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PAPERS

ABSTRACTS

Analysis of Foreign Direct Investment in Kazakhstan

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Abstract

The State of Kazakhstan has received relatively large amounts of Foreign Direct Investment (FDI) since its independence in 1991 from the Soviet Union. Estimates of the proven oil reserves make Kazakhstan one of the largest non-OPEC members. As a result, Kazakhstan is expected to attract FDI into its economy in the future. This paper analyzes the impact of FDI on the economy of Kazakhstan. Simple Regression analysis was employed to find out the impact of FDI on GDP, Per capita income and on the individual sectors of the economy. Although there is only a moderate correlation between FDI and growth, analysis showed that FDI has in general positive effect on the economy's growth. Also, the tests conducted between FDI and Per capita income showed a positive relationship. Yet, analysis on the sector level showed that FDI has an adverse effect and crowds-out domestic investment in some sectors. For instance, the growth in agricultural and manufacturing sectors declined with the increase in FDI. Most share of FDI is directed towards the energy sector. It was concluded that FDI may not promote a sustainable growth of Kazakhstan economy.

Introduction

Foreign Direct Investment (FDI) is the movement of capital across national frontiers in a manner that grants the investor control over the acquired asset. Its an investment involving long term relationship and reflecting a lasting interest and control by the resident entity. In the last few decades, many countries especially developing countries have recognized foreign direct investment as the vital external source for capital, cutting edge technology, development of human knowledge that contribute immensely to the growth of host economies (Christiansen, 2002). This fact is also supported by some international organizations like World Bank, International Monetary Fund (IMF), United Nations Conference on Trade and Development (UNCTAD), Organization for Economic Co-Operation and Development (OECD) and others undertake to share knowledge by collecting and distributing statistical data and conducting research studies.

According to the statistics from UNCTAD from 2005, since 1990's FDI inflows have constantly surged amounting to US $1.5 trillion in 2000. The trend declined starting from 2001 where FDI inflows stood at US $729 billion. The upward trend resumed in 2004 where the total FDI inflows reached US $648 billion. As possible explanations for the renewed surge in FDI was mainly competition and price appreciation for natural resources. Indeed, under competitive pressures and search for new growth resources, the FDI outflow consisted of US $ 730 billion of which firms from developed countries accounted for the bulk share, exactly 87 percent (World Investment Report, 2005). According to UNCTAD FDI still remains as the primary source of capital for developing countries. FDI "continues to surpass other private capital flows to developing countries as well as flows of official development assistance programs" that accounts

"for more than half of all resource flows to developing countries". The organization believes that "provided economic growth is maintained, the prospects for a further increase in global FDI flows in 2005 are promising." (World Investment Report, 2005).

In view of recent global surge of FDI inflows, Kazakhstan's share of inflows is in line with that trend. In 2004 FDI inflows totaled to over US $ 4.2 billion which was twice the 2003 investments. In total, since its independence in 1991, Kazakhstan received over US $40 billion of FDI inflows (http://www.nationalbank.kz/? docid= 440&uid= 737335 CA-802C-E8FB-3F673D5D294C83C5). Since 2001, FDI inflows comprised on average 8.5 percent of GDP (http://www.economist.com/ countries/ Kazakhstan/ profile. cfm?folder= Profile-FactSheet).

In 2005, Kazakhstan's total GDP comprised $56.2 billion. Being naturally endowed in mineral resources, Kazakhstan is ranked as the second biggest exporter of oil after Russia in the Commonwealth of Independent States (CIS) region. Moreover, estimates of proven oil reserves in the country makes Kazakhstan as one of the largest non-OPEC members. According to U.S. Energy Information Administration, non-OPEC countries produced 60 percent of world's oil in 2004. (http://www.eia.doe.gov/oil_gas/petroleum/info_glance/petroleum.html). Given GDP growth and geological estimates of proven oil reserves, it can be expected that Kazakhstan will continue to attract FDI into its economy in the future.

Equity capital, reinvested earnings and intra-company loans comprise components of FDI. UNCTAD defines these as follows: *Equity capital* is the foreign direct investor's purchase of shares of an enterprise in a country other than its own. *Reinvested earnings* comprise the direct investor's share (in proportion to direct equity participation) of earnings not distributed as dividends by affiliates, or earnings not remitted to the direct investor. Such retained profits by affiliates are reinvested. *Intra-company loans* or intra-company debt transactions refer to short- or long-term borrowing and lending of funds between direct investors (parent enterprises) and affiliate enterprises" (World Investment Report, 2005).

Usually the source of FDI comes from transnational corporations. Transnational corporations (TNCs) or also called multinational enterprises (MNEs) are incorporated or unincorporated enterprises comprising parent enterprises and their foreign affiliates. Because FDI is accompanied with a bundle of assets, Lall (2000) identified five major values that TNCs bring: *capital*, *technology*, *skills and management*, *market access and environment*. For developing countries the capital may be scarce (Moran, 2002) and can act as a much needed "shot in the arm". In contrast to commercial debt and portfolio investments, FDI inflows offer a stable source of capital when TNCs invest in long-term projects, taking risks and repatriating profits only when the projects yield returns (Lall, 2000). Because usually developing countries lag in progressive processes, they may use outdated technologies. Lall (2000) describes positive spillovers as follows: TNCs can bring modern technologies many not available without FDI and raise the efficiency with which technologies are used. Technical inefficiency and obsolescence affect the quality of products and handicap the ability to cope with new market demands. Moreover, TNCs can adapt technologies to local conditions, drawing on their experience in other developing countries. They may, in some cases, set up local R&D facilities. They can upgrade technologies as innovations emerge and consumption patterns change. They can stimulate technical efficiency in local firms, both suppliers and competitors, by providing assistance, acting as role models and intensifying competition (Lall, 2000). Moreover, Lall (2000) argued that skills are transferred when TNCs bring in experts and set up training facilities for endogenous work force. TNCs also possess management techniques that offer enormous

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competitive benefits. Given these favorable values that FDI creates, some argue that FDI positively correlates to growth. (Lim, 2001).

Yet, there are studies that show little or no effect of FDI on the growth of the host economy. For instance, Singh (1988) analyzed data from 73 countries for two time periods: from 1960-70 and from 1970-80. The data was subdivided into two groups: low-income and middle-income developing countries. Using regression analysis, the author reached a conclusion, that there was little or insignificant effect of FDI on the economy or the industrialization of the host economy. Also, Hein (1992) reported an insignificant effect of FDI on economic growth for a sample of 41 countries in the medium term.

Some even believe that FDI has a negative effect on the host country's economy. Detrimental effect is usually explained in the influence of FDI on domestic investments by eroding and thus crowding out endogenous firms. Here, Fry (1992) examined a sample of 16 developing countries. In his regression model, he found that in general FDI does not have significantly different contribution to the rate of economic growth from domestic investment. Moreover, domestic investment had a negative sign which meant FDI had an adverse affect on the domestic investment climate. Yet, the results varied from country to country.

As seen above, the available research provides conflicting predictions concerning the growth effects of FDI on the economy of the host countries. It will be interesting to see how FDI impacted Kazakhstan's economy. There are no studies conducted explicitly on Kazakhstan that examine the effect of FDI on its economy. The study by Klaus (2001) on FDI in Commonwealth Independent States (CIS) reports some investigation of the effect of FDI on data for Kazakhstan. Yet, his study included data until 1997 with a time span of ten years when Kazakhstan was one of the republics of the former Soviet Union. Another study on Kazakhstan concerned export orientation of the Kazakhstan government and its effect (Kuralbayeva, Kutan and Wyzan, 2001). The study included data from 1995 to 2001. Therefore, given the mixed results on the effect of FDI and lack of studies concerning impact of FDI on the economy in Kazakhstan, it was considered important to examine these issues.

Specifically, this study explores whether inflowing foreign direct investments into the economy of Kazakhstan helped the economy to grow. Growth rate of GDP and GDP per capita are analyzed in relation with FDI as well as export volumes. Moreover, GDP per sector is analyzed with inflowing FDI to see whether there is any correlation.

Methodology

In most studies researchers have used secondary data to find out the impact of FDI on host economies. This study also utilizes secondary data to analyze the impact of FDI on the economy of Kazakhstan. This study uses mostly simple regression analysis. Most of the studies on FDI included large sample data. Moreover, these studies have longer analysis period and were conducted for number of countries where sufficient data was available. Yet, this study includes data for 1995-2003 periods. Data limitations and time available for this research constrained this study from adopting a more thorough analysis that includes growth models used in other studies.

The regression tests used in this research included such economic variables as Total gross domestic product, Gross domestic product per economic sector, population, foreign direct investment inflows, employment and export volumes. Excel statistical software from Microsoft Office package was used to run statistical tests. Tests are performed using confidence level of 90 percent. Hypothesis is rejected, if p-value is smaller than the significance level of $\alpha=0.10$.

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Data

The industrial classification code adopted by the statistics agency in Kazakhstan is compatible with Standard Industrial Code in the United States.

Data on GDP, GDP per sector, FDI, aggregate employment, employment per sector and export volume was collected from the following sources:

- IMF's International Financial Statistics March 2006 CD ROM version for world oil prices from 1995 to 2004 and real GDP growth from 1993-2005.
- Statistical Agency of Kazakhstan - from yearly statistical prints and electronic database for GDP in 1993 constant prices from 1995-2003, GDP in current market prices from 1993-2005, export volumes from 1995-2004, aggregate employment data from 1993-2005
- Ernst & Young's business and investment guide for Kazakhstan. The guide included employment data per sector of the economy from 1999-2003.
- Electronic database of the National Bank of Kazakhstan for inflows of foreign direct investment as aggregate data as well as inflows per sector.

The data used for statistical tests has several limitations. The time span of the data is not consistent across all data. The longest time span included 13 observations and the shortest time span included 8 observations. Additionally, some variables in some tests may draw data from different sources, e.g. from National Bank of Kazakhstan and from IMF. Although, data came from different sources, data compatibility was not violated. The time span of data is short and thus limits the underlying research from employing growth models that require large sample data. Reliability of data is influenced by some factors. First, in 1998 the Statistical Agency of Kazakhstan changed the methodology of data collection. Second, electronic data has slight deviations from print data published by the Statistical Agency.

Results

GDP, employment and average earnings are among some variables that are used in many studies on FDI to run the statistical tests to find out the impact of FDI on the growth of the host economy. GDP per capita is one of the economic indicators of nation's wealth. It was included in the analysis in this study. Thus, in this study, the following main relationships were analyzed using EXCEL statistical software.

a) FDI as % of GDP as the Independent variable and GDP Growth Rate (%) as the Dependent variable. Simple linear regression analysis showed that Regression was significant at $p < .0269$. The coefficient of determination was $= 0.5852$.

b) Time as the Independent variable and GDP Growth Rate as the Dependent variable. Regression was found to be significant at $p < .0153$. The coefficient of determination was $= 0.6518$.

c) Exports as % of GDP as the Independent variable and % GDP Growth Rate as the Dependent variable. Regression was significant at $p < .0027$. The coefficient of determination was $= 0.80$.

d)   Exports as % of GDP as the Independent variable and FDI as of % GDP as the Dependent variable. Regression was significant at p < .0002. The coefficient of determination was = 0.86.

e)   FDI as a % of GDP as the Independent variable and GDP per capita as the Dependent variable. Again regression was significant at p < .002 with a coefficient of determination = 0.7988.

f)   FDI as a % of GDP had a low correlation (0.42) with Employment levels.

It was also attempted to find out whether foreign direct investments have any impact on the individual sectors of the economy. As was seen earlier, FDI has a positive correlation to the GDP growth. Although the coefficient of determination was not high, the test was statistically significant. For sectoral level analysis, ratio of FDI to GDP was used as the independent variable. Ratio of the output per sector to the total GDP was used as a dependent variable.

Analysis showed that FDI had a negative effect on GDP of Agricultural sector which included Forestry, Hunting and Fishing. It also had a negative effect on Construction sector, Trade sector, and, Services sector. However, FDI had a positive effect on output of the Industry sector which included mining, manufacturing and utilities. FDI also showed a slight positive effect on Transportation and Communication sector. However, the relationship was not statistically significant at 10% level of significance.

Discussion and Conclusions

From 1993, Kazakhstan has on the average received FDI amounting to 12% of GDP. The FDI inflows seemed to be volatile in nature and most share of FDI inflows are directed towards the energy sector. In the analysis period, the exports also increased and the exports seemed to positively influence the growth of the economy that is the GDP. Kazakhstan's export volume in 1995 accounted for 31 percent of gross domestic product. This share increased to 50 percent over a ten year period. The export composite includes durable and non-durable goods. Out of non-durable share of exports mineral products made up 29 percent in 1995 and which increased to 74 percent in 2005. From this we can infer that Kazakhstan is tending to be an exporter of primary products that mostly includes petroleum and gas condensate. It thus seems that exports may help Kazakhstan to sustain economic growth in the long run. Exports did not help sectors like manufacturing, agriculture, construction and mining where the employment composition even declined. In contrast, in other sectors like trade, transport, communications, finance and services the overall employment increased during the observed period.

Overall, in the case of Kazakhstan, FDI had a positive influence on the growth of the economy. But, when the impact of FDI was analyzed at individual sector level, it showed that FDI is negatively influencing some sectors or had no significant relationship to other sectors. Because FDI is mostly directed to the energy sector which makes big share of exports, and due to volatility of oil prices, it may be concluded that FDI may not be promoting a sustainable growth of Kazakhstan economy.

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Exploring Multistate Business Taxation

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Abstract

Developing an understanding of multistate taxation is a challenging task. Multistate taxation varies greatly from federal taxation because you move from one tax code to the possibility of fifty state tax codes and instances where taxes may or may not be due in certain states. The varying state tax codes lead to exploring interesting questions. What is nexus? Why is "substantial nexus" so important? Why is Complete Auto Transit mentioned so much in relation to multistate taxation? So answering questions such as these can help interested parties break into the complex world of multistate taxation. This paper addresses nexus, some important cases of multistate taxation, and how multistate entities identify taxes due to states in which they have business activity.

Introduction

Multistate taxation is a complex issue involving considerations of federal law and state law. The primary concerns in multistate taxation involve: state, business entity, and individual employee interests. States desire to receive as much income as possible from businesses and individuals who conduct activities within their borders while businesses and individuals desire to pay as little as possible from their activities within a state. Multistate taxation covers areas such as sales and use taxes, employee withholding of income taxes, and business income and or franchise taxes. The topic of multistate taxation in this paper will be limited to business-to-state concerns. The paper will address: nexus, important cases of multistate taxation, and apportionment and allocations of income for taxing.

Nexus

The taxing of an entity by a state is a legal issue addressed in the Constitution of the United States. A state's taxing authority is covered under the Due Process Clause of the Fourteenth Amendment, the Commerce Clause of the Constitution, and the federal Income Tax Law (P.L. 86-272) (CCH, 2007). The Due Process Clause describes the following about state rights, "…nor shall any State deprive any person of life, liberty, or property, without due process of law…" (U.S. Constitution). The Commerce Clause addresses state rights as, "…[Congress has power] to regulate commerce with foreign nations, and among the several states, and with the Indian tribes…" (U.S. Constitution). P.L. 86-272 gives relief from state taxes on net income of an out-of-state entity that derived the income solely from the solicitation of orders within the state (15 U.S.C. Section 381). However, the solicitation must meet two criteria: approval and filling of the orders must occur outside of the state.

Each state uses these federal laws to help determine the structure of state tax laws for entities that operate from within and from outside their state. Entities that operate in multiple states have issues in multistate taxation. The determination of who owes taxes and in what amount of tax owed is of great concern to both the states and business entities. As in many matters of law, litigation has been the key determinant in deciding who and what amount or kind of tax is owed. A review on the taxing of multistate entities would reveal four phases of history (Tax Commissioner v. MBNA). The four phases on determination of tax liability include: (1) early court cases declaring that no state could tax interstate commerce, then (2) a move toward determining if a tax created a direct or indirect burden on interstate commerce occurred, next, (3) a physical presence in a state requirement emerged, and finally, (4) a push toward only requiring an economic presence in a state is emerging. These four phases are capturing a concept called nexus. "Nexus describes the degree of business activity that must be present before a taxing jurisdiction has the right to impose a tax, or an obligation to collect a tax, on an entity" (Freiden and Porter). Currently, nexus is being determined by the final two phases of requiring physical presence and the push toward economic presence.

The uncertainty of defining nexus legally has caused much confusion between the states and entities. Because of different legal interpretations of nexus many court cases have occurred. Some of the most often cited or "hot" current cases are addressed below.

Multistate Taxation Cases

Several cases are important to gaining an understanding of multistate taxation. When considering how to operate in multiple states, business entities, in part, use the following cases to evaluate their operations.

Complete Auto Transit, Inc. (1977)

This case appears with most multistate taxation issues. This case was important in establishing many details on how the federal constitution relates to state taxation. This case established the term "substantial nexus." The Supreme Court used Complete Auto Transit to clarify and give further meaning from National Bellas Hess, Inc. v. Department of Revenue, 386 U.S. 753 (1967). The Court felt that the physical presence of the entity in a state should be required before a state could require collection of its state sales tax. This is impart because the entity should be receiving benefit (police protection, property) from a state before a state should be allowed to require an action of the company (answering the National question of "whether the state has given anything for which it can ask return"). Complete Auto Transit defined that a state's ability to require collection of sales and use taxes must meet a four prong test. The four parts of the test are: (1) the entity has substantial nexus with the state; (2) the tax is fairly apportioned; (3) the tax does not discriminate; and (4) the tax is related to the services provided by the state (Maryland v. Louisiana 451 U.S. 725). The Court did not spell out what constitutes "substantial nexus" but revealed that a physical presence is key to creating nexus between the state and entity. Since establishing this test, most cases appear to rely on part one or four for safe harbor.

Quill Corporation (1992)

This case is significant in multistate taxation because the Supreme Court acknowledged differences between the Due Process Clause and the Commerce Clause

(Edson, 1996). The case established that nexus can be assessed at different levels for the two Clauses. The Due Process Clause is meant to deal with having fairness in requiring collection of sales tax. It allows for a state to show a lesser degree of connection to establish nexus. However, the Commerce Clause requires a greater amount of connection (substantial) to establish nexus because it protects national interest by monitoring how state regulation affects the national economy.

Following closer to the Commerce Clause, the Supreme Court upheld the National Bellas Hess ruling with Quill. Quill was determined to not have a substantial nexus with the state (in physical presence) and therefore not required to collect and remit taxes.

Tax Commissioner of the State of West Virginia v. MBNA America Bank, (2006)

The general stance for most multistate entities has been to rely heavily on the Complete Auto Transit case. If a multistate entity does not have a physical presence in a state, the entity would consider Complete Auto Transit to provide protection for not paying state taxes of any form for the business transactions completed in that state. The states often disagree with that stance so litigation has continued around this issue. In the MBNA case, West Virginia chose to challenge the taxability of income earned by MBNA from West Virginia residents. The State proposed that the four requirements of the Complete Auto test were met and argued against the notion that Quill upheld a physical presence as indeed what the U.S. Supreme Court meant for all state taxes. The State determined that the activities of MBNA were substantial (about $18.5 million in gross receipts from West Virginia residents over the audit period) enough to meet the requirements of Complete Auto and were beyond protection given in P.L. 86-272. The State limited the Quill decision to sales and use taxes only. Therefore, MBNA owed franchise and income taxes because the State used an "economic" nexus condition verses a physical presence condition in meeting "substantial nexus" (CCH, 2007).

These cases provide guidance on how nexus is established. Once nexus is established with a state, sales and/or use taxes and/or income taxes are due to that state. Calculation of the sales and use tax is the simpler process of the two tax forms. Sales and use taxes are a function of goods/services sold times the applicable tax rate. However, income tax owed is a more detailed topic and is explained further in the next section.

Apportionment and Allocation

Determination of the income taxes owed to a state is a complicated matter. The process of allocating income to the states in which a business operates is called apportionment. Apportionment is a formula based process for determining taxable income. The states have flexibility in creating tax laws but most states follow an approach established in the Uniform Division of Income for Tax Purposes Act (UDITPA) for determining the apportionment of income (Fanning & Joy, 1999).

The general apportionment formula is based on three factors with each receiving equal weight (UDITPA). However, the apportionment formula used in a state does not have to grant the three factors equal weight or use all three factors (Wilson, 2005). This can lead to a situation where "the states –in the aggregate- may tax more than 100 percent of the income of a corporation or corporate group" (Wilson, 2005). The three factors of apportionment are the in-state amount of property, payroll, and receipts. These factors

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are formed into ratios by the formula, in-state value/total business value. "The ratios are then summed, weighted (if required) and averaged to determine the corporation's apportionment percentage for the state. The apportionment percentage is then multiplied by total corporation business income" (Boucher & Ponda, 2006).

Additionally, UDITPA provides guidance on identifying what is business and nonbusiness income and how expenses and other deductions are segregated. The type of revenue received by a business is treated differently in the apportionment formulas. However, these two types of income must be accounted for because the total income divided among the states must balance out to the total gross income reported on the federal tax return (Fanning & Joy, 1999). UDITPA expresses that expenses and other tax deductions are allocated on a rational basis.

Some special items of the apportionment formula a state may use are throwback and throwout rules. Throwback rules allow a state to consider a receipt in the numerator of its apportionment formula when another state that has the right to the receipt excludes the receipt from its formula (Wilson, 2005). Throwout rules affect the denominator of a state's apportionment formula. Throwout rules involve taking out receipts that no other state is claiming (Wilson, 2005). The effect of using these throwback and throwout rules is to increase the percentage received by the apportionment calculation for the state using them (Wilson, 2005).

Conclusion

Breaking into multistate taxation can be difficult. However, understanding the basics behind multistate taxation is a huge step toward success. In this paper, nexus, multistate taxation cases, and apportionment have been discussed. Nexus relates to what type of affiliation or connection to a state will lead to tax obligations. Information has been given on the four stages of nexus development and how the key cases of Quill and MBNA help define how businesses develop strategies dealing with nexus. Finally, an introduction into apportionment describes how states divide up a multistate entity's income for taxing purposes.

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Politics and the Economy – An Analysis of the Two Stimulus Packages

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Abstract

This paper will analyze the recent stimulus packages of Presidents Bush and Obama. After a brief discussion of monetary policy, The Great Depression and the Economic Stimulus Act of 2008, the two votes on the Emergency Economic Stabilization Act of 2008 and the American Recovery and Reinvestment Act of 2009, were evaluated using a multiple regression analysis of the votes.

Both the first vote which failed and the second vote which passed of the Emergency Economic Stabilization Act of 2008 were evaluated. The purpose of the bill, also known as the Troubled Assets Relief program (TARP) was to free up the frozen credit markets. Under this plan, $700 billion will be devoted to buying bad mortgage-related securities by the Treasury Department. For the multiple regression analysis, the vote code for the members of Congress was the dependent variable. There were ten independent variables including: the tenure in years of the members of Congress, the party code, membership in the House Finance Committee, money received from groups, the tax union rating, the liberal economic rating, Fannie Mae and Freddie Mac Money, location in relation to a financial center, the margin of victory and membership in the Republican Study Committee.

Next, the American Recovery and Reinvestment Act of 2009 was evaluated. The stated purpose of this $787 billion stimulus package was to stimulate the economy by direct spending and tax cuts. Spending included infrastructure projects and expanded medical and unemployment benefits. Again, for the multiple regression analysis, the vote code for the members of Congress was the dependent variable. The independent variables included: the tenure in years of the members of Congress, the party code, membership in the House Finance Committee, money received from groups, the tax union rating, the liberal economic rating, location in relation to a financial center, membership in the Republican Study Committee, the top 10 states by population, the top 10 states for Fortune 500 companies and the top 10 states by unemployment.

The explanatory value of the regression analysis' of the first failed vote and then the successful vote on the Emergency Economic Stabilization Act of 2008, was not great. The variables did not form a linear relationship. The regression analysis of the vote on the American Recovery and Reinvestment Act of 2009, did form a linear relationship. The party code was the strongest independent variable, and basically formed a linear relationship by itself.

Introduction

Monetary Policy

The Federal Reserve Act was signed into law by President Woodrow Wilson in 1913 (History – past and perspective). The chief role of the Federal Reserve (Fed) is to implement the country's monetary policy. They do this by "influencing money and credit conditions in the

economy to promote the goals of high employment, sustainable growth and stable prices." The tool used most often by the Fed to achieve these goals is the open market. When this tool is used, the Fed buys and sells "U. S. Government securities, or IOUs." Other tools used by the Fed are discount rates and reserve requirements. A discount rate "is the interest rate charged by Federal Reserve Banks to depository institutions on short-term loans." "Reserve requirements are the portions of deposits that banks must maintain either in their vaults or on deposit at a Federal Reserve Bank (Federal Reserve Education)." Frequently, during times of economic downturns, the Fed will act to expand the money supply using the tools at its disposal.

For example, during a recession, the Fed may implement expansionary policies to prevent high unemployment. This action may create short term success, but create long term problems. If the monetary expansion lasts too long, strong inflationary pressures could be generated. Typically, the Fed strives to maintain a balance between its immediate goals and its future goals. The Fed claims to have a degree of independence from the political pressures of Washington, and they are therefore able to operate in a balanced way between the short and long range goals (The Federal Reserve Bank of San Francisco).

However, questions have been raised about the Independence of the Fed. George Will in an article entitled "Politics, financial meltdown," asserts that the Fed "has become an appendage of the executive branch." He then warns that "the coming costs, in political manipulation of the money supply, of this forfeiture of independence could be steep (Politics, financial meltdown)." However, even before his editorial, the independence of the Federal Reserve has been questioned. "Fed Economist Thomas Dilorenzo questioned that independence with his research, showing that Fed chairmen typically adjust their growth policies based on the wishes of the current administration (History – past and perspective)."

During economic slumps, the federal government acts by passing legislation for the purpose of stimulating the economy or reducing unemployment. "John Maynard Keynes, the trendiest dead economist of this apocalyptic moment, was the godfather of government stimulus. Keynes had the radical idea that throwing money at recessions through aggressive deficit spending would resuscitate flatlined economies (How to spend a trillion dollars)."

Recently, President Bush and now President Obama, have put this classical Keynesian economic theory into practice. However even before them, presidents have taken action to stimulate failing economies.

The Great Depression

Before proceeding with an in-depth analysis of the Bush and Obama responses to the current economic crisis, a brief examination of the response of Presidents Hoover and Roosevelt during The Great Depression will be examined. Although, the current economic situation does not yet rise to the level of The Great Depression, and at this time, it does not seem that it will, there are some interesting correlations between these two economic downturns and the government response to the problem.

Hoover's first step to jumpstart the economy after the crash of 1929 was to implement a cut in taxes. Both individual and corporate income tax rates were lowered by a full percentage point. Although these reductions were significant and popular, there was no impact on the economy, because for most people the tax cut was insignificant. For example, for a man making $5000, the taxes were cut from $16.88 to $5.63 (The Great Crash, p 137).

Hoover resisted the calls for more direct intervention in the form of public works projects and subsidies (The shattered dream Herbert Hoover and the Great Depression, pp. 80-81). He subscribed to the conventional wisdom of the time that the government should adopt a "hands-off" policy in regard to government intervention. He continued to follow this policy until 1932 (The affluent society, p. 155).

Then in response to the worsening situation, the Reconstruction Finance Corporation (RFC) was established. The President proposed that Congress set aside two billion dollars to lend money to private businesses. It is interesting to note that with this proposal, there were newspapers that proclaimed the action as the beginning of socialism and others predicted a Soviet America. The administration insisted that these were just loans and that they would be paid back (The shattered dream Herbert Hoover and the Great Depression, p. 76). The RFC focused on the big banks and the "stimulus" monies were funneled to these. There were also public works projects that would create income and jobs (The shattered dream Herbert Hoover and the Great Depression, p. 78). The RFS would "use Treasury funds to lend to banks, industries, agricultural credit agencies, and local governments (America's Great Depression, p. 285)."

It is interesting to note, that then as now, there were those that urged Hoover to cut expenditures and taxes, while others urged additional spending. "Virgil Jordan, economist for Business Week, urged expansion of public spending: 'Just as we saved our way into depression, we must squander our way out of it (America's Great Depression, p. 291).'"

During Roosevelt's administration, the government extended its authority over the economy. "By the end of the Roosevelt years, few questioned the right of the government to pay the farmer millions in subsidies not to grow crops, to enter plants to conduct union elections, to regulate business enterprises from utility companies to air lines, or even to compete directly with business by generating and distributing hydroelectric power (Franklin D. Roosevelt and the New Deal, p. 335)!"

During this time "the financial center of the nation shifted from Wall Street to Washington (Franklin D. Roosevelt and the New Deal, p. 335)." In 1935, with the passage of the Banking Act, Congress acted to centralize more authority over banking operations and basically implement federal control of it (Franklin D. Roosevelt and the New Deal, p. 160).

Economic Stimulus Act of 2008

Early in 2008, the 110th Congress passed the Economic Stimulus Act of 2008 (H. R. 5140), which provided tax rebates for many taxpayers and tax incentives to stimulate businesses. President Bush signed it on February 13, 2008. The total cost of this bill was estimated at $170 billion (Bush signs bill aimed at boosting economy). The bill received strong bipartisan support (American Recovery and Reinvestment Act of 2009). President Bush was quoted as saying that he believes this Act will be a "booster shot" for the economy. The stimulus package "paid most individual taxpayers $600 and $1200for married taxpayers" as long as their income was below specified levels. The plan also provided for a $300 per child tax credit. The intent is to place approximately "$120 billion in the hands of individuals in the hopes that they will spend it and boost a faltering U. S. economy. The stimulus act was passed in the midst of fears by some that the economy was slipping into a recession, and by others that the economy was already in recession (Bush signs bill aimed at boosting the economy). The decision to take quick action was made as fears increased over a "severe housing slump and a painful credit crisis," and the

possibility that these developments might cause Americans to halt their spending and businesses to quit hiring (President Bush to push for tax rebates, breaks for businesses to keep economy growing).

The passage of the bill was by an overwhelming margin. There were 216 Democrats and 169 Republicans voting to approve the stimulus package. It is interesting to note that the percentage of Democrats (95.6 %) voting in favor of the act was higher than the percentage of Republicans (87.1 %), with a Republican president in office (House Vote on Passage: H. R. 5140 [110th] Economic Stimulus Act of 2008). The vote took place during an election year and with fears of a recession growing.

Emergency Economic Stabilization Act of 2008

This bill (H. R. 1424), which was signed into law by President Bush on Friday, October 3, 2008, has been called a bailout of the financial services industry. The bill, also known as the Troubled Assets Relief Program (TARP), will attempt to free up the frozen credit markets. In the plan the Treasury Department will "spend as much as $700 billion to buy bad mortgage-related securities, which have slowed and, in some cases dried up the flow of credit (Johnson)." The bill was divided into two parts, with the intent that the next president would be making a decision on how best to spend $350 billion of this amount (Obama's first test: Stimulus today, change tomorrow). The plan received a less than enthusiastic endorsement by many economists. "Some 200 university economists and finance professors wrote an open letter to Congress expressing shared concerns about the government's $700 billion plan to shore up the banking system and reverse the ongoing unwinding of the global credit markets (Economists say rescue plan still needs work)."

A similar measure had been rejected earlier in the week, and the result was an 800 point drop in the Dow Jones Industrial Average (Temple-Raston). The "Republican Study Committee, a 100-plus-member group of fiscal conservatives" helped kill the bill on Monday. This drop precipitated phone calls from constituents to provide some degree of balance to the angry ones opposing any rescue package (The bailout spotlight returns to the House – and John Boehner). Also, in the intervening time lobbying efforts resulted in the 26 Republicans and 32 Democrats changing their minds. Sue Myrick, a Republican from North Carolina was quoted "in a statement before the vote,….'We're on the cusp of a complete catastrophic credit meltdown. There is no liquidity in the market. We are out of time.'" Two Democrats who changed their minds, the Representatives Elijah Cummings and Donna Edwards, who were both from Maryland, told reporters that they switched after receiving "calls from Democratic presidential nominee Barrack Obama, encouraging them to change their minds (Bailout is law)." The representatives had help elsewhere in changing their minds. On Thursday, there were reports that jobless claims reached a seven-year high." There was also news of a 4 percent drop in factory orders. Then the Mortgage Bankers Association announced that "foreclosures in the second quarter rose to a record 2.75 percent of all mortgages issued that quarter (Temple-Raston)." The House debate on Friday started with more bad news. There was a "worse-than-expected monthly jobs number," and "one key measure showed that banks were hoarding cast rather than loaning it (Bailout is law)."

The vote on October 3, 2008, resulted in the passage of the bill and was by a comfortable margin. There were 172 Democrats and 63 Republicans voting to approve the stimulus package. As with the Emergency Economic Stabilization Act of 2008, it is interesting to note that the

percentage of Democrats (73.2%) voting in favor of the act was higher than the percentage of Republicans (45.7 %). Once again, the fact that a Republican was in the executive mansion is interesting (Final vote results for roll call 681). Also of note is the fact that the vote took place a few weeks before an election and with fears of a recession or worse mounting.

American Recovery and Reinvestment Act of 2009

On Friday, February 13, 2009, the 111th Congress passed the American Recovery and Reinvestment Act of 2009 (H. R. 1). The stated purpose of this $787 billion stimulus package was to stimulate the economy by direct spending and tax cuts. Within the direct spending category, the primary expenditures were infrastructure projects, and expanded medical and unemployment benefits (American Recovery and Reinvestment Act of 2009). The final bill includes approximately 35 percent in tax cuts and about 65 percent for spending. There was also over $150 billion allocated for the infrastructure (Stimulus deal shows reach – and limits – of Obama's power). The plan calls for the obtaining the money by issuing U.S. Treasury Bonds (American Recovery and Reinvestment Act of 2009). An example of an item within the tax cut category is a tax deduction for sales tax on new cars. An often unstated end result of this stimulus program will be to increase the national debt. The legislation was signed by President Obama on Tuesday, February 17, 2009 (American Recovery and Reinvestment Act of 2009).

The intent of the bill is "to save or create 3 to 4 million jobs by the end of 2010 (How to spend a trillion dollars)." Obama hopes to avoid a long deep recession with high unemployment and deflation. Obama also hopes to advance his own priorities with the stimulus package, such as reducing carbon emissions and energy use, cutting taxes, upgrading the infrastructure, controlling health care costs and reducing government deficits (How to spend a trillion dollars). The Republican vote against the bill was virtually unanimous. There were no "no" votes and only two members that did not vote. There were 176 Republicans that voted against the bill (House Vote on Conference Report: H. R. 1: American Recovery and Reinvestment Act of 2009). Even before the final, vote there were those, such as Georgetown University professor, Clyde Wilcox, who accused "the GOP of gambling here that the stimulus does not work" in anticipation of making gains in the 2010 elections (Stimulus deal shows reach – and limits – of Obama's power). For their part, Republicans are protesting that the bill on the basis that the Democrats are using the economic crisis to promote their own agenda (The stimulus bill's bumpy ride).

The Obama plan has not been endorsed by all. There are many economists, including Nobel Prize-winners Paul Krugman and Joseph Stiglitz, that advocate "government spending programs to counter economic downturns. However, other economists oppose the spending program because of the debt incurred; these include…Nobel Prize-winners Robert Lucas, Jr., Edward C. Prescott, and Vernon L. Smith (American Recovery and Reinvestment Act of 2009).

Thus far the Obama plan has fared better with the public than the Bush plan, although there is strong opposition. Attaching the word stimulus to the plan may have helped. Conversely, the use of the word bailout with the Bush plan probably hurt it, but it is hard to sell the American people on the idea that rich Wall Street financiers need a bailout (Why aren't Americans buying the bailout?). Still, the Bush plan was intended to stimulate the Economy, and some have referred to the Obama stimulus program as a bailout of the public sector. Michael Grunwald in his article "How to Spend a Trillion Dollars, said "We should bail out the public sector, but only with serious strings attached; otherwise, we'll repeat the bailout of the financial

sector, which pocketed the federal handouts and kept doing whatever it pleased (How to spend a trillion dollars)."

The Bush and Obama bills are similar in the respect that both are intended to stimulate the economy. Both bills were also sold to the American public in the same way. President Bush warned of a possible "financial panic," and President Obama "warned of 'catastrophe' and a threat 'as dire as any since the Great Depression'". He also stated that "'at some point we may be unable to reverse' the deepening depression." It is also interesting to note that the passage of both bills was similar. Both bills were passed quickly and made into law before our legislators had read and evaluated them (Obama's stimulus like (& sold like) Bush's stimulus).

Regression Model of Congressional Votes on the Economic Stabilization Act of 2008

Two models of the Economic Stabilization Act of 2008 were run. First, a model of the failed first attempt was run, and then a model of the second successful attempt was run. The data for the first model is provided in Table 1 and the data for the second model is provided in Table 2. The variables used in both linear multiple regression models of the Economic Stabilization Act of 2008 are now discussed.

The dependent variable (y) is the vote code represented by Vote_Code. It is theorized that the vote code is a function of ten independent variables (x1, x2, …x10). The vote code is represented by a binary code. For this code, a "1" represents a "yes" vote on the Emergency Economic Stabilization Act of 2008, and a "0" represents a "no" vote (Final vote results for roll call 681). The number of votes analyzed for both models was the same. Only the votes of those representatives voting in the failed first attempt were evaluated in the second model.

The tenure in years of each congressman is represented by the independent variable Tenure_Years (x1). The value of this variable is the number of years a particular congressman has served in the House of Representatives. For example, this variable is listed as 15 for Spencer Bachus of the sixth congressional district of Alabama. The number represents the fifteen years that Spencer Bachus has served in the House of Representatives (110th Congress Seniority List).

Like the Vote_Code variable, the Party_Code variable is represented by a binary code with "1" signifying that the congressman is a member of the Democratic Party and a "0" signifying the congressman is a member of the Republican Party. The Party_Code variable is identified as x2 (Final vote results for roll call 681).

The Fin_Serv_Code is also signified by using a binary code that designates whether the congress member is a member of the House Finance Committee. A "1" indicates that the individual is a member of the committee and a "0" indicates that he is not. "The Committee oversees all components of the nation's housing and financial services sectors including banking, insurance, real estate, public and assisted housing, and securities. The Committee continually reviews the laws and programs relating to the U.S. Department of Housing and Urban Development, the Federal Reserve Bank, the Federal Deposit Insurance Corporation, Fannie Mae and Freddie Mac, and international development and finance agencies such as the World Bank and the International Monetary Fund" (House Committee on Financial Services). The Fin_Serv_Code is variable x3.

Variable x4, is the Dollars_From_Groups variable and shows how much money each congressman has received from Financial Services Groups interested in the passage of he bailout

bill. The dollar amount received by each member of congress is the value of this variable (Notes from class under Professor Jim F. Couch).

