control access to their majors and/or junior and senior level courses. Because many colleges use this approach to control access, it should be of interest to policy makers to know whether or not their screening mechanism is valid through the senior year. This paper uses an Ordered Probit Model to investigate how well performance in freshman and sophomore courses predicts performance in a senior level Operations Management course.

Session 31: Willow Room 1:15 pm – 2:00 pm

Accounting & Finance

Session Chair: Jerry Belloit

Gender Diversity of Corporate Boards and Key Financial Metrics

Sunita Ahlawat College of New Jersey

Gender diversity has been a topic of debate for some time. While males have dominated corporate boards for a long time, women are slowly making their way to the top echelons of the corporate world. Proponents of gender diversity suggest that women are able to bring a unique perspective to the board table especially since they are gaining experience at all levels. A survey on global trends in board diversity confirms a steady, albeit incremental, increase in female board membership. In this study, we compare key financial performance metrics of companies with gender diversity on boards with those that have no women on boards. Results show a significant difference between the two groups: companies with gender diversity on boards perform better than those that lack diversity. An important question remains, however: does diversity contribute to success or success invite diversity.

The Financial Implications of a Public-Private Waste Management Strategic Initiative

Frank Duserick Alfred University
Mark Lewis Alfred University
Theresa Gunn Alfred University

Across the United States, there has been an increased demand for municipalities to manage taxpayer's funds and meet the citizens' needs. This case study describes how a county in New York State effectively implemented a public-private interface model to outsource management of the county's landfill to a private waste management corporation as a strategic initiative to control the municipality's increasing tax rate and to enhance the county's competitive environment. This initiative has provided the county with a substantial long-term positive cash flow from landfill operations as opposed to significant annual increases in operating losses.

Session 32: Holmes/Foster Room 1:15 pm – 2:00 pm

Economics, Government and Other Session

Chair: Carolyn LaMacchia

E-Government: Support of Administration and Democracy

Kathleen S. Hartzel Duquesne University
Virginia W. Gerde Furman University Denista Tuneva-Duquesne University

This paper discusses the complementary and unique roles of *e-administrative* and *e-democracy* e-government systems. Both positive aspects of the technology and potential drawbacks are highlighted. Then the case of egovernment in Estonia is presented as a model of successful deployment of a national e-governance presence. Finally, the Estonian context is compared to the level of readiness for e-government in the United States.

Small Business Income Reporting post Housing and Economic Recovery Act: A Tool to Improve Tax Compliance and Reduce the Tax Gap

Ahmed Abdelhalim LaGuardia Community College-CUNY

The 2008 Housing and economic recovery Act provided a provision that require banks and credit card merchants to report payments to the IRS. The provision which took effect in 2012, affected how businesses, including online ecommerce businesses, report their annual gross receipts. As a growing number of consumers are using credit cards for their purchases. Whether swiped, keyed, tapped (contactless) or dipped (Chip), all credit card purchases are now reported to the IRS if they exceed 200 transaction and $20,000 in annual proceeds. The Form name is 1099-K, *Merchant Card and Third-party Network Payments.* The provision was meant to "improve voluntary tax compliance by business taxpayers and help the IRS determine whether their tax returns are correct and complete." This presentation will share practice cases for small businesses that received IRS under-reporting letters as result of the provision.

Session 33: Logan/Harris Room 1:15 pm – 2:15 pm

Technology, Accounting & Finance Session

Chair: Rajendra Bhika

Accounting, Financial and Legal Implications of a Public-Private Sector Technology Strategic Initiative

Frank Duserick Alfred University
Theresa Gunn Alfred University
Mark Lewis Alfred University
Luis Rodriguez Alfred University

Across the United States, there has been an increased interest in municipalities' developing strategies to attract industry and business. This paper describes the accounting, financial and legal implications in how a county in New York State efffectively implemented a public-private interface model to develop a dark-fiber network as a strategic initiative to enhance the county's compewtitive environment. The main purpose of this project is to create a county-wide fiber infrastructure (at no cost to the county) that not only would improve telecommunications, communication and reliability but also to become a platform to enhance business development.

Can Local Twitter Sentiment Predict Earnings Surprises?

Thomas O. Miller — West Chester University of Pennsylvania

This work-in-progress research is based on the financial information that may be present in Twitter data streams. While this area of research contains many possibilities, the focus of this paper is the potential information in tweets leading up to firms' quarterly earnings announcements. Quarterly earnings announcements can have a major impact on stock prices especially if the earnings are a "surprise." Earnings surprises will be the main dependent variable of this study, and are defined as the percentage difference between a firm's reported earnings and analyst expectations prior to the announcement.