The Tax_Union_Rating variable (x5) gives the grade of each member of the house as assigned by the National Taxpayers Union (NTU). Every year the NTU rates members of the Senate and the House on their votes in relation to how they effect spending, taxes, debt, and the burdens on taxpayers. An "A" grade indicates that the congressman has an excellent rating relating to how he spends taxpayer dollars. An "F" indicates that the congressman has a very poor rating. For the purpose of this analysis each grade was assigned a numerical value base on the grade. The values associated with each grade are as follows: A(5), B(4), C(3), D(2), F(1) (National Taxpayers Union Rates Congress).

The Liberal_Economic_Rating variable (x6), represents a rating assigned by the National Journal. The National Journal has been rating lawmakers since 1981. The rankings are based on the votes of the members of Congress in three areas: economic and social issues and foreign policy. Each member of the House and Senate is assigned a score in each of the above three categories. These scores are given in percentiles.   For the purpose of this analysis, only the scores on economic issues were examined. The more liberal a congressman is in terms of his/her votes on these economic issues, the higher his/her rating. Conversely, the more conservative a congressman is on economic issues, the lower his/her rating. Theoretically, this rating could range from 0 to 100, although in actuality it does not reach either of these extremes (2007 Vote Ratings).

Variable x7, Fannie_Mae_Freddie_Mac, represents the total monies received from PAC'S (Political Action Committees) and individuals associated with Fannie Mae or Freddie Mac. Of the current house members, lawmakers received over 2.5 million from Fannie Mae and Freddie Mac from 1989 to 2008. The total dollars invested in our lawmakers (Senate and House) totals about 4.8 million. Of this total, Democrats collected about 57 percent. For the House these totals break down to $1,751,445 for yes votes and $817,574 for no votes. These totals can be simplified further as $8544 per "yes" vote and $3570 per "no" vote (Update: Fannie Mae and Freddie Mac invest in lawmakers).

The Finance_Center variable (x8) is another binary code type variable. A "1" value for a member of congress indicates that the individual represents a congressional district within the boundaries of a major financial center (National Atlas). In the United States, these centers were identified as the states of New York, Texas, California, and Florida, and the cities of Chicago and Philadelphia. The above states are the four most populated states (U. S. States (plus Washington D. C.) Population and Ranking). In addition, New York is home to Wall Street and the World Financial Center. California is home to Sand Hill Road and Silicon Valley (U. S. Financial Centers). California, Texas and New York have the three highest totals of Fortune 500 companies of any states (Fortune 500).

Variable (x9), Margin_of_Victory indicates the percentage win in the last election over the next closest opponent. For example, in Alabama Congressional District 1, Jo Bonner won election over Vivian Beckerle by 68% to 32%. Therefore, the margin of victory was 68 – 32 = 36 and the value for Jo Bonner for this variable is 36 (America votes 2006).

Variable, x10 represents the Republican Study Committee. It is also a binary code type variable. A "1" represents membership in the Republican Study Committee for the 110th Congress. The Republican Study Committee (RSC) has as its stated purpose, the advancement of a conservative social and economic agenda in the House. This committee operates according to six basic principles which include: (1) less government, (2) lower taxes, (3) personal

responsibility, (4) individual freedom, (5) stronger families and (6) domestic tranquility and national defense (Republican Study Committee (RSC) – The Caucus of House Conservatives - 110th Congress).

These variables are again summarized below:

Variable	Refers to the
Y	Vote_Code
x1	Tenure_Years
x2	Party_Code
x3	Fin_Serv_Code
x4	Dollars_From_Groups
x5	Tax_Union_Ratings
x6	Liberal_Economic_Rating
x7	Fannie_Mae_Freddie_Mac
x8	Finance_Center
x9	Margin_of_Victory
x10	Republican_Study_Committee

The data for each of the above ten variables was entered into an Excel spreadsheet and a regression analysis was performed. The variables were then adjusted based on the data from the successful vote that was signed into law by President Bush on October 3, 2008, and a regression analysis was performed for this model also.

Regression Model of Congressional Votes on the Recovery and Reinvestment Act of 2009

Next, a linear multiple regression analysis was performed to analyze the votes of the American Recovery and Reinvestment Act of 2009. The data for the regression analysis model is provided in Table 3. The votes of the members of the111th Congress on this bill were recorded (House Vote on Conference Report: H.R. 1: American Recovery and Reinvestment Act of 2009). For the purpose of this analysis, only the votes from those congressional members that were also members of the 110th Congress were used. These members voted on both the Bush stimulus bills for the financial sector (the Troubled Assets Relief Program) and the Obama bill. Some of the independent variables used in each analysis are dependent on a particular congressman's voting record, such as the Tax_Union_Rating and the Liberal_Economic_Rating. Newly elected congressman would not have a voting record with which to assign these ratings.

The dependent variable (y) is the vote code represented by Vote_Code. The vote code is a function of eleven independent variables (x1, x2, x3, x4, x5, x6, x8, x10, x11, x12, x13). Variables x1, x2, x3, x4, x5, x6, x8 and x10 correspond to the variables with the same designation in the Emergency Economic Stabilization Act of 2008 regression models discussed above. It should be noted that the membership in the Republican Study Committee changed slightly from that of the 110th Congress (Republican Study Committee (RSC) – The Causcus of House Conservatives – 111th Congress). Variables x11, x12 and x13 are discussed below.

Variable x11 (Top_10_States_by_Population) is designated using a binary code. If a state is one of the ten states with the highest populations, this variable is designated with a "1." The states with the highest populations are California, Texas, New York, Florida, Illinois, Pennsylvania, Ohio, Michigan, New Jersey and Georgia (U. S. States (plus Washington D. C.) Population and Ranking).

Variable x12 (Top_10_States_for_Fortune_500_Companies) represents the states with the most Fortune 500 companies. These states include California, Texas, New York, Ohio, Illinois, Pennsylvania, New Jersey, Minnesota, Michigan, Florida and Georgia (Fortune 500). It should be noted that in the preceding list, Florida and Georgia tied for tenth place in number of Fortune 500 companies.

Vaiable x13 (Top_10_States_for_Unemployment) represents the ten states that have the highest percentage of unemployment. These states with the corresponding unemployment rates are Michigan (12%), South Carolina (11%), Oregon (10.8%), North Carolina (10.7%), California (10.5%), Rhode Island (10.5%), Florida (9.4%), Ohio (9.4%) and Indiana (9.4%) (Unemployment rates by state).

All of the variables for the Obama model are summarized below:

Variable	Refers to the
Y	Vote_Code
x1	Tenure_Years
x2	Party_Code
x3	Fin_Serv_Code
x4	Dollars_From_Groups
x5	Tax_Union_Ratings
x6	Liberal_Economic_Rating
x8	Finance_Center
x10	Republican_Study_Committee
x11	Top_10_States_by_Population
x12	Top_10_States_for_Fortune_500_Companies
x13	Top_10_States_for_Unemployment

A regression analysis was performed for this model and the results and conclusions, along with those for the Bush models are discussed below.

Conclusions

The first vote on the Economic Stabilization Act of 2008 was analyzed using a regression analysis. The results of the regression analysis are shown in Figure 1. The R Square statistic was 0.180741871. This statistic indicates that 18.1% of the variability the vote on the bailout is associated with the ten variables analyzed. Therefore, the explanatory value of this regression analysis is not great. The closer the R Square statistic is to 1, the higher the probability that there is a linear relationship. Therefore the variables used to evaluate the first vote on the financial bailout do not form a linear relationship (Regression analysis).

For this analysis, the confidence level was input as 0.95. With this confidence level, the value of alpha (α) will be 0.5. If the p-values for these independent variables are less than α (0.05), then they have an impact on the vote. For this analysis, the Tenure variable (x2) and the Dollars From Groups (x4) variable impact the vote. The other eight variables do not impact the vote (Multiple regression analysis).

The second vote on the Economic Stabilization Act of 2008 resulted in the passage of the bill into law and this vote was also analyzed using a regression analysis. The results of the regression analysis are shown in Figure 2. The R Square statistic was 0.164528502. This statistic indicates that 16.4% of the variability in a vote on the bailout is associated with the ten variables analyzed. Therefore, the explanatory value of this regression analysis is not great. The

closer the R square value is to 1, the higher the probability that there is a linear relationship. Therefore the variables used to evaluate the first vote on the financial bailout do not form a linear relationship (Regression analysis).

For this analysis, the confidence level was input as 0.95. With this confidence level the value of alpha (α) will be 0.5. If the p-values for these independent variables are less than α (0.05), then they have an impact on the vote. For this analysis, the Tenure variable ($x2$) had an impact on the vote. The other nine variables do not have a significant impact (Multiple regression analysis).

The vote on the Recovery and Reinvestment Act of 2009 resulted in the passage of the bill into law and this vote was also analyzed using a regression analysis. The results of the regression analysis are shown in Figure 3. The R Square statistic was 0.969130019. This statistic indicates that 96.9% of the variability in a vote on the bailout is associated with the eleven variables analyzed. Therefore, the explanatory value of this regression analysis is good. The closer the R square value is to 1, the higher the probability that there is a linear relationship. For this R square statistic it is apparent that there is a linear relationship (Regression analysis).

Once again, the confidence level was input as 0.95 and the value of alpha (α) is 0.5. If the p-values for these independent variables are less than α (0.05), then they have an impact on the vote. For this analysis, the Party Code variable ($x1$), the Liberal Economic Rating variable ($x6$), the Top 10 States by Population variable ($x11$), and the Top 10 States for Fortune 500 Companies variable ($x12$) all had an impact on the vote. The other seven variables did not have a significant impact on the vote (Multiple regression analysis). A chart showing the relationship between the Liberal Economic Rating for yes and no votes is shown in Figure 4.

It should be observed that for all three regression models, when the p-value is less than α, the absolute value for the t-statistic is greater than two. Conversely, when the p-value for a variable is greater than α, the confidence interval for that variable ranges from a positive to a negative value, with the interval including 0. This is a sign that these variables are not telling us much.

The sign of the coefficient value indicates whether that coefficient is having a positive or a negative effect on the value of "y". If the coefficient is zero then there is basically no explanatory value. The further the coefficient is from zero, the more value it has.

For the Obama vote, it is readily apparent that the party code was the strongest variable. The coefficient for the party code vote is .958. Basically, this is a linear model by using the party code variable by itself.

The two Bush bills were most likely skewed by the impact of the election year. Variables such as the tax rating and the liberal economic rating show that overall the votes of the Republicans in the House are generally more fiscally conservative. Under normal circumstances, they might be expected to be more likely to vote against a bill that is mostly spending. In this instance, since the sitting president was of their own party, there was doubtless a lot of pressure to vote for his bill.

There were 172 Democrats and 63 Republicans voting to approve the stimulus package. The percentage of Democrats (73.2%) voting in favor of the act was higher than the percentage of Republicans (45.7 %). The vote took place a few weeks before national elections during a time when fears of a recession or worse were mounting.

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Appendix

Table 1. Emergency Economic Stabilization Act of 2008 (Data for Failed Vote)

Name	Party	State and Cong. District	Vote	Party Code (x1)	Tenure (x2)	Fin Ser Comm (x3)	Dollars From Groups (x4)	Tax Union (x5)	Liberal Economic Rating (x6)	Fannie Mae and Freddie Mac Money (x7)	Fin. Center (x8)	Margin of Victory (x9)	Repub. Study Comm. (x10)	Vote code (y)
Abercrombie	D	(HI-1)	No	1	17	0	$45,150	1	58	$0	0	38	0	0
Ackerman	D	(NY-5)	Yes	1	25	1	$140,212	1	76	$5,000	1	100	0	1
Aderholt	R	(AL-4)	No	0	11	0	$40,992	3	29	$250	0	40	1	0
Akin	R	(MO-2)	No	0	7	0	$112,700	5	11	$0	0	24	1	0
Alexander	R	(LA-5)	No	0	5	0	$39,050	3	28	$1,250	0	39	1	0
Allen	D	(ME-1)	Yes	1	11	0	$150,090	1	78	$1,950	0	30	0	1
Altmire	D	(PA-4)	No	1	1	0	$59,600	1	56	$0	0	4	0	0
Andrews	D	(NJ-1)	Yes	1	9	0	$256,869	1	82	$5,000	0	100	0	1
Arcuri	D	(NY-24)	Yes	1	1	0	$88,030	1	78	$250	1	9	0	1
Baca	D	(CA-43)	No	1	9	1	$46,000	1	82	$20,500	1	30	0	0
Bachmann	R	(MN-6)	No	0	1	1	$172,724	5	6	$8,850	0	8	1	0
Bachus	R	(AL-6)	Yes	0	15	1	$924,138	4	22	$103,300	0	100	1	1
Baird	D	(WA-3)	Yes	1	9	0	$71,300	1	76	$0	0	26	0	1
Baldwin	D	(WI-2)	Yes	1	9	0	$20,800	1	82	$0	0	26	0	1

Barrett	R	(SC-3)	No	0	5	1	$148,156	5	4	$17,250	0	26	1	0
Barrow	D	(GA-12)	No	1	3	0	$80,200	2	47	$0	0	0	0	0
Bartlett	R	(MD-6)	No	0	15	0	$6,700	4	30	$0	0	20	1	0
Barton	R	(TX-6)	No	0	23	0	$129,625	4	6	$0	1	24	1	0
Bean	D	(IL-8)	Yes	1	3	1	$487,305	2	50	$41,249	0	7	0	1
Becerra	D	(CA-31)	No	1	15	0	$101,350	1	82	$8,000	1	100	0	0
Berkley	D	(NV-1)	No	1	9	0	$108,951	1	62	$2,750	0	34	0	0
Berman	D	(CA-28)	Yes	1	25	0	$61,500	1	82	$0	1	55	0	1
Biggert	R	(IL-13)	No	0	9	1	$278,684	4	34	$17,750	0	16	0	0
Bilbray	R	(CA-50)	No	0	2	0	$57,850	4	16	$500	1	11	1	0
Bilirakis	R	(FL-9)	No	0	1	0	$53,720	3	35	$0	1	12	0	0
Bishop	D	(NY-1)	Yes	1	5	0	$115,050	1	78	$0	1	22	0	1
Bishop	D	(GA-2)	Yes	1	15	0	$57,800	1	64	$500	0	36	0	1
Bishop	R	(UT-1)	No	0	5	0	$19,000	4	8	$0	0	31	1	0
Blackburn	R	(TN-7)	No	0	5	0	$97,900	5	5	$1,000	0	34	1	0
Blumenauer	D	(OR-3)	No	1	12	0	$32,550	1	72	$0	0	51	0	0
Blunt	R	(MO-7)	Yes	0	11	0	$571,987	4	11	$96,950	0	37	0	1
Boehner	R	(OH-8)	Yes	0	17	0	$714,589	5	0	$67,750	0	28	0	1
Bonner	R	(AL-1)	Yes	0	5	0	$72,450	4	21	$0	0	36	0	1
Bono Mack	R	(CA-45)	Yes	0	10	0	$46,300	3	35	$0	1	18	0	1
Boren	D	(OK-2)	Yes	1	3	0	$149,540	2	43	$5,250	0	46	0	1

Boswell	D	(IA-3)	Yes	1	11	0	$99,400	1	58	$1,000	0	6	0	1
Boucher	D	(VA-9)	Yes	1	15	0	$201,750	1	54	$1,000	0	36	0	1
Boustany	R	(LA-7)	No	0	3	0	$181,807	3	21	$1,000	0	42	0	0
Boyd	D	(FL-2)	Yes	1	11	0	$136,981	1	49	$6,000	1	100	0	1
Boyda	D	(KS-2)	No	1	1	0	$49,300	1	52	$0	0	4	0	0
Brady	R	(TX-8)	Yes	0	11	0	$58,000	4	7	$0	1	34	1	1
Brady	D	(PA-1)	Yes	1	11	0	$37,550	1	82	$0	1	100	0	1
Braley	D	(IA-1)	No	1	1	0	$26,400	1	78	$0	0	12	0	0
Brown	D	(FL-3)	Yes	1	15	0	$4,000	1	63	$450	1	100	0	1
Brown	R	(SC-1)	Yes	0	7	0	$20,750	4	25	$0	0	22	1	1
Brown-Waite	R	(FL-5)	No	0	5	1	$157,150	3	34	$21,000	1	20	0	0
Buchanan	R	(FL-13)	No	0	1	0	$209,985	3	39	$0	1	0	1	0
Burgess	R	(TX-26)	No	0	5	0	$50,750	4	17	$0	1	23	1	0
Burton	R	(IN-5)	No	0	25	0	$50,935	5	13	$0	0	34	1	0
Butterfield	D	(NC-1)	No	1	4	0	$29,800	1	63	$2,000	0	100	0	0
Buyer	R	(IN-4)	No	0	15	0	$18,250	4	23	$0	0	24	0	0
Calvert	R	(CA-44)	Yes	0	15	0	$44,600	4	21	$1,000	1	21	0	1
Camp	R	(MI-4)	Yes	0	17	0	$165,100	4	21	$5,000	0	22	1	1
Campbell	R	(CA-48)	Yes	0	3	1	$137,725	5	16	$1,000	1	23	1	1
Cannon	R	(UT-3)	Yes	0	11	0	$38,750	5	3	$2,500	0	26	1	1
Cantor	R	(VA-7)	Yes	0	7	0	$628,551	5	4	$48,500	0	30	1	1

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Capito	R	(WV-2)	No	0	7	1	$268,280	3	42	$14,250	0	14	0	0
Capps	D	(CA-23)	Yes	1	10	0	$57,050	1	82	$0	1	30	0	1
Capuano	D	(MA-8)	Yes	1	9	1	$145,000	1	73	$6,000	0	82	0	1
Cardoza	D	(CA-18)	Yes	1	5	0	$104,850	1	67	$4,000	1	32	0	1
Carnahan	D	(MO-3)	Yes	1	3	0	$36,500	1	64	$1,250	0	33	0	1
Carney	D	(PA-10)	No	1	1	0	$32,653	1	52	$250	0	6	0	0
Carter	R	(TX-31)	No	0	5	0	$94,722	4	13	$0	1	19	1	0
Castle	R	(DE-1)	Yes	0	15	1	$492,665	3	46	$9,200	0	18	0	1
Castor	D	(FL-11)	No	1	1	0	$33,900	1	67	$500	1	40	0	0
Chabot	R	(OH-1)	No	0	13	0	$216,901	5	26	$4,750	0	6	1	0
Chandler	D	(KY-6)	No	1	4	0	$42,450	1	60	$0	0	70	0	0
Clarke	D	(NY-11)	Yes	1	1	0	$28,350	1	82	$0	1	81	0	1
Clay	D	(MO-1)	No	1	7	1	$61,600	1	67	$10,250	0	48	0	0
Cleaver	D	(MO-5)	No	1	3	1	$78,700	1	82	$7,000	0	32	0	0
Clyburn	D	(SC-6)	Yes	1	15	0	$268,161	1	82	$29,750	0	30	0	1
Coble	R	(NC-6)	No	0	13	0	$31,250	4	21	$0	0	42	0	0
Cohen	D	(TN-9)	Yes	1	1	0	$35,950	1	61	$0	0	38	0	1
Cole	R	(OK-4)	Yes	0	5	0	$83,400	4	18	$5,000	0	30	1	1
Conaway	R	(TX-11)	No	0	3	0	$77,623	4	3	$1,000	1	100	1	0
Conyers	D	(MI-14)	No	1	43	0	$15,203	1	82	$0	0	70	0	0
Cooper	D	(TN-5)	Yes	1	25	0	$72,400	2	49	$1,000	0	41	0	1

Costa	D	(CA-20)	Yes	1	3	0	$63,850	1	59	$2,000	1	100	0	1
Costello	D	(IL-12)	No	1	20	0	$22,800	1	58	$0	0	100	0	0
Courtney	D	(CT-2)	No	1	1	0	$112,710	1	69	$0	0	0	0	0
Cramer	D	(AL-5)	Yes	1	17	0	$11,950	1	50	$7,500	0	100	0	1
Crenshaw	R	(FL-4)	Yes	0	7	0	$53,250	4	27	$0	1	40	0	1
Crowley	D	(NY-7)	Yes	1	9	0	$615,104	1	82	$29,700	1	68	0	1
Cuellar	D	(TX-28)	No	1	3	0	$156,911	1	47	$2,450	1	48	0	0
Culberson	R	(TX-7)	No	0	7	0	$54,700	4	3	$0	1	20	1	0
Cummings	D	(MD-7)	No	1	12	0	$63,750	1	73	$16,700	0	100	0	0
Davis	D	(AL-7)	Yes	1	5	0	$292,135	1	73	$11,750	0	100	0	1
Davis	D	(IL-7)	Yes	1	11	0	$44,852	1	72	$4,950	1	74	0	1
Davis	D	(CA-53)	Yes	1	7	0	$4,500	1	67	$0	1	36	0	1
Davis	R	(VA-11)	Yes	0	13	0	$163,650	3	33	$75,499	0	11	0	1
Davis	R	(KY-4)	No	0	3	1	$482,123	4	23	$21,000	0	7	1	0
Davis	D	(TN-4)	No	1	5	1	$130,300	1	53	$5,000	0	32	0	0
Davis	R	(TN-1)	No	0	1	0	$34,504	4	12	$0	0	24	1	0
Deal	R	(GA-9)	No	0	15	0	$29,500	5	5	$0	0	54	0	0
DeFazio	D	(OR-4)	No	1	21	0	$3,000	1	61	$0	0	24	0	0
DeGette	D	(CO-1)	Yes	1	11	0	$39,150	1	76	$2,500	0	58	0	1
Delahunt	D	(MA-10)	No	1	11	0	$20,500	1	82	$0	0	36	0	0
DeLauro	D	(CT-3)	Yes	1	17	0	$22,650	1	78	$1,750	0	54	0	1

Dent	R	(PA-15)	No	0	3	0	$180,001	3	43	$0	0	9	0	0
Diaz-Balart	R	(FL-21)	No	0	15	0	$94,650	3	35	$3,000	1	18	0	0
Diaz-Balart	R	(FL-25)	No	0	5	0	$75,900	3	34	$1,450	1	16	1	0
Dicks	D	(WA-6)	Yes	1	11	0	$19,650	1	78	$250	0	42	0	1
Dingell	D	(MI-15)	Yes	1	53	0	$100,700	1	73	$10,000	0	83	0	1
Doggett	D	(TX-25)	No	1	13	0	$48,300	1	64	$0	1	40	0	0
Donnelly	D	(IN-2)	Yes	1	1	1	$75,905	1	48	$3,500	0	8	0	1
Doolittle	R	(CA-4)	No	0	17	0	$33,450	4	14	$11,500	1	3	1	0
Doyle	D	(PA-14)	Yes	1	13	0	$32,850	1	72	$0	0	80	0	1
Drake	R	(VA-2)	No	0	3	0	$156,649	4	18	$9,000	0	2	1	0
Dreier	R	(CA-26)	Yes	0	27	0	$389,900	4	18	$9,000	1	19	0	1
Duncan	R	(TN-2)	No	0	20	0	$28,600	5	4	$600	0	56	0	0
Edwards	D	(TX-17)	Yes	1	17	0	$209,225	1	48	$0	1	18	0	1
Ehlers	R	(MI-3)	Yes	0	15	0	$26,000	3	40	$0	0	28	0	1
Ellison	D	(MN-5)	Yes	1	1	1	$23,350	1	82	$2,500	0	35	0	1
Ellsworth	D	(IN-8)	Yes	1	1	0	$65,083	1	51	$1,000	0	22	0	1
Emanuel	D	(IL-5)	Yes	1	5	0	$721,300	1	78	$51,750	1	56	0	1
Emerson	R	(MO-8)	Yes	0	12	0	$82,500	3	41	$0	0	46	0	1
Engel	D	(NY-17)	Yes	1	19	0	$60,540	1	82	$0	1	52	0	1
English	R	(PA-3)	No	0	13	0	$163,350	3	42	$4,000	0	12	0	0
Eshoo	D	(CA-14)	Yes	1	15	0	$39,400	1	69	$0	1	46	0	1

Name	Party	District												
Etheridge	D	(NC-2)	Yes	1	11	0	$74,250	1	56	$0	0	32	0	1
Everett	R	(AL-2)	Yes	0	15	0	$78,150	4	25	$0	0	40	0	1
Fallin	R	(OK-5)	No	0	1	0	$32,100	4	14	$0	0	24	1	0
Farr	D	(CA-17)	Yes	1	15	0	$6,300	1	82	$0	1	54	0	1
Fattah	D	(PA-2)	Yes	1	13	0	$57,700	1	82	$1,500	1	80	0	1
Feeney	R	(FL-24)	No	0	5	1	$324,746	5	10	$14,750	1	16	1	0
Ferguson	R	(NJ-7)	Yes	0	7	0	$396,800	2	47	$2,700	0	1	0	1
Filner	D	(CA-51)	No	1	15	0	$15,550	1	82	$1,000	1	36	0	0
Flake	R	(AZ-6)	No	0	7	0	$75,620	5	4	$0	0	48	1	0
Forbes	R	(VA-4)	No	0	7	0	$59,570	4	27	$0	0	52	1	0
Fortenberry	R	(NE-1)	No	0	3	0	$157,072	3	36	$0	0	18	1	0
Fossella	R	(NY-13)	Yes	0	11	0	$356,349	4	40	$10,750	1	14	0	1
Foxx	R	(NC-5)	No	0	3	0	$106,550	5	4	$0	0	14	1	0
Frank	D	(MA-4)	Yes	1	27	1	$656,955	1	82	$42,350	0	100	0	1
Franks	R	(AZ-2)	No	0	5	0	$24,900	5	0	$0	0	19	1	0
Frelinghuysen	R	(NJ-11)	No	0	13	0	$71,200	3	39	$0	0	25	0	0
Gallegly	R	(CA-24)	No	0	21	0	$22,600	4	23	$0	1	24	0	0
Garrett	R	(NJ-5)	No	0	5	1	$207,952	5	9	$0	0	11	1	0
Gerlach	R	(PA-6)	No	0	5	1	$357,999	3	45	$17,750	0	2	0	0
Giffords	D	(AZ-8)	No	1	1	0	$53,579	1	62	$0	0	12	0	0
Gilchrest	R	(MD-1)	Yes	0	17	0	$18,600	2	44	$0	0	38	0	1

Gillibrand	D	(NY-20)	No	1	1	0	$251,546	1	64	$0	1	6	0	0
Gingrey	R	(GA-11)	No	0	5	0	$124,830	5	0	$0	0	42	1	0
Gohmert	R	(TX-1)	No	0	3	0	$133,864	4	15	$0	1	38	1	0
Gonzalez	D	(TX-20)	Yes	1	9	0	$95,700	1	53	$8,500	1	74	0	1
Goode	R	(VA-5)	No	0	11	0	$56,073	4	29	$0	0	19	1	0
Goodlatte	R	(VA-6)	No	0	15	0	$74,000	4	25	$0	0	62	1	0
Gordon	D	(TN-6)	Yes	1	13	0	$108,250	1	55	$6,750	0	36	0	1
Granger	R	(TX-12)	Yes	0	11	0	$100,650	4	13	$0	1	36	0	1
Graves	R	(MO-6)	No	0	7	0	$119,150	3	31	$1,000	0	25	0	0
Green	D	(TX-9)	No	1	3	1	$76,515	1	69	$4,000	1	100	0	0
Green	D	(TX-29)	No	1	15	0	$13,300	1	50	$0	1	50	0	0
Grijalva	D	(AZ-7)	No	1	5	0	$10,150	1	82	$2,000	0	24	0	0
Gutierrez	D	(IL-4)	Yes	1	15	1	$30,050	1	82	$3,250	1	72	0	1
Hall	D	(NY-19)	Yes	1	1	0	$74,615	1	64	$0	1	2	0	1
Hall	R	(TX-4)	No	0	27	0	$76,550	4	26	$0	1	32	0	0
Hare	D	(IL-17)	Yes	1	1	0	$30,800	1	69	$0	0	14	0	1
Harman	D	(CA-36)	Yes	1	15	0	$61,750	1	82	$3,250	1	31	0	1
Hastings	D	(FL-23)	Yes	1	15	0	$23,500	1	82	$300	1	100	0	1
Hastings	R	(WA-4)	No	0	13	0	$28,000	4	17	$2,000	0	20	0	0
Hayes	R	(NC-8)	No	0	9	0	$157,573	3	39	$1,000	0	0	0	0
Heller	R	(NV-2)	No	0	1	1	$86,850	4	27	$6,000	0	6	0	0

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Name	Party	District					Amount			Amount				
Hensarling	R	(TX-5)	No	0	5	1	$595,158	5	6	$3,250	1	26	1	0
Herger	R	(CA-2)	Yes	0	11	0	$54,900	4	8	$0	1	31	1	1
Herseth Sandlin	D	(SD)	No	1	4	0	$133,376	1	52	$16,200	0	40	0	0
Higgins	D	(NY-27)	Yes	1	3	0	$95,500	1	72	$1,000	1	58	0	1
Hill	D	(IN-9)	No	1	1	0	$87,834	1	51	$5,000	0	4	0	0
Hinchey	D	(NY-22)	No	1	15	0	$11,149	1	82	$500	1	100	0	0
Hinojosa	D	(TX-15)	Yes	1	11	1	$188,750	1	59	$14,500	1	37	0	1
Hirono	D	(HI-2)	No	1	1	0	$34,750	1	82	$0	0	22	0	0
Hobson	R	(OH-7)	Yes	0	17	0	$87,775	3	36	$2,850	0	22	0	1
Hodes	D	(NH-2)	No	1	1	1	$127,500	1	78	$5,450	0	8	0	0
Hoekstra	R	(MI-2)	No	0	15	0	$39,905	4	19	$0	0	34	1	0
Holden	D	(PA-17)	No	1	15	0	$24,075	1	56	$0	0	30	0	0
Holt	D	(NJ-12)	Yes	1	9	0	$44,955	1	82	$0	0	32	0	1
Honda	D	(CA-15)	Yes	1	7	0	$16,150	1	82	$4,750	1	44	0	1
Hooley	D	(OR-5)	Yes	1	11	0	$250,062	1	66	$28,750	0	11	0	1
Hoyer	D	(MD-5)	Yes	1	27	0	$429,899	1	82	$55,500	0	68	0	1
Hulshof	R	(MO-9)	No	0	11	0	$161,050	3	30	$1,700	0	25	0	0
Hunter	R	(CA-52)	No	0	27	0	$20,625	4	26	$0	1	33	1	0
Inglis	R	(SC-4)	Yes	0	15	0	$36,000	4	29	$0	0	32	1	1
Inslee	D	(WA-1)	No	1	9	0	$17,550	1	63	$750	0	36	0	0
Israel	D	(NY-2)	Yes	1	7	0	$246,689	1	63	$12,050	1	40	0	1

Issa	R	(CA-49)	No	0	7	0	$35,460	5	4	$0	1	29	1	0
Jackson	D	(IL-2)	No	1	13	0	$88,525	1	82	$14,000	1	73	0	0
Jackson-Lee	D	(TX-18)	No	1	13	0	$3,250	1	69	$8,000	1	58	0	0
Jefferson	D	(LA-2)	No	1	17	0	$71,450	1	60	$19,250	0	8	0	0
Johnson	D	(TX-30)	Yes	1	15	0	$13,550	1	60	$2,825	1	62	0	1
Johnson	R	(IL-15)	No	0	7	0	$10,503	3	44	$0	0	16	0	0
Johnson	D	(GA-4)	No	1	1	0	$22,300	1	82	$1,000	0	52	0	0
Johnson	R	(TX-3)	No	0	17	0	$171,950	5	8	$0	1	27	1	0
Jones	R	(NC-3)	No	0	13	1	$104,300	3	40	$2,750	0	38	0	0
Jordan	R	(OH-4)	No	0	1	0	$70,368	5	5	$0	0	20	1	0
Kagen	D	(WI-8)	No	1	1	0	$27,000	1	78	$0	0	2	0	0
Kanjorski	D	(PA-11)	Yes	1	13	1	$571,010	1	50	$96,000	0	44	0	1
Kaptur	D	(OH-9)	No	1	25	0	$8,650	1	57	$4,350	0	48	0	0
Keller	R	(FL-8)	No	0	7	0	$121,550	4	31	$2,500	1	7	0	0
Kennedy	D	(RI-1)	Yes	1	13	0	$179,250	1	82	$3,250	0	46	0	1
Kildee	D	(MI-5)	Yes	1	31	0	$31,250	1	73	$0	0	48	0	1
Kilpatrick	D	(MI-13)	No	1	11	0	$54,050	1	73	$4,000	0	100	0	0
Kind	D	(WI-3)	Yes	1	11	0	$142,350	1	60	$0	0	30	0	1
King	R	(NY-3)	Yes	0	15	1	$133,794	3	42	$16,750	1	12	0	1
King	R	(IA-5)	No	0	5	0	$64,150	5	8	$0	0	22	1	0
Kingston	R	(GA-1)	No	0	15	0	$40,450	4	9	$0	0	36	1	0

Kirk	R	(IL-10)	Yes	0	7	0	$314,275	3	45	$0	0	6	0	1
Klein	D	(FL-22)	Yes	1	1	1	$236,128	1	62	$11,000	1	4	0	1
Kline	R	(MN-2)	Yes	0	5	0	$172,221	4	9	$0	0	16	1	1
Knollenberg	R	(MI-9)	No	0	15	0	$149,500	3	32	$8,250	0	6	0	0
Kucinich	D	(OH-10)	No	1	11	0	$36,779	1	48	$1,349	0	32	0	0
Kuhl	R	(NY-29)	No	0	3	0	$85,750	3	38	$0	1	4	0	0
LaHood	R	(IL-18)	Yes	0	13	0	$58,850	3	43	$500	0	34	0	1
Lamborn	R	(CO-5)	No	0	1	0	$52,000	5	0	$0	0	18	1	0
Lampson	D	(TX-22)	No	1	11	0	$83,350	2	46	$250	1	10	0	0
Langevin	D	(RI-2)	Yes	1	7	0	$39,800	1	82	$0	0	46	0	1
Larsen	D	(WA-2)	Yes	1	7	0	$60,700	1	61	$0	0	28	0	1
Larson	D	(CT-1)	Yes	1	9	0	$98,550	1	78	$8,000	0	48	0	1
Latham	R	(IA-4)	No	0	13	0	$138,650	2	32	$1,000	0	14	0	0
LaTourette	R	(OH-14)	No	0	5	1	$218,550	3	43	$17,500	0	19	0	0
Lee	D	(CA-9)	No	1	10	0	$27,550	1	82	$11,250	1	75	0	0
Levin	D	(MI-12)	Yes	1	15	0	$31,250	1	67	$9,800	0	44	0	1
Lewis	R	(KY-2)	Yes	0	15	0	$65,600	4	20	$0	0	10	1	1
Lewis	R	(CA-41)	Yes	0	29	0	$37,300	4	19	$8,000	1	34	0	1
Lewis	D	(GA-5)	No	1	21	0	$54,250	1	82	$8,500	0	100	0	0
Linder	R	(GA-7)	No	0	15	0	$123,056	5	0	$1,150	0	42	0	0
Lipinski	D	(IL-3)	No	1	3	0	$8,250	1	60	$0	1	54	0	0

LoBiondo	R	(NJ-2)	No	0	5	0	$30,750	2	51	$0	0	27	0	0
Loebsack	D	(IA-2)	Yes	1	1	0	$17,500	1	67	$0	0	2	0	1
Lofgren	D	(CA-16)	Yes	1	13	0	$18,400	1	82	$1,000	1	46	0	1
Lowey	D	(NY-18)	Yes	1	9	0	$267,100	1	82	$0	1	40	0	1
Lucas	R	(OK-3)	No	0	5	1	$116,800	4	20	$3,000	0	34	1	0
Lungren	R	(CA-3)	Yes	0	29	0	$103,400	4	16	$0	1	21	1	1
Lynch	D	(MA-9)	No	1	7	1	$120,800	1	82	$22,500	0	56	0	0
Mack	R	(FL-14)	No	0	3	0	$195,906	4	17	$500	1	28	1	0
Mahoney	D	(FL-16)	Yes	1	1	1	$273,290	1	50	$11,000	1	1	0	1
Maloney	D	(NY-14)	Yes	1	15	1	$400,891	1	76	$39,750	1	68	0	1
Manzullo	R	(IL-16)	No	0	15	1	$265,925	4	19	$250	0	34	1	0
Marchant	R	(TX-24)	No	0	3	1	$161,027	4	12	$7,000	1	23	1	0
Markey	D	(MA-7)	Yes	1	33	0	$237,250	1	69	$2,250	0	100	0	1
Marshall	D	(GA-8)	Yes	1	5	0	$175,964	2	45	$6,000	0	2	0	1
Matheson	D	(UT-2)	No	1	7	0	$423,840	2	46	$24,500	0	22	0	0
Matsui	D	(CA-5)	Yes	1	3	0	$62,800	1	78	$3,500	1	48	0	1
McCarthy	D	(NY-4)	Yes	1	11	1	$203,350	1	67	$5,500	1	30	0	1
McCarthy	R	(CA-22)	No	0	1	1	$69,450	4	11	$3,000	1	42	0	0
McCaul	R	(TX-10)	No	0	3	0	$113,073	4	27	$0	1	14	1	0
McCollum	D	(MN-4)	Yes	1	7	0	$66,470	1	82	$4,350	0	40	0	1
McCotter	R	(MI-11)	No	0	5	1	$90,687	4	33	$0	0	11	1	0

McCrery	R	(LA-4)	Yes	0	21	0	$338,050	4	15	$29,000	0	41	0	1
McDermott	D	(WA-7)	Yes	1	19	0	$6,250	1	73	$0	0	63	0	1
McGovern	D	(MA-3)	Yes	1	11	0	$37,150	1	82	$0	0	100	0	1
Mchenry	R	(NC-10)	No	0	3	1	$277,299	5	12	$12,500	0	24	1	0
McHugh	R	(NY-23)	Yes	0	15	0	$19,900	2	44	$0	1	26	0	1
McIntyre	D	(NC-7)	No	1	11	0	$46,800	1	51	$0	0	46	0	0
McKeon	R	(CA-25)	Yes	0	15	0	$242,877	4	6	$0	1	24	1	1
McMorris Rodgers	R	(WA-5)	No	0	3	0	$140,461	4	31	$0	0	12	1	0
McNerney	D	(CA-11)	Yes	1	1	0	$33,770	1	78	$1,000	1	6	0	1
McNulty	D	(NY-21)	Yes	1	19	0	$28,500	1	82	$0	1	56	0	1
Meek	D	(FL-17)	Yes	1	5	0	$134,250	1	82	$7,250	1	100	0	1
Meeks	D	(NY-6)	Yes	1	11	1	$293,128	1	82	$14,000	1	100	0	1
Melancon	D	(LA-3)	Yes	1	3	0	$77,592	1	47	$8,000	0	15	0	1
Mica	R	(FL-7)	No	0	15	0	$21,500	4	6	$0	1	26	0	0
Michaud	D	(ME-2)	No	1	7	0	$57,030	1	77	$1,000	0	40	0	0
Miller	R	(CA-42)	Yes	0	9	1	$53,600	4	18	$38,000	1	100	1	1
Miller	D	(NC-13)	Yes	1	5	1	$193,625	1	18	$18,000	0	28	0	1
Miller	D	(CA-7)	Yes	1	33	0	$88,055	1	78	$0	1	68	0	1
Miller	R	(MI-10)	No	0	5	0	$47,750	3	40	$0	0	35	0	0
Miller	R	(FL-1)	No	0	7	0	$17,500	5	24	$0	1	38	1	0
Mitchell	D	(AZ-5)	No	1	1	0	$56,401	2	53	$1,000	0	5	0	0

Mollohan	D	(WV-1)	Yes	1	25	0	$24,300	1	51	$0	0	28	0	1
Moore	D	(KS-3)	Yes	1	9	1	$505,817	1	78	$26,550	0	30	0	1
Moore	D	(WI-4)	Yes	1	3	1	$92,604	1	82	$8,250	0	44	0	1
Moran	D	(VA-8)	Yes	1	17	0	$82,350	1	67	$10,500	0	35	0	1
Moran	R	(KS-1)	No	0	11	0	$114,870	3	33	$2,000	0	59	1	0
Murphy	D	(PA-8)	Yes	1	1	0	$160,900	1	56	$0	1	0	0	1
Murphy	D	(CT-5)	Yes	1	1	1	$173,550	1	64	$4,000	0	12	0	1
Murphy	R	(PA-18)	No	0	5	0	$192,412	3	41	$2,000	0	16	0	0
Murtha	D	(PA-12)	Yes	1	35	0	$94,800	1	56	$0	0	22	0	1
Musgrave	R	(CO-4)	No	0	5	0	$226,912	4	3	$1,000	0	3	1	0
Myrick	R	(NC-9)	No	0	13	0	$170,750	5	13	$3,200	0	34	1	0
Nadler	D	(NY-8)	Yes	1	17	0	$139,050	1	78	$0	1	68	0	1
Napolitano	D	(CA-38)	No	1	19	0	$13,250	1	82	$9,300	1	50	0	0
Neal	D	(MA-2)	Yes	1	19	0	$133,706	1	82	$1,500	0	100	0	1
Neugebauer	R	(TX-19)	No	0	5	1	$233,609	5	0	$20,000	1	38	1	0
Nunes	R	(CA-21)	No	0	5	0	$71,750	4	15	$12,000	1	37	0	0
Oberstar	D	(MN-8)	Yes	1	33	0	$23,684	1	55	$2,500	0	30	0	1
Obey	D	(WI-7)	Yes	1	39	0	$35,550	1	82	$4,250	0	27	0	1
Olver	D	(MA-1)	Yes	1	17	0	$15,550	1	82	$2,000	0	52	0	1
Ortiz	D	(TX-27)	No	1	25	0	$20,625	1	55	$1,000	1	18	0	0
Pallone	D	(NJ-6)	Yes	1	21	0	$124,000	1	82	$0	0	39	0	1

Pascrell	D	(NJ-8)	No	1	19	0	$39,400	1	82	$500	0	43	0	0
Pastor	D	(AZ-4)	No	1	17	0	$61,400	1	62	$8,100	0	48	0	0
Paul	R	(TX-14)	No	0	11	1	$314,104	5	20	$3,500	1	20	0	0
Payne	D	(NJ-10)	No	1	19	0	$22,400	1	82	$10,100	0	100	0	0
Pearce	R	(NM-2)	No	0	5	1	$109,900	4	11	$5,000	0	20	1	0
Pence	R	(IN-6)	No	0	7	0	$143,722	5	0	$0	0	20	1	0
Perlmutter	D	(CO-7)	Yes	1	1	1	$128,700	1	77	$5,000	0	13	0	1
Peterson	R	(PA-5)	Yes	0	11	0	$26,400	3	23	$0	0	20	0	1
Peterson	D	(MN-7)	No	1	17	0	$74,440	1	52	$0	0	41	0	0
Petri	R	(WI-6)	No	0	29	0	$7,750	4	37	$0	0	100	0	0
Pickering	R	(MS-3)	Yes	0	11	0	$33,000	4	30	$500	0	62	0	1
Pitts	R	(PA-16)	No	0	11	0	$21,000	5	9	$0	0	18	1	0
Platts	R	(PA-19)	No	0	7	0	$5,750	3	42	$250	0	31	0	0
Poe	R	(TX-2)	No	0	3	0	$68,089	4	26	$0	1	32	1	0
Pomeroy	D	(ND)	Yes	1	15	0	$243,670	1	69	$6,750	0	32	0	1
Porter	R	(NV-3)	Yes	0	4	0	$236,205	3	40	$2,000	0	1	0	1
Price	D	(NC-4)	Yes	1	21	0	$30,950	1	82	$4,550	0	30	0	1
Price	R	(GA-6)	No	0	3	1	$216,356	5	6	$3,500	0	44	1	0
Pryce	R	(OH-15)	Yes	0	15	1	$519,281	3	35	$55,500	0	0	0	1
Putnam	R	(FL-12)	Yes	0	7	1	$145,868	4	18	$15,500	1	50	0	1
Radanovich	R	(CA-19)	Yes	0	13	0	$23,950	4	0	$0	1	20	1	1

Rahall	D	(WV-3)	Yes	1	31	0	$11,600	1	59	$0	0	38	0	1
Ramstad	R	(MN-3)	No	0	17	0	$99,050	3	45	$0	0	30	0	0
Rangel	D	(NY-15)	Yes	1	37	0	$547,950	1	82	$38,000	1	88	0	1
Regula	R	(OH-16)	Yes	0	35	0	$40,400	3	39	$2,000	0	18	0	1
Rehberg	R	(MT)	No	0	7	0	$55,700	3	26	$500	0	20	1	0
Reichert	R	(WA-8)	No	0	3	0	$178,086	2	46	$2,000	0	2	0	0
Renzi	R	(AZ-1)	No	0	5	0	$269,444	3	37	$28,250	0	7	0	0
Reyes	D	(TX-16)	Yes	1	11	0	$29,250	1	56	$17,550	1	58	0	1
Reynolds	R	(NY-26)	Yes	0	9	0	$376,225	3	31	$62,200	1	4	1	1
Rodriguez	D	(TX-23)	No	1	15	0	$34,050	1	54	$3,750	1	8	0	0
Rogers	R	(KY-5)	Yes	0	27	0	$39,000	4	25	$0	0	48	0	1
Rogers	R	(AL-3)	Yes	0	4	0	$178,848	3	31	$0	0	22	0	1
Rogers	R	(MI-8)	No	0	7	0	$151,624	4	29	$22,750	0	12	0	0
Rohrabacher	R	(CA-46)	No	0	19	0	$21,950	5	7	$0	1	22	0	0
Roskam	R	(IL-6)	No	0	1	1	$234,251	4	24	$11,650	1	2	1	0
Ros-Lehtinen	R	(FL-18)	No	0	19	0	$58,485	3	37	$0	1	24	0	0
Ross	D	(AR-4)	Yes	1	7	0	$184,700	1	53	$5,550	0	50	0	1
Rothman	D	(NJ-9)	No	1	11	0	$67,150	1	82	$0	0	43	0	0
Roybal-Allard	D	(CA-34)	No	1	15	0	$33,050	1	82	$9,800	1	54	0	0
Royce	R	(CA-40)	No	0	15	1	$325,027	5	9	$28,600	1	36	1	0
Ruppersberger	D	(MD-2)	Yes	1	5	0	$98,650	1	64	$0	0	40	0	1

Rush	D	(IL-1)	No	1	15	0	$45,375	1	73	$1,000	1	68	0	0
Ryan	D	(OH-17)	Yes	1	5	0	$60,900	1	73	$0	0	60	0	1
Ryan	R	(WI-1)	Yes	0	9	0	$248,699	5	17	$3,250	0	26	1	1
Salazar	D	(CO-3)	No	1	3	0	$43,750	1	61	$4,250	0	24	0	0
Sali	R	(ID-1)	No	0	1	0	$40,575	5	3	$0	0	5	1	0
Sanchez	D	(CA-39)	No	1	5	0	$23,736	1	82	$2,000	1	32	0	0
Sanchez	D	(CA-47)	No	1	11	0	$38,690	1	77	$4,250	1	24	0	0
Sarbanes	D	(MD-3)	Yes	1	1	0	$104,178	1	73	$500	0	32	0	1
Saxton	R	(NJ-3)	Yes	0	25	0	$50,331	3	43	$0	0	17	0	1
Schakowsky	D	(IL-9)	Yes	1	9	0	$63,230	1	82	$0	1	50	0	1
Schiff	D	(CA-29)	No	1	7	0	$52,168	1	77	$1,000	1	37	0	0
Schmidt	R	(OH-2)	No	0	3	0	$86,100	4	29	$3,500	0	2	0	0
Schwartz	D	(PA-13)	Yes	1	3	0	$204,900	1	67	$3,200	1	32	0	1
Scott	D	(VA-3)	No	1	5	0	$45,450	1	69	$1,000	0	100	0	0
Scott	D	(GA-13)	No	1	15	1	$280,907	1	82	$17,000	0	38	0	0
Sensenbrenner	R	(WI-5)	No	0	29	0	$89,017	5	11	$0	0	26	0	0
Serrano	D	(NY-16)	No	1	18	0	$13,500	1	73	$2,500	1	92	0	0
Sessions	R	(TX-32)	Yes	0	11	0	$545,938	4	13	$29,472	1	16	1	1
Sestak	D	(PA-7)	Yes	1	1	0	$144,876	1	64	$1,150	0	12	0	1
Shadegg	R	(AZ-3)	No	0	13	0	$110,600	5	0	$500	0	19	1	0
Shays	R	(CT-4)	Yes	0	21	1	$766,917	3	48	$2,500	0	3	0	1

Shea-Porter	D	(NH-1)	No	1	1	0	$2,800	1	78	$0	0	4	0	0
Sherman	D	(CA-27)	No	1	11	1	$109,100	1	82	$18,000	1	38	0	0
Shimkus	R	(IL-19)	No	0	11	0	$55,301	4	29	$0	0	22	0	0
Shuler	D	(NC-11)	No	1	1	0	$29,250	1	55	$0	0	8	0	0
Shuster	R	(PA-9)	No	0	7	0	$40,700	4	19	$0	0	20	0	0
Simpson	R	(ID-2)	Yes	0	9	0	$23,850	3	36	$0	0	28	0	1
Sires	D	(NJ-13)	Yes	1	2	0	$51,650	1	82	$2,000	0	59	0	1
Skelton	D	(MO-4)	Yes	1	31	0	$52,000	1	59	$500	0	39	0	1
Slaughter	D	(NY-28)	Yes	1	21	0	$34,750	1	82	$5,500	1	46	0	1
Smith	R	(TX-21)	Yes	0	21	0	$88,700	4	21	$500	1	36	1	1
Smith	D	(WA-9)	Yes	1	11	0	$56,150	1	64	$2,250	0	32	0	1
Smith	R	(NJ-4)	No	0	28	0	$25,200	2	48	$1,000	0	33	0	0
Smith	R	(NE-3)	No	0	1	0	$94,750	4	14	$0	0	10	0	0
Snyder	D	(AR-2)	Yes	1	11	0	$32,100	1	69	$0	0	22	0	1
Solis	D	(CA-32)	No	1	7	0	$15,350	1	82	$6,800	1	66	0	0
Souder	R	(IN-3)	Yes	0	13	0	$28,500	4	23	$3,000	0	8	1	1
Space	D	(OH-18)	Yes	1	1	0	$48,410	1	54	$1,000	0	24	0	1
Spratt	D	(SC-5)	Yes	1	25	0	$277,150	1	77	$21,500	0	14	0	1
Stark	D	(CA-13)	No	1	35	0	$4,250	1	67	$500	1	48	0	0
Stearns	R	(FL-6)	No	0	19	0	$59,905	4	27	$1,850	1	20	1	0
Stupak	D	(MI-1)	No	1	15	0	$8,500	1	53	$0	0	41	0	0

Sullivan	R	(OK-1)	No	0	5	0	$50,250	4	14	$0	0	33	1	0
Sutton	D	(OH-13)	No	1	1	0	$6,000	1	64	$0	0	22	0	0
Tancredo	R	(CO-6)	Yes	0	9	0	$26,775	5	0	$0	0	19	1	1
Tanner	D	(TN-8)	Yes	1	19	0	$217,922	1	49	$4,250	0	46	0	1
Tauscher	D	(CA-10)	Yes	1	11	0	$89,800	1	69	$2,000	1	32	0	1
Taylor	D	(MS-4)	No	1	19	0	$5,500	2	47	$0	0	60	0	0
Terry	R	(NE-2)	No	0	9	0	$154,575	4	28	$1,000	0	10	0	0
Thompson	D	(CA-1)	No	1	9	0	$115,054	1	67	$10,600	1	37	0	0
Thompson	D	(MS-2)	No	1	15	0	$51,450	1	82	$7,000	0	28	0	0
Thornberry	R	(TX-13)	No	0	13	0	$55,175	4	6	$0	1	51	1	0
Tiahrt	R	(KS-4)	No	0	13	0	$69,050	4	24	$6,500	0	30	0	0
Tiberi	R	(OH-12)	No	0	7	0	$506,895	4	32	$35,700	0	16	0	0
Tierney	D	(MA-6)	No	1	11	0	$17,950	1	82	$0	0	40	0	0
Towns	D	(NY-10)	Yes	1	25	0	$73,675	1	82	$1,750	1	86	0	1
Turner	R	(OH-3)	No	0	5	0	$82,050	3	38	$375	0	18	1	0
Udall	D	(CO-2)	No	1	9	0	$149,831	1	61	$3,000	0	37	0	0
Udall	D	(NM-3)	No	1	9	0	$86,711	1	78	$0	0	50	0	0
Upton	R	(MI-6)	Yes	0	21	0	$42,580	3	41	$0	0	23	0	1
Van Hollen	D	(MD-8)	Yes	1	5	0	$71,248	1	82	$30,700	0	56	0	1
Velazquez	D	(NY-12)	Yes	1	15	1	$330,850	1	82	$20,750	1	78	0	1
Visclosky	D	(IN-1)	No	1	23	0	$57,100	1	73	$0	0	43	0	0

Walberg	R	(MI-7)	No	0	1	0	$46,950	4	20	$1,000	0	5	1	0
Walden	R	(OR-2)	Yes	0	9	0	$41,900	3	34	$0	0	47	0	1
Walsh	R	(NY-25)	Yes	0	19	0	$47,000	2	44	$7,750	1	2	0	1
Walz	D	(MN-1)	No	1	1	0	$40,250	1	69	$0	0	6	0	0
Wamp	R	(TN-3)	No	0	13	0	$45,900	4	24	$0	0	32	1	0
Wasserman Schultz	D	(FL-20)	Yes	1	3	0	$114,133	1	73	$10,750	1	100	0	1
Waters	D	(CA-35)	Yes	1	17	1	$8,500	1	82	$17,800	1	74	0	1
Watson	D	(CA-33)	No	1	7	0	$1,250	1	82	$250	1	100	0	0
Watt	D	(NC-12)	Yes	1	15	1	$223,840	1	82	$17,250	0	34	0	1
Waxman	D	(CA-30)	Yes	1	33	0	$10,500	1	78	$0	1	44	0	1
Weiner	D	(NY-9)	Yes	1	9	0	$31,051	1	78	$250	1	100	0	1
Welch	D	(VT)	No	1	1	0	$24,050	1	77	$1,000	0	8	0	0
Weldon	R	(FL-15)	Yes	0	13	0	$32,750	4	19	$500	1	12	1	1
Westmoreland	R	(GA-3)	No	0	5	0	$106,850	5	0	$0	0	36	1	0
Wexler	D	(FL-19)	Yes	1	11	0	$75,150	1	82	$3,500	1	100	0	1
Whitfield	R	(KY-1)	No	0	13	0	$62,750	3	33	$6,000	0	20	0	0
Wilson	R	(SC-2)	Yes	0	7	0	$48,100	5	9	$0	0	26	1	1
Wilson	D	(OH-6)	Yes	1	1	1	$63,850	1	57	$7,250	0	24	0	1
Wilson	R	(NM-1)	Yes	0	11	0	$182,131	3	37	$1,250	0	0	0	1
Wolf	R	(VA-10)	Yes	0	27	0	$64,100	3	41	$1,000	0	16	0	1
Woolsey	D	(CA-6)	No	1	15	0	$11,600	1	82	$0	1	42	0	0

Wu	D	(OR-1)	No	1	9	0	$186,063	1	82	$500	0	29	0	0
Yarmuth	D	(KY-3)	No	1	1	0	$27,778	1	58	$0	0	3	0	0
Young	R	(FL-10)	No	0	37	0	$52,400	3	38	$0	1	32	0	0
Young	R	(AK-1)	No	0	35	0	$49,650	3	33	$0	0	17	0	0

Figure 1. Emergency Economic Stabilization Act of 2008 (Failed Vote – Regression Analysis)

SUMMARY OUTPUT (Emergency Economic Stabilization Act of 2008 - Failed Vote)

Regression Statistics	
Multiple R	0.425137473
R Square	0.180741871
Adjusted R Square	0.160563099
Standard Error	0.457956038
Observations	417

ANOVA

	df	SS	MS	F	Significance F
Regression	10	18.7850184	1.87850184	8.95703037	2.30722E-13
Residual	406	85.14783532	0.209723732		
Total	416	103.9328537			

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Intercept	0.522483693	0.244133611	2.140154692	0.03293762	0.042559956	1.002407429	0.042559956	1.002407429
Party Code (x1)	-0.008526458	0.12611406	-0.067609098	0.946130095	-0.256444517	0.239391601	-0.256444517	0.239391601
Tenure (x2)	0.008667142	0.002872671	3.017101776	0.002712685	0.003019975	0.014314309	0.003019975	0.014314309
Fin Ser Comm (x3)	-0.075539665	0.068723155	-1.099187963	0.272337453	-0.210637299	0.05955797	-0.210637299	0.05955797

Dollars From Groups (x4)	8.93714E-07	2.46321E-07	3.628251643	0.000321739	4.09491E-07	1.37794E-06	4.09491E-07	1.37794E-06
Tax Union (x5)	-0.105365512	0.056778655	1.855724007	0.064217351	-0.21698236	0.006251335	-0.21698236	0.006251335
Liberal Economic Rating (x6)	-0.000782219	0.002355352	0.332103067	0.739982818	-0.005412426	0.003847987	-0.005412426	0.003847987
Fannie Mae and Freddie Mac Money (x7)	1.09925E-06	2.47979E-06	0.443285629	0.657795264	-3.77557E-06	5.97408E-06	-3.77557E-06	5.97408E-06
Fin. Center (x8)	0.072241523	0.048082721	1.50244247	0.133760246	-0.02228065	0.166763695	-0.02228065	0.166763695
Margin of Victory (x9)	0.000752258	0.00101493	0.741204357	0.458998033	-0.001242883	0.002747398	-0.001242883	0.002747398
Repub. Study Comm. (x10)	-0.0434563	0.07920085	0.548684766	0.583523399	-0.199151239	0.11223864	-0.199151239	0.11223864

Table 2. Emergency Economic Stabilization Act of 2008 (Data for Successful Vote)

Name	Party	State and Cong. District	Vote	Party Code (x1)	Tenure (x2)	Fin Ser Comm (x3)	Dollars From Groups (x4)	Tax Union (x5)	Liberal Economic Rating (x6)	Fannie Mae and Freddie Mac Money (x7)	Fin. Center (x8)	Margin of Victory (x9)	Repub. Study Comm. (x10)	Vote code (y)
Abercrombie	D	(HI-1)	Yes	1	17	0	$45,150	1	58	$0	0	38	0	1
Ackerman	D	(NY-5)	Yes	1	25	1	$140,212	1	76	$5,000	1	100	0	1
Aderholt	R	(AL-4)	No	0	11	0	$40,992	3	29	$250	0	40	1	0
Akin	R	(MO-2)	No	0	7	0	$112,700	5	11	$0	0	24	1	0
Alexander	R	(LA-5)	Yes	0	5	0	$39,050	3	28	$1,250	0	39	1	1
Allen	D	(ME-1)	Yes	1	11	0	$150,090	1	78	$1,950	0	30	0	1
Altmire	D	(PA-4)	No	1	1	0	$59,600	1	56	$0	0	4	0	0
Andrews	D	(NJ-1)	Yes	1	9	0	$256,869	1	82	$5,000	0	100	0	1
Arcuri	D	(NY-24)	Yes	1	1	0	$88,030	1	78	$250	1	9	0	1
Baca	D	(CA-43)	Yes	1	9	1	$46,000	1	82	$20,500	1	30	0	1
Bachmann	R	(MN-6)	No	0	1	1	$172,724	5	6	$8,850	0	8	1	0
Bachus	R	(AL-6)	Yes	0	15	1	$924,138	4	22	$103,300	0	100	1	1
Baird	D	(WA-3)	Yes	1	9	0	$71,300	1	76	$0	0	26	0	1
Baldwin	D	(WI-2)	Yes	1	9	0	$20,800	1	82	$0	0	26	0	1

Barrett	R	(SC-3)	Yes	0	5	1	$148,156	5	4	$17,250	0	26	1	1
Barrow	D	(GA-12)	No	1	3	0	$80,200	2	47	$0	0	0	0	0
Bartlett	R	(MD-6)	No	0	15	0	$6,700	4	30	$0	0	20	1	0
Barton	R	(TX-6)	No	0	23	0	$129,625	4	6	$0	1	24	1	0
Bean	D	(IL-8)	Yes	1	3	1	$487,305	2	50	$41,249	0	7	0	1
Becerra	D	(CA-31)	No	1	15	0	$101,350	1	82	$8,000	1	100	0	0
Berkley	D	(NV-1)	Yes	1	9	0	$108,951	1	62	$2,750	0	34	0	1
Berman	D	(CA-28)	Yes	1	25	0	$61,500	1	82	$0	1	55	0	1
Biggert	R	(IL-13)	Yes	0	9	1	$278,684	4	34	$17,750	0	16	0	1
Bilbray	R	(CA-50)	No	0	2	0	$57,850	4	16	$500	1	11	1	0
Bilirakis	R	(FL-9)	No	0	1	0	$53,720	3	35	$0	1	12	0	0
Bishop	D	(NY-1)	Yes	1	5	0	$115,050	1	78	$0	1	22	0	1
Bishop	D	(GA-2)	Yes	1	15	0	$57,800	1	64	$500	0	36	0	1
Bishop	R	(UT-1)	No	0	5	0	$19,000	4	8	$0	0	31	1	0
Blackburn	R	(TN-7)	No	0	5	0	$97,900	5	5	$1,000	0	34	1	0
Blumenauer	D	(OR-3)	No	1	12	0	$32,550	1	72	$0	0	51	0	0
Blunt	R	(MO-7)	Yes	0	11	0	$571,987	4	11	$96,950	0	37	0	1
Boehner	R	(OH-8)	Yes	0	17	0	$714,589	5	0	$67,750	0	28	0	1
Bonner	R	(AL-1)	Yes	0	5	0	$72,450	4	21	$0	0	36	0	1

Bono Mack	R	(CA-45)	Yes	0	10	0	$46,300	3	35	$0	1	18	0	1
Boren	D	(OK-2)	Yes	1	3	0	$149,540	2	43	$5,250	0	46	0	1
Boswell	D	(IA-3)	Yes	1	11	0	$99,400	1	58	$1,000	0	6	0	1
Boucher	D	(VA-9)	Yes	1	15	0	$201,750	1	54	$1,000	0	36	0	1
Boustany	R	(LA-7)	Yes	0	3	0	$181,807	3	21	$1,000	0	42	0	1
Boyd	D	(FL-2)	Yes	1	11	0	$136,981	1	49	$6,000	1	100	0	1
Boyda	D	(KS-2)	No	1	1	0	$49,300	1	52	$0	0	4	0	0
Brady	R	(TX-8)	Yes	0	11	0	$58,000	4	7	$0	1	34	1	1
Brady	D	(PA-1)	Yes	1	11	0	$37,550	1	82	$0	1	100	0	1
Braley	D	(IA-1)	Yes	1	1	0	$26,400	1	78	$0	0	12	0	1
Brown	D	(FL-3)	Yes	1	15	0	$4,000	1	63	$450	1	100	0	1
Brown	R	(SC-1)	Yes	0	7	0	$20,750	4	25	$0	0	22	1	1
Brown-Waite	R	(FL-5)	No	0	5	1	$157,150	3	34	$21,000	1	20	0	0
Buchanan	R	(FL-13)	Yes	0	1	0	$209,985	3	39	$0	1	0	1	1
Burgess	R	(TX-26)	No	0	5	0	$50,750	4	17	$0	1	23	1	0
Burton	R	(IN-5)	No	0	25	0	$50,935	5	13	$0	0	34	1	0
Butterfield	D	(NC-1)	No	1	4	0	$29,800	1	63	$2,000	0	100	0	0
Buyer	R	(IN-4)	No	0	15	0	$18,250	4	23	$0	0	24	0	0
Calvert	R	(CA-44)	Yes	0	15	0	$44,600	4	21	$1,000	1	21	0	1

Name	Party	District												
Camp	R	(MI-4)	Yes	0	17	0	$165,100	4	21	$5,000	0	22	1	1
Campbell	R	(CA-48)	Yes	0	3	1	$137,725	5	16	$1,000	1	23	1	1
Cannon	R	(UT-3)	Yes	0	11	0	$38,750	5	3	$2,500	0	26	1	1
Cantor	R	(VA-7)	Yes	0	7	0	$628,551	5	4	$48,500	0	30	1	1
Capito	R	(WV-2)	No	0	7	1	$268,280	3	42	$14,250	0	14	0	0
Capps	D	(CA-23)	Yes	1	10	0	$57,050	1	82	$0	1	30	0	1
Capuano	D	(MA-8)	Yes	1	9	1	$145,000	1	73	$6,000	0	82	0	1
Cardoza	D	(CA-18)	Yes	1	5	0	$104,850	1	67	$4,000	1	32	0	1
Carnahan	D	(MO-3)	Yes	1	3	0	$36,500	1	64	$1,250	0	33	0	1
Carney	D	(PA-10)	No	1	1	0	$32,653	1	52	$250	0	6	0	0
Carter	R	(TX-31)	No	0	5	0	$94,722	4	13	$0	1	19	1	0
Castle	R	(DE-1)	Yes	0	15	1	$492,665	3	46	$9,200	0	18	0	1
Castor	D	(FL-11)	No	1	1	0	$33,900	1	67	$500	1	40	0	0
Chabot	R	(OH-1)	No	0	13	0	$216,901	5	26	$4,750	0	6	1	0
Chandler	D	(KY-6)	No	1	4	0	$42,450	1	60	$0	0	70	0	0
Clarke	D	(NY-11)	Yes	1	1	0	$28,350	1	82	$0	1	81	0	1
Clay	D	(MO-1)	No	1	7	1	$61,600	1	67	$10,250	0	48	0	0
Cleaver	D	(MO-5)	Yes	1	3	1	$78,700	1	82	$7,000	0	32	0	1
Clyburn	D	(SC-6)	Yes	1	15	0	$268,161	1	82	$29,750	0	30	0	1

Coble	R	(NC-6)	Yes	0	13	0	$31,250	4	21	$0	0	42	0	1
Cohen	D	(TN-9)	Yes	1	1	0	$35,950	1	61	$0	0	38	0	1
Cole	R	(OK-4)	Yes	0	5	0	$83,400	4	18	$5,000	0	30	1	1
Conaway	R	(TX-11)	Yes	0	3	0	$77,623	4	3	$1,000	1	100	1	1
Conyers	D	(MI-14)	No	1	43	0	$15,203	1	82	$0	0	70	0	0
Cooper	D	(TN-5)	Yes	1	25	0	$72,400	2	49	$1,000	0	41	0	1
Costa	D	(CA-20)	Yes	1	3	0	$63,850	1	59	$2,000	1	100	0	1
Costello	D	(IL-12)	No	1	20	0	$22,800	1	58	$0	0	100	0	0
Courtney	D	(CT-2)	No	1	1	0	$112,710	1	69	$0	0	0	0	0
Cramer	D	(AL-5)	Yes	1	17	0	$11,950	1	50	$7,500	0	100	0	1
Crenshaw	R	(FL-4)	Yes	0	7	0	$53,250	4	27	$0	1	40	0	1
Crowley	D	(NY-7)	Yes	1	9	0	$615,104	1	82	$29,700	1	68	0	1
Cuellar	D	(TX-28)	Yes	1	3	0	$156,911	1	47	$2,450	1	48	0	1
Culberson	R	(TX-7)	No	0	7	0	$54,700	4	3	$0	1	20	1	0
Cummings	D	(MD-7)	Yes	1	12	0	$63,750	1	73	$16,700	0	100	0	1
Davis	D	(AL-7)	Yes	1	5	0	$292,135	1	73	$11,750	0	100	0	1
Davis	D	(IL-7)	Yes	1	11	0	$44,852	1	72	$4,950	1	74	0	1
Davis	D	(CA-53)	Yes	1	7	0	$4,500	1	67	$0	1	36	0	1
Davis	R	(VA-11)	Yes	0	13	0	$163,650	3	33	$75,499	0	11	0	1

Davis	R	(KY-4)	No	0	3	1	$482,123	4	23	$21,000	0	7	1	0
Davis	D	(TN-4)	No	1	5	1	$130,300	1	53	$5,000	0	32	0	0
Davis	R	(TN-1)	No	0	1	0	$34,504	4	12	$0	0	24	1	0
Deal	R	(GA-9)	No	0	15	0	$29,500	5	5	$0	0	54	0	0
DeFazio	D	(OR-4)	No	1	21	0	$3,000	1	61	$0	0	24	0	0
DeGette	D	(CO-1)	Yes	1	11	0	$39,150	1	76	$2,500	0	58	0	1
Delahunt	D	(MA-10)	No	1	11	0	$20,500	1	82	$0	0	36	0	0
DeLauro	D	(CT-3)	Yes	1	17	0	$22,650	1	78	$1,750	0	54	0	1
Dent	R	(PA-15)	Yes	0	3	0	$180,001	3	43	$0	0	9	0	1
Diaz-Balart	R	(FL-21)	No	0	15	0	$94,650	3	35	$3,000	1	18	0	0
Diaz-Balart	R	(FL-25)	No	0	5	0	$75,900	3	34	$1,450	1	16	1	0
Dicks	D	(WA-6)	Yes	1	11	0	$19,650	1	78	$250	0	42	0	1
Dingell	D	(MI-15)	Yes	1	53	0	$100,700	1	73	$10,000	0	83	0	1
Doggett	D	(TX-25)	No	1	13	0	$48,300	1	64	$0	1	40	0	0
Donnelly	D	(IN-2)	Yes	1	1	1	$75,905	1	48	$3,500	0	8	0	1
Doolittle	R	(CA-4)	No	0	17	0	$33,450	4	14	$11,500	1	3	1	0
Doyle	D	(PA-14)	Yes	1	13	0	$32,850	1	72	$0	0	80	0	1
Drake	R	(VA-2)	No	0	3	0	$156,649	4	18	$9,000	0	2	1	0
Dreier	R	(CA-26)	Yes	0	27	0	$389,900	4	18	$9,000	1	19	0	1

Name	Party	District											
Duncan	R	(TN-2)	No	0	20	0	$28,600	5	4	$600	0	56	0	0
Edwards	D	(TX-17)	Yes	1	17	0	$209,225	1	48	$0	1	18	0	1
Ehlers	R	(MI-3)	Yes	0	15	0	$26,000	3	40	$0	0	28	0	1
Ellison	D	(MN-5)	Yes	1	1	1	$23,350	1	82	$2,500	0	35	0	1
Ellsworth	D	(IN-8)	Yes	1	1	0	$65,083	1	51	$1,000	0	22	0	1
Emanuel	D	(IL-5)	Yes	1	5	0	$721,300	1	78	$51,750	1	56	0	1
Emerson	R	(MO-8)	Yes	0	12	0	$82,500	3	41	$0	0	46	0	1
Engel	D	(NY-17)	Yes	1	19	0	$60,540	1	82	$0	1	52	0	1
English	R	(PA-3)	No	0	13	0	$163,350	3	42	$4,000	0	12	0	0
Eshoo	D	(CA-14)	Yes	1	15	0	$39,400	1	69	$0	1	46	0	1
Etheridge	D	(NC-2)	Yes	1	11	0	$74,250	1	56	$0	0	32	0	1
Everett	R	(AL-2)	Yes	0	15	0	$78,150	4	25	$0	0	40	0	1
Fallin	R	(OK-5)	Yes	0	1	0	$32,100	4	14	$0	0	24	1	1
Farr	D	(CA-17)	Yes	1	15	0	$6,300	1	82	$0	1	54	0	1
Fattah	D	(PA-2)	Yes	1	13	0	$57,700	1	82	$1,500	1	80	0	1
Feeney	R	(FL-24)	No	0	5	1	$324,746	5	10	$14,750	1	16	1	0
Ferguson	R	(NJ-7)	Yes	0	7	0	$396,800	2	47	$2,700	0	1	0	1
Filner	D	(CA-51)	No	1	15	0	$15,550	1	82	$1,000	1	36	0	0
Flake	R	(AZ-6)	No	0	7	0	$75,620	5	4	$0	0	48	1	0

Forbes	R	(VA-4)	No	0	7	0	$59,570	4	27	$0	0	52	1	0
Fortenberry	R	(NE-1)	No	0	3	0	$157,072	3	36	$0	0	18	1	0
Fossella	R	(NY-13)	Yes	0	11	0	$356,349	4	40	$10,750	1	14	0	1
Foxx	R	(NC-5)	No	0	3	0	$106,550	5	4	$0	0	14	1	0
Frank	D	(MA-4)	Yes	1	27	1	$656,955	1	82	$42,350	0	100	0	1
Franks	R	(AZ-2)	No	0	5	0	$24,900	5	0	$0	0	19	1	0
Frelinghuysen	R	(NJ-11)	Yes	0	13	0	$71,200	3	39	$0	0	25	0	1
Gallegly	R	(CA-24)	No	0	21	0	$22,600	4	23	$0	1	24	0	0
Garrett	R	(NJ-5)	No	0	5	1	$207,952	5	9	$0	0	11	1	0
Gerlach	R	(PA-6)	Yes	0	5	1	$357,999	3	45	$17,750	0	2	0	1
Giffords	D	(AZ-8)	Yes	1	1	0	$53,579	1	62	$0	0	12	0	1
Gilchrest	R	(MD-1)	Yes	0	17	0	$18,600	2	44	$0	0	38	0	1
Gillibrand	D	(NY-20)	No	1	1	0	$251,546	1	64	$0	1	6	0	0
Gingrey	R	(GA-11)	No	0	5	0	$124,830	5	0	$0	0	42	1	0
Gohmert	R	(TX-1)	No	0	3	0	$133,864	4	15	$0	1	38	1	0
Gonzalez	D	(TX-20)	Yes	1	9	0	$95,700	1	53	$8,500	1	74	0	1
Goode	R	(VA-5)	No	0	11	0	$56,073	4	29	$0	0	19	1	0
Goodlatte	R	(VA-6)	No	0	15	0	$74,000	4	25	$0	0	62	1	0
Gordon	D	(TN-6)	Yes	1	13	0	$108,250	1	55	$6,750	0	36	0	1

Granger	R	(TX-12)	Yes	0	11	0	$100,650	4	13	$0	1	36	0	1
Graves	R	(MO-6)	No	0	7	0	$119,150	3	31	$1,000	0	25	0	0
Green	D	(TX-9)	Yes	1	3	1	$76,515	1	69	$4,000	1	100	0	1
Green	D	(TX-29)	No	1	15	0	$13,300	1	50	$0	1	50	0	0
Grijalva	D	(AZ-7)	No	1	5	0	$10,150	1	82	$2,000	0	24	0	0
Gutierrez	D	(IL-4)	Yes	1	15	1	$30,050	1	82	$3,250	1	72	0	1
Hall	D	(NY-19)	Yes	1	1	0	$74,615	1	64	$0	1	2	0	1
Hall	R	(TX-4)	No	0	27	0	$76,550	4	26	$0	1	32	0	0
Hare	D	(IL-17)	Yes	1	1	0	$30,800	1	69	$0	0	14	0	1
Harman	D	(CA-36)	Yes	1	15	0	$61,750	1	82	$3,250	1	31	0	1
Hastings	D	(FL-23)	Yes	1	15	0	$23,500	1	82	$300	1	100	0	1
Hastings	R	(WA-4)	No	0	13	0	$28,000	4	17	$2,000	0	20	0	0
Hayes	R	(NC-8)	No	0	9	0	$157,573	3	39	$1,000	0	0	0	0
Heller	R	(NV-2)	No	0	1	1	$86,850	4	27	$6,000	0	6	0	0
Hensarling	R	(TX-5)	No	0	5	1	$595,158	5	6	$3,250	1	26	1	0
Herger	R	(CA-2)	Yes	0	11	0	$54,900	4	8	$0	1	31	1	1
Herseth Sandlin	D	(SD)	No	1	4	0	$133,376	1	52	$16,200	0	40	0	0
Higgins	D	(NY-27)	Yes	1	3	0	$95,500	1	72	$1,000	1	58	0	1
Hill	D	(IN-9)	No	1	1	0	$87,834	1	51	$5,000	0	4	0	0

Hinchey	D	(NY-22)	No	1	15	0	$11,149	1	82	$500	1	100	0	0
Hinojosa	D	(TX-15)	Yes	1	11	1	$188,750	1	59	$14,500	1	37	0	1
Hirono	D	(HI-2)	Yes	1	1	0	$34,750	1	82	$0	0	22	0	1
Hobson	R	(OH-7)	Yes	0	17	0	$87,775	3	36	$2,850	0	22	0	1
Hodes	D	(NH-2)	No	1	1	1	$127,500	1	78	$5,450	0	8	0	0
Hoekstra	R	(MI-2)	Yes	0	15	0	$39,905	4	19	$0	0	34	1	1
Holden	D	(PA-17)	No	1	15	0	$24,075	1	56	$0	0	30	0	0
Holt	D	(NJ-12)	Yes	1	9	0	$44,955	1	82	$0	0	32	0	1
Honda	D	(CA-15)	Yes	1	7	0	$16,150	1	82	$4,750	1	44	0	1
Hooley	D	(OR-5)	Yes	1	11	0	$250,062	1	66	$28,750	0	11	0	1
Hoyer	D	(MD-5)	Yes	1	27	0	$429,899	1	82	$55,500	0	68	0	1
Hulshof	R	(MO-9)	No	0	11	0	$161,050	3	30	$1,700	0	25	0	0
Hunter	R	(CA-52)	No	0	27	0	$20,625	4	26	$0	1	33	1	0
Inglis	R	(SC-4)	Yes	0	15	0	$36,000	4	29	$0	0	32	1	1
Inslee	D	(WA-1)	No	1	9	0	$17,550	1	63	$750	0	36	0	0
Israel	D	(NY-2)	Yes	1	7	0	$246,689	1	63	$12,050	1	40	0	1
Issa	R	(CA-49)	No	0	7	0	$35,460	5	4	$0	1	29	1	0
Jackson	D	(IL-2)	Yes	1	13	0	$88,525	1	82	$14,000	1	73	0	1
Jackson-Lee	D	(TX-18)	Yes	1	13	0	$3,250	1	69	$8,000	1	58	0	1

Jefferson	D	(LA-2)	No	1	17	0	$71,450	1	60	$19,250	0	8	0	0
Johnson	D	(TX-30)	Yes	1	15	0	$13,550	1	60	$2,825	1	62	0	1
Johnson	R	(IL-15)	No	0	7	0	$10,503	3	44	$0	0	16	0	0
Johnson	D	(GA-4)	No	1	1	0	$22,300	1	82	$1,000	0	52	0	0
Johnson	R	(TX-3)	No	0	17	0	$171,950	5	8	$0	1	27	1	0
Jones	R	(NC-3)	No	0	13	1	$104,300	3	40	$2,750	0	38	0	0
Jordan	R	(OH-4)	No	0	1	0	$70,368	5	5	$0	0	20	1	0
Kagen	D	(WI-8)	No	1	1	0	$27,000	1	78	$0	0	2	0	0
Kanjorski	D	(PA-11)	Yes	1	13	1	$571,010	1	50	$96,000	0	44	0	1
Kaptur	D	(OH-9)	No	1	25	0	$8,650	1	57	$4,350	0	48	0	0
Keller	R	(FL-8)	No	0	7	0	$121,550	4	31	$2,500	1	7	0	0
Kennedy	D	(RI-1)	Yes	1	13	0	$179,250	1	82	$3,250	0	46	0	1
Kildee	D	(MI-5)	Yes	1	31	0	$31,250	1	73	$0	0	48	0	1
Kilpatrick	D	(MI-13)	Yes	1	11	0	$54,050	1	73	$4,000	0	100	0	1
Kind	D	(WI-3)	Yes	1	11	0	$142,350	1	60	$0	0	30	0	1
King	R	(NY-3)	Yes	0	15	1	$133,794	3	42	$16,750	1	12	0	1
King	R	(IA-5)	No	0	5	0	$64,150	5	8	$0	0	22	1	0
Kingston	R	(GA-1)	No	0	15	0	$40,450	4	9	$0	0	36	1	0
Kirk	R	(IL-10)	Yes	0	7	0	$314,275	3	45	$0	0	6	0	1

Klein	D	(FL-22)	Yes	1	1	1	$236,128	1	62	$11,000	1	4	0	1
Kline	R	(MN-2)	Yes	0	5	0	$172,221	4	9	$0	0	16	1	1
Knollenberg	R	(MI-9)	Yes	0	15	0	$149,500	3	32	$8,250	0	6	0	1
Kucinich	D	(OH-10)	No	1	11	0	$36,779	1	48	$1,349	0	32	0	0
Kuhl	R	(NY-29)	Yes	0	3	0	$85,750	3	38	$0	1	4	0	1
LaHood	R	(IL-18)	Yes	0	13	0	$58,850	3	43	$500	0	34	0	1
Lamborn	R	(CO-5)	No	0	1	0	$52,000	5	0	$0	0	18	1	0
Lampson	D	(TX-22)	No	1	11	0	$83,350	2	46	$250	1	10	0	0
Langevin	D	(RI-2)	Yes	1	7	0	$39,800	1	82	$0	0	46	0	1
Larsen	D	(WA-2)	Yes	1	7	0	$60,700	1	61	$0	0	28	0	1
Larson	D	(CT-1)	Yes	1	9	0	$98,550	1	78	$8,000	0	48	0	1
Latham	R	(IA-4)	No	0	13	0	$138,650	2	32	$1,000	0	14	0	0
LaTourette	R	(OH-14)	No	0	5	1	$218,550	3	43	$17,500	0	19	0	0
Lee	D	(CA-9)	Yes	1	10	0	$27,550	1	82	$11,250	1	75	0	1
Levin	D	(MI-12)	Yes	1	15	0	$31,250	1	67	$9,800	0	44	0	1
Lewis	R	(KY-2)	Yes	0	15	0	$65,600	4	20	$0	0	10	1	1
Lewis	R	(CA-41)	Yes	0	29	0	$37,300	4	19	$8,000	1	34	0	1
Lewis	D	(GA-5)	Yes	1	21	0	$54,250	1	82	$8,500	0	100	0	1
Linder	R	(GA-7)	No	0	15	0	$123,056	5	0	$1,150	0	42	0	0

Name	Party	District	Vote			Amount							
Lipinski	D	(IL-3)	No	1	3	0	$8,250	1	60	$0	1	54	0	0
LoBiondo	R	(NJ-2)	No	0	5	0	$30,750	2	51	$0	0	27	0	0
Loebsack	D	(IA-2)	Yes	1	1	0	$17,500	1	67	$0	0	2	0	1
Lofgren	D	(CA-16)	Yes	1	13	0	$18,400	1	82	$1,000	1	46	0	1
Lowey	D	(NY-18)	Yes	1	9	0	$267,100	1	82	$0	1	40	0	1
Lucas	R	(OK-3)	No	0	5	1	$116,800	4	20	$3,000	0	34	1	0
Lungren	R	(CA-3)	Yes	0	29	0	$103,400	4	16	$0	1	21	1	1
Lynch	D	(MA-9)	No	1	7	1	$120,800	1	82	$22,500	0	56	0	0
Mack	R	(FL-14)	No	0	3	0	$195,906	4	17	$500	1	28	1	0
Mahoney	D	(FL-16)	Yes	1	1	1	$273,290	1	50	$11,000	1	1	0	1
Maloney	D	(NY-14)	Yes	1	15	1	$400,891	1	76	$39,750	1	68	0	1
Manzullo	R	(IL-16)	No	0	15	1	$265,925	4	19	$250	0	34	1	0
Marchant	R	(TX-24)	No	0	3	1	$161,027	4	12	$7,000	1	23	1	0
Markey	D	(MA-7)	Yes	1	33	0	$237,250	1	69	$2,250	0	100	0	1
Marshall	D	(GA-8)	Yes	1	5	0	$175,964	2	45	$6,000	0	2	0	1
Matheson	D	(UT-2)	No	1	7	0	$423,840	2	46	$24,500	0	22	0	0
Matsui	D	(CA-5)	Yes	1	3	0	$62,800	1	78	$3,500	1	48	0	1
McCarthy	D	(NY-4)	Yes	1	11	1	$203,350	1	67	$5,500	1	30	0	1
McCarthy	R	(CA-22)	No	0	1	1	$69,450	4	11	$3,000	1	42	0	0

McCaul	R	(TX-10)	No	0	3	0	$113,073	4	27	$0	1	14	1	0
McCollum	D	(MN-4)	Yes	1	7	0	$66,470	1	82	$4,350	0	40	0	1
McCotter	R	(MI-11)	No	0	5	1	$90,687	4	33	$0	0	11	1	0
McCrery	R	(LA-4)	Yes	0	21	0	$338,050	4	15	$29,000	0	41	0	1
McDermott	D	(WA-7)	No	1	19	0	$6,250	1	73	$0	0	63	0	0
McGovern	D	(MA-3)	Yes	1	11	0	$37,150	1	82	$0	0	100	0	1
Mchenry	R	(NC-10)	No	0	3	1	$277,299	5	12	$12,500	0	24	1	0
McHugh	R	(NY-23)	Yes	0	15	0	$19,900	2	44	$0	1	26	0	1
McIntyre	D	(NC-7)	No	1	11	0	$46,800	1	51	$0	0	46	0	0
McKeon	R	(CA-25)	Yes	0	15	0	$242,877	4	6	$0	1	24	1	1
McMorris Rodgers	R	(WA-5)	No	0	3	0	$140,461	4	31	$0	0	12	1	0
McNerney	D	(CA-11)	Yes	1	1	0	$33,770	1	78	$1,000	1	6	0	1
McNulty	D	(NY-21)	Yes	1	19	0	$28,500	1	82	$0	1	56	0	1
Meek	D	(FL-17)	Yes	1	5	0	$134,250	1	82	$7,250	1	100	0	1
Meeks	D	(NY-6)	Yes	1	11	1	$293,128	1	82	$14,000	1	100	0	1
Melancon	D	(LA-3)	Yes	1	3	0	$77,592	1	47	$8,000	0	15	0	1
Mica	R	(FL-7)	No	0	15	0	$21,500	4	6	$0	1	26	0	0
Michaud	D	(ME-2)	No	1	7	0	$57,030	1	77	$1,000	0	40	0	0
Miller	R	(CA-42)	Yes	0	9	1	$53,600	4	18	$38,000	1	100	1	1

Miller	D	(NC-13)	Yes	1	5	1	$193,625	1	18	$18,000	0	28	0	1
Miller	D	(CA-7)	Yes	1	33	0	$88,055	1	78	$0	1	68	0	1
Miller	R	(MI-10)	No	0	5	0	$47,750	3	40	$0	0	35	0	0
Miller	R	(FL-1)	No	0	7	0	$17,500	5	24	$0	1	38	1	0
Mitchell	D	(AZ-5)	Yes	1	1	0	$56,401	2	53	$1,000	0	5	0	1
Mollohan	D	(WV-1)	Yes	1	25	0	$24,300	1	51	$0	0	28	0	1
Moore	D	(KS-3)	Yes	1	9	1	$505,817	1	78	$26,550	0	30	0	1
Moore	D	(WI-4)	Yes	1	3	1	$92,604	1	82	$8,250	0	44	0	1
Moran	D	(VA-8)	Yes	1	17	0	$82,350	1	67	$10,500	0	35	0	1
Moran	R	(KS-1)	No	0	11	0	$114,870	3	33	$2,000	0	59	1	0
Murphy	D	(PA-8)	Yes	1	1	0	$160,900	1	56	$0	1	0	0	1
Murphy	D	(CT-5)	Yes	1	1	1	$173,550	1	64	$4,000	0	12	0	1
Murphy	R	(PA-18)	No	0	5	0	$192,412	3	41	$2,000	0	16	0	0
Murtha	D	(PA-12)	Yes	1	35	0	$94,800	1	56	$0	0	22	0	1
Musgrave	R	(CO-4)	No	0	5	0	$226,912	4	3	$1,000	0	3	1	0
Myrick	R	(NC-9)	Yes	0	13	0	$170,750	5	13	$3,200	0	34	1	1
Nadler	D	(NY-8)	Yes	1	17	0	$139,050	1	78	$0	1	68	0	1
Napolitano	D	(CA-38)	No	1	19	0	$13,250	1	82	$9,300	1	50	0	0
Neal	D	(MA-2)	Yes	1	19	0	$133,706	1	82	$1,500	0	100	0	1

Neugebauer	R	(TX-19)	No	0	5	1	$233,609	5	0	$20,000	1	38	1	0
Nunes	R	(CA-21)	No	0	5	0	$71,750	4	15	$12,000	1	37	0	0
Oberstar	D	(MN-8)	Yes	1	33	0	$23,684	1	55	$2,500	0	30	0	1
Obey	D	(WI-7)	Yes	1	39	0	$35,550	1	82	$4,250	0	27	0	1
Olver	D	(MA-1)	Yes	1	17	0	$15,550	1	82	$2,000	0	52	0	1
Ortiz	D	(TX-27)	Yes	1	25	0	$20,625	1	55	$1,000	1	18	0	1
Pallone	D	(NJ-6)	Yes	1	21	0	$124,000	1	82	$0	0	39	0	1
Pascrell	D	(NJ-8)	Yes	1	19	0	$39,400	1	82	$500	0	43	0	1
Pastor	D	(AZ-4)	Yes	1	17	0	$61,400	1	62	$8,100	0	48	0	1
Paul	R	(TX-14)	No	0	11	1	$314,104	5	20	$3,500	1	20	0	0
Payne	D	(NJ-10)	No	1	19	0	$22,400	1	82	$10,100	0	100	0	0
Pearce	R	(NM-2)	No	0	5	1	$109,900	4	11	$5,000	0	20	1	0
Pence	R	(IN-6)	No	0	7	0	$143,722	5	0	$0	0	20	1	0
Perlmutter	D	(CO-7)	Yes	1	1	1	$128,700	1	77	$5,000	0	13	0	1
Peterson	R	(PA-5)	Yes	0	11	0	$26,400	3	23	$0	0	20	0	1
Peterson	D	(MN-7)	No	1	17	0	$74,440	1	52	$0	0	41	0	0
Petri	R	(WI-6)	No	0	29	0	$7,750	4	37	$0	0	100	0	0
Pickering	R	(MS-3)	Yes	0	11	0	$33,000	4	30	$500	0	62	0	1
Pitts	R	(PA-16)	No	0	11	0	$21,000	5	9	$0	0	18	1	0

Platts	R	(PA-19)	No	0	7	0	$5,750	3	42	$250	0	31	0	0
Poe	R	(TX-2)	No	0	3	0	$68,089	4	26	$0	1	32	1	0
Pomeroy	D	(ND)	Yes	1	15	0	$243,670	1	69	$6,750	0	32	0	1
Porter	R	(NV-3)	Yes	0	4	0	$236,205	3	40	$2,000	0	1	0	1
Price	D	(NC-4)	Yes	1	21	0	$30,950	1	82	$4,550	0	30	0	1
Price	R	(GA-6)	No	0	3	1	$216,356	5	6	$3,500	0	44	1	0
Pryce	R	(OH-15)	Yes	0	15	1	$519,281	3	35	$55,500	0	0	0	1
Putnam	R	(FL-12)	Yes	0	7	1	$145,868	4	18	$15,500	1	50	0	1
Radanovich	R	(CA-19)	Yes	0	13	0	$23,950	4	0	$0	1	20	1	1
Rahall	D	(WV-3)	Yes	1	31	0	$11,600	1	59	$0	0	38	0	1
Ramstad	R	(MN-3)	Yes	0	17	0	$99,050	3	45	$0	0	30	0	1
Rangel	D	(NY-15)	Yes	1	37	0	$547,950	1	82	$38,000	1	88	0	1
Regula	R	(OH-16)	Yes	0	35	0	$40,400	3	39	$2,000	0	18	0	1
Rehberg	R	(MT)	No	0	7	0	$55,700	3	26	$500	0	20	1	0
Reichert	R	(WA-8)	No	0	3	0	$178,086	2	46	$2,000	0	2	0	0
Renzi	R	(AZ-1)	No	0	5	0	$269,444	3	37	$28,250	0	7	0	0
Reyes	D	(TX-16)	Yes	1	11	0	$29,250	1	56	$17,550	1	58	0	1
Reynolds	R	(NY-26)	Yes	0	9	0	$376,225	3	31	$62,200	1	4	1	1
Rodriguez	D	(TX-23)	No	1	15	0	$34,050	1	54	$3,750	1	8	0	0

Rogers	R	(KY-5)	Yes	0	27	0	$39,000	4	25	$0	0	48	0	1
Rogers	R	(AL-3)	Yes	0	4	0	$178,848	3	31	$0	0	22	0	1
Rogers	R	(MI-8)	No	0	7	0	$151,624	4	29	$22,750	0	12	0	0
Rohrabacher	R	(CA-46)	No	0	19	0	$21,950	5	7	$0	1	22	0	0
Roskam	R	(IL-6)	No	0	1	1	$234,251	4	24	$11,650	1	2	1	0
Ros-Lehtinen	R	(FL-18)	Yes	0	19	0	$58,485	3	37	$0	1	24	0	1
Ross	D	(AR-4)	Yes	1	7	0	$184,700	1	53	$5,550	0	50	0	1
Rothman	D	(NJ-9)	No	1	11	0	$67,150	1	82	$0	0	43	0	0
Roybal-Allard	D	(CA-34)	No	1	15	0	$33,050	1	82	$9,800	1	54	0	0
Royce	R	(CA-40)	No	0	15	1	$325,027	5	9	$28,600	1	36	1	0
Ruppersberger	D	(MD-2)	Yes	1	5	0	$98,650	1	64	$0	0	40	0	1
Rush	D	(IL-1)	Yes	1	15	0	$45,375	1	73	$1,000	1	68	0	1
Ryan	D	(OH-17)	Yes	1	5	0	$60,900	1	73	$0	0	60	0	1
Ryan	R	(WI-1)	Yes	0	9	0	$248,699	5	17	$3,250	0	26	1	1
Salazar	D	(CO-3)	No	1	3	0	$43,750	1	61	$4,250	0	24	0	0
Sali	R	(ID-1)	No	0	1	0	$40,575	5	3	$0	0	5	1	0
Sanchez	D	(CA-39)	No	1	5	0	$23,736	1	82	$2,000	1	32	0	0
Sanchez	D	(CA-47)	No	1	11	0	$38,690	1	77	$4,250	1	24	0	0
Sarbanes	D	(MD-3)	Yes	1	1	0	$104,178	1	73	$500	0	32	0	1

Saxton	R	(NJ-3)	Yes	0	25	0	$50,331	3	43	$0	0	17	0	1
Schakowsky	D	(IL-9)	Yes	1	9	0	$63,230	1	82	$0	1	50	0	1
Schiff	D	(CA-29)	Yes	1	7	0	$52,168	1	77	$1,000	1	37	0	1
Schmidt	R	(OH-2)	Yes	0	3	0	$86,100	4	29	$3,500	0	2	0	1
Schwartz	D	(PA-13)	Yes	1	3	0	$204,900	1	67	$3,200	1	32	0	1
Scott	D	(VA-3)	No	1	5	0	$45,450	1	69	$1,000	0	100	0	0
Scott	D	(GA-13)	Yes	1	15	1	$280,907	1	82	$17,000	0	38	0	1
Sensenbrenner	R	(WI-5)	No	0	29	0	$89,017	5	11	$0	0	26	0	0
Serrano	D	(NY-16)	No	1	18	0	$13,500	1	73	$2,500	1	92	0	0
Sessions	R	(TX-32)	Yes	0	11	0	$545,938	4	13	$29,472	1	16	1	1
Sestak	D	(PA-7)	Yes	1	1	0	$144,876	1	64	$1,150	0	12	0	1
Shadegg	R	(AZ-3)	Yes	0	13	0	$110,600	5	0	$500	0	19	1	1
Shays	R	(CT-4)	Yes	0	21	1	$766,917	3	48	$2,500	0	3	0	1
Shea-Porter	D	(NH-1)	No	1	1	0	$2,800	1	78	$0	0	4	0	0
Sherman	D	(CA-27)	No	1	11	1	$109,100	1	82	$18,000	1	38	0	0
Shimkus	R	(IL-19)	No	0	11	0	$55,301	4	29	$0	0	22	0	0
Shuler	D	(NC-11)	No	1	1	0	$29,250	1	55	$0	0	8	0	0
Shuster	R	(PA-9)	Yes	0	7	0	$40,700	4	19	$0	0	20	0	1
Simpson	R	(ID-2)	Yes	0	9	0	$23,850	3	36	$0	0	28	0	1

Name	Party	District													
Sires	D	(NJ-13)	Yes	1	2	0	$51,650	1	82	$2,000	0	59	0	1
Skelton	D	(MO-4)	Yes	1	31	0	$52,000	1	59	$500	0	39	0	1
Slaughter	D	(NY-28)	Yes	1	21	0	$34,750	1	82	$5,500	1	46	0	1
Smith	R	(TX-21)	Yes	0	21	0	$88,700	4	21	$500	1	36	1	1
Smith	D	(WA-9)	Yes	1	11	0	$56,150	1	64	$2,250	0	32	0	1
Smith	R	(NJ-4)	No	0	28	0	$25,200	2	48	$1,000	0	33	0	0
Smith	R	(NE-3)	No	0	1	0	$94,750	4	14	$0	0	10	0	0
Snyder	D	(AR-2)	Yes	1	11	0	$32,100	1	69	$0	0	22	0	1
Solis	D	(CA-32)	Yes	1	7	0	$15,350	1	82	$6,800	1	66	0	1
Souder	R	(IN-3)	Yes	0	13	0	$28,500	4	23	$3,000	0	8	1	1
Space	D	(OH-18)	Yes	1	1	0	$48,410	1	54	$1,000	0	24	0	1
Spratt	D	(SC-5)	Yes	1	25	0	$277,150	1	77	$21,500	0	14	0	1
Stark	D	(CA-13)	No	1	35	0	$4,250	1	67	$500	1	48	0	0
Stearns	R	(FL-6)	No	0	19	0	$59,905	4	27	$1,850	1	20	1	0
Stupak	D	(MI-1)	No	1	15	0	$8,500	1	53	$0	0	41	0	0
Sullivan	R	(OK-1)	Yes	0	5	0	$50,250	4	14	$0	0	33	1	1
Sutton	D	(OH-13)	Yes	1	1	0	$6,000	1	64	$0	0	22	0	1
Tancredo	R	(CO-6)	Yes	0	9	0	$26,775	5	0	$0	0	19	1	1
Tanner	D	(TN-8)	Yes	1	19	0	$217,922	1	49	$4,250	0	46	0	1

Tauscher	D	(CA-10)	Yes	1	11	0	$89,800	1	69	$2,000	1	32	0	1
Taylor	D	(MS-4)	No	1	19	0	$5,500	2	47	$0	0	60	0	0
Terry	R	(NE-2)	Yes	0	9	0	$154,575	4	28	$1,000	0	10	0	1
Thompson	D	(CA-1)	Yes	1	9	0	$115,054	1	67	$10,600	1	37	0	1
Thompson	D	(MS-2)	No	1	15	0	$51,450	1	82	$7,000	0	28	0	0
Thornberry	R	(TX-13)	Yes	0	13	0	$55,175	4	6	$0	1	51	1	1
Tiahrt	R	(KS-4)	No	0	13	0	$69,050	4	24	$6,500	0	30	0	0
Tiberi	R	(OH-12)	Yes	0	7	0	$506,895	4	32	$35,700	0	16	0	1
Tierney	D	(MA-6)	Yes	1	11	0	$17,950	1	82	$0	0	40	0	1
Towns	D	(NY-10)	Yes	1	25	0	$73,675	1	82	$1,750	1	86	0	1
Turner	R	(OH-3)	No	0	5	0	$82,050	3	38	$375	0	18	1	0
Udall	D	(CO-2)	No	1	9	0	$149,831	1	61	$3,000	0	37	0	0
Udall	D	(NM-3)	No	1	9	0	$86,711	1	78	$0	0	50	0	0
Upton	R	(MI-6)	Yes	0	21	0	$42,580	3	41	$0	0	23	0	1
Van Hollen	D	(MD-8)	Yes	1	5	0	$71,248	1	82	$30,700	0	56	0	1
Velazquez	D	(NY-12)	Yes	1	15	1	$330,850	1	82	$20,750	1	78	0	1
Visclosky	D	(IN-1)	No	1	23	0	$57,100	1	73	$0	0	43	0	0
Walberg	R	(MI-7)	No	0	1	0	$46,950	4	20	$1,000	0	5	1	0
Walden	R	(OR-2)	Yes	0	9	0	$41,900	3	34	$0	0	47	0	1

Walsh	R	(NY-25)	Yes	0	19	0	$47,000	2	44	$7,750	1	2	0	1
Walz	D	(MN-1)	No	1	1	0	$40,250	1	69	$0	0	6	0	0
Wamp	R	(TN-3)	Yes	0	13	0	$45,900	4	24	$0	0	32	1	1
Wasserman Schultz	D	(FL-20)	Yes	1	3	0	$114,133	1	73	$10,750	1	100	0	1
Waters	D	(CA-35)	Yes	1	17	1	$8,500	1	82	$17,800	1	74	0	1
Watson	D	(CA-33)	Yes	1	7	0	$1,250	1	82	$250	1	100	0	1
Watt	D	(NC-12)	Yes	1	15	1	$223,840	1	82	$17,250	0	34	0	1
Waxman	D	(CA-30)	Yes	1	33	0	$10,500	1	78	$0	1	44	0	1
Weiner	D	(NY-9)	Yes	1	9	0	$31,051	1	78	$250	1	100	0	1
Welch	D	(VT)	Yes	1	1	0	$24,050	1	77	$1,000	0	8	0	1
Weldon	R	(FL-15)	Yes	0	13	0	$32,750	4	19	$500	1	12	1	1
Westmoreland	R	(GA-3)	No	0	5	0	$106,850	5	0	$0	0	36	1	0
Wexler	D	(FL-19)	Yes	1	11	0	$75,150	1	82	$3,500	1	100	0	1
Whitfield	R	(KY-1)	No	0	13	0	$62,750	3	33	$6,000	0	20	0	0
Wilson	R	(SC-2)	Yes	0	7	0	$48,100	5	9	$0	0	26	1	1
Wilson	D	(OH-6)	Yes	1	1	1	$63,850	1	57	$7,250	0	24	0	1
Wilson	R	(NM-1)	Yes	0	11	0	$182,131	3	37	$1,250	0	0	0	1
Wolf	R	(VA-10)	Yes	0	27	0	$64,100	3	41	$1,000	0	16	0	1
Woolsey	D	(CA-6)	Yes	1	15	0	$11,600	1	82	$0	1	42	0	1

Wu	D	(OR-1)	Yes	1	9	0	$186,063	1	82	$500	0	29	0	1
Yarmuth	D	(KY-3)	Yes	1	1	0	$27,778	1	58	$0	0	3	0	1
Young	R	(FL-10)	No	0	37	0	$52,400	3	38	$0	1	32	0	0
Young	R	(AK-1)	No	0	35	0	$49,650	3	33	$0	0	17	0	0

Figure 2. Emergency Economic Stabilization Act of 2008 (Successful Vote – Regression Analysis)

SUMMARY OUTPUT (Emergency Economic Stabilization
Act of 2008 - Successful Vote)

Regression Statistics	
Multiple R	0.405621131
R Square	0.164528502
Adjusted R Square	0.143899576
Standard Error	0.452703484
Observations	416

ANOVA

	df	SS	MS	F	Significance F
Regression	10	16.34527388	1.634527388	7.975621373	9.27454E-12
Residual	405	83.00087996	0.204940444		
Total	415	99.34615385			

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Intercept	0.617903025	0.241619122	2.557343225	0.010910924	0.142918825	1.092887225	0.142918825	1.092887225
Party Code (x1)	-0.110291886	0.124883243	-0.883160006	0.377673746	-0.355792187	0.135208416	-0.355792187	0.135208416
Tenure (x2)	0.003528993	0.00286918	1.229965827	0.219423883	-0.002111351	0.009169338	-0.002111351	0.009169338

Fin Ser Comm (x3)	-0.103588022	0.067949907	-1.524476293	0.128170243	-0.237166573	0.029990529	-0.237166573	0.029990529
Dollars From Groups (x4)	6.79406E-07	2.43531E-07	2.789806366	0.005523052	2.00662E-07	1.15815E-06	2.00662E-07	1.15815E-06
Tax Union (x5)	-0.08631326	0.056184868	-1.53623677	0.12526116	-0.196763643	0.024137123	-0.196763643	0.024137123
Liberal Economic Rating (x6)	0.001938318	0.002328923	0.832281055	0.405740804	-0.002639968	0.006516605	-0.002639968	0.006516605
Fannie Mae and Freddie Mac Money (x7)	1.8639E-06	2.4515E-06	0.760309757	0.447511834	-2.95535E-06	6.68314E-06	-2.95535E-06	6.68314E-06
Fin. Center (x8)	0.053223529	0.047550691	1.119300835	0.263675207	-0.040253457	0.146700514	-0.040253457	0.146700514
Margin of Victory (x9)	0.00114577	0.001004154	1.141030319	0.25453155	-0.000828234	0.003119774	-0.000828234	0.003119774
Repub. Study Comm. (x10)	-0.077598769	0.078307625	-0.990947794	0.322302735	-0.231538922	0.076341385	-0.231538922	0.076341385

Table 3. American Recovery and Reinvestment Act of 2009 (Data for Vote)

Name	Party	State and Cong. District	Vote	Party Code (x1)	Tenure (x2)	Fin Ser Comm (x3)	Dollars From Groups (x4)	Tax Union (x5)	Liberal Economic Rating (x6)	Fin. Center (x8)	Repub. Study Comm. (x10)	Top 10 States by Population (x11)	Top 10 States for Fortune 500 Companies (x12)	Top 10 States for Unemployment (x13)	Vote Code for Obama Bill (Y)
Ackerman	D	(NY-5)	Yes	1	25	1	$140,212	1	76	1	0	1	1	0	1
Andrews	D	(NJ-1)	Yes	1	9	0	$256,869	1	82	0	0	1	1	0	1
Arcuri	D	(NY-24)	Yes	1	1	0	$88,030	1	78	1	0	1	1	0	1
Baird	D	(WA-3)	Yes	1	9	0	$71,300	1	76	0	0	0	0	0	1
Baldwin	D	(WI-2)	Yes	1	9	0	$20,800	1	82	0	0	0	0	0	1
Bean	D	(IL-8)	Yes	1	3	1	$487,305	2	50	0	0	1	1	0	1
Berman	D	(CA-28)	Yes	1	25	0	$61,500	1	82	1	0	1	1	1	1
Bishop	D	(NY-1)	Yes	1	5	0	$115,050	1	78	1	0	1	1	0	1
Bishop	D	(GA-2)	Yes	1	15	0	$57,800	1	64	0	0	1	1	0	1
Boren	D	(OK-2)	Yes	1	3	0		2	43	0	0	0	0	0	1

$149,54

0

Boswell	D	(IA-3)	Yes	1	11	0	$99,400	1	58	0	0	0	0	0	1
Boucher	D	(VA-9)	Yes	1	15	0	$201,750	1	54	0	0	0	0	0	1
Boyd	D	(FL-2)	Yes	1	11	0	$136,981	1	49	1	0	1	1	1	1
Brady	D	(PA-1)	Yes	1	11	0	$37,550	1	82	1	0	1	1	0	1
Brown	D	(FL-3)	Yes	1	15	0	$4,000	1	63	1	0	1	1	1	1
Capps	D	(CA-23)	Yes	1	10	0	$57,050	1	82	1	0	1	1	1	1
Capuano	D	(MA-8)	Yes	1	9	1	$145,000	1	73	0	0	0	0	0	1
Cardoza	D	(CA-18)	Yes	1	5	0	$104,850	1	67	1	0	1	1	1	1
Carnahan	D	(MO-3)	Yes	1	3	0	$36,500	1	64	0	0	0	0	0	1
Clarke	D	(NY-11)	Yes	1	1	0	$28,350	1	82	1	0	1	1	0	1
Cohen	D	(TN-9)	Yes	1	1	0	$35,950	1	61	0	0	0	0	0	1
Cooper	D	(TN-5)	Yes	1	25	0	$72,400	2	49	0	0	0	0	0	1
Costa	D	(CA-20)	Yes	1	3	0	$63,850	1	59	1	0	1	1	1	1
Crowley	D	(NY-7)	Yes	1	9	0	$615,104	1	82	1	0	1	1	0	1
Davis	D	(AL-7)	Yes	1	5	0	$292,13	1	73	0	0	0	0	0	1

Davis	D	(CA-53)	Yes	1	7	0	$4,500	1	67	1	0	1	1	1	1
Davis	D	(IL-7)	Yes	1	11	0	$44,852	1	72	1	0	1	1	0	1
DeGette	D	(CO-1)	Yes	1	11	0	$39,150	1	76	0	0	0	0	0	1
DeLauro	D	(CT-3)	Yes	1	17	0	$22,650	1	78	0	0	0	0	0	1
Dicks	D	(WA-6)	Yes	1	11	0	$19,650	1	78	0	0	0	0	0	1
Dingell	D	(MI-15)	Yes	1	53	0	$100,700	1	73	0	0	1	1	1	1
Donnelly	D	(IN-2)	Yes	1	1	1	$75,905	1	48	0	0	0	0	1	1
Doyle	D	(PA-14)	Yes	1	13	0	$32,850	1	72	0	0	1	1	0	1
Edwards	D	(TX-17)	Yes	1	17	0	$209,225	1	48	1	0	1	1	0	1
Ellison	D	(MN-5)	Yes	1	1	1	$23,350	1	82	0	0	0	1	0	1
Ellsworth	D	(IN-8)	Yes	1	1	0	$65,083	1	51	0	0	0	0	1	1
Engel	D	(NY-17)	Yes	1	19	0	$60,540	1	82	1	0	1	1	0	1
Eshoo	D	(CA-14)	Yes	1	15	0	$39,400	1	69	1	0	1	1	1	1
Etheridge	D	(NC-2)	Yes	1	11	0	$74,250	1	56	0	0	0	0	1	1
Farr	D	(CA-17)	Yes	1	15	0	$6,300	1	82	1	0	1	1	1	1
Fattah	D	(PA-2)	Yes	1	13	0	$57,700	1	82	1	0	1	1	0	1
Frank	D	(MA-4)	Yes	1	27	1	$656,95	1	82	0	0	0	0	0	1

Gonzalez	D	(TX-20)	Yes	1	9	0	$95,700	1	53	1	0	1	1	0	1
Gordon	D	(TN-6)	Yes	1	13	0	$108,250	1	55	0	0	0	0	0	1
Gutierrez	D	(IL-4)	Yes	1	15	1	$30,050	1	82	1	0	1	1	0	1
Hall	D	(NY-19)	Yes	1	1	0	$74,615	1	64	1	0	1	1	0	1
Hare	D	(IL-17)	Yes	1	1	0	$30,800	1	69	0	0	1	1	0	1
Harman	D	(CA-36)	Yes	1	15	0	$61,750	1	82	1	0	1	1	1	1
Hastings	D	(FL-23)	Yes	1	15	0	$23,500	1	82	1	0	1	1	1	1
Higgins	D	(NY-27)	Yes	1	3	0	$95,500	1	72	1	0	1	1	0	1
Hinojosa	D	(TX-15)	Yes	1	11	1	$188,750	1	59	1	0	1	1	0	1
Holt	D	(NJ-12)	Yes	1	9	0	$44,955	1	82	0	0	1	1	0	1
Honda	D	(CA-15)	Yes	1	7	0	$16,150	1	82	1	0	1	1	1	1
Hoyer	D	(MD-5)	Yes	1	27	0	$429,899	1	82	0	0	0	0	0	1
Israel	D	(NY-2)	Yes	1	7	0	$246,689	1	63	1	0	1	1	0	1
Johnson	D	(TX-30)	Yes	1	15	0	$13,550	1	60	1	0	1	1	0	1
Kanjorski	D	(PA-11)	Yes	1	13	1	$571,01	1	50	0	0	1	1	0	1

0

Name	Party	District													
Kennedy	D	(RI-1)	Yes	1	13	0	$179,250	1	82	0	0	0	0	1	1
Kildee	D	(MI-5)	Yes	1	31	0	$31,250	1	73	0	0	1	1	1	1
Kind	D	(WI-3)	Yes	1	11	0	$142,350	1	60	0	0	0	0	0	1
Klein	D	(FL-22)	Yes	1	1	1	$236,128	1	62	1	0	1	1	1	1
Langevin	D	(RI-2)	Yes	1	7	0	$39,800	1	82	0	0	0	0	1	1
Larsen	D	(WA-2)	Yes	1	7	0	$60,700	1	61	0	0	0	0	0	1
Larson	D	(CT-1)	Yes	1	9	0	$98,550	1	78	0	0	0	0	0	1
Levin	D	(MI-12)	Yes	1	15	0	$31,250	1	67	0	0	1	1	1	1
Loebsack	D	(IA-2)	Yes	1	1	0	$17,500	1	67	0	0	0	0	0	1
Lofgren	D	(CA-16)	Yes	1	13	0	$18,400	1	82	1	0	1	1	1	1
Lowey	D	(NY-18)	Yes	1	9	0	$267,100	1	82	1	0	1	1	0	1
Maloney	D	(NY-14)	Yes	1	15	1	$400,891	1	76	1	0	1	1	0	1
Markey	D	(MA-7)	Yes	1	33	0	$237,250	1	69	0	0	0	0	0	1
Marshall	D	(GA-8)	Yes	1	5	0	$175,964	2	45	0	0	1	1	0	1

Name	Party	District	Vote				Amount								
Matsui	D	(CA-5)	Yes	1	3	0	$62,800	1	78	1	0	1	1	1	1
McCarthy	D	(NY-4)	Yes	1	11	1	$203,350	1	67	1	0	1	1	0	1
McCollum	D	(MN-4)	Yes	1	7	0	$66,470	1	82	0	0	0	1	0	1
McDermott	D	(WA-7)	Yes	1	19	0	$6,250	1	73	0	0	0	0	0	1
McGovern	D	(MA-3)	Yes	1	11	0	$37,150	1	82	0	0	0	0	0	1
McNerney	D	(CA-11)	Yes	1	1	0	$33,770	1	78	1	0	1	1	1	1
Meek	D	(FL-17)	Yes	1	5	0	$134,250	1	82	1	0	1	1	1	1
Meeks	D	(NY-6)	Yes	1	11	1	$293,128	1	82	1	0	1	1	0	1
Melancon	D	(LA-3)	Yes	1	3	0	$77,592	1	47	0	0	0	0	0	1
Miller	D	(CA-7)	Yes	1	33	0	$88,055	1	78	1	0	1	1	1	1
Miller	D	(NC-13)	Yes	1	5	1	$193,625	1	18	0	0	0	0	1	1
Mollohan	D	(WV-1)	Yes	1	25	0	$24,300	1	51	0	0	0	0	0	1
Moore	D	(WI-4)	Yes	1	3	1	$92,604	1	82	0	0	0	0	0	1
Moore	D	(KS-3)	Yes	1	9	1	$505,817	1	78	0	0	0	0	0	1
Moran	D	(VA-8)	Yes	1	17	0	$82,350	1	67	0	0	0	0	0	1
Murphy	D	(CT-5)	Yes	1	1	1	$173,550	1	64	0	0	0	0	0	1

Murphy	D	(PA-8)	Yes	1	1	0	$160,900	1	56	1	0	1	1	0	1
Murtha	D	(PA-12)	Yes	1	35	0	$94,800	1	56	0	0	1	1	0	1
Nadler	D	(NY-8)	Yes	1	17	0	$139,050	1	78	1	0	1	1	0	1
Neal	D	(MA-2)	Yes	1	19	0	$133,706	1	82	0	0	0	0	0	1
Oberstar	D	(MN-8)	Yes	1	33	0	$23,684	1	55	0	0	0	1	0	1
Obey	D	(WI-7)	Yes	1	39	0	$35,550	1	82	0	0	0	0	0	1
Olver	D	(MA-1)	Yes	1	17	0	$15,550	1	82	0	0	0	0	0	1
Pallone	D	(NJ-6)	Yes	1	21	0	$124,000	1	82	0	0	1	1	0	1
Perlmutter	D	(CO-7)	Yes	1	1	1	$128,700	1	77	0	0	0	0	0	1
Pomeroy	D	(ND)	Yes	1	15	0	$243,670	1	69	0	0	0	0	0	1
Price	D	(NC-4)	Yes	1	21	0	$30,950	1	82	0	0	0	0	1	1
Rahall	D	(WV-3)	Yes	1	31	0	$11,600	1	59	0	0	0	0	0	1
Rangel	D	(NY-15)	Yes	1	37	0	$547,950	1	82	1	0	1	1	0	1
Reyes	D	(TX-16)	Yes	1	11	0	$29,250	1	56	1	0	1	1	0	1
Ross	D	(AR-4)	Yes	1	7	0	$184,700	1	53	0	0	0	0	0	1

Name	Party	District													
Ruppersberger	D	(MD-2)	Yes	1	5	0	$98,650	1	64	0	0	0	0	0	1
Ryan	D	(OH-17)	Yes	1	5	0	$60,900	1	73	0	0	1	1	1	1
Sarbanes	D	(MD-3)	Yes	1	1	0	$104,178	1	73	0	0	0	0	0	1
Schakowsky	D	(IL-9)	Yes	1	9	0	$63,230	1	82	1	0	1	1	0	1
Schwartz	D	(PA-13)	Yes	1	3	0	$204,900	1	67	1	0	1	1	0	1
Sestak	D	(PA-7)	Yes	1	1	0	$144,876	1	64	0	0	1	1	0	1
Sires	D	(NJ-13)	Yes	1	2	0	$51,650	1	82	0	0	1	1	0	1
Skelton	D	(MO-4)	Yes	1	31	0	$52,000	1	59	0	0	0	0	0	1
Slaughter	D	(NY-28)	Yes	1	21	0	$34,750	1	82	1	0	1	1	0	1
Smith	D	(WA-9)	Yes	1	11	0	$56,150	1	64	0	0	0	0	0	1
Snyder	D	(AR-2)	Yes	1	11	0	$32,100	1	69	0	0	0	0	0	1
Space	D	(OH-18)	Yes	1	1	0	$48,410	1	54	0	0	1	1	1	1
Spratt	D	(SC-5)	Yes	1	25	0	$277,150	1	77	0	0	0	0	1	1
Tanner	D	(TN-8)	Yes	1	19	0	$217,922	1	49	0	0	0	0	0	1
Tauscher	D	(CA-10)	Yes	1	11	0	$89,800	1	69	1	0	1	1	1	1

Name		District													
Towns	D	(NY-10)	Yes	1	25	0	$73,675	1	82	1	0	1	1	0	1
Van Hollen	D	(MD-8)	Yes	1	5	0	$71,248	1	82	0	0	0	0	0	1
Velazquez	D	(NY-12)	Yes	1	15	1	$330,850	1	82	1	0	1	1	0	1
Wasserman Schultz	D	(FL-20)	Yes	1	3	0	$114,133	1	73	1	0	1	1	1	1
Waters	D	(CA-35)	Yes	1	17	1	$8,500	1	82	1	0	1	1	1	1
Watt	D	(NC-12)	Yes	1	15	1	$223,840	1	82	0	0	0	0	1	1
Waxman	D	(CA-30)	Yes	1	33	0	$10,500	1	78	1	0	1	1	1	1
Weiner	D	(NY-9)	Yes	1	9	0	$31,051	1	78	1	0	1	1	0	1
Wexler	D	(FL-19)	Yes	1	11	0	$75,150	1	82	1	0	1	1	1	1
Wilson	D	(OH-6)	Yes	1	1	1	$63,850	1	57	0	0	1	1	1	1
Abercrombie	D	(HI-1)	Yes	1	17	0	$45,150	1	58	0	0	0	0	0	1
Altmire	D	(PA-4)	Yes	1	1	0	$59,600	1	56	0	0	1	1	0	1
Baca	D	(CA-43)	Yes	1	9	1	$46,000	1	82	1	0	1	1	1	1
Barrow	D	(GA-12)	Yes	1	3	0	$80,200	2	47	0	0	1	1	0	1
Becerra	D	(CA-31)	Yes	1	15	0	$101,350	1	82	1	0	1	1	1	1
Berkley	D	(NV-1)	Yes	1	9	0	$108,95	1	62	0	0	0	0	1	1

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Blumenauer	D	(OR-3)	Yes	1	12	0	$32,550	1	72	0	0	0	0	1	1
Braley	D	(IA-1)	Yes	1	1	0	$26,400	1	78	0	0	0	0	0	1
Butterfield	D	(NC-1)	Yes	1	4	0	$29,800	1	63	0	0	0	0	1	1
Carney	D	(PA-10)	Yes	1	1	0	$32,653	1	52	0	0	1	1	0	1
Castor	D	(FL-11)	Yes	1	1	0	$33,900	1	67	1	0	1	1	1	1
Chandler	D	(KY-6)	Yes	1	4	0	$42,450	1	60	0	0	0	0	0	1
Clay	D	(MO-1)	Yes	1	7	1	$61,600	1	67	0	0	0	0	0	1
Cleaver	D	(MO-5)	Yes	1	3	1	$78,700	1	82	0	0	0	0	0	1
Conyers	D	(MI-14)	Yes	1	43	0	$15,203	1	82	0	0	1	1	1	1
Costello	D	(IL-12)	Yes	1	20	0	$22,800	1	58	0	0	1	1	0	1
Courtney	D	(CT-2)	Yes	1	1	0	$112,710	1	69	0	0	0	0	0	1
Cuellar	D	(TX-28)	Yes	1	3	0	$156,911	1	47	1	0	1	1	0	1
Cummings	D	(MD-7)	Yes	1	12	0	$63,750	1	73	0	0	0	0	0	1
Davis	D	(TN-4)	Yes	1	5	1	$130,300	1	53	0	0	0	0	0	1
Delahunt	D	(MA-10)	Yes	1	11	0	$20,500	1	82	0	0	0	0	0	1
Doggett	D	(TX-25)	Yes	1	13	0	$48,300	1	64	1	0	1	1	0	1

Name	Party	District	Vote				Amount								
Filner	D	(CA-51)	Yes	1	15	0	$15,550	1	82	1	0	1	1	1	1
Giffords	D	(AZ-8)	Yes	1	1	0	$53,579	1	62	0	0	0	0	0	1
Green	D	(TX-9)	Yes	1	3	1	$76,515	1	69	1	0	1	1	0	1
Green	D	(TX-29)	Yes	1	15	0	$13,300	1	50	1	0	1	1	0	1
Grijalva	D	(AZ-7)	Yes	1	5	0	$10,150	1	82	0	0	0	0	0	1
Herseth Sandlin	D	(SD)	Yes	1	4	0	$133,376	1	52	0	0	0	0	0	1
Hill	D	(IN-9)	Yes	1	1	0	$87,834	1	51	0	0	0	0	1	1
Hinchey	D	(NY-22)	Yes	1	15	0	$11,149	1	82	1	0	1	1	0	1
Hirono	D	(HI-2)	Yes	1	1	0	$34,750	1	82	0	0	0	0	0	1
Hodes	D	(NH-2)	Yes	1	1	1	$127,500	1	78	0	0	0	0	0	1
Holden	D	(PA-17)	Yes	1	15	0	$24,075	1	56	0	0	1	1	0	1
Inslee	D	(WA-1)	Yes	1	9	0	$17,550	1	63	0	0	0	0	0	1
Jackson	D	(IL-2)	Yes	1	13	0	$88,525	1	82	1	0	1	1	0	1
Jackson-Lee	D	(TX-18)	Yes	1	13	0	$3,250	1	69	1	0	1	1	0	1
Johnson	D	(GA-4)	Yes	1	1	0	$22,300	1	82	0	0	1	1	0	1
Kagen	D	(WI-8)	Yes	1	1	0	$27,000	1	78	0	0	0	0	0	1
Kaptur	D	(OH-9)	Yes	1	25	0	$8,650	1	57	0	0	1	1	1	1
Kilpatrick	D	(MI-13)	Yes	1	11	0	$54,050	1	73	0	0	1	1	1	1

Kucinich	D	(OH-10)	Yes	1	11	0	$36,779	1	48	0	0	1	1	1	1
Lee	D	(CA-9)	Yes	1	10	0	$27,550	1	82	1	0	1	1	1	1
Lewis	D	(GA-5)	Yes	1	21	0	$54,250	1	82	0	0	1	1	0	1
Lynch	D	(MA-9)	Yes	1	7	1	$120,800	1	82	0	0	0	0	0	1
Matheson	D	(UT-2)	Yes	1	7	0	$423,840	2	46	0	0	0	0	0	1
McIntyre	D	(NC-7)	Yes	1	11	0	$46,800	1	51	0	0	0	0	1	1
Michaud	D	(ME-2)	Yes	1	7	0	$57,030	1	77	0	0	0	0	0	1
Mitchell	D	(AZ-5)	Yes	1	1	0	$56,401	2	53	0	0	0	0	0	1
Napolitano	D	(CA-38)	Yes	1	19	0	$13,250	1	82	1	0	1	1	1	1
Ortiz	D	(TX-27)	Yes	1	25	0	$20,625	1	55	1	0	1	1	0	1
Pascrell	D	(NJ-8)	Yes	1	19	0	$39,400	1	82	0	0	1	1	0	1
Pastor	D	(AZ-4)	Yes	1	17	0	$61,400	1	62	0	0	0	0	0	1
Payne	D	(NJ-10)	Yes	1	19	0	$22,400	1	82	0	0	1	1	0	1
Rodriguez	D	(TX-23)	Yes	1	15	0	$34,050	1	54	1	0	1	1	0	1
Rothman	D	(NJ-9)	Yes	1	11	0	$67,150	1	82	0	0	1	1	0	1
Roybal-Allard	D	(CA-34)	Yes	1	15	0	$33,050	1	82	1	0	1	1	1	1
Rush	D	(IL-1)	Yes	1	15	0	$45,375	1	73	1	0	1	1	0	1
Salazar	D	(CO-3)	Yes	1	3	0	$43,750	1	61	0	0	0	0	0	1

Name	Party	District	Vote				Amount								
Sanchez	D	(CA-39)	Yes	1	5	0	$23,736	1	82	1	0	1	1	1	1
Sanchez	D	(CA-47)	Yes	1	11	0	$38,690	1	77	1	0	1	1	1	1
Schiff	D	(CA-29)	Yes	1	7	0	$52,168	1	77	1	0	1	1	1	1
Scott	D	(VA-3)	Yes	1	5	0	$45,450	1	69	0	0	0	0	0	1
Scott	D	(GA-13)	Yes	1	15	1	$280,907	1	82	0	0	1	1	0	1
Serrano	D	(NY-16)	Yes	1	18	0	$13,500	1	73	1	0	1	1	0	1
Shea-Porter	D	(NH-1)	Yes	1	1	0	$2,800	1	78	0	0	0	0	0	1
Sherman	D	(CA-27)	Yes	1	11	1	$109,100	1	82	1	0	1	1	1	1
Shuler	D	(NC-11)	Yes	1	1	0	$29,250	1	55	0	0	0	0	1	1
Solis	D	(CA-32)	Yes	1	7	0	$15,350	1	82	1	0	1	1	1	1
Stark	D	(CA-13)	Yes	1	35	0	$4,250	1	67	1	0	1	1	1	1
Stupak	D	(MI-1)	Yes	1	15	0	$8,500	1	53	0	0	1	1	1	1
Sutton	D	(OH-13)	Yes	1	1	0	$6,000	1	64	0	0	1	1	1	1
Thompson	D	(CA-1)	Yes	1	9	0	$115,054	1	67	1	0	1	1	1	1
Thompson	D	(MS-2)	Yes	1	15	0	$51,450	1	82	0	0	0	0	0	1
Tierney	D	(MA-6)	Yes	1	11	0	$17,950	1	82	0	0	0	0	0	1
Visclosky	D	(IN-1)	Yes	1	23	0	$57,100	1	73	0	0	0	0	1	1

Walz	D	(MN-1)	Yes	1	1	0	$40,250	1	69	0	0	0	1	0	1
Watson	D	(CA-33)	Yes	1	7	0	$1,250	1	82	1	0	1	1	1	1
Welch	D	(VT)	Yes	1	1	0	$24,050	1	77	0	0	0	0	0	1
Woolsey	D	(CA-6)	Yes	1	15	0	$11,600	1	82	1	0	1	1	1	1
Wu	D	(OR-1)	Yes	1	9	0	$186,063	1	82	0	0	0	0	1	1
Yarmuth	D	(KY-3)	Yes	1	1	0	$27,778	1	58	0	0	0	0	0	1
Aderholt	R	(AL-4)	No	0	11	0	$40,992	3	29	0	1	0	0	0	0
Akin	R	(MO-2)	No	0	7	0	$112,700	5	11	0	1	0	0	0	0
Alexander	R	(LA-5)	No	0	5	0	$39,050	3	28	0	1	0	0	0	0
Bachmann	R	(MN-6)	No	0	1	1	$172,724	5	6	0	1	0	1	0	0
Bachus	R	(AL-6)	No	0	15	1	$924,138	4	22	0	1	0	0	0	0
Barrett	R	(SC-3)	No	0	5	1	$148,156	5	4	0	1	0	0	1	0
Bartlett	R	(MD-6)	No	0	15	0	$6,700	4	30	0	1	0	0	0	0
Barton	R	(TX-6)	No	0	23	0	$129,625	4	6	1	1	1	1	0	0
Biggert	R	(IL-13)	No	0	9	1	$278,684	4	34	0	0	1	1	0	0

Name	Party	District					$								
Bilbray	R	(CA-50)	No	0	2	0	$57,850	4	16	1	1	1	1	1	0
Bilirakis	R	(FL-9)	No	0	1	0	$53,720	3	35	1	1	1	1	1	0
Bishop	R	(UT-1)	No	0	5	0	$19,000	4	8	0	1	0	0	0	0
Blackburn	R	(TN-7)	No	0	5	0	$97,900	5	5	0	1	0	0	0	0
Blunt	R	(MO-7)	No	0	11	0	$571,987	4	11	0	0	0	0	0	0
Boehner	R	(OH-8)	No	0	17	0	$714,589	5	0	0	0	1	1	1	0
Bonner	R	(AL-1)	No	0	5	0	$72,450	4	21	0	1	0	0	0	0
Bono Mack	R	(CA-45)	No	0	10	0	$46,300	3	35	1	0	1	1	1	0
Boustany	R	(LA-7)	No	0	3	0	$181,807	3	21	0	0	0	0	0	0
Brady	R	(TX-8)	No	0	11	0	$58,000	4	7	1	0	1	1	0	0
Brown	R	(SC-1)	No	0	7	0	$20,750	4	25	0	1	0	0	1	0
Brown-Waite	R	(FL-5)	No	0	5	1	$157,150	3	34	1	0	1	1	1	0
Buchanan	R	(FL-13)	No	0	1	0	$209,985	3	39	1	1	1	1	1	0
Burgess	R	(TX-26)	No	0	5	0	$50,750	4	17	1	1	1	1	0	0
Burton	R	(IN-5)	No	0	25	0	$50,935	5	13	0	1	0	0	1	0
Buyer	R	(IN-4)	No	0	15	0	$18,250	4	23	0	0	0	0	1	0
Calvert	R	(CA-44)	No	0	15	0	$44,600	4	21	1	0	1	1	1	0

Name	Party	District													
Camp	R	(MI-4)	No	0	17	0	$165,100	4	21	0	1	1	1	1	0
Cantor	R	(VA-7)	No	0	7	0	$628,551	5	4	0	1	0	0	0	0
Capito	R	(WV-2)	No	0	7	1	$268,280	3	42	0	0	0	0	0	0
Carter	R	(TX-31)	No	0	5	0	$94,722	4	13	1	1	1	1	0	0
Castle	R	(DE-1)	No	0	15	1	$492,665	3	46	0	0	0	0	0	0
Coble	R	(NC-6)	No	0	13	0	$31,250	4	21	0	0	0	0	1	0
Cole	R	(OK-4)	No	0	5	0	$83,400	4	18	0	1	0	0	0	0
Conaway	R	(TX-11)	No	0	3	0	$77,623	4	3	1	1	1	1	0	0
Crenshaw	R	(FL-4)	No	0	7	0	$53,250	4	27	1	0	1	1	1	0
Culberson	R	(TX-7)	No	0	7	0	$54,700	4	3	1	1	1	1	0	0
Davis	R	(KY-4)	No	0	3	1	$482,123	4	23	0	1	0	0	0	0
Deal	R	(GA-9)	No	0	15	0	$29,500	5	5	0	0	1	1	0	0
Dent	R	(PA-15)	No	0	3	0	$180,001	3	43	0	0	1	1	0	0
Diaz-Balart	R	(FL-21)	No	0	15	0	$94,650	3	35	1	0	1	1	1	0
Diaz-Balart	R	(FL-25)	No	0	5	0	$75,900	3	34	1	0	1	1	1	0
Dreier	R	(CA-26)	No	0	27	0	$389,90	4	18	1	0	1	1	1	0

0

Duncan	R	(TN-2)	No	0	20	0	$28,600	5	4	0	0	0	0	0	0
Ehlers	R	(MI-3)	No	0	15	0	$26,000	3	40	0	0	1	1	1	0
Emerson	R	(MO-8)	No	0	12	0	$82,500	3	41	0	0	0	0	0	0
Fallin	R	(OK-5)	No	0	1	0	$32,100	4	14	0	1	0	0	0	0
Flake	R	(AZ-6)	No	0	7	0	$75,620	5	4	0	1	0	0	0	0
Forbes	R	(VA-4)	No	0	7	0	$59,570	4	27	0	1	0	0	0	0
Fortenberry	R	(NE-1)	No	0	3	0	$157,072	3	36	0	1	0	0	0	0
Foxx	R	(NC-5)	No	0	3	0	$106,550	5	4	0	1	0	0	1	0
Franks	R	(AZ-2)	No	0	5	0	$24,900	5	0	0	1	0	0	0	0
Frelinghuysen	R	(NJ-11)	No	0	13	0	$71,200	3	39	0	0	1	1	0	0
Gallegly	R	(CA-24)	No	0	21	0	$22,600	4	23	1	0	1	1	1	0
Garrett	R	(NJ-5)	No	0	5	1	$207,952	5	9	0	1	1	1	0	0
Gerlach	R	(PA-6)	No	0	5	1	$357,999	3	45	0	0	1	1	0	0
Gingrey	R	(GA-11)	No	0	5	0	$124,830	5	0	0	1	1	1	0	0
Gohmert	R	(TX-1)	No	0	3	0	$133,864	4	15	1	1	1	1	0	0

Name	Party	District												
Goodlatte	R	(VA-6)	No	0	15	0	$74,000	4	25	0	1	0	0	0	0
Granger	R	(TX-12)	No	0	11	0	$100,650	4	13	1	0	1	1	0	0
Graves	R	(MO-6)	No	0	7	0	$119,150	3	31	0	1	0	0	0	0
Hall	R	(TX-4)	No	0	27	0	$76,550	4	26	1	0	1	1	0	0
Hastings	R	(WA-4)	No	0	13	0	$28,000	4	17	0	0	0	0	0	0
Heller	R	(NV-2)	No	0	1	1	$86,850	4	27	0	0	0	0	1	0
Hensarling	R	(TX-5)	No	0	5	1	$595,158	5	6	1	1	1	1	0	0
Herger	R	(CA-2)	No	0	11	0	$54,900	4	8	1	1	1	1	1	0
Hoekstra	R	(MI-2)	No	0	15	0	$39,905	4	19	0	1	1	1	1	0
DeFazio	D	(OR-4)	No	1	21	0	$3,000	1	61	0	0	0	0	1	0
Hunter	R	(CA-52)	No	0	27	0	$20,625	4	26	1	1	1	1	1	0
Inglis	R	(SC-4)	No	0	15	0	$36,000	4	29	0	1	0	0	1	0
Issa	R	(CA-49)	No	0	7	0	$35,460	5	4	1	1	1	1	1	0
Johnson	R	(IL-15)	No	0	7	0	$10,503	3	44	0	0	1	1	0	0
Johnson	R	(TX-3)	No	0	17	0	$171,950	5	8	1	1	1	1	0	0
Jones	R	(NC-3)	No	0	13	1	$104,300	3	40	0	0	0	0	1	0
Jordan	R	(OH-4)	No	0	1	0	$70,368	5	5	0	1	1	1	1	0

King	R	(NY-3)	No	0	15	1	$133,794	3	42	1	0	1	1	0	0
King	R	(IA-5)	No	0	5	0	$64,150	5	8	0	1	0	0	0	0
Kingston	R	(GA-1)	No	0	15	0	$40,450	4	9	0	1	1	1	0	0
Kirk	R	(IL-10)	No	0	7	0	$314,275	3	45	0	0	1	1	0	0
Kline	R	(MN-2)	No	0	5	0	$172,221	4	9	0	1	0	1	0	0
LaHood	R	(IL-18)	No	0	13	0	$58,850	3	43	0	0	1	1	0	0
Lamborn	R	(CO-5)	No	0	1	0	$52,000	5	0	0	1	0	0	0	0
Latham	R	(IA-4)	No	0	13	0	$138,650	2	32	0	0	0	0	0	0
LaTourette	R	(OH-14)	No	0	5	1	$218,550	3	43	0	0	1	1	1	0
Lewis	R	(CA-41)	No	0	29	0	$37,300	4	19	1	0	1	1	1	0
Linder	R	(GA-7)	No	0	15	0	$123,056	5	0	0	1	1	1	0	0
LoBiondo	R	(NJ-2)	No	0	5	0	$30,750	2	51	0	0	1	1	0	0
Lucas	R	(OK-3)	No	0	5	1	$116,800	4	20	0	1	0	0	0	0
Lungren	R	(CA-3)	No	0	29	0	$103,400	4	16	1	1	1	1	1	0
Mack	R	(FL-14)	No	0	3	0	$195,90	4	17	1	1	1	1	1	0

Manzullo	R	(IL-16)	No	0	15	1	$265,925	4	19	0	1	1	1	0	0
Marchant	R	(TX-24)	No	0	3	1	$161,027	4	12	1	1	1	1	0	0
McCarthy	R	(CA-22)	No	0	1	1	$69,450	4	11	1	0	1	1	1	0
McCaul	R	(TX-10)	No	0	3	0	$113,073	4	27	1	1	1	1	0	0
McCotter	R	(MI-11)	No	0	5	1	$90,687	4	33	0	1	1	1	1	0
Mchenry	R	(NC-10)	No	0	3	1	$277,299	5	12	0	1	0	0	1	0
McHugh	R	(NY-23)	No	0	15	0	$19,900	2	44	1	0	1	1	0	0
McKeon	R	(CA-25)	No	0	15	0	$242,877	4	6	1	1	1	1	1	0
McMorris Rodgers	R	(WA-5)	No	0	3	0	$140,461	4	31	0	1	0	0	0	0
Mica	R	(FL-7)	No	0	15	0	$21,500	4	6	1	0	1	1	1	0
Miller	R	(CA-42)	No	0	9	1	$53,600	4	18	1	1	1	1	1	0
Miller	R	(FL-1)	No	0	7	0	$17,500	5	24	1	1	1	1	1	0
Miller	R	(MI-10)	No	0	5	0	$47,750	3	40	0	0	1	1	1	0
Moran	R	(KS-1)	No	0	11	0	$114,870	3	33	0	1	0	0	0	0

Name	Party	District													
Murphy	R	(PA-18)	No	0	5	0	$192,412	3	41	0	0	1	1	0	0
Myrick	R	(NC-9)	No	0	13	0	$170,750	5	13	0	1	0	0	1	0
Neugebauer	R	(TX-19)	No	0	5	1	$233,609	5	0	1	1	1	1	0	0
Nunes	R	(CA-21)	No	0	5	0	$71,750	4	15	1	0	1	1	1	0
Paul	R	(TX-14)	No	0	11	1	$314,104	5	20	1	0	1	1	0	0
Pence	R	(IN-6)	No	0	7	0	$143,722	5	0	0	1	0	0	1	0
Petri	R	(WI-6)	No	0	29	0	$7,750	4	37	0	0	0	0	0	0
Pitts	R	(PA-16)	No	0	11	0	$21,000	5	9	0	1	1	1	0	0
Platts	R	(PA-19)	No	0	7	0	$5,750	3	42	0	0	1	1	0	0
Poe	R	(TX-2)	No	0	3	0	$68,089	4	26	1	1	1	1	0	0
Price	R	(GA-6)	No	0	3	1	$216,356	5	6	0	1	1	1	0	0
Putnam	R	(FL-12)	No	0	7	1	$145,868	4	18	1	0	1	1	1	0
Radanovich	R	(CA-19)	No	0	13	0	$23,950	4	0	1	1	1	1	1	0
Rehberg	R	(MT)	No	0	7	0	$55,700	3	26	0	1	0	0	0	0
Reichert	R	(WA-8)	No	0	3	0	$178,086	2	46	0	0	0	0	0	0

Rogers	R	(AL-3)	No	0	4	0	$178,848	3	31	0	0	0	0	0	0
Rogers	R	(KY-5)	No	0	27	0	$39,000	4	25	0	0	0	0	0	0
Rogers	R	(MI-8)	No	0	7	0	$151,624	4	29	0	0	1	1	1	0
Rohrabacher	R	(CA-46)	No	0	19	0	$21,950	5	7	1	0	1	1	1	0
Peterson	D	(MN-7)	No	1	17	0	$74,440	1	52	0	0	0	1	0	0
Roskam	R	(IL-6)	No	0	1	1	$234,251	4	24	1	1	1	1	0	0
Ros-Lehtinen	R	(FL-18)	No	0	19	0	$58,485	3	37	1	0	1	1	1	0
Royce	R	(CA-40)	No	0	15	1	$325,027	5	9	1	1	1	1	1	0
Ryan	R	(WI-1)	No	0	9	0	$248,699	5	17	0	1	0	0	0	0
Schmidt	R	(OH-2)	No	0	3	0	$86,100	4	29	0	1	1	1	1	0
Sensenbrenner	R	(WI-5)	No	0	29	0	$89,017	5	11	0	0	0	0	0	0
Sessions	R	(TX-32)	No	0	11	0	$545,938	4	13	1	1	1	1	0	0
Shadegg	R	(AZ-3)	No	0	13	0	$110,600	5	0	0	1	0	0	0	0
Shimkus	R	(IL-19)	No	0	11	0	$55,301	4	29	0	1	1	1	0	0
Shuster	R	(PA-9)	No	0	7	0	$40,700	4	19	0	0	1	1	0	0

Name	Party	District					Amount								
Simpson	R	(ID-2)	No	0	9	0	$23,850	3	36	0	0	0	0	0	0
Smith	R	(TX-21)	No	0	21	0	$88,700	4	21	1	1	1	1	0	0
Smith	R	(NJ-4)	No	0	28	0	$25,200	2	48	0	0	1	1	0	0
Smith	R	(NE-3)	No	0	1	0	$94,750	4	14	0	0	0	0	0	0
Souder	R	(IN-3)	No	0	13	0	$28,500	4	23	0	1	0	0	1	0
Stearns	R	(FL-6)	No	0	19	0	$59,905	4	27	1	1	1	1	1	0
Sullivan	R	(OK-1)	No	0	5	0	$50,250	4	14	0	1	0	0	0	0
Terry	R	(NE-2)	No	0	9	0	$154,575	4	28	0	0	0	0	0	0
Thornberry	R	(TX-13)	No	0	13	0	$55,175	4	6	1	1	1	1	0	0
Tiahrt	R	(KS-4)	No	0	13	0	$69,050	4	24	0	1	0	0	0	0
Tiberi	R	(OH-12)	No	0	7	0	$506,895	4	32	0	0	1	1	1	0
Taylor	D	(MS-4)	No	1	19	0	$5,500	2	47	0	0	0	0	0	0
Turner	R	(OH-3)	No	0	5	0	$82,050	3	38	0	1	1	1	1	0
Upton	R	(MI-6)	No	0	21	0	$42,580	3	41	0	0	1	1	1	0
Walden	R	(OR-2)	No	0	9	0	$41,900	3	34	0	0	0	0	1	0
Wamp	R	(TN-3)	No	0	13	0	$45,900	4	24	0	1	0	0	0	0
Westmoreland	R	(GA-3)	No	0	5	0	$106,850	5	0	0	1	1	1	0	0
Whitfield	R	(KY-1)	No	0	13	0	$62,750	3	33	0	0	0	0	0	0

Wilson	R	(SC-2)	No	0	7	0	$48,100	5	9	0	1	0	0	1	0
Wolf	R	(VA-10)	No	0	27	0	$64,100	3	41	0	0	0	0	0	0
Young	R	(FL-10)	No	0	37	0	$52,400	3	38	1	0	1	1	1	0
Young	R	(AK-1)	No	0	35	0	$49,650	3	33	0	0	0	0	0	0

Figure 3. American Recovery and Reinvestment Act of 2009 (Regression Analysis)

SUMMARY OUTPUT (American Recovery and
Reinvestment Act 0f 2009)

Regression Statistics	
Multiple R	0.984444015
R Square	0.969130019
Adjusted R Square	0.968162584
Standard Error	0.088380982
Observations	363

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	11	86.0736965	7.8248815	1001.751779	1.8341E-257
Residual	351	2.7417305 01	0.00781 1198		
Total	362	88.8154 27			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	-0.03585 7095	0.05211 9221	-0.68798 2169	0.4919 18407	-0.13836 2337	0.06664 8148	-0.13836 2337	0.06664 8148
Party Code (x1)	0.95805 7175	0.02743 6388	34.9192 1692	3.0725 E-116	0.90409 6783	1.01201 7567	0.90409 6783	1.01201 7567
Tenure (x2)	-0.00102 1649	0.00055 9362	-1.82645 5283	0.0686 30947	-0.00212 1771	7.8473 E-05	-0.00212 1771	7.8473 E-05
Fin Ser Comm (x3)	0.00165 4456	0.01404 8949	0.11776 3716	0.9063 22239	-0.02597	0.02928 5163	-0.02597	0.02928 5163

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					625		625	
Dollars From Groups (x4)	2.92212E-08	4.05239E-08	0.721084356	0.471337618	-5.04791E-08	1.08921E-07	-5.04791E-08	1.08921E-07
Tax Union (x5)	0.003092648	0.012136595	0.254820062	0.799011313	-0.020776945	0.026962241	0.020776945	0.026962241
Liberal Economic Rating (x6)	0.000951572	0.000470931	2.020619175	0.044078162	2.53708E-05	0.001877774	2.53708E-05	0.001877774
Fin. Center (x8)	0.002338539	0.013268785	0.17624365	0.86020417	-0.023757785	0.028434863	0.023757785	0.028434863
Repub. Study Comm. (x10)	0.009949303	0.016658589	0.597247628	0.55027139	-0.022813902	0.042712507	0.022813902	0.042712507
Top 10 States by Population (x11)	0.140327789	0.035539775	3.948471559	9.50548E-05	0.070430098	0.21022548	0.070430098	0.21022548
Top 10 States for Fortune 500 Companies (x12)	-0.127705657	-0.034409306	3.711369779	0.000239622	-0.195380004	-0.060031311	-0.195380004	-0.060031311
Top 10 States for Unemployment (x13)	-0.005975865	-0.01040006	0.574599093	0.565930546	-0.026430135	0.014478406	-0.026430135	0.014478406

Figure 4. Liberal Economic Rating and Vote Type

Liberal Economic Rating /Vote Type
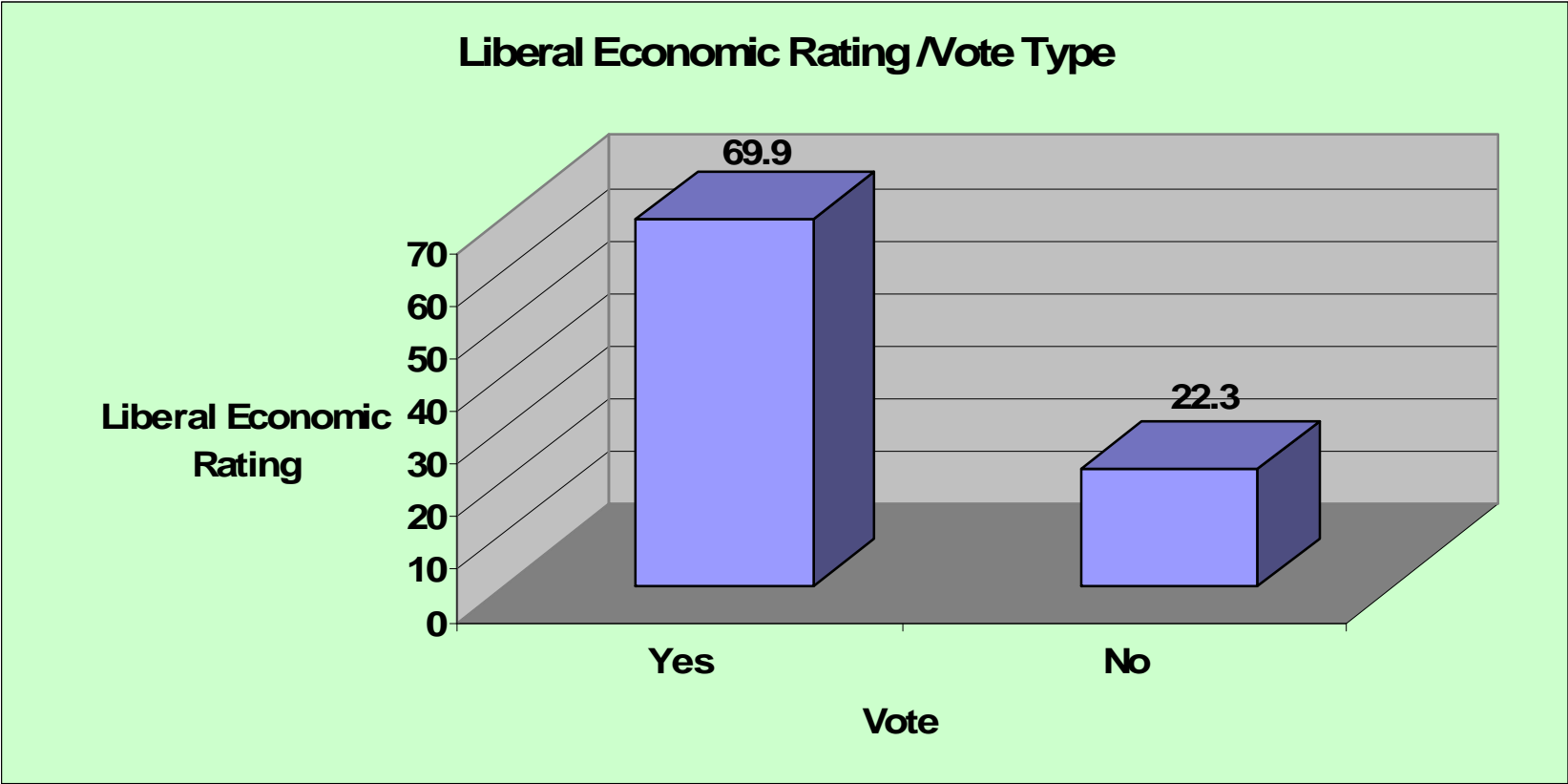
An Examination of Pharmaceutical Supply Chain Vulnerability and Risk: Evidence from an Emerging Economy

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Abstract

Because global pharmaceutical supply chains are increasingly exposed to vulnerabilities and risks, pharmaceutical firms in an emerging economy such as Ghana are grappling with the challenges of implementing supply chain risk management responses. To survive and thrive in the face of daunting risks and vulnerabilities, the Ghana pharmaceutical industry must assess its vulnerabilities in order to design comprehensive supply chain risk management responses that can ensure pharmaceutical supply chain security and integrity. One of the crucial factors of effective supply chain risk management response is risk identification and analysis. The ability to identify and assess supply chain pain points can equip pharmaceutical firms with better knowledge of vulnerabilities, and most essentially the potential effect on patient safety, public health confidence, brand name, profit margins, and shareholder value. An analytic hierarchy process model is proposed to model risks in the pharmaceutical supply chain. Analytic hierarchy process is an important tool which can assist firms in managing supply chain risks and vulnerabilities in order to achieve their intended business objectives. The research findings indicate that counterfeit risk is the most important priority followed by Food and Drugs Board risk, exchange rate risk, currency risk, and supplier failure risk With respect to the overall goal, risk reduction is most preferred followed by risk avoidance. With respect to supply chain risk management response, risk avoidance followed by risk reduction are best responses for counterfeit risk; risk reduction followed by risk avoidance are appropriate responses for Food and Drugs Board risk; risk transfer followed by risk avoidance are used for exchange rate risk; risk reduction followed by risk avoidance are use to manage currency risk; and risk reduction flowed by risk avoidance appropriate responses for supplier failure risk
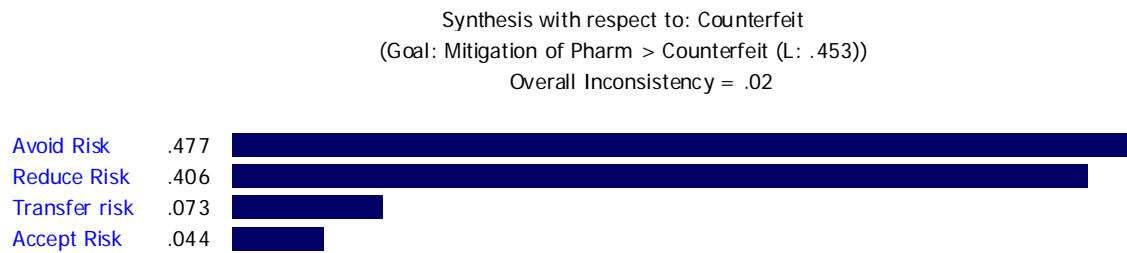
Introduction

Breen (2008) emphasized that "pharmaceuticals are a key input into healthcare treatment, so it is imperative that risks attached to the sourcing and passage of these products through to patients are identified and managed." Lack of supply of essential pharmaceuticals can result in a loss of confidence in the pharmaceutical supply chain. Handfield and Nichols (1999) defined pharmaceutical supply chain as "the integration of all activities associated with the flow of and transformation of [pharmaceuticals] from raw materials through to the end-user, [patient], as well as associated information flows, through improved supply chain relationships to achieve a sustainable competitive advantage." According to Christiansen, "the [pharmaceutical] supply chain is a chain of companies delivering pharmaceuticals by transformation of information about

[healthcare] needs, from the chemist to upstream companies (wholesalers, manufacturers and suppliers of raw materials." In today's environment, uncertainties and portfolio of risks confronting pharmaceutical firms' global supply chains is daunting. Those firms able to "nurture flexibility, awareness, and resiliency are more likely to survive the crisis, and even to prosper" (Brian and Farrell (2008). As a result, many pharmaceutical firms particularly in the developed nations are investing in risk management best practices to minimize the frequency and impact of risk on business objectives. Risk management which entails a structured and coherent approach to identify, analyze, and manage risks that can affect business objectives has become a crucial part of strategic management (Rogachev, 2008) for pharmaceutical firms. As a result, maintaining and sustaining differentiated position in today's ultra-competitive environment demands C-level executives and supply chain managers to have a clear understanding of appropriate approaches to mitigate key risks. Thus, the Ghanaian pharmaceutical industry should have a methodology for identifying and evaluating the risks it faces and a process for generating intervention plans to mitigate the risks to an acceptable level. Indeed, "the link between risk and reward has never been more important than it is now in the pharmaceutical [firms around the world] as [they wrestle] with the challenges of delivering profitable, new solutions for better healthcare in the global marketplace" (KPMG).

This paper examines the crucial issues confronting Ghanaian pharmaceutical industry and sources of pharmaceutical supply chain risks and vulnerabilities. Specifically, this paper leverages analytic hierarchy process (AHP) to model risk management in Ghanaian pharmaceutical supply chain. According to reviewed relevant literature, some of the vulnerabilities and/risks that can precipitate disruption in the pharmaceutical supply chain include Food & Drugs Board (regulatory), counterfeit, exchange rate, currency rate, and supplier failure. Finally, the paper presents the conclusions and managerial implications.

Crucial Issues Confronting Ghanaian Pharmaceutical Iidustry

Although Ghana possesses a well established and developing pharmaceutical manufacturing sector, its pharmaceutical market encompasses roughly 30% locally produced and 70% import products from India and China (Harper and Gyansa-Litterodt, n.d). Ghanaian pharmaceutical industry is faced with the critical challenge of surviving and striving in today's environment that is laden with uncertainty and risks. To reduce reliance on imported pharmaceuticals that is draining foreign exchange resources, Ghanaian Pharmaceutical industry is grappling with how to improve its capacity. For example, industry commentators suggest that out of 3,000 drugs registered by the Food and Drugs Board only 900 are produced locally. According to Mahama (2007), one of the remedies to importation of drugs is to source raw materials locally in order to contain cost of production and improve the competitiveness of Ghanaian pharmaceutical manufacturing industry. The growth and capacity of pharmaceutical industry production is notably marginal, hampered by government's free market policy, and absence of tax exemptions for raw materials that severely impacts production and competition (Republic of Ghana, 2004).

Ghanaian Pharmaceutical industry is confronted with daunting challenges for its future development and growth. A major challenge that is confronting it is abject under employment of manufacturing capacity, often greater than 50% (Harper and Gyansa-Litterodt, n.d). Some other major issues facing the development of pharmaceutical industry in Ghana encompasses (Harper and Gyansa-Litterodt, n.d) include a chaotic and unregulated pharmaceutical distribution chain that leads to high prices and which significantly compromises pharmaceutical chain security; a focus of local production on over the counter (OTC) product manufacturing in a highly saturated local OTC market against the background of an 'ad hoc' local pharmaceutical market; inability to produce essential medicines that meet the standards for international tenders (i.e., WHO prequalification with its emphasis on manufacturing and product international regulatory compliance); relatively high manufacturing costs for locally manufactured pharmaceutical products as compared to imports from India and China; lack of or absence of enabling environment (i.e., effective and coordinated incentives and support for local pharmaceutical production of essential drugs according to international pharmaceutical standards); difficult access to cost-effective investment; poor perceptions of sub-region produced medicinal products; the growing threat of counterfeit and diverted medicines – both for finished dosage forms and for active pharmaceutical ingredients (APIs) from India and China in particular); and local inaction and in-coordination leading to increasing reliance on imported medicines from international donors, China, India, other parts of Africa

Sources of Supply Chain Risks and Vulerabilities

Pharmaceutical supply chain has increasingly become exposed to vulnerabilities and risks because the pharmaceutical firms not only purchase their raw materials or ingredients and manufacturing from dispersed low cost destination, but also they must depend on foreign contractors to coordinate the manufacture and distribution of their drugs. In essence, raw materials can be procured from one low-cost country, active ingredients produced in the second country, the final product produced in the third country, and packaging completed in the fourth country. Supply chain risk is any factor that can impact the reliability and continuity of supply of a commodity and/or service. Pharmaceutical firms' vulnerabilities and risks may come from variety of sources. Some of those sources include environmental risk (healthcare terrorism/counterfeiting and diversion), operational contingencies (supplier issues, theft/fraud), regulatory compliance (e.g., Sarbanes-Oxley Act), political strife, natural disasters, regulatory/legislation, currency and exchange rate fluctuations.

Indeed, the attacks of 9/11 reminded C-level executives around how vulnerable their global supply chains have become to both the predictable and unpredictable risks. Since then the world is more than ever in constant threat of vulnerabilities and disruptions and the global supply chain is not immune. As a result, supply chain vulnerability and disruption risks have gained increasing attention in management and marketing (Peck, 2006, Kleindorfer and Saad, 2005, Christopher and Lee, 2004). Supply chain vulnerabilities and risks can emanate in a variety of forms (Harland and Brenchley, 2001) and their breadth and scope have expanded in recent years (Barry, 2004). Kleindorfer and Saad contend that the two broad groups of disruption risk impacting global supply chain

design and management are 1) risks resulting from problems of coordinating demand and supply and 2) risks resulting from disruptions to normal activities. The disruption risks to normal activities include economic and political terrorism, healthcare terrorism (drug counterfeiters), political strife, strikes, pandemics, natural disasters, and changes in corporate business strategy. Also, supply chains are vulnerable to "chaos" risk due to complexity and uncertainty, over-reactions, unnecessary interventions, second guessing, mistrust, and distorted information within and across the supply chain (Christopher and Lee, 2004, Childerhouse, at al., 2003, Lee at al., 1997). The complex nature of modern supply chain networks are more vulnerable and susceptible to higher risks because of greater uncertainties in supply and demand, globalization of the market, shorter product and technology life cycles, lean practices, supplier base reduction, and the increased use of manufacturing, distribution and logistics partnerships (Christopher, et al., 2002). Christopher and Lee (2004) suggest that one key factor in any strategy designed to mitigate supply chain risk is enhanced end-to-end information visibility. They contend that "supply chain "confidence" will increase in proportion to the quality of supply chain information." The quality of supply chain information and the ability of shareholders to share that information are imperative for achieving end-to-end supply chain visibility. It has been recognized that firms endowed with "information-enriched" supply chains can perform much better and gain competitive advantage over those without access to information (Mason-Jones and Towill, 1998, 1997). However, managing the flow of information through a product supply chain in today's changing business landscape is increasingly challenging because organizations must have to work collaboratively with suppliers, logistics providers, distributors, and retailers to collect and manage information about customer demand, sales orders, distribution schedules, production planning, manufacturing, sourcing, and product design (Pande, et al., 2006). Therefore, collaborative sharing of information and best practices among supply chain stakeholders is a key to identifying vulnerabilities and in planning and implementing effective crisis management (Kleindorfer and Saad, 2005). Hence, supply chains that are information handcuffed or faced with information risk can result in poor performance (Wilding, 1998).

Holton (2004) described risk as composed of exposure and uncertainty. Adams (1995) posits that "virtually all the formal treatments of risk and uncertainty in game theory, operations research, economics and management science require that the odds be known, that numbers be attachable to the probabilities and magnitudes of possible outcomes." Indeed, risk and uncertainty are the quintessential part and parcel of doing business. March and Shapira (1987) and Buehler and Pritsch (2003) contend that risk assumption is ultimately a fact of business and management life. Hence it is the ability to assume and manage risks is what organizations must do to produce profits and shareholder value (Buehler and Pritsch, 2003) and indeed "in extremely uncertain environments, shaping strategies may deliver higher returns, with lower risk, than they do in less uncertain times" (Courtney, 2001). Those organizations that hesitate to create order out of chaos (Courtney, 2001), manage risks and improve their risk management processes will be faced with a different kind of risks, including unexpected and severe financial losses that make their cash flows and stock prices volatile and harm their reputation with customers, employees, and investors (Buehler and Pritsch, 2003) and higher risk of system failure. Supply chain risk pertains to any threat of interruption to the

well functioning of supply chain operations (Christopher, 2003). Risk emanate from lack of knowledge about the nature of events that may disrupt supply chain operations and its resiliency to disruption (Deleris and Erhum, 2005).

Traditionally, the two general sources of risk drivers discussed in the literature are the internal and external risks. Internal risks are risks under the direct control of the organization, including faulty machine, planning, production, and internal customers. While external risks are risks beyond a firm's control, including demand and supply risks, counterfeits, terrorism, regulation and legislation, currency, third-party relationship, currency and exchange rate fluctuations. Because the internal risks are preventable, the current paper only considered some of the important external risks affecting Ghanaian pharmaceutical supply chain. In agreement with Bernstein (1996, p. 197), "the essence of risk management lies in maximizing areas where we have some control over the outcome while minimizing the areas where we have absolutely no control over the outcome and the linkage between effect and cause is hidden from us." Pharmaceutical supply chain risks that can disrupt the reliability and continuity of smooth flow of pharmaceuticals and/or active pharmaceutical ingredients include the aforementioned external risks. Pharmaceutical supply chain risk can manifest from variety of sources. To mitigate these risks it is vitally important that they are identified by supply chain managers or chief risk officer.

Research Methodology

A decision-making environment can entail multiple and in some cases conflicting objectives or criteria called multi-criteria decision making (MCDM) (Hwang and Yoon, 1981). Evaluation and management of pharmaceutical supply chain vulnerabilities and/or risks represent a typical MCDM problem that entails multiple criteria that can be both qualitative and quantitative. An example of MCDM selected to model risk management in pharmaceutical supply chain outsourcing is AHP developed by Saaty (1980). It is selected because it allows decision-makers to model a complex problem in a hierarchical structure portraying the relationships of the overall goal, criteria (objectives), sub-criteria (sub-objectives), and alternatives. Although the positive attributes associated with AHP has been widely reported in the literature, there has been a small number of descending voices as to its theoretical basis. For example, Belton and Gear (1986) and Dyer and Wendel (1985) argue that AHP lacks theoretical basis. Watson and Freeling (1982) contend that AHP in order to elicit the weights of the criteria by way of a ratio scale, it asks decision-makers useless or meaningless questions such as which of these two criteria is more important for the goal and how much more. However, in defense of Saaty's AHP, based on the theoretical research of Harker and Vargas (1987) and Perez (1995), respectively, proved that the criticisms against AHP method was not valid. They argued that AHP is indeed based on a firm theoretical ground. As a result, its application has been popularized in many fields. Research that have used AHP include supplier selection (Lee et al., 2001); project selection and management (Liberatore, 1987; Al-Harbi, 2001), international business management (Atthirawong and MacCarthy, 2005), operations and logistics/supply chain management (Enyinda, 2008; Min, 1992), marketing (Dyer and Forman, 1992), pharmaceutical marketing and management (Ross and Nydick, 1994), and accounting (Apostolou and Hassell, 1993). Following Saaty and Al-Harbi (2001),

hierarchy structure modeling of risk management in pharmaceutical supply chain shown in Figure 1 can be achieved as follows.

1. Define an unstructured problem and determine the overall goal. The overall goal is to manage risk in pharmaceutical supply chain outsourcing.

2. Build the hierarchy from the top through the intermediate levels to the lowest level which usually contains the list of alternatives. The major decision criteria occupy the second level of the hierarchy, while the sub-criteria occupy the third level of the hierarchy. The decision maker defines the criteria that will be used to judge the alternative policy options. The defined decision criteria are Food and Drug Board (regulatory) risk; counterfeit risk; exchange risk; currency risk and supplier failure risk. The risk mitigation strategies proposed include risk reduction, risk acceptance, risk avoidance, and risk sharing/transfer. The factor with the maximum local priority is selected from each category to represent the category and the relative priorities of the scaling factors computed. The derived priorities are used for final rating of the mitigation strategies and selecting the most important and satisfactory strategy option.

3. Construction of pairwise comparison matrix. Build a set of pairwise comparison matrices for each level of the hierarchy and then conduct all the pairwise comparisons. The pairwise comparison matrix A, where element a_{ij} of the matrix is the relative importance of ith factor with respect to j^{th} factor, can be determined as follows:

$$A = [a_{ij}] \tag{1}$$

Where the entry in row i and column j of A (a_{ij}) indicates how much more important objective (criteria) i is than objective j. Each entry in matrix A is positive ($a_{ij} > 0$) and reciprocal (($a_{ij} = 1/a_{ji}$) for all $i, j = 1, 2, 3,…n$). "Importance" is measured on an integer-valued 1-9 scale reported in Table 3. It is the relative scale measurement developed by Saaty (200) for pairwise comparisons. It allows the transformation of qualitative judgments and/or intangible attributes into preference weights (level of importance) or numerical values. The pairwise comparisons are accomplished in terms of which element dominates or influences the order. AHP can aggregate many aspects of the decision situation into a single objective function. Its goal is to choose the best alternative that can optimize the objective function. However, with AHP model, a supply chain risk C-level executive or chief risk officer can make pairwise comparisons of the criteria using Saaty's nine-point scale. The nine-point scale seeks to know the dependence criteria, which one will influence the common criteria more and if so how much more. According to Saaty, a value of 1 between two criteria indicates that both equally influence the affected node, while a value of 9 indicates that the influence of one criterion is extremely more important than the other.

4. n(n – 1)/ judgments are needed to develop a set of matrices in step #3. Reciprocals are assigned in each pairwise comparison automatically.

5. Utilizing the hierarchical synthesis to weight the eigenvectors according to the weights of the criteria. The total is for all weighted eigenvectors corresponding to those in the next lower level of the hierarchy.

6. After completing all the pair-wise comparisons, the consistency can be evaluated using the eigenvalue (λ_{max}), to derive the consistent index (CI). Specifically, Saaty (1990) recommended that the maximum eigenvalue, λ_{max}, can be determined as

$$\lambda_{max} = \sum_{j=1}^{n} a_{ij}\, W_j/W_i,\qquad\qquad (2)$$

Figure 1. Hierarchy Structure of Ghanaian Pharmaceutical Supply Chain Risks
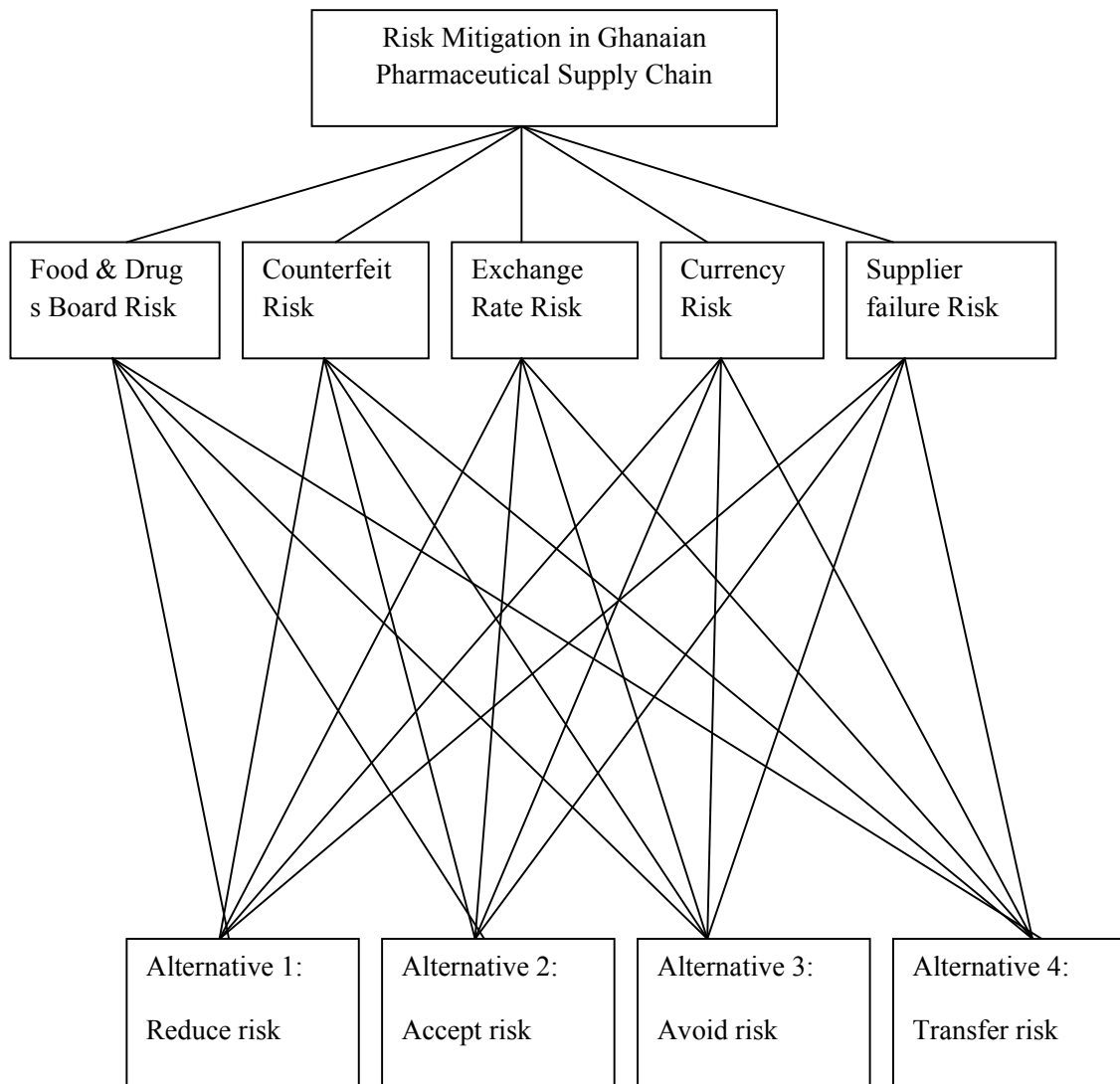
Table 2. The AHP Pair-wise Comparison Values or Scale of Preference between two Elements

Preference weights or level of	Definition of Verbal Scale	Explanation

importance (value of a_{ij})		
$a_{ij} = 1$	If the two objectives are equally (equal) preferred (importance)	Two activities or elements contribute equally to the objective
$a_{ij} = 3$	If objective i is moderately preferred or moderately more important than objective j	Experience and judgment slightly favor activity or element over another
$a_{ij} = 5$	If objective i is strongly preferred or strongly more important than objective j	Experience and judgment strongly or essentially favor one activity over another
$a_{ij} = 7$	If objective i is very strongly preferred or very strongly more important than objective j	An activity is strongly favored over another and its dominance demonstrated in practice
$a_{ij} = 9$	If objective i is extremely preferred or absolutely more important than objective j	The evidence favoring one activity over another is of the highest degree possible of affirmation
2,4,6,8	Intermediate values	Used to represent compromise between the preferences listed above or used to compromise between two judgments
$a_{ji} = 1/3$	If objective j is weakly more important than objective i.	

Where λ_{max} is the principal or maximum eigenvalue of positive real values in judgment matrix, W_j is the weight of jth factor, and W_i is the weight of ith factor.

7. Consistency Test. Each pairwise comparison which has several decision elements for CI measures the entire consistency judgment for each comparison matrix and the hierarchy structure. Thus, CI and consistency ratio (CR) are used to determine the consistency of the comparison matrix. A matrix is assumed to be consistent if and only if $a_{ij} * a_{jk} = a_{jk} \; \forall_{i,jk}$ (for all i, j, and k). The eigenvalue method is used to check for

inconsistencies in the inputted valuation. When a positive reciprocal matrix of order n is consistent, the principal eigenvalue possesses the value n. Conversely, when it is inconsistent, the principal eigenvalue is greater than n and its difference will serve as a measure of CI. Therefore, to ascertain that the priority of elements is consistent, the maximum eigenvector or relative weights/λ_{max} can be determined. Specifically, CI for each matrix order n is determined by using (3).

$$CI = (\lambda_{max} - n)/n - 1 \qquad (3)$$

Where n is the matrix size or the number of items that are being compared in the matrix. Table 3 shows the Saaty's AHP average random consistency or random index (RI).

Table 3. Saaty's AHP Average Random Consistency or RI

Size of matrix	1	2	3	4	5	6	7	8	9	10
Random consistency (n)	0.00	0.00	0.58	0.9	1.12	1.24	1.32	1.41	1.45	1.49

Based on (2) and Table 3, the consistency ratio (CR) in (4) can be determined as below:

$$CR = CI/RI = [(\lambda_{max} - n)/n - 1]/RI \qquad (4)$$

CR is acceptable, if its value is less than or equal to 0.10. However, if it is greater than 0.10, the judgment matrix will be considered inconsistent. To rectify the judgment matrix that is inconsistent, decision-makers' judgments should be reviewed and improved.

Data Collection and Analysis

A survey questionnaire approach was used for gathering relational data to assess the order of importance of Ghanaian pharmaceutical supply chain risks. Thus, from the hierarchy tree, a questionnaire was developed to enable pairwise comparisons between all the factors at each level in the hierarchy. The pairwise comparison process elicits qualitative judgments or opinions that indicate the strength of the experts' preference in a specific comparison according to Saaty's 1-9 scale. The experts in logistics and supply chain were requested to respond to several pairwise comparisons where two categories at a time are compared with respect to the goal. The result of the survey questionnaire technique was then used as input for the AHP. The pairwise comparison matrix developed from the AHP survey questionnaire is depicted Table 4. Because of limitation of space the pairwise matrix for the alternatives or mitigation strategies with respect to each of the objectives, include Food and Drug Board (regulatory) risk, counterfeit risk, exchange rate risk, currency risk, and supplier are not provided in this paper. The analysis was carried out using Expert Choice Software (11.5)

Table 4. Pair-wise Comparison Matrix of Major Risk Criteria w. r. t the Goal

Goal	FDB	Currency	Exchange Rate	Counterfeit	Supplier Failure
FDB	1	1	6	3	2

Currency	1/1	1	5	3	1
Exchange Rate	1/6	1/5	1	1	3
Counterfeit	1/3	1/3	1/1	1	1
Supplier Failure	½	1/1	1/3	1/1	1

Results and Discussions

The pairwise comparison of the major objectives is portrayed in Figure 1. Counterfeit risk (0.453) is the most preferred risk to mitigate followed by Food and Drugs Board (regulatory) risk (0.264), exchange rate risk (0.112), currency risk (0.089), and supplier risk (0.089). For counterfeit, the result is consistent with literature given that it has become very prevalent in African pharmaceutical markets. Pharmaceutical firms are subject to regulatory compliance risk and lack of it can lead to serious sanction and delay in launching a drug. Therefore, it is crucial to improve regulatory compliance and risk mitigation responses.

Model Name: Ghana Pharma SC Risk Assessment

Treeview

■ **Goal: Mitigation of Pharmaceutical SC Risk in Ghana**
 ■ **Food & Drug Board (L: .264 G: .264)**
 ■ **Currency (L: .089 G: .089)**
 ■ **Exchange Rate (L: .112 G: .112)**
 ■ **Counterfeit (L: .453 G: .453)**
 ■ **Supplier Failure (L: .082 G: .082)**
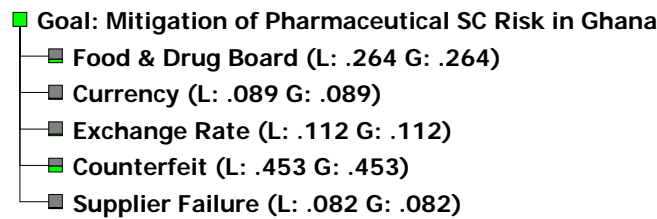
Figure 1. Pharmaceutical Hierarchy Structure with Major Decision Objectives and Associated Priorities

Supply Chain Risk Management Responses

Figure 2 shows the supply chain risk response synthesis with respect to the overall goal. For the overall goal, it indicates that risk reduction/control (0.393) is more than the risk avoidance (0.374).

Synthesis with respect to:
Goal: Mitigation of Pharmaceutical SC Risk in Ghana
Overall Inconsistency = .04

Reduce Risk	.393
Avoid Risk	.374
Transfer risk	.149
Accept Risk	.084
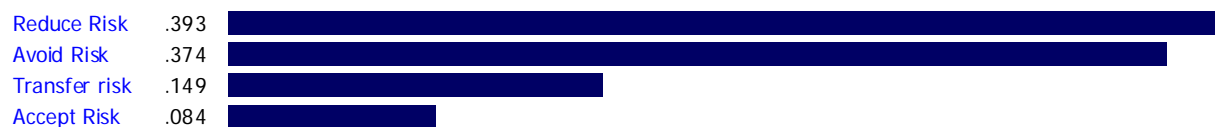
Figure 2. Synthesis with respect Goal

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Figures 3- 7 portray the supply chain risk management response synthesis with respect to each of the decision objectives. Risk avoidance (0.477) followed by risk reduction (0.406) are the best risk treatments for counterfeit risk; risk reduction (0.462) followed by risk avoidance (0.301) are appropriate risk responses for Food and Drugs Board risk; risk transfer (0.474) followed by risk avoidance (0.255) are used for exchange rate risk; risk reduction (0.333) followed by risk avoidance (0.306) are used to manage currency risk; and risk reduction (0.440) followed by risk avoidance (0.325) are appropriate responses for supplier failure risk

Synthesis with respect to: Counterfeit
(Goal: Mitigation of Pharm > Counterfeit (L: .453))
Overall Inconsistency = .02

Avoid Risk	.477	
Reduce Risk	.406	
Transfer risk	.073	
Accept Risk	.044	

Figure 3. Synthesis with respect to Counterfeit Risk

Synthesis with respect to: Food & Drug Board
(Goal: Mitigation of Pharm > Food & Drug Board (L: .26)
Overall Inconsistency = .05

Reduce Risk	.462	
Avoid Risk	.301	
Accept Risk	.134	
Transfer risk	.103	
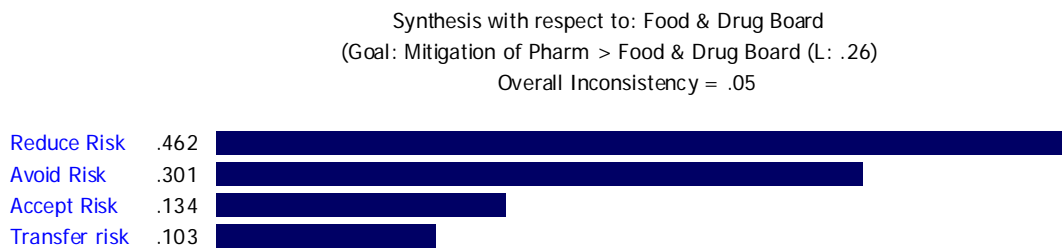
Figure 4. Synthesis with respect to Food & Drugs Board

Synthesis with respect to: Exchange Rate
(Goal: Mitigation of Pharm > Exchange Rate (L: .112))
Overall Inconsistency = .03

Transfer risk	.474	
Avoid Risk	.255	
Reduce Risk	.202	
Accept Risk	.069	
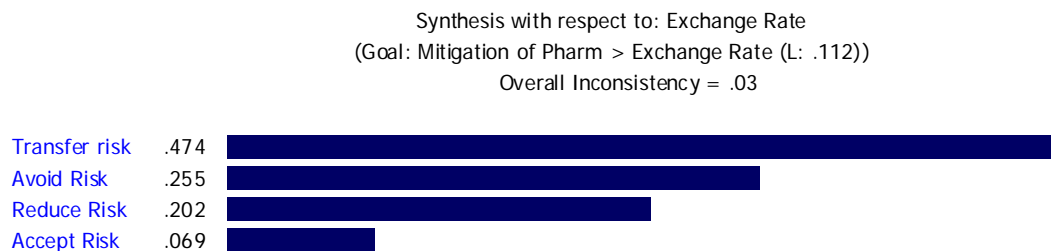
Figure 5. Synthesis with respect to Exchange Rate

Synthesis with respect to: Currency
(Goal: Mitigation of Pharm > Currency (L: .089))
Overall Inconsistency = .03

Reduce Risk	.333	
Avoid Risk	.306	
Transfer risk	.235	
Accept Risk	.125	
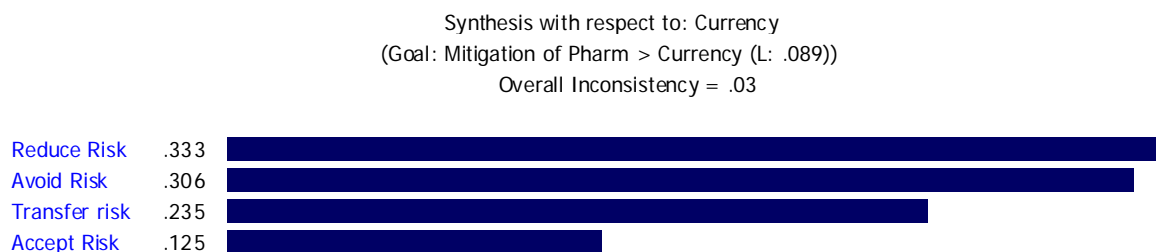
Figure 6. Synthesis with respect to Currency

115

Synthesis with respect to: Supplier Failure
(Goal: Mitigation of Pharm > Supplier Failure (L: .082)
Overall Inconsistency = .02

Reduce Risk	.440	
Avoid Risk	.325	
Transfer risk	.146	
Accept Risk	.088	
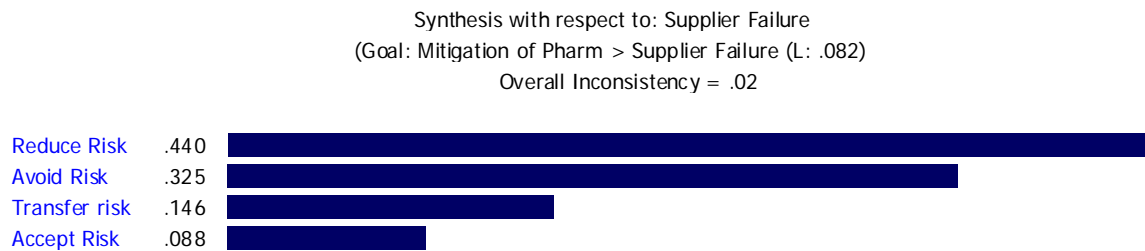
Figure 7. Synthesis with respect to Supplier

Conclusions and Managerial Implications

Proactive management of pharmaceutical supply chain blind spots is imperative to ensuring drug security and integrity. Safeguarding pharmaceutical supply chain security and integrity "is critical to patient welfare thus any risks attached to this must be identified and controlled" (2008). Against a backdrop of growing uncertainties and risks, the implications deduced from this paper are far reaching. Although there is growing number of uncertainties and risks in modern global supply chains, Ghanaian pharmaceutical companies are yet to implement supply chain risk management to mitigate risks in their pharmaceutical supply chains and reduce associated costs. Because the goal of the pharmaceutical supply chain is to source vital pharmaceuticals and raw materials in the healthcare treatment for ultimate-end user, patients (Breen, 2008), pharmaceutical firms are under pressure to identify and manage the risks associated with the pharmaceutical global supply chains. Thus, pharmaceutical supply chain managers must understand that inability to plan, measure, mitigate and manage risk elements in their supply chains can adversely impact drug quality, customer confidence, brand strength, and financial performance. Optimizing pharmaceutical firms' financial performance requires ongoing analysis of the key risks spanning the entire supply chain network that connects suppliers, manufacturers, distributors, pharmacies and customers. For the Ghanaian pharmaceutical industry, understanding risk sources not only help to reduce potential losses from operations, it will also enable the industry to take advantage of new opportunities while mitigating and managing associated risks. Supply chain risk management technique enables supply chain managers and/or supply chain Chief Risk Officers to identify and select among alternative strategic risk management responses, including risk control/reduction, risk funding/sharing/transfer, risk avoidance, and retention/acceptance. Regrettably, many pharmaceutical firms fail to recognize risk throughout all tiers of the pharmaceutical supply chain. As a result, the pharmaceutical industry's risks are inordinately compounded by the chains of external providers it depends on for its raw materials and/or active pharmaceutical ingredients, and sometime finished products for the end-users.

The task for Ghanaian pharmaceutical supply chain managers must be to cultivate risk management culture in order to proactively manage today's new layers of risks. This will enable firms not only to prosper and flourish "but also to seize the extraordinary opportunities that arise during periods of vast uncertainty (Bryan and Farrell, 2008), improved efficiency and responsiveness/nimbleness, enhanced flexibility, improved inventory policy, reduced administrative costs, better capacity planning, and reduced delivery time. Those that do not cultivate the risk management culture will see their

financial gains evaporate, unattractive shareholder value, and diminished reputation. According to Rogachev (2008), "…risk management should be integrated into the general culture of the organization, accepted and approved of by directors and conveyed to every employee in terms of a general company development program with locally formulated specific tasks.

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Income Gap and Poverty in the United States by State and Region, 1990-2005

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Abstract

Over the past several decades, the United States has experienced a rising standard of living, with real GDP per capita more than doubling between 1959 and 2004. In contrast, living standards among some the society groups seem to have stagnated. Globalization, declining manufacturing jobs, expanding low-wage service and trade jobs, and weakening of labor market institutions has contributed to the erosion of wages especially for workers without technical or college training here in the United States of America. This paper examines the poverty level in the United States from 1990-through 2005 and assesses how poverty rates and poverty gaps have changed over time. It also explores educational attainment and income gaps between the sates and the regions respectively. Data was collected from U.S. Census of Population, Geolytics Census CD and from various electronics sources. To analyze the data Excel and SPSS were used. The study indicates the poverty rate gap between white and black population is very high. It also indicates that the poverty rate gap between more urbanized states and less urbanized states is very wide.

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Introduction

Although attention is now given to income inequality in the United States, there are scholars who dispute the growing evidence of its contribution to high poverty? incidence. Feldestein (1999) contends that not all income inequality implies violation of the Pareto Principle. He stresses that most income inequality actually satisfies the Pareto Principle. In other words, the widening gap in income distribution due to increases in the incomes of high-income individuals without decreasing the incomes of others make some people better off without making anyone else worse off. According to Caputo (1995), the growing evidence of income inequality is disputed in part because of controversy regarding the appropriate way to evaluate changes in distribution of income among families and workers. Kwan Kim (1997) did an interregional comparison study of income distribution and poverty for a period between 1979 and 1994. Kim's study focused on the following regions: Western Europe and North America, Eastern Europe, East Asia, Sub-Sahel Africa and Latin America. In his analysis of findings on the distribution of income and poverty among developed or industrialized countries, the U.S. again emerges as the most unequal (see table 1). Income inequality and poverty

increased more during this period in the transitional economies in Central and Eastern Europe, many Latin American countries and African countries, but not in the East Asian countries.

Table 1   Quintile in the Western & Eastern Asian Nations During 1980s

Countries	Income Share of Bottom Quintile %	The Ration Income Share of Bottom to the Top Quintile %
France	6.3	6.48
Great Britain	5.8	6.81
Italy	6.8	6.03
Germany	6.8	5.69
Japan	8.7	4.31
United States	4.7	8.91
Average	6.5	6.14

Source: Kim, 1997 p. 1911 (World Bank Data)

Kim summarizes that although the causes behind interregional disparities are country-specific, it could be argued that for developed countries it is due to the linkages between the changes in labor and capital markets within the domestic economy and the global economy in technology, trade and capital movement, and vice-versa. .He furthermore, asserts that for many developing countries, the rise in inequality and poverty between 1979 and 1994 is due also to the downside of globalization in the context of rapidly evolving technologies, which increased the demand for better-educated and trained workers even in developing countries. The most important factors that contributed to decreasing inequality were structural characteristics of the countries, such as a higher share of agriculture in GDP, or a higher share of urban in total population, and higher initial income inequality level. For both urban and rural poverty, they found that economic growth (as measured by GDP per capita) reduced poverty rates, but the effect was partially cancelled by the fact that growth increases inequality, which in turn increases poverty. The authors also tried to determine total effects of growth and found that for all periods a negative relationship between income and poverty (both urban and rural) occurred mainly during recessions and/or during economic down turns. Other important components (besides the labor market and changing demographics) that have been emerging in recent studies of income inequality and poverty are race, gender and family structure.

Darity et al. (1998) used a decomposition model on racial earnings disparity and family structure during the end of the Carter administration and into the Reagan and Bush administrations, and found that gender and race discrimination explain substantial portions of the gaps in earnings. They assert that, although family structure matters, racial discrimination (especially pre-labor and labor-market treatment) was a stronger influential factor in the determination of the widening racial gaps in earnings among family heads during the shift that began toward the end of the Carter administration and lasted into the Reagan and Bush administrations (1976-1985). The authors purport that if blacks and whites were treated equally in every aspect to the point that the coefficients in the labor force participation, family structure, and earnings equations were identical for

both groups, then there would have been a convergence of black and white probabilities of female-headed families by 1985, black intensive products away from standardized products have induced a widening wage gap between skilled and unskilled workers. labor force participation would have climbed, black earnings would have increased tremendously, and earning disparities would have declined dramatically.

In the 1960s and 1970s, the availability of a low-cost, unskilled, and less educated Labor force helped attract manufacturing from urban to rural areas. This seemed to have resulted in an apparent decline in rural poverty due to growth and economic vitality brought about by increased employment. However, in the 1980s and 1990s, global market competition and structural changes in the U.S economy plus the rise in high-tech Industries, demanding highly educated workers, made it difficult for rural areas to attract Industries requiring a skilled labor force. Moreover, there has been a disproportionate coverage of urban poverty in terms of media and current research studies. More federal programs targeted to alleviate poverty have been devoted to urban as compared to rural areas. The failure of the literature on poverty to adequately address rural poverty limits its scope in understanding the vitally different character and changing nature of rural poverty, and hence its value for policy makers in designing development and federal programs to serve the rural poor (Deavers and Hoppe, 1992).

For example from the rural areas, the Appalachian region (AP) of the Southern United States (SUS) , mainly the state of Mississippi, Alabama and West Virginia, are highly affected in terms of the incidence of poverty, and they lag behind that of the nation. High rates of poverty, high unemployment rates, low human capital formation and out-migration, especially by young college graduates, are the general features of rural life in most of the SUS including West Virginia (Dilger and Witt, 1994). The slow or negative growth in income and employment in the rural states, the population loss and the disappearance of rural households are both causes and effects of the persistently high rates of poverty with repercussions for the economic and social well-being of the rural population, the health of local business, and the ability of the local governments to provide basic services (Cushing and Rogers, 1996). Poverty is a historical fact of life in many rural areas of America, where the SUS region is located, and serves as a classic example of deeply rooted poverty. Despite the economic expansion of the late 1980s, rural areas have lagged behind the rest of the nation, and poverty rates remained high (Deavers and Hoppe, 1992). This evidence suggests that many rural areas and rural poor are at a disadvantage when competing for new job and higher income opportunities, even in a growing economy.