Twitter's "$" tag will be used to screen for tweets referencing stock tickers. Additionally Twitter provides a geo-tag that will allow for screening of tweets within a given radius of a firm's headquarters. This increases the probability of the tweet containing a real information leak. The tweets will then be grouped into three moods based on sentiment analysis. This analysis is conducted by assigning values to key words within the tweets which are then totaled resulting in a designation for each tweet of positive, negative, or neutral. The final step of the analysis will be to test if there is any predictive power in tweets leading up to an earnings announcement.

Sport Industry Performance Analysis Using Sport Index (SI)

Woosoon Kim — Alvernia University
Rim Hong — Shippensburg University of Pennsylvania
Won Yong Kim — Dickinson College

Sport became an integral part of social engagement and mainstream media in the United States. However, there is no consensus on the definition of sport and the sport industry. Although the North American Industrial Classification System (NAICS) doesn't clarify the sport industry, it reports some sport related segments. The authors dedicated 13-sector analysis in the NAICS and developed Sport Index (SI) to measure the sport industry performance. The SI composed sport-related firms whose stocks are listed in the U.S. stock markets. The daily returns of the equally-weighted index (EWI) were collected and analyzed in three different periods; before the financial crisis (June, 2006 – June, 2008), during the crisis (July, 2008 – April, 2010), and after the crisis (May, 2010 – December, 2012). The overall results showed that S&P and EWI were highly correlated but S&P carried much higher relatively riskiness than EWI. The correlations slightly increased to 0.7121 (during the crisis) from 0.6494 (before crisis) but decreased to 0.6228 (after the crisis). The SI will be a useful tool for future studies in measuring the performance of sport industry in relations to economic and financial market activities.

Session 34: Sylvan Room 2:20 pm – 3:40 pm

Education & Panel Discussion

Session Chair: John Charles Blewitt

What Affects Graduation and Persistence Rates in Higher Education?

Roger Hibbs — Kutztown University of Pennsylvania

A literature review follows that looks at the scope of the problem and the common strategies used to increase graduation and persistence rates. The purpose of this literature review is to gain insight into the problem and then to

look at one aspect of the problem – students not having the necessary prerequisites to continue in a business major – and a possible "solution" to the problem: granting waivers to get students back on track.

Managing student success: do waivers help students get back on-track at college and increase graduation rates? Because academic problems (such as prerequisites and grades), transfer issues, changing majors and personal reasons cause students to fall behind, do waivers (exceptions) provide a viable solution to students who may not graduate or cannot graduate on-time? This research looks at a medium-sized state university's attempt to formalize the waiver process and the impact of the process on retention. This was done by instituting a required meeting with the department chair, an agreement with the student on how to proceed, and then analyzing the paper trail that followed the student until graduation over a four year period.

Integrating Service Learning into a "Business Communications and Mentoring "Course

Joan M. Blewitt King's College

The use of service learning courses and projects has become an increasingly popular method of enhancing student learning and in some cases, creating a greater global awareness among students. While acknowledging that service leaning can be a most effective teaching tool, it is often difficult to find a place to integrate it into an already crowded business curriculum. This workshop will illustrate how service learning was embedded into a foundations course in the business school and hopefully serve as a spring board for other faculty with an interest in building this component into the curriculum.

This presentation/workshop will describe how two service learning projects were integrated into the course, "Business Communications and Mentoring." The projects were part of two sections of classes at King's College during the Fall 2015 and Spring 2015 semesters. The projects focused on raising money and school supplies for impoverished areas of Kenya and Uganda. The service learning projects served as the culminating activity in which students used their oral and written communication skills to research the needs of the schools that were targeted, determine logistics for delivery, investigate the ethical climate of the region, make a proposal, develop business style emails, conduct a fund raising campaign and finally write reflections on the experience. Writing samples, a video, "campaign materials," and a few student reflections will be shown and discussed. Issues of commitment and involvement will also be topics for discussion. It is hoped that the presentation of the service learning projects that were conducted will lead to lively discussion and potentially, further integration of service learning into business curriculums.

A Knowledge Map of IT Deflationary Effects

James Otto Towson University

This paper explores and documents, in a knowledge network, the deflationary impacts of information technology (IT) on our economy. This is a critical issue since national economies across the globe are facing strong deflationary pressures. This has resulted in unprecedented central bank actions to fight these pressures. These actions include quantitative easing, zero percent interest rates, and in some cases, even negative interest rates. Some examples of how IT can foster deflation include reducing producer costs through improvements in operational efficiencies, reducing consumer prices by improving price transparency, and increasing buyer options through reduced search transaction costs. By capturing these types of deflationary impacts in a formal knowledge map framework, economic policy makers may be better able to understand, and respond to, the many challenges presented by IT deflationary pressures.