The causes of poverty are multifaceted and complex (Duncan, 1992). Nevertheless it has been shown that poverty is inextricably linked to the labor market, income inequalities by race and gender, welfare dependence, single-parent families, presence of pre-school children, low human capital, and lack of earning ability, low annual earnings and economic insecurity. The structural changes in rural economies are not temporary phenomena, but a situation in which the economic bases of rural communities will be changing constantly as a response to ongoing international forces and national structural economic adjustments (Reeder, 1990). To provide public facilities and services, and to strengthen and diversify the local economy, policy makers and local leaders need to know the incidence of poverty and the nature of income distribution patterns.

Poverty Rates Remained Steady in Most States

As Figure 1 shows, the poverty rates in the United States was 13.1 % , in 1990 slightly dropped down in 2000 to 12.4% and jumped to 13.3% in 2005 (See Figure 1). Comparing the different regions, in 1990 the highest all persons poverty rates were regions three, four and two respectively.

Figure 1
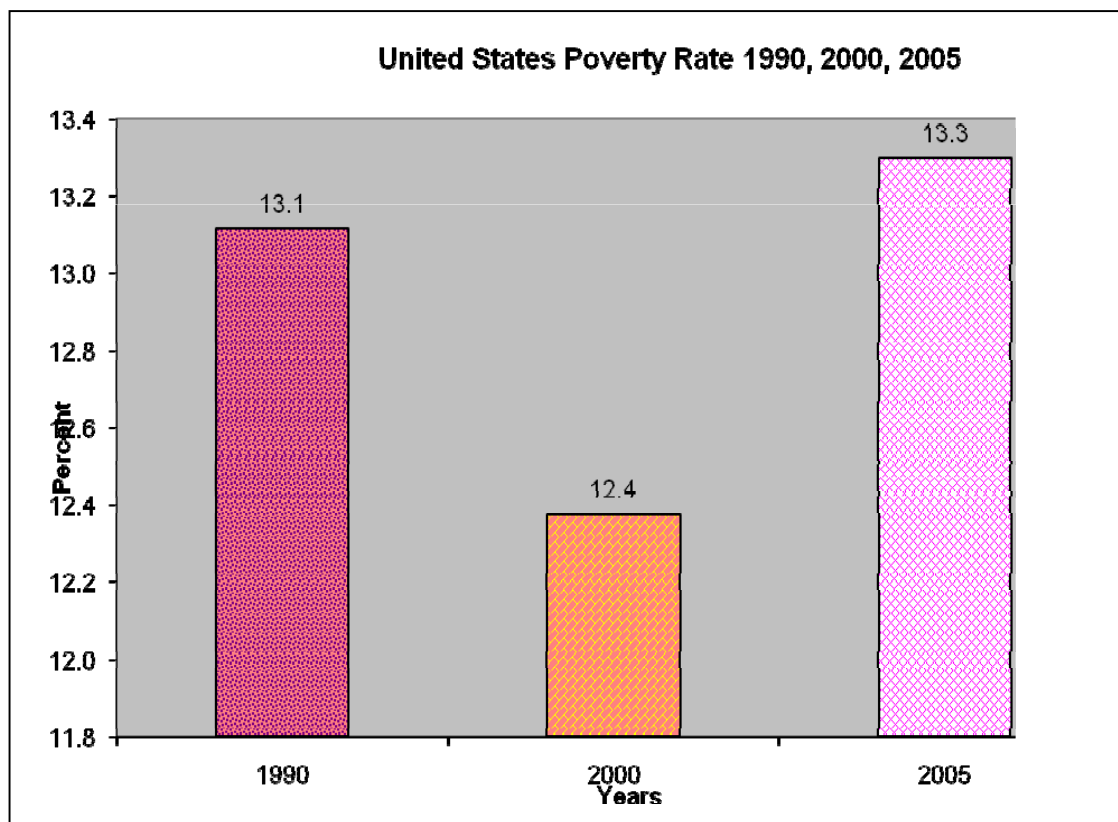
Source: U.S. Census of Population 1990-2000 and Population Estimate by Center for Urban and Rural Research, 2005

However, in 2000, regions three, two and four showed slight decreases in all persons poverty rates (see Figure 2). Over all. Alaska, South Dakota, and Vermont experienced the biggest jumps in poverty rates since 2004, with increase of at least 2 percentage points each. In most of the majority states, poverty rates remained unchanged; however, there was only one state-Washington-with significant decrease in poverty.

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Figure 2
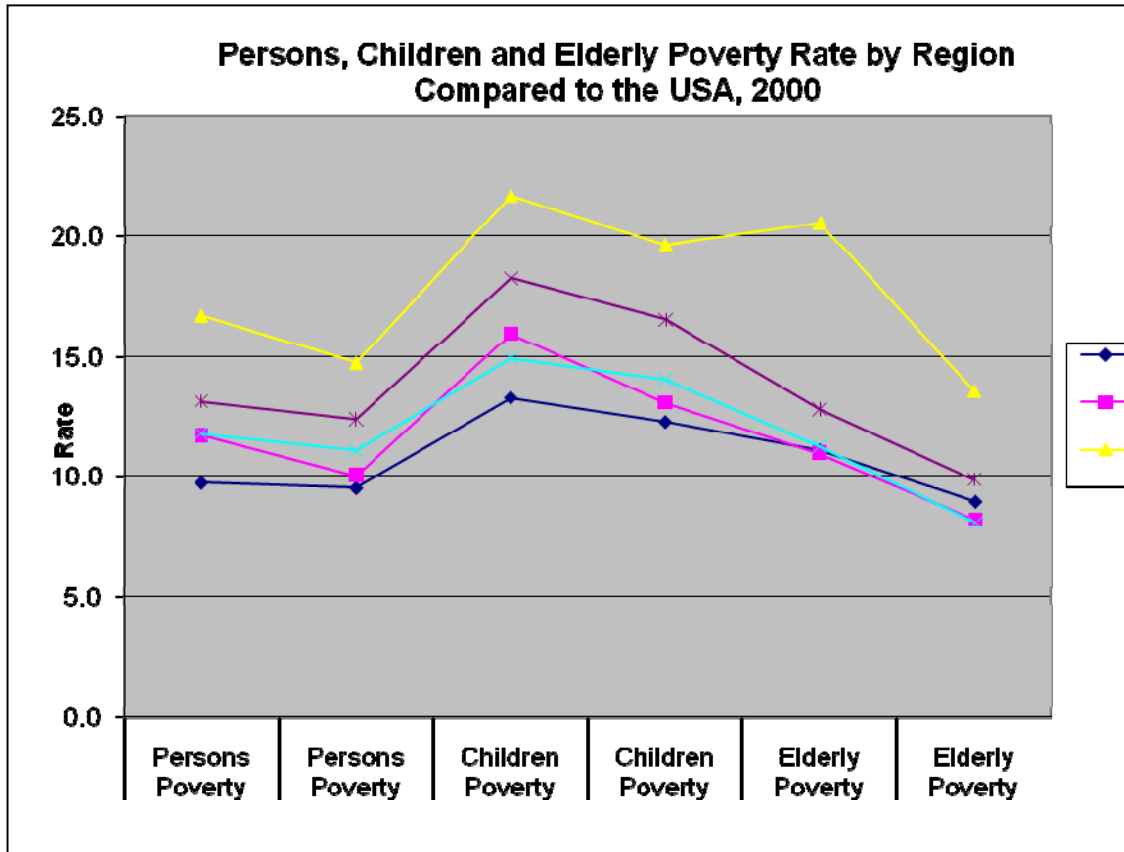
Source: Geolytics Census CD, 2000

Table 1   States with High Poverty Rates 2004-2005

State	% People in Poverty	% People in Poverty	%Change
Poverty Rate Increased	2004 Estimate	2005 Estimate	2004-2005
Alabama	16.0	17.0	1.0
Alaska	8.2	11.2	3.0
Florida	12.2	12.8	0.6
Indiana	10.8	12.2	1.4
Iowa	9.9	10.9	0.9
Kansas	10.5	11.7	1.1
Massachusetts	9.2	10.3	1.1
Michigan	12.3	13.2	0.9
Missouri	11.8	13.3	1.5
South Dakota	11.0	13.6	2.7
Texas	16.6	17.6	1.0

Vermont	9.0	11.5	2.4
Washington	13.1	11.9	-1.2

Source: Population Reference Bureau Analysis of the American Community
Survey.
_____

Note: The ACS survey in 2004 and 2005 are limited to the household population
and excludes the population living in institutions, college dormitories, and other group
quarters. Data are based on a sample and are subject to sampling variability.

Children Poverty Rates Increasing in Many States

The new ACS estimate shows that children poverty rates have increased in many
parts of the country. Overall, there were seven states with significant increases in children
poverty since 2004, and five with significant decreases (see table 2). Four of the states
with increases in

Children poverty were located in the Midwest- Kansas, Missouri, Nebraska, and
South Dakota. Vermont experienced the biggest increase in children poverty from 2004
to 2005, jumping from 12 percent to 15 percent. In Texas, one every four children lived
in poverty in 2005. As Figure 3 indicates in 1990 regions three, two, and four were high
in children poverty rates. While. in 2000 all regions showed a slight decrease in children
poverty rates. Three of the states with significant decrease in children poverty rates
(Nevada, Utah, and Wyoming) were located in the mountain west region. Of the entire
states children poverty rate decreased in Nevada, from 19 percent in 2004 to 15 percent in
2005. In 2005, the national children poverty rate stood at 18 percent. As the same time
in 1990 elderly poverty rates were higher in regions three, four and one respectively. And
in 2000 elderly poverty rates dropped significantly starting from region three, four and
one respectively (see Figure 3).

Figure 3

States With the Highest Persons, Children and Elderly Poverty
Rate Compare to USA, 1990 and 2000

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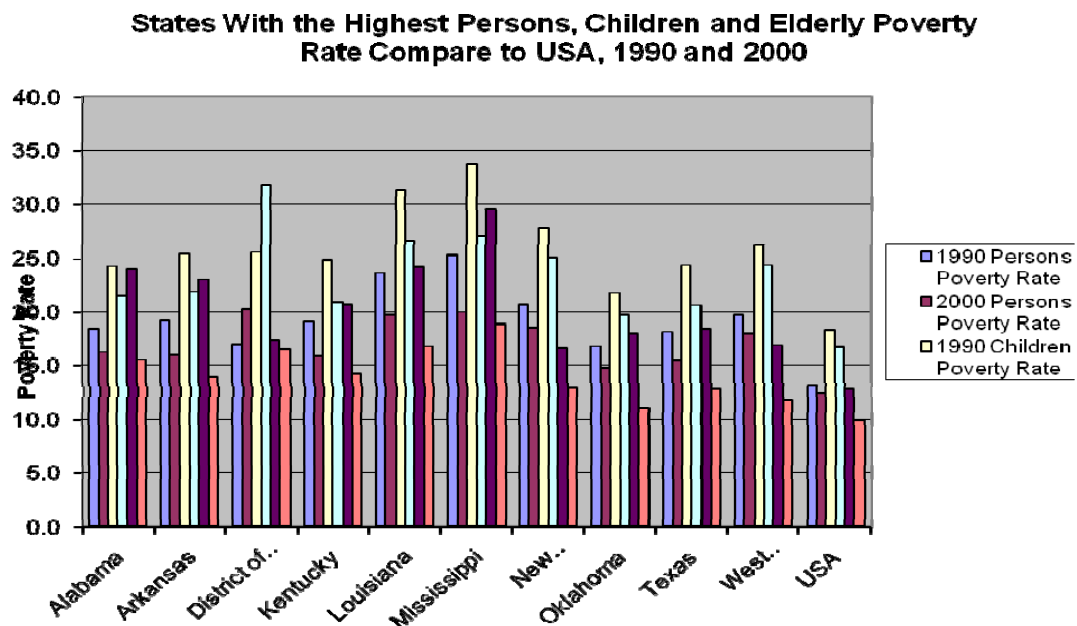
Source: Geolytics Census CD, 1990-2000

Table 2 States with High Children Poverty Rates 2004-2005

State	2004	2005	2004-2005% change
Alaska	11.2	14.5	3.3
Kansas	12.5	15.1	2.6
Missouri	16.2	19.0	2.8
Nebraska	13.1	14.8	1.8
South Dakota	14.8	18.2	3.4
Texas	22.9	24.9	2.0
Vermont	11.7	15.4	3.7
Nevada	18.8	14.9	-3.9
New York	20.7	19.4	-1.3
Utah	13.3	10.9	-2.4
Washington	17.2	15.1	-2.1
Wyoming	14.0	11.1	-2.9

Source: Population Reference Bureau Analysis of the American Community Survey.

Educational Attainment 1990 – 2000

One of the most important factors affecting the human resource base of any community is the educational level of its population. The relationship that exists between low educational levels and low income levels has been well documented in different literatures. In 1990 states like West Virginia, Arkansas, and Kentucky had the lowest college graduates (12.3%, 13.3%, and 13.6% respectively), where as District of Colombia, New Mexico,, Texas, and Oklahoma had the highes colleague graduates (33.3%, 20.4%, 20.3% and 17.8) respectively. In 2000 Distinct of Colombia, New Mexico, Texas, Oklahoma, Alabama, Louisiana, and Mississippi had the lowest college graduates (39.1%, 23.5%, 23.2%, 20.3%, 19%, and 18.7%) respectively, while national colleges graduated has shown an increase from 20.3% in 1990 to 23.7% in 2000, (see Figure 2).

Figure 4

States With the Lowest High School and College Graduates 1990 and 2000
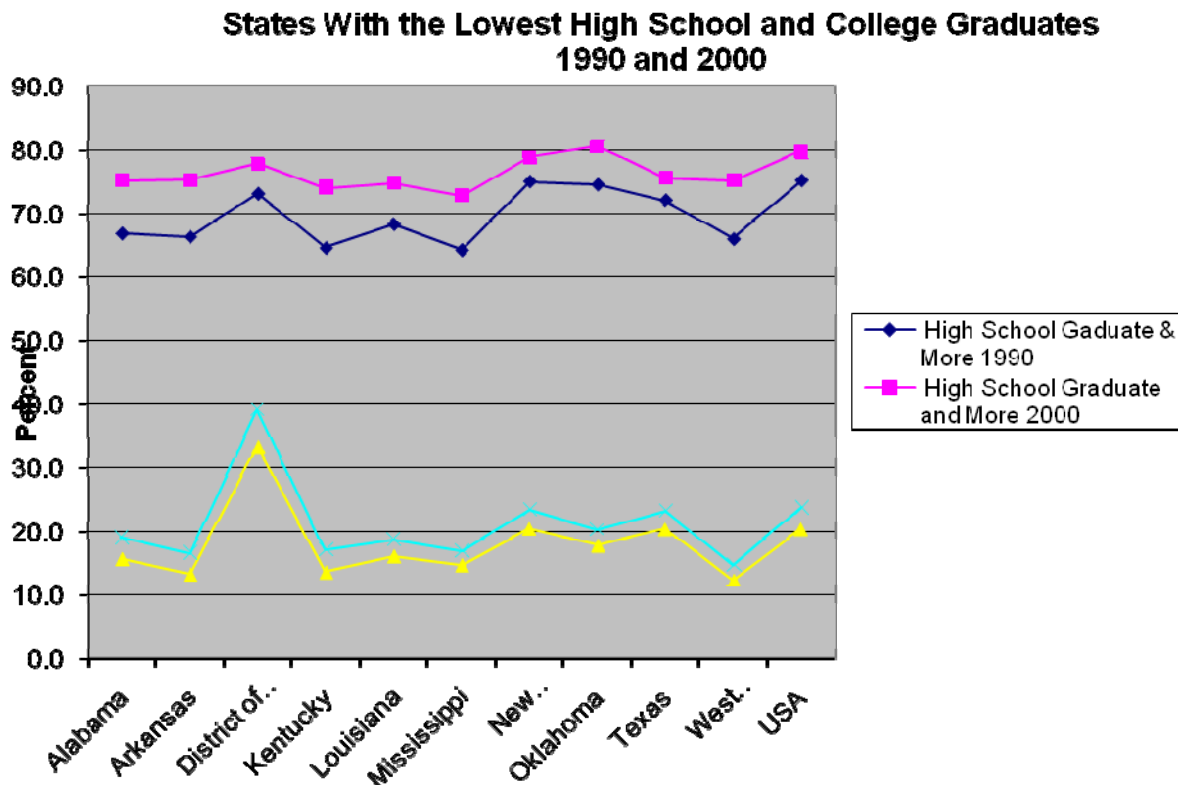
Source: Geolytics Census CD, 1990-2000

States with the Highest Unemployment Rates Compared to the Nation between 1990 and 2000

As Figure 3 indicates in 1990 Louisiana (8.9), West Virginia (8.9) had the highest unemployment rate in the nation but in 2000 District of Colombia (10.5%) had the highest unemployment rate in the nation followed by Mississippi (7.5%) and West Virginia (7.5%).

During the same period. West Virginia, Texas, Oklahoma, Kentucky's states had the lowest unemployment rate in the nation.

Figure 5

States With the Highest Unemployment Rate Compared to USA, 1990 and 2000
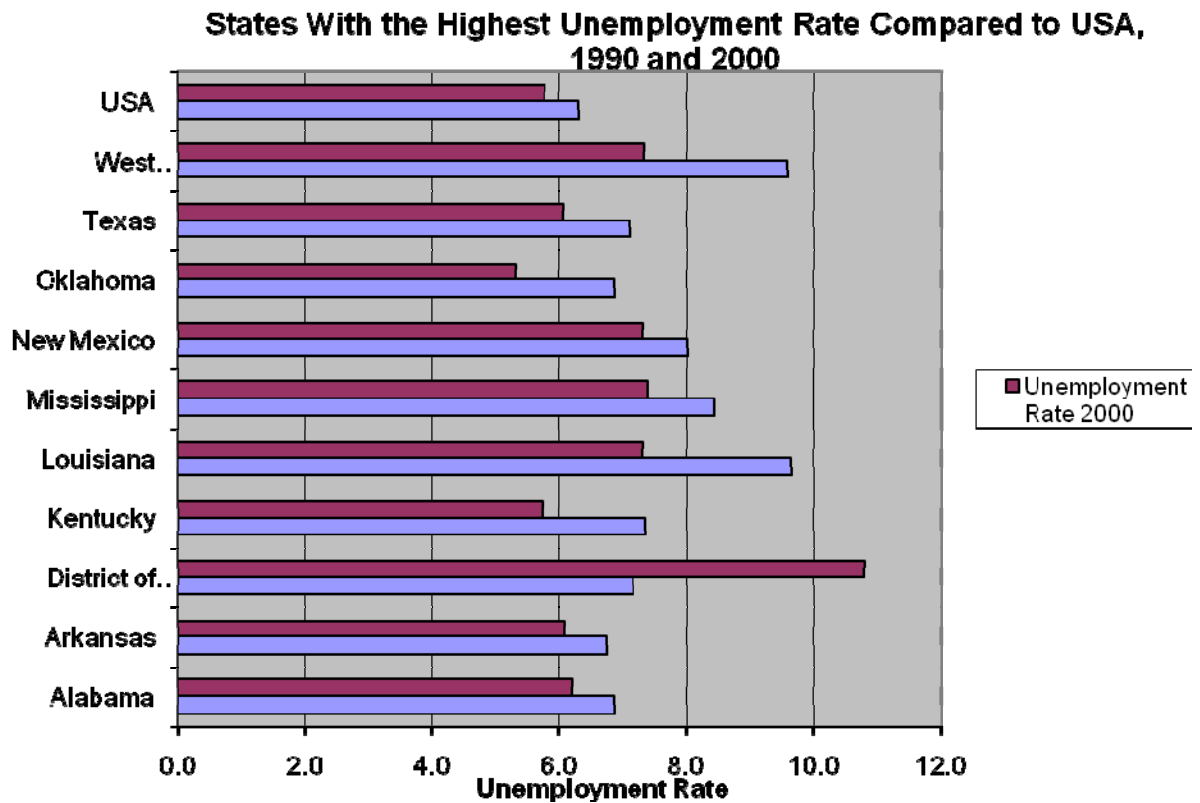
Source: Geolytics Census CD, 1990-2000

Highest Per Capita, Median Family by State 1990-2000

As Figure shows between 1990 and 2000 the per capita and median family income increased as high as 6% to as low as 3%, the unemployment jumped from as low as 6.3% to as high as 11% while the unemployment rate dropped from 6.3% to 5.8% nationally. The composition of the labor force and the skill which it posses significantly affect an area's potential for industrial development. These factors to a large extent determine the types and quality of industries which may locate within an area.

Figure 6

States with the Lowest Median Family and Per Capita Income Compared to the USA, 1990 and 2000
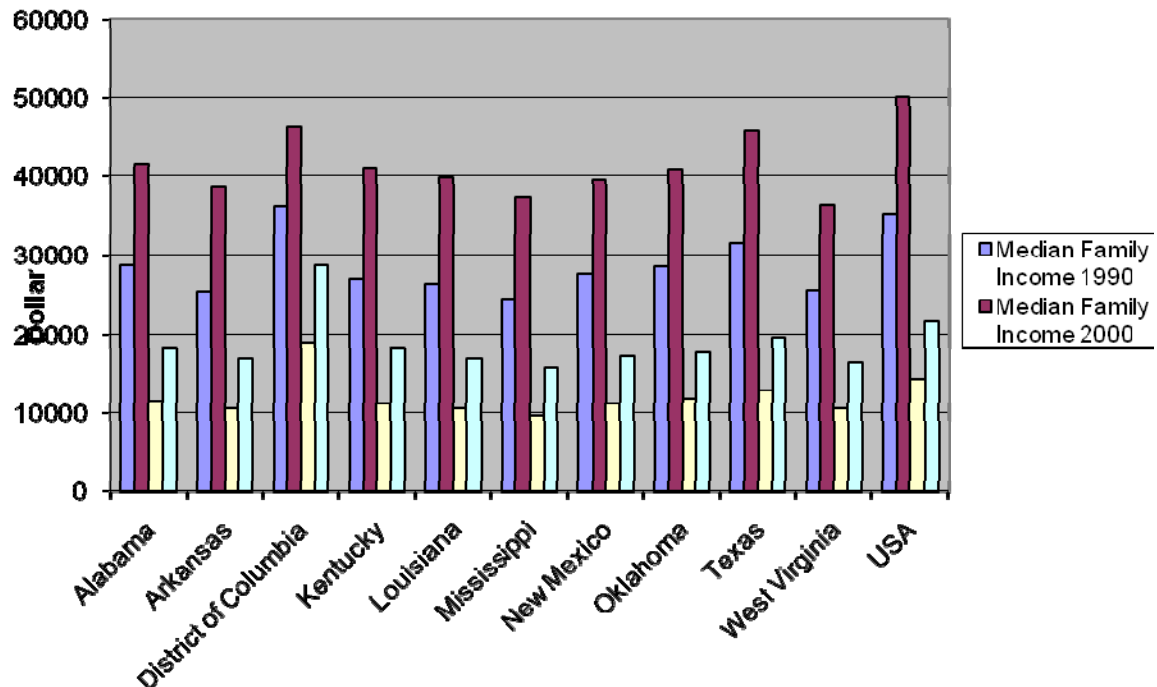
Source: Geolytics Census CD, 1990-2000

Summary

A correlation analysis was applied to see the relationship between poverty rates, education, race and income between 1990 and 2000. The results reveal that state with higher poverty rates have low median family and per capita income. Regarding the determinants of poverty and income inequality, the correlation results reveal that increases in the proportions of population on welfare and of the population age 65 or older, contributed to increase poverty levels (measured as the proportion of people with total incomes below the official poverty line). On the other hand, increases in the level of per capita income in the states contribute to reduce poverty. The main factor that contributes to increase income inequality, according to the results, is the educational level of the states and their respective counties.

Policy Implications/and Conclusion

The fact that the annual rates of change in poverty and income inequality can take place simultaneously and helps bring awareness to local governments and policy makers design policies and strategies that could both reduce poverty and income inequality in the United States. For instance, a strategy to reduce income inequality requires simultaneous interventions by the government to promote job creation and entrepreneurship as well as to improve equity in the opportunity of participation in educational levels. There is also a

need to improve access to these new jobs by reducing gender, wage, and class discrimination that exist in local labor markets.

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Economic Efficiency: Extending legislative Ideology through Benefits and Costs

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Abstract

In an analysis of medical malpractice and minimum wage roll call votes in the U.S. House and Senate within the 99th through 108th Congress, a measure of economic efficiency was found to be a statistically significant contributor to voting decisions within either policy area. Economic efficiency considers maximization of net benefits of policy formulation and is an objective criterion for legislative behavior. This paper argues that such a measure exhibits variation from traditional measures of liberal-conservative ideology vote models and adds a different perspective to legislative ideology that is useful in vote models. Variations between chambers of Congress (House and Senate) and political parties (Republican and Democrat) are analyzed. Aggregate effects of public policy decisions are explored and advantages of using a measure of economic efficiency noted.

Introduction

Ideology reflects deep beliefs about a person and how individual satisfaction derives from improving the lives of others or promoting ideological positions. Political ideologies depict the preferred states of the world and are often illustrated through a liberal-conservative spectrum. By studying ideology one can explore not only the motives behind individual decision making, but also consider the effect of those decisions.

This study considers roll call votes on medical malpractice and minimum wage in the U.S. House and Senate within the 99th through 108th Congresses, inclusive, and analyzes three measures of liberal-conservative ideology - Americans for Democratic Action (ADA), American Conservative Union (ACU), and DW Nominate – in an attempt to explore to what extent roll call votes are cast in liberal or conservative terms. Measuring legislative decision-making through a liberal-conservative spectrum includes characteristics of a legislator's behavior but does not include outcomes or consequences of those actions. Through development of an economic efficiency index (E-score) that assigns numerical values to legislative voting, the public benefits of a public policy decision are measured vis-à-vis public costs and analyzed relative to liberal-conservative measures (Kennedy, 2005; Boozer, 2008; Boozer, Westley, & Landry, 2008). Higher E-scores are consistent with legislative behavior promoting greater net public policy benefits, while lower E-scores are associated with relatively lower net public policy benefits.

The model utilizes two dependent variables: support for increasing the federal minimum wage (an economically inefficient policy) and support for medical malpractice reform (an economically efficient policy). Roll call votes of members of the U.S. House of Representatives and U.S. Senate are analyzed from the 99th through 108th Congresses.

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A multivariate analysis of the model finds that liberal-conservative ideology is a better predictor of legislative behavior than economic efficiency.

This study concludes by finding that the potential use of economic efficiency is numerous in public policy dialogue and analysis for supplementing liberal-conservative measures with objective criterion for understanding behavior. Measuring political behavior through aggregate benefits and costs adds a different perspective to individual behavior that is important in weighing the effectiveness of political choices.

Literature Review

Ideology is an action-oriented model of people and society (Grafton & Permaloff, 2005, p. 173) and offers a solid basis for most legislative decisions. It is important for this study as a tool in explaining the step between individual behavior and consequences of political decisions. An action-oriented model contains directions for resolving political and economic issues, where ideology offers a prescription for solving these issues within a society (Reichley, 1981; Van Dyke, 1995). By analyzing and selecting public policies to solve political, economic, and even social issues, the effect of ideology on congressional voting behavior makes explicit a moral basis for action.

A consensus exists that ADA and ACU roll call votes offer a distinctive measure of a legislator's ideological location along a liberal-conservative spectrum (Burden, Caldeira, & Groseclose, 2000; Erickson, 1990). Researchers find that a single liberal-conservative dimension explains as much as 80 percent of voting decisions (Poole & Rosenthal, 1985; Poole & Daniels, 1985), leaving fully 20 percent not explained within a single dimension. E-scores utilize roll call votes but introduce another dimension to voting models by extending traditional liberal-conservative spectrums to incorporate net social benefits.

Economic efficiency as a concept used in the economics literature appears to transcend traditionally accepted definitions of ideology and self-interest as utilized in the legislative voting literature, but it does not replace those factors as determinants of human behavior. Economic efficiency in the broader, social benefits context of its definition is best addressed through production and allocation. Kennedy (2005, p. 45) argues this point where "efficiency in production is a measure of the effectiveness of an input with respect to the production of some output."

Considering the production process through a chain of events is necessary for illustration. Bennett (1982) offers a model for program evaluation that considers events that occur (e.g. inputs, processes, outputs, outcomes) and evaluative procedures to analyze those events (as cited in Patton, 1997, pp. 233-236). Adapting Bennett's model, Patton (1997, pp. 233-234) shows inputs as resources expended to start an initiative; activities processed with available inputs; outputs a decision or action realized from those activities; and outcomes a measurable result or consequence of the output. The input under consideration is the information available to legislators to discuss a problem area that might require a public policy. Processing the input through political debate or discussion is a step needed to produce an output. The roll call vote on this debate is the output, the decision or action taken. Outcomes are the consequences of the vote (Kau, Keenan, & Rubin, 1982). An outcome could be a reduction in malpractice claims, for

example, in the context of medical malpractice reform (Boozer, Westley, & Landry, 2008) or changes in the level of employment as a result of changes in the minimum wage.

In economic terms, the output produced from policy formulation is a function of the inputs or resources that go into developing that output. According to Browning and Zupan (2002, p. 166), a production function can be expressed mathematically as

$$Q = f(X, Y, Z)$$

Where, Q is the output or policy decision that is made and combinations of X, Y, Z are factors of production or inputs that are employed through the political process to produce a public policy solution or vote.

Descriptive Analysis

Measuring ideology along a liberal-conservative spectrum allows for analysis of not only the relative aspects of each component, but also trends in ideology across the time period of this study, 99th through 108th congresses. Political party control of Congress shifts from Democrat to Republican with the 104th Congress. Using DW Nominate scores as a weighted measure that captures ideology across time as each legislator casts additional roll call votes for or against legislation, a relatively stronger increase in conservatism in the House and Senate is apparent.

Referring to mean values for DW Nominate in the House in Figure 1, the trend in conservatism over the period of this study is generally upward with a sharp spike beginning with the 104th Congress and gradually continuing thereafter. Positive numbers indicate a conservative orientation and negative numbers a liberal orientation. In each Congress a positive number is found when the majority in charge is Republican and a negative number is found when the majority is charge is Democratic. DW-Nominate scores are measured by Congress and are available from http://voteview.com/dwnomin.htm.

In the Senate DW Nominate values also experience a sharp increase beginning with the 104th Congress, but the chamber does not become increasingly conservative. Changes in DW Nominate scores from the 99th Congress to the 108th Congress show very little absolute change from beginning to end, but much variability from one Congress to the next. A shift in orientation from liberal to conservative with the 104th Congress is associated with relatively more extreme DW Nominate scores. Immediately preceding the shift in orientation, the Senate was becoming more liberal with higher negative DW Nominate scores. Immediately after the change in party control with the 104th Congress the Senate was relatively more conservative, as DW Nominate scores were increasingly higher, positive numbers. DW Nominate scores further away from changes in party control with the 104th Congress, i.e. DW Nominate scores for Congresses closer chronologically to the 99th or 108th Congress, experience less movement and are generally closer to zero, a point where ideology is relatively balanced between liberal and conservative. Figure 2 illustrates mean DW Nominate values for the U.S. Senate.

Economic Efficiency as a Social Benefit Maximizer

Support for policies that do not maintain or increase economic output might not be economically efficient. An economically efficient legislator supports higher economic

output to maximize aggregate social welfare as opposed to situational aspects of support for individual public policies. Stigler (1971) argues that economic interests are a key component of why legislators sometimes adopt inefficient policies. The economic interests of a constituency must be considered with the self-interests of a legislator and the public interest attributes of policy decisions. Kennedy notes: "The expectation is that economic interests play a greater explanatory role as the injurious nature of a given policy is more obvious" (Kennedy, 2005, p. 32). Injurious policy is that policy which reduces economic efficiency and beneficial policy enhances welfare (p. 33). Maximization of social benefits might or might not be consistent with those economic interests of a constituency. How ideology is measured via social benefits and costs and analyzed relative to traditional measures of liberal-conservative ideology, such as ADA and ACU scores draws distinctions between the objective aspects of the former and the normative aspects of the latter.

E-score development

An E-score is a measure of economic efficiency developed by Kennedy (2005) to measure social benefit and cost of roll call votes on legislative policies in the House and Senate. Boozer (2008) extends the measure to include the 99th through 108th Congresses, inclusive. The model for computation of the E-score is:

$$\text{E-score} = \sum_{i=1}^{N} (P_i / N) \times 1$$

Where,

P_i = one if legislator voted in support of enhancing efficiency and zero otherwise

N = number of votes considered in the analysis of each legislator

Only roll call votes were chosen where economic efficiency was clearly discernable. That is, decision rules developed by Stigler (1971) and Kennedy (2005) were followed in compiling votes for analysis (Boozer, 2008, p. 31) and are available across each Congress of the study (pp. 382-391). Analogous to ADA and ACU scores, E-scores are based on a scale of 0 to 100, where higher scores are assigned to legislators that vote increasingly for policies that expand social benefit relative to social cost and lower scores to those legislators that support legislation that produces higher social cost relative to social benefit (Kennedy, 2005, pp. 45-49).

ADA and ACU scores

Traditional measures of liberal-conservative ideology are ADA and ACU scores. ADA scores measure liberal ideology and ACU scores measure conservative ideology. On a scale of 0 to 100 legislators in the House and Senate that vote for relatively more liberal positions are assigned higher ADA scores and legislators that vote for relatively more conservative positions are assigned higher ACU scores. Each score measures ideology along a spectrum of liberal-conservative. ADA ratings are available from http://www.adaction.org/votingrecords.htm and ACU scores are available at http://www.acuratings.org/.

Considering ADA, ACU, and E-scores across the ten Congresses of the study finds variation between each measure and within each Congress. Figure 3 illustrates that E-scores in the House vary from lower to higher scores, relative to ADA and ACU measures of liberalism and conservatism and gradually increase throughout the study,

indicating that House members are voting in increasing numbers for public policies that are economically efficient.

As indicated in Figure 4, in the Senate much more variation occurs in each of the variables, especially the E-scores. Throughout the time period examined, ADA and ACU scores shift several times but remain virtually flat. Increases in ACU scores and decreases in ADA scores reflect a shift in Republican control of both chambers of Congress beginning with the 104th Congress. The shift is not to the extent of much higher conservatism in the House and does not appear to be a harbinger of changes in a long-term trend in ideology in the Senate.

The Model

The model is a multivariate analysis of each dependent variable (medical malpractice and minimum wage) and values for E-score, ADA, ACU, and DW Nominate considered as independent variables. The analysis addresses each dependent variable singularly for each Congress across each chamber. With the purpose of the study surrounding the role of E-score as an ideological tool for predicting legislative behavior each dependent variable, to standardize the analysis between each dependent variable roll call votes were coded to represent an economically efficiency enhancing legislative position. Roll call votes for medical malpractice are economically efficiency enhancing and votes for minimum wage are not economically efficiency enhancing. That is, roll call votes in support of medical malpractice and votes in opposition to minimum wage increases are coded as economically efficiency enhancing.

Three distinct scoring models are employed in compiling votes for computing the value of each dependent variable. For each dependent variable policy area – medical malpractice and minimum wage – when only one piece of legislation is considered in that Congress, the dependent variable is computed based on roll call votes for that single piece of legislation. For those Congresses where more than one piece of dependent variable legislation is considered roll call votes are tabulated within a scoring model to reflect a percent of the total roll call votes within each policy included in this analysis. For example, if four pieces of legislation were analyzed in the policy area and a legislator voted in support of increasing economic efficiency one time out of four a score of 25 was assigned to the legislator.

Legislation for each dependent variable policy area was not considered within each Congress of the study and therefore roll call votes are not available for analysis in some Congresses. To alleviate the problem of no dependent variable available for analysis in these Congresses, separate scoring models for each dependent variable policy area are computed in the House and Senate for those legislators serving in each Congress during the time period of the study, 1985-2004. In the same manner as the scoring model for multiple pieces of legislation in the same Congress, a score is assigned for the legislator as a percent of the total roll call votes available for analysis within each policy area across each Congress in the House and Senate.

All legislation in each policy area where roll call votes were cast is not included in the scoring models. Only that legislation that specifically addressed the policy area(s) was included. That is, legislation that was part of other bills or failed to clearly distinguish economic efficiency implications of the legislator's vote on the policy

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position is not included. Table 1 summarizes legislation included in the dependent variable scoring model for each Congress of the study in House and Senate. For each piece of legislation in the table the name of the legislation, bill number, and date when the roll call vote was cast is included.

For each dependent variable policy area (medical malpractice and minimum wage) the following regression equation was employed in analyzing the impact of each measure of ideology (E-score, ADA, ACU, and DW Nominate) on voting in support of economically efficient policies.

$VOTE\text{it} = a_0 + b_1 ESCORE_{it} + b_2 ADA_{it} + b_3 ACU_{it} + b_4 DW\ NOMINATE_{it}$

$VOTE\text{it}$ = dependent variable representing a scoring model of final, roll call votes by a legislator on medical malpractice and minimum wage policy.

a_o = constant term representing parameter at Y-intercept.

$b_1....b_4$ = coefficients (beta) for independent variables in the model

$ESCORE_i$ = E-score for legislator $_i$ in time $_t$.

ADA_{it} = ADA scores for legislator $_i$ in time $_t$.

ACU_{it} = ACU scores for legislator $_i$ in time $_t$.

$DW\ NOMINATE_{it}$ = DW Nominate scores for legislator $_i$ in time $_t$.

Tables 2 and 3 present the effect of each ideology variable on legislative voting in the House and Senate, respectively, for Congresses where dependent variable legislation was available. For each Congress statistically significant relationships between each independent variable and the appropriate dependent variable are indicated at $p < 0.01$ and $p < 0.05$ levels of significance. One or more ideology variables were statistically significant in each House where dependent variable legislation was available for the Congress analyzed. For medical malpractice ACU was statistically significant in the 99th Congress and ADA in the 104th Congress. ACU, ADA, and DW Nominate were each statistically significant in the 100th Congress. For the 107th Congress ADA and E-score were statistically significant.

For minimum wage dependent variable E-score is statistically significant in 101st, 104th, and 106th Congresses. E-score is positively correlated with minimum wage in the 101st and 106th Congress, but inversely correlated with minimum wage in the 104th Congress. An inverse correlation with minimum wage suggests that legislators with higher economic efficiency ratings do not always support economically efficient policies.

Overall, the model produced statistically significant results for each ideology variable across the Congresses where medical malpractice or minimum wage legislation was available as dependent variables. Standardized coefficients indicate that the directional impact of each ideology variable on changes in the dependent variables was consistent with each hypothesis in all Congresses analyzed. Two exceptions are an inverse correlation for ACU and medical malpractice in the 99th Congress and an inverse correlation between E-score and votes in opposition to increasing the minimum wage in the 104th Congress.

In the Senate the model produced no statistically significant results for ideology variables when minimum wage was considered as the dependent variable in the 100th Congress or medical malpractice in the 104th Congress. For medical malpractice dependent variable ADA was statistically significant in the 107th and 108th Congresses and inversely correlated to movements in the dependent variable. For minimum wage

dependent variable, ACU and DW Nominate are each statistically significant in the 101st Congress and positively related to the dependent variable as hypothesized.

For Congresses where dependent variable legislation was not available a scoring model of votes including all dependent variable legislation for each dependent variable separately was considered. Scores representing each dependent variable are a compilation of scores for each individual Congress for those legislators serving across all Congresses in the model. Tables 4 and 5 summarize the results of each ideology variable regressed against a scoring model for each dependent variable in the House and Senate, respectively.

In the House the model produced no statistically significant variables in the 101st, 102nd, 103rd, and 106th Congresses for medical malpractice dependent variable, and 99th Congress for minimum wage dependent variable. For each of the other Congresses where a scoring model was used in the absence of dependent variable legislation for that Congress – 105th and 108th for medical malpractice and 100th, 102nd, 103rd, 105th, 107th, and 108th for minimum wage dependent variables, respectively – at least one ideology variable was statistically significant in the model. E-score was statistically significant in the 102nd and 105th Congresses with minimum wage as the dependent variable.

In the Senate the model produced no statistically significant results in the 99th, 100th, 105th, and 106th Congresses with medical malpractice as the dependent variable and in the 99th, 103rd, 106th, 107th, and 108th with minimum wage as the dependent variable. In the remaining Congresses – 101st, 102nd, 103rd for medical malpractice and 102nd, 104th, and 105th for minimum wage dependent variables, respectively – where a scoring model was used in compiling a dependent variable at least one ideology variable was statistically significant in each Congress. E-score was statistically significant in the 101st and 102nd Congresses with medical malpractice as the dependent variable.

Conclusion

This study supplements existing research that finds economic efficiency to be a statistically significant predictor of behavior over a limited time period by measuring its effect over a period of twenty years and analyzing E-score relative to liberal-conservative ideology. By focusing on a measure of economic efficiency to describe behavior through outcomes of voting decisions, using those decisions to predict support for policies that expand net benefits is possible. The study applied an E-score for measuring economic efficiency associated with legislative decision making to public policy initiatives to test its effectiveness. Including liberal-conservative ideology variables is a multivariate analysis allows for testing the effect of E-score in a model and measuring directional impact of its application.

The study extends results by Boozer, Westley, and Landry (2008) and finds that traditional measures of liberal-conservative ideology – ADA, ACU, and DW Nominate – are highly correlated with each other over time but not with E-score. A positive correlation existed with E-score and ACU and DW Nominate and a negative correlation with E-score and ADA. These associations were relatively consistent throughout the model over the time period of the study.

Movements between Congresses for ADA, ACU, and DW Nominate scores experience relatively less variance than E-score. Less variance is an indication that

liberal-conservative positions of legislators experience less change from Congress to Congress, while E-score values swing with much more variation. The purpose of incorporating more moderate values for E-score into a vote model was to alleviate extreme positions identified in using ADA, ACU, and DW Nominate scores to predict behavior. As a measure of economic efficiency, E-scores were not expected to measure extreme positions for ideology between each political party but rather capture a different component of ideology for Republicans and Democrats alike that is less extreme and more reliable.

While liberal-conservative ideology was never questioned as a predictor of behavior, the analysis clearly depicts ideology as multidimensional. Benefits and costs associated with public policies must be included as determinants of decision making. By including a measure of economic efficiency in vote models, such models have added explanatory power for identifying and understanding economic consequences of political behavior. Analyzing associations between each measure of ideology over a period of ten Congresses and two distinct public policy areas supports E-score as a predictor of legislative behavior that is not limited to a relatively brief period of analysis of prior studies.

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Peer Evaluation Lessons in a Group Project

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Abstract

Peer learning is an effective teaching tool and is appropriate for group projects. However, students may be tempted to get a free ride in the group or may fear that they will carry more than their fair share of the load. Students may be reluctant to provide critical evaluation of peers. Detailed rubrics and group structure are important factors in successful peer grading. This paper discusses the authors' ongoing experiences in refining peer evaluations as a tool in a class which uses a scale model reinforced concrete structure as an active learning model.

Key Words: Peer Evaluation, Active Learning, Group Projects, Rubric

Introduction

In today's workforce a premium is put on people who have the ability to work in groups. The team concept develops necessary career skills and encourages peer learning. Naturally, students working on group projects will evaluate the work of other students in the organization. A professor can utilize this evaluation by implementing a peer grading system. This assessment process makes students realize that their work is a part of the whole and not just an individual effort. The professor is able to obtain some representation of student participation without having to micromanage every student. However, peer evaluation can be frustrating for instructors and students for several reasons. Students tend to be lenient on evaluating other students and the amount of time required for grade calculation discourages instructors from using peer review with large classes. This process has already been documented (Bray& Manry, 2007). The observations of the student serving as the owner's representative and the project manager are included in a later section of this paper.

Background

The junior-level Reinforced Concrete and Formwork class is taught once each year in the fall semester. The model building shown in Figure 1 was introduced to give students a hands-on example to illustrate results of calculations. The instructor found that students were more persistent in understanding theory when they had constructed a physical model (Bray & Manry, 2007). Table 1 explains the five-year development of the project. The project has developed into a simulated construction project focusing the entire class of approximately 50 students for six to eight weeks in constructing the project according to a set of plans and specifications. Figure 2 shows the project organization

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chart. The remainder of the semester is spent on the design theory behind the actual structure.

Peer Evaluation Method and Grades

For the current project cycle, the instructor grades each group using a specialized rubric. The rubric for the project management team is shown in Table 2. Each group is given the opportunity to redistribute the available points among the group members. In the 2007 cycle the peer evaluation data was collected in a special spreadsheet that automated the calculations. In the 2008 the data was collected by the instructor and tabulated by hand. The extensive reorganization of the groups will require a new computerized data collection method.

The Other Side of the Desk… Tales of an Owner's Representative

The owner's representative is an important part of the project management team on any project. In this class I had the opportunity to facilitate the coordination of the scale model with the instructor. The most difficult thing that I had to control as owners representative was the project documentation. In our project we used submittals, daily reports, memos, purchase orders, and a project website to make up our complete project documentation system. The coordination of receiving the necessary project documents in an orderly time for the project progress to continue was very difficult. The project documentation process of submitting and getting approval was rather difficult to do when the class only met for two hours and fifteen minutes on Tuesdays and Thursdays.

The thing that surprised me most about the project was the speed at which the work was finished. The concrete crew, steel fabrication, and ironwork crew were able to complete the structure in a timely fashion. The project was finished without much work outside of class.

If I had the opportunity to do the project over again, I would have a better system of filing and communication between the owner's inspectors and the project management team. The filing system that we used with binders and a project documents box was cumbersome and was often ignored by members of the project team that needed documents. An online database for our construction documents would have been the perfect way for us to get experience with how project documentation is done on an actual jobsite and have a way to organize and access documents outside of the classroom. The online database would need administrative access by the owner's representative and the project engineer. The other members of the project management and the inspectors would need access to upload documents to the database and review documents. The communication chain between the owner's rep and the project management team could have been improved with more meetings where the foreman of each crew was present and active. These meetings would focus specifically on what each crew needed to do that day by outlining clear directives and creating a separate schedule for the week. Instead of just looking at a long schedule it would have helped to have weekly goals to keep members of class on the same page.

The Other Side of the Desk… Through the Eyes of the Project Manager

It was found in that past cycles of the scale model project that the crews were too large and their corresponding rubrics were too generalized. One of the major changes to the scale model project during this cycle was the new organizational chart shown in Figure 2. In the past the crews were broken down into the project management team, earthwork, form-work /alignment and ironworkers. This format left to much discretion to each team. Each team had up to 15 members who had to decide who would be doing what jobs. The rubrics also had to be generalized, since the groups performed many different jobs. When the initial group grade was assigned it was for the entire 15 member team. Thus, if one person did not perform their job well it affected the entire 15 member team. The new organizational chart included many smaller teams of four members each. Once the crews were broken down the grading rubrics were specialized to better clarify the responsibilities of each crew. This made expectations much clearer. Additionally, communication was better in groups of four. This improved communication made it easier for teams to discern if their other teammates needed help getting a job accomplished or if the whole team has hit a snag and needs help from members outside the group.

The schedule was one of the most difficult things to manage. Every time that the project was proceeding as scheduled or ahead of schedule, something would occur that would put it behind schedule. When this happened the lost time had to be made up somehow. The only way this lost time could be made up is to ask crews to come in outside of designated class times to help put the project back on schedule. This was met with mixed reviews. Some members of the crews did not mind while others did. Some showed up some did not. Some came in good moods while others came in bad moods complaining about the people who didn't have to show up or the ones who were supposed to come and did not.

While these problems had to be dealt with they were not the main cause of the schedule being difficult to manage. The most problematic scheduling dilemma was keeping the steel fabrication crew on schedule. It was their responsibility to pre-tie all of the reinforcing steel before each concrete pour. See Figure 3. In the past this crew had six to eight members. However, during this cycle the steel fabrication crew had only four members. This was simply not enough. As the project started it soon became evident that there was no way that the steel fabrication crew was going to be able to meet the schedule. A decision had to be made and fast. The first idea was to have the crew come in early before each class to make up the time. This worked for a short time before the complaining started and members of said group started not showing up. At this point it was time for a new approach. It was decided to ask the iron working crew to pool their resources with the steel fabrication crew. Fortunately, the iron working crew did not have a problem with this and were able to see the big picture, which was keeping the project on schedule. Although both crews continued to have to come in outside of class time to stay on schedule it did reduce the amount of time they had to do so and there were some days that they did not have to come in early.

As the project manager the biggest problem I found with the current grading rubrics is that they do not allow for the management team to add input into the other

groups' grades. This becomes important because the instructor is not around to observe if groups are actually doing their own work. He only observes whether or not the work is done and done correctly. While the project management team's rubric has job responsibilities that are unique to it such as scheduling the work and purchase orders, it was also all inclusive, meaning that the project management team is responsible for each team's performance.

This is as it should be. However, it becomes a problem when a group repeatedly does not complete their job responsibilities. The management team can only ask or tell a group what to do. After that the management's hands are tied. There is no leverage by grading. The only choices left to the management team are to either let the job go undone and compromise their own grade, or to do it themselves.

There is a solution for this problem. Each crew could have a job responsibility labeled project participation. This responsibility would be evaluated by the project management team who are always around during the work. This would make the evaluation a much more true representation of what really goes on during the project.

This became a problem in two ways. First there was a problem with the tool crib crew. It was their responsibility to be around at the end of each class period to make sure all the tools were put back the correct places and that the work site was clean. However, at the end of several of the classes either the crew was missing members or none of the members were present. This left their responsibilities of cleaning up the site to the management team and other students who were there and did not mind helping with the clean up. If the management team had even a small influence on the tool crib grade this might be correctable.

The second problem was there was no way to reward crews that did more than required by their rubric to keep the job running smoothly and on schedule. A perfect example of this was the iron working crew. If this crew had not been willing to help the steel fabrication crew the project would not have been on schedule.

I had many pleasant surprises along the way building the scale model. One such surprise was the plethora of knowledge that this group of students contained. There was not a single time when a problem was encountered that someone did not have a great idea to solve it. This even worked across crew lines. If a crew had a problem word quickly spread and someone would come forward with a great idea even though it was not necessarily their responsibility to do so. I was also surprised by how much pride everyone took in their work and the project as a whole. This pride was evident by the amount of time and work, each crew put forth making sure everything was as perfect as they could possibly make it. When grades were posted for the groups the instructor would also post the reasons for taking off points. The groups took the grade reports seriously because they wanted to improve their own personal grades and were interested in producing the best product they possibly could.

If I had this project to do over one of the things I would definitely try to do is communicate more effectively. Communication could have been improved between the project management team and the different crews as well as within the project management team itself. It was brought to my attention after the project was finished that there were many times that I would give a crew directions then the superintendent would come by with a different opinion of how it should be done. I also learned that some students felt like they were not kept abreast of the progress we were making on the

project and what would be happening each day. All of these problems could have been helped if not totally corrected by better communication.

After this experience I will never take a project manager's job for granted. I understand how important it is to have a good staff around you. This is true for the others on the project management team and the people performing the work. I will also never take a job for granted as being an easy job. As far as the world of construction goes this would have been labeled a small and easy job to get done. However, from this experience I learned how much work is involved in every project. As the project manager I faced problems everyday. Luckily for me, I had people around me with construction knowledge that could help.

Conclusions

Plans for the sixth cycle of the project to begin in fall 2008 include:
- Revised rubrics and peer evaluation scheme to allow the project management to offer rewards and penalties for crew performance
- Revised computer software to facilitate the peer review process
- Realignment of the teaching plan to introduce the design theory along with each building element instead of at the end of the course
- Investigate methods to improve communication

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Ethical Perceptions' of Business Students: The Impact of Experience, Gender and a Course in Business Ethics.

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Abstract

Over the years a large number of studies have appeared which address some aspect of Business Ethics. The business world continues to provide impetus for this area of research with a multitude of infractions ranging from the World Com, Enron scandals to the many unethical or irresponsible practices which led to our current economic crisis. One aspect of this research has been to focus on the ethics of business students. This study pursues that approach by examining if pursuing an advanced degree (i.e. an MBA) affects ethical perceptions, and also if the amount of experience a student has in the workforce has an impact. It will also examine whether having taken a business ethics course will have a positive impact on ethical perceptions. In addition the study will explore the relationship between gender and ethical perceptions.

Introduction

Over the years a large number of studies have appeared which address some aspect of Business Ethics. The business world continues to provide impetus for this area of research with a multitude of infractions ranging from the World Com, Enron scandals to the many unethical or irresponsible practices which led to our current economic crisis. One aspect of this research has been to focus on the ethics of business students. This study pursues that approach.

Numerous ethics studies have been performed on business students, graduate and undergraduate, in the US and around the world (Allmon, Page and Roberts, 2000; Friedman, Fogel, and Friedman 2005; Jones, Hamilton and Ingram, 2006; Al-Kahtani, 2008). Business students are considered to be a viable population for business ethics studies because they are the source of the next generation of business leaders (Smyth and Davis 2004). Past studies have suggested that behavior in college is a precursor for behavior in the business world (Allmon, et al 2000, Friedman et al., 2005; Nonis and Swift, 2001; Smyth and Davis 2004). Nonis and Swift (2001) found that students who cheat in college are likely to cheat once they enter the business world.

A number of different methodologies have been used ranging from the use of formal measuring instruments such as Rest's Defining Issues Test (St. Pierre, Nelson, and Gabbin, 1990;) or the Reidenbach and Robin Multidimensional Ethics Scales (Reidenbach and Robin 1990) to a multitude of individual scales and measures (Diekhoff, LaBeff, Clark, Williams, Francis and Haines, 1996; Harris, 1989; Smyth and Davis, 2004). This study will utilize the questionnaire developed by Forrest and Pritchett (1990) and adapted by Allmon, et al (2000) and Jones et al. (2006). This approach is useful for avoiding the problems of socially desirable responding (Forrest and Pritchett, 1990: Smyth and Davis, 2004), avoidance of self incriminatory reporting (Smyth and Davis,

2004) or self reporting understatement (Nonis and Swift 2001) which often impact business ethics studies (Baumhart, 1961; Newstrom and Ruch, 1976).

While consistency for most variables used in these studies has been a problem, one variable has always proved true – each group, when contrasted with others, rated themselves as the most ethical. Business professionals have long been known to consider themselves more ethical than their counterparts (Baumhart, 1961; Newstrom and Ruch, 1976). Students perceive themselves as more ethical than their peers (Forrest and Pritchett, 1990; Jones, et al. 2006) and also perceive themselves as more ethical than their professors (Friedman, Fogel, and Friedman, 2005). Women rated themselves as more ethical than men, and men rated themselves as ethically superior to women (D'Aquilla et al., 2004). Thus, Hypothesis 1 states:

H1 Students will perceive themselves as more ethical than their peers

Additional studies have explored the relationship between academic classification and ethical perceptions with some studies finding graduate students more ethical than undergraduate students (Al- Kahtani, 2008; Jones, et al., 2006; Nonis and Swift, 2001) and others finding no difference (Allmon et al., 2000). However it has been suggested that, as graduate students have had more work experience than undergraduates, it may be the experience level rather than the academic classification which is at work (Jones, et al., 2006). This is also suggested in the work of (Allmon et al., 2000; and Nonis and Swift, 2001). Robin and Babin (1997) found that gender differences between male and female students disappeared as women entered the workforce and suggested Gender Socialization – a product of experience – as the reason. Therefore the following two hypotheses will be tested:

H2 Undergraduate business students will perceive situations as more ethical than MBA students.

H3 Students with fewer years of work experience will perceive situations as more ethical than students with more years of work experience.

There is a great deal of interest in whether Business Schools can be effective in raising the level of ethical behavior in the workplace by turning out students who are more willing and able to act in an ethical manner. Universities seem to be expected to accomplish this (Harris, 1989; St Pierre et al., 1990, Allmon et al., 2000), but are also perceived to be either lax or incompetent in this area (D'Aquilla et al., 2004). Internally we know we are attempting to both provide specific instruction via ethics courses and also by raising ethical issues in individual classes in all disciplines. The question is whether we are effective. Bowden and Smyth (2008) found an ethics class had a very general positive influence on ethical judgment. Diekhoff et al. (1996) found that business students were more cognitive of ethical issues but cared less. Other studies found that an ethics course had no impact on ethical judgment. In this study we explore the impact of a business ethics course.

H4 Students who have not had a business ethics course will perceive situations as more ethical than those who have taken a business ethics course.

A very controversial variable in ethics research is the impact of gender. Existing studies are wildly contradictory and no conclusive evidence has been developed. Robin and Babin (1997) conducted a thorough study which concluded that while some evidence exists at the student level which suggests females have higher ethical standards than males, this difference disappears when the students become professionals, probably due

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to gender socialization. Many studies (Diekhoff et al, 1996, Harris, 1989, Robin and Babin, 1997) have found no differences due to gender while others (St. Pierre et al., 1990; D'Aquilla, 2004, Smyth and Davis, 2004) found there were differences with women being more ethically critical than men. Ibrahim (2009) and Jones et al. (2006) saw gender research as inconclusive. Most of these studies found that gender differences varied by situation and topic rather than being clearly different in every area. In this study we will examine whether any gender differences exist in classroom ethics.

H5 Men will perceive situations as more ethical than women.

Methodology

SPSS was used to derive appropriate statistics by utilizing the survey instrument developed by Forrest and Pritchett (1990), used by Allmon et al. (2000) and Jones, et al (2006). Frequency statistics, comparison of response means, and regression analyses were performed to assess differentiation between groups and to determine the effects of years of work experience on perceptions of situations and ethics. The first ten (10) sets of questions asked about the same ethical situations but presented the opportunity for the respondent to provide a "self" perception related to the events and to present a perception of how others related to the events. The next twenty (20) questions dealt with questions related to practices in the business world. All forty (40) questions used an 8 point Likert scale. The first twenty questions offered responses of *Always Acceptable* (1) to *Always Unacceptable* (8) and the last twenty (20) questions offered responses of *Strongly Agree* (1) to *Strongly Disagree* (8). The *EthicsAvg* and *EthicsAvg2* variables were aggregate means computed from variations of questions 1 – 40.

A population of two hundred thirty (230) students, consisting of seventy-six (76) undergraduate business majors and one hundred fifty-four (154) MBA candidates, were asked to voluntarily complete the survey via the University on-line teaching platform. Sixty-six (66) usable surveys were obtained. Almost twenty-nine percent (28.79%) of the respondents were undergraduate students and approximately seventy-one percent (71.21%) of the respondents were MBA candidates. *Males* comprised approximately twenty-one percent (21.21%) of the useable sample with *Females* dominating the sample at almost seventy-nine percent (78.79%). The source University was a small, private school in the South.

Results

H1 *(Students will perceive themselves as more ethical than their peers)* was assessed by comparing the means to ten sets of questions that deal with ethical issues (*cheating on exams, reporting classmates that cheat on exams, copying a published article as one's own paper, having a classmate write a paper for another, having a classmate do a computer project for another, pretending a death had occurred to be exempt from a test, using employer supplies for class work, not reporting a math error to acquire a higher grade, allowing a student to take the blame for another's mistakes, and comparing honesty to integrity*) to determine if individual perceptions of ethical situations were different from the perception of others' considering the same ethical situations..

Questions 3 and 4 (*reporting a classmate for cheating on an exam … Sig..000*), 7 and 8 (*getting a classmate to write a term paper which I turn in as my own work … Sig. .007*), 13 and 14 (*using a copy machine, paper, and other supplies where I work to do my classwork … Sig. .000*), 15 and 16 (*not telling the professor that a math error gave me a higher exam score … Sig. .017*), and 19 and 20 (*honesty is more important than good grades … Sig. .001*) were significant at <.05. Thus, five (5) of the ten (10) sets of questions supported H1 *(Students will perceive themselves as more ethical than their peers)*. Mean scores addressing the ten (10) sets of questions are presented in Table 1. While the mean differences do not indicate that the respondents are more ethical, the mean scores do suggest that "self" reports are likely inaccurate. Respondents have a tendency to rationalize or "neutralize" Diekhoff et al., (1996) their own behavior, so reports of peer behavior being closer to the true ethical standards of the group are probable.

Insert Table 1 About Here

H2 (*Undergraduate business students will perceive situations as more ethical than MBA students*) was assessed by comparing the means for the "self" reporting responses in questions 1 – 20 and the means for questions 21 – 40. The latter questions address a number of ethical issues that deal with dishonesty, inappropriate blame, integrity, and greed. Mean differences were only significant for five (5) of the thirty (30) situations addressed in the survey but the *EthicsAvg2* variable also had a significant difference (.013) between the MBA and undergraduate student. The higher mean (7.08) for the undergraduate student reinforces the suggestion that the undergraduate business student perceives situations as more ethical than MBA students. Table 2 presents the significance level and the means for the situations and EthicsAvg2 variable.

Insert Table 2 About Here

H3 (*Students with fewer years of work experience will perceive situations as more ethical than students with more years of work experience*) was tested using regression analysis. *YearsEmployed* ranged from 0 to 47, had a mean of 11.35, and a median of 10. Many of the students at the source university are non-traditional, especially those in the MBA program. The Pearson Correlation was .043 for the relationship between *YearsEmployed* and *EthicsAvg2*. Respectively, the r^2 value for the linear model was .002; both statistics suggesting years of employment (business experience) does not especially present a basis for variation towards ethical perceptions. More than sixty percent (60.6%) of the respondents had seven (7) or more years experience in the work force. Over ninety percent (90.1%) of the respondent had been employed more than one (1) year in the work force.

H4 (*Students who have not had a business ethics course will perceive situations as more ethical than those who have taken a business ethics course*) was assessed by comparing response means. The outcomes between the students that had taken a Business Ethics course and those who had not taken a Business Ethics course were not significant. Many business courses offer ethics discussion both within the classroom and as complementary materials in one or more text chapters. Respectively, the addition of

ethics materials throughout numerous business courses combined with the constant reinforcement of ethically-challenged businesses presented in the news media may have an impact on the responses by both sets of students.

H5 (*Men will perceive situations as more ethical than women*) was also assessed by comparing response means. Two (2) of the "self" reporting questions and three (3) of the business practice questions reflected significant differences in response means. *Cheating on exams* and *having others write papers for another* appear to be areas of greater concern to *Females*. Respectively, *integrity more important than achieving results*, the *boss asking* one *to do something unethical*, and *business professors being more concerned with student ethics* are also areas of greater concern to *Female* students. Significance levels and means are presented in Table 3. *Females* reflected higher means (a greater perception of *Unacceptable* or more *Strongly Agree*ing to a questionable event or perceiving slightly more concern) for each of the aforenoted situations than did *Males*; suggesting that men do perceive some situations as more ethical than women.

Insert Table 3 About Here

Conclusions

Various indicators suggest that students perceive themselves as more ethical than their peers; undergraduate business students perceive situations as more ethical than MBA students; and males perceive situations as more ethical than females. Responses from the survey do not tend to support a difference between years of work experience and ethical perceptions nor do the responses suggest that taking a Business Ethics course offers a basis for varied perceptions of ethical situations. The first three relationships (H1, H2, and H5) are consistent with other studies.

The latter two relationships (H3 and H4), or lack thereof, may be explained by the experience consistency of the non-traditional student (H3) or the proliferation of ethics materials in the varied business courses completed by business students and the in-class discussion of ethical conflicts in today's business environment (H4). The limitations of the data set used in the analyses prompts a need for additional research in both, if not all, of the proposed hypotheses.

Ethics is a critical concern for all students. Undergraduates entering the work environment or transitioning to higher levels of an organization will be confronted with direct or indirect ethical situations. MBA's will often be in positions that prompt ethical considerations towards the varied stakeholders associated with concerned organizations. Regretfully, ethics has been a pronounced concern for economically catastrophic events both in the United States and globally. The pursuit of ethical awareness and of enhanced decision-making via more ethical responses will be a necessity for a return to economic stability and for equitable interface between business and the consumer.

Limitations and Suggestions for Future Research

The major limitation of this study is that the sample was from a small university over only 2 campuses and the results may not generalize to a larger population. Some of

the sample sub-segments were not large enough to be able to draw reasonable conclusions. However many of the results were congruent with previous studies.

Much more investigation of the variables explored in this study is needed. In particular the relationship between experience, ethics education and ethical perception is not clear. This and other studies seem to suggest that while the number of years spent in college does have an effect on ethical perception, neither ethics courses nor work experience may have the impact we had hoped. It also suggests' that a "value-free bottom-line" approach to teaching business was never the cause of unethical business behavior as has been previously proposed.

Further studies on the impact of gender are needed, especially regarding in which situations differences will be most apparent. Although there have been many studies done in this area, they are contradictory. Research is needed to both provide additional insight and to unify the diverse findings which now exist.

The concept of "it's not me" implied by the belief that one is more ethical than the group should be explored for its contribution to unethical business behavior. Of all the business ethics variables which have been studied since 1961, this is the one most consistent. Neither sample, methodology, or even validity and reliability have impacted this consistency. It suggests that everyone feels their own behavior is fine and needs no modification, and if so all the business ethics classes and codes of conduct in the world will not improve business ethics.

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Appendix

Table 1: Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
SCheatOnExam	66	6	8	7.91	.381
PCheatOnExam	66	1	8	6.56	1.720
SNotRptMateCheatOnExam	66	1	8	6.11	2.001
PNotRptMateCheatOnExam	66	1	8	4.77	2.479
SCopyArticleAsOwnPaper	66	6	8	7.86	.493
PCopyArticleAsOwnPaper	66	1	8	6.77	1.567
SGetMateToWritePaper	66	5	8	7.80	.638
PGetMateToWritePaper	66	1	8	6.32	1.955
SGetMateToDoComputerProj	66	5	8	7.79	.595
PGetMateToDoComputerProj	66	1	8	6.21	1.902
SPretendDeathToExcuseFrExam	66	6	8	7.91	.381
PPretendDeathToExcuseFrExam	66	1	8	6.95	1.818
SUseWorkSuppliesForClasswork	66	1	8	4.80	2.322
PUseWorkSuppliesForClasswork	66	1	8	4.14	1.960
SNotTellProfMathErrorHigherGrade	66	1	8	6.58	2.091
PNotTellProfMathErrorHigherGrade	66	1	8	4.61	2.739
SLetOtherStudentTakeBlame	66	5	8	7.82	.605
PLetOtherStudentTakeBlame	66	1	8	6.55	1.764
SHonestyMoreImportantGoodGrade	66	1	8	3.20	2.936
PHonestyMoreImportantGoodGrade	66	1	8	4.08	2.207
Valid N (listwise)	66				

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Table 2: MBA Students Versus Undergraduate Business Students

Variable	Significance	MBA Mean	Undergraduate Mean
EthicsAvg2	.013	6.66	7.08
using a copy machine, paper, and other supplies where I work to my classwork	.020	4.38	5.84
members of the business world would take credit for someone else's work if it helped them get ahead	.023	2.64	3.29
members o business world have lied to get day off	.024	2.32	3.58
willing to do anything to succeed in business career	.011	6.68	5.21
boss asks me to do something unethical, won't have a choice about doing it or not	.017	7.53	6.37

Table 3: Females Versus Males

Variable	Significance	Mean - Female	Mean - Male
cheating on an exam	.030	7.96	7.71
getting a classmate to write a paper which I turn in as my own	.012	7.90	7.43
Integrity is more important than achieving results	.027	6.92	5.50
boss asks me to do something unethical, won't have a choice about doing it or not	.045	7.40	6.43
willing to do anything to succeed in business career	.034	5.35	6.50

The ABCs of Accounting: Covering More by Teaching Less

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Abstract

Professors and students are being overwhelmed by the volume of materials in intermediate accounting textbooks. New pronouncements are constantly being issued by professional organizations. How should educators convey all of this new information to students? To prepare students for the profession, it is imperative that students are able to learn new topics using a consistent framework. Thus, all topics should be presented to students via the ABCs of accounting concept. "A" is for Allocation, "B" is for Book Valuation, and "C" is for Classification. This allows students to comprehend new material without getting bogged down into the weeds of details rules and procedures. Thus students are able to learn more material and professors are able to teach less. The purpose of this paper is to convey the results of the author's use of the ABCs of accounting concept for my Intermediate Accounting I course.

Introduction

Since 1989, I have taught thirty-four (34) sections Intermediate Accounting I. Over this time span, I have reported over one-thousand, four-hundred, sixty-eight (1,468) grades of student performances. My failure rate has average thirty-five (35%) percent. Failure is defined as students receiving a grade of "D" or "F". This failure rate was unacceptable to me, thus I been to explore ways of reducing this rate without compromising the academic rigor required in the intermediate accounting course.

Over this twenty year time span, my university has used Intermediate Accounting by Kieso, Weygandt and Warfield (1989 to 2003) and Intermediate Accounting by Stice, Stice and Skousen (2003 to 2008). We start using Intermediate Accounting by Spiceland, Sepe, Nelson and Tomassini starting spring 2009. The Kieso and Stice texts have over 1,300 pages and the Spiceland has approximately 1,200 pages. This is a tremendous amount of material to cover over a two-semester intermediate accounting sequence.

Typical topics covered in Intermediate Accounting I course are listed below.

Foundation of Financial Accounting	Time Value of Money
Review of the Accounting Cycle	Revenue Recognition
Balance Sheet	Cash and Receivables
Income Statement	Inventory
Statement of Cash Flows	Operational Assets

Some of these topics are very difficult to teach and for students to comprehend appropriately. Professors and students are being overwhelmed by the volume of materials in intermediate accounting textbooks. In addition, professors and students must also learn International Financial Reporting Standards (IFRS). This duel learning of accounting standards will continue until the convergence process is completed around 2014. The purpose of this paper is to convey the results of the author's use of the ABCs of accounting concept for my Intermediate Accounting I course.

ABC's of Accounting

To prepare students for the profession, it is imperative that students are able to learn new concepts using a consistent framework. This allows students to comprehend new material without getting bogged down into the weeds of details rules and procedures. Thus, I present topics to students via the ABCs of accounting concept. The meaning of this acronym is:

"**A**" is for **A**llocation;

"**B**" is for **B**ook valuation; and

"**C**" is for **C**lassification.

The **"A"** (allocation) concept is used to explain the relationship between the balance sheet and the income statement. I teach students that all items on the balance sheet will be allocated to the income statement at some future date. For example, inventory and cost of goods sold are similar and building and depreciation are similar. These are costs that must be allocated from the balance sheet to the income statement under the accrual basis of accounting. Thus FIFO and LIFO are just the mechanics of completing this allocation process. The same can be said of straight-line and declining balance methods of depreciation. The goal is to teach students the allocation concept and not the detail mechanics. Afterward, students can apply "allocation" concept to the other balance sheet and income statement accounts without getting bogged down into the weeds of details rules and procedures. Thus students are able to learn more conceptual material themselves and professors are able to teach less mechanics. Students are then able to use technology to help solve the detail mechanics of specific accounting problems more efficiently.

The **"B"** (book valuation) concept is used to explain the valuation bases used to measure transactions, historical cost or fair value. Intermediate texts use terms such as historical cost, amortized cost, present value, discounted cash flows, and fair value as separate valuation basis. Students are often confused and mislead into thinking that these are different valuation basis and not just a variation of historical cost or fair value. Once students understand the book valuation concept, students can easily applied it to other measurements without further explanation, thus students are able to learn more conceptual material themselves and professors are able to teach less mechanics.

The **"C"** (classification) concept is used to explain that accounting information would be meaningless to creditors, investor and others without proper classification. Proper classifications enhance the decision-making process for users. I teach students to initial classify accounts into the following categories: asset, liability, equity, revenue (gain), and expense (loss). Thus, when a new account is introduce in the text, I teach students to immediately classify that account. For example, if an account is classified as an asset or liability, students know immediately that the account would be on the balance sheet and subject to the allocation concept. In addition, students are further instructed to sub-classify these assets or liabilities. For example, assets can be further divided into the following classifications: current, investments, operational, intangibles and others. Liabilities can be sub-classified into current and long-term liabilities. A similar classification is taught for revenue and expense accounts using the multiple-step format of classification. Thus again, when students are able to understand the classification of

an account, students are able to learn more material themselves and professors are able to teach less.

The acronym continues with the **"Big D"** for disclosure. Accounting information should not mislead creditors or investors in their decision making process. To insure transparency to all parties, students are taught that all significant allocation, book valuation, and classification issues must be disclosed.

The ABCs of accounting concept is imbedded in generally accepted accounting principles (GAAP). GAAP consist of broad principles that provide a framework for understanding accounting practices. The GAAP are economic entity, going concern, periodicity, monetary unit, historical cost, realization, matching and full-disclosure.

Thus, my teaching techniques has involved over the past twenty years. It has involved from teaching less mechanical rules to more emphasis on concepts. As a result, students understanding have improved via grades performance. Presented below are my longitudinal grade results for twenty (20) years for the Intermediate Accounting I course.

Grade Distribution

Since 1989, I have taught thirty-four (34) sections of Intermediate Accounting I. Intermediate Accounting I is required of all business students. In fact, over eighty (80%) percent of the students are non-accounting majors. Thus a typical class consists of highly motivated students and students who just want to pass the course. Over this twenty (20) year time span my grade distribution was as follows.

1989 to 2008

Summary	A	B	C	D	F	I	W	TOTAL
Number	40	184	664	324	189	20	47	1,468
Percentage	3%	13%	45%	22%	13%	1%	3%	100%

In summary, sixty-one (61%) percent of students received a passing grade of A, B or C and thirty-five (35%) percent received a failing grade of D or F. The remaining four (4%) percent of grades were incompletes (1%) and withdrawals (3%). Incompletes and withdrawals grades were deemed to be immaterial and excluded from further analyses. My teaching techniques has involved from teaching detail mechanics to broader concepts of accounting.

To further analyze the evolution of my teaching technique, I further divided my grade distribution into the following phases.

Phase 1- -1989 to 1994
Phase 2- -1995 to 1999
Phase 3- -2000 to 2004
Phase 4- -2005 to 2008

During each of these phases, I gradually chance how I taught the Intermediate Accounting I course. My teaching technique evolved from traditional to mixed to innovative to the ABCs of accounting concept.

Phase 1- -1989 to 1994
(16 classes)

Summary	A	B	C	D	F	I	W	TOTAL
Number	19	86	309	164	110	14	29	731

Percentage	3%	12%	42%	22%	15%	2%	4%	100%

During Phase 1, fifty-seven (57%) percent of students received a passing (A, B or C) grade while thirty-seven (37%) percent received a failing (D or F) grade. This was consistent with my overall grade distribution percentages for twenty (20) years.

During Phase 1, my teaching technique could be described as traditional. I was hard nose, and I expected students to know the smallest mechanics details of accounting. The recording, posting and summarization of each transaction were reviewed in great detail. Students received a deduction if their answers did not correspond precisely with my answers. I never thought that my teaching techniques affected student learning. Students that did not do well in my accounting class just needed to study more. Why change, my student evaluations were positive.

<div align="center">Phase 2- -1995 to 1999</div>
<div align="center">(8 classes)</div>

Summary	A	B	C	D	F	I	W	TOTAL
Number	10	58	173	104	55	2	10	412
Percentage	2%	14%	43%	26%	13%	0%	2%	100%

During Phase 2, fifty-nine (59%) percent of students received a passing (A, B or C) grade while thirty-seven (39%) percent received a failing (D or F) grade. On average, this was again consistent with my overall grade distribution percentages for twenty (20) years.

During Phase 2, my teaching technique could be described as mixed, a little of the old and a little of the new. I continue to use my Phase 1 teaching techniques with a mixture of technological innovations. Overall, my student evaluations were positive but I realized that I must change my approach to teaching accounting to help my students continue to be successful in the marketplace.

<div align="center">Phase 3- -2000 to 2004</div>
<div align="center">(6 classes)</div>

Summary	A	B	C	D	F	I	W	TOTAL
Number	7	25	112	29	17	2	7	199
Percentage	4%	12%	56%	14%	9%	1%	4%	100%

During Phase 3, seventy-two (72%) percent of students received a passing (A, B or C) grade while twenty-three (23%) percent received a failing (D or F) grade. The pass rate was significantly higher (72% versus 61%) and the failure rate was significantly lower (23% versus 35%) compared with my overall grade distribution percentages for twenty (20) years. The percentage of students receiving a grade of "C" increased significantly (56% versus 45%) while maintaining the academic rigor for "A" (4% versus 3%) and "B" (12% versus 13%).

During Phase 3, my teaching technique could be described as innovative and forward thinking. I attended seminars on preparing students for the new technological era of e-commerce and the attributes that students must have to be successful. Student must have academic competencies of technical, analytical, conceptual and communications skills along with other behavior competencies of professional image,

judgment, assertiveness, teamwork, and leadership skills to be successful in the marketplace.

During Phase 3, I begin to emphasis the basis components of the ABC's of accounting concept. All examinations covered both accounting theory and accounting practice, with these being weighted sixty (60%) percent and forty (40%) percent, respectively. Examinations included true-false, multiple-choice items along with problems to test student analytical, reflective thinking, and decision making skills. Students were also given essay questions to test their written communication skills. Students are required to make oral presentations to class on related accounting topics. Students comments reflected a more appreciation of accounting. My