The Contribution of US Foreign Direct Investments to Economic Growth in Sub-Saharan Africa: Evidence from Panel Data

Augustin Ntembe Bowie State University
Senando Sengupta Bowie State University

In this paper we use panel data for the period ranging from 1996 to 2013 to investigate the contribution of US foreign direct investment to economic growth in fourteen Sub-Saharan African Countries. We apply a number of empirical models to estimate two different equations; the first equation considered the entire stock of capital including US foreign direct investments while the second equation excluded US direct investment in the sub region from capital stock variable. The results of estimations revealed that domestic capital significantly affect economic growth in these

countries but found no evidence that US FDI have any direct effect on economic growth in the host countries. The results also found significant effect of political stability and openness on the growth of Sub Saharan African countries. The implication of these findings is that the region can promote economic growth by mobilizing more domestic resources, ensuring that there is political stability and opening their economies to external competition.

Session 35: Willow Room 2:20 pm – 3:20 pm

Accounting & Finance

Session Chair: Tony Johns

A Survey of Undergraduate Financial Accounting and Reporting Curricular Methodologies at Colleges and Universities in Pennsylvania

Michael J. Gallagher — DeSales University
John D. Grigsby — Philadelphia Unviersity

The purpose of this paper is to examine different curricular methodologies used at the undergraduate level to teach Financial Accounting and Reporting. A base survey was sent to approximately fifty colleges and universities in Pennsylvania having undergraduate accounting programs. The questions focused on which courses were used by the institutions to cover various topics included on the Financial Accounting and Reporting section of the Uniform Certified Public Accountant examination. We found that nearly half of the respondents covered the Financial Accounting and Reporting topics in a sequence of Intermediate Accounting I and II supplemented by some elective courses, close to a third of the respondents used a three course sequence of either Intermediate Accounting I, II and III or Intermediate Accounting I and II and Advanced Accounting and small number of institutions used a four course sequence.

Financial Literacy Pedagogy in the First Year Seminar for Business: A Tool for Student Engagement, Empowerment, and Life-long Learning

Andrea Bianca Francis — LaGuardia Community College-CUNY
Rajendra Bhika — LaGuardia Community College-CUNY

The 2014 National Council for Economic Education Survey of the States[1] found that only 17 states in the country mandate financial literacy education, and only six states require testing of financial management skills before students can graduate from high school. Further, with student loan debt above $1 trillion[2], it is apparent that college students have to rely on loans to further their education. Thus, many entering college students not only face significant financial need, they also may not be equipped with the tools to manage the resources which they do have. At LaGuardia Community College, located in New York City, the situation is no better -- the 2014 Institutional Profile indicated that 61.8% of students living with parents have a family income less than $25,000, while 81.5% of students living away from parents have a family income less than $25,000. Additionally, New York State does not require financial literacy education in high schools thereby reducing students' ability to tackle complex financial issues that could affect them for years to come.

The First Year Seminar for Business at LaGuardia (FYS) is a mandatory, credit-bearing, discipline-specific course, and the presenters, who were also FYS course designers, have for a long time believed personal financial literacy to be a crucial component of students' education, with statistics supporting that belief. The FYS course was thus leveraged as a unique opportunity to engage students in the exploration of financial literacy concepts and applications, to facilitate students' financial wellness and empowerment, not just in the course, but life-long.
Presenters will share the rationale for personal financial literacy lesson and activity design, experiences with classroom implementation, and the ways in which the lessons and activities can be modified for diverse settings. Presenters will also reflect on how their pedagogy may help to inform and impact the practice of faculty and staff across college campuses.

Reframing Efforts to Align Undergraduate General Education and Business Core Programs

Mark Usry — Bloomsburg University of Pennsylvania
Stephen Markell — Bloomsburg University of Pennsylvania

The philosophy and content of both undergraduate business programs and undergraduate general education programs have developed since their inception early in the last century. This evolution is accompanied by several ongoing disagreements among business practitioners, business academics, and non-business academics about the purpose, design, and outcome of general education course requirements in undergraduate business programs.

After presenting their overview of key issues, the authors propose a way business programs can improve businessgeneral education curriculum integration. The authors' proposed undergraduate business programs 1) adopt student skill development as the unifying central purpose of general education and business core courses , 2) identify key student skills to be developed , 3) align general education requirements with student acquisition of key skill fundamentals, and 4) advance student development of key skills in business core curriculum courses. This proposal addresses several aspects of ongoing debates, reflects recent scholarship on skills emphasized by business academics and practitioners, and fits with current practices in curriculum mapping, assessment of student learning and program review. Examples are provided.

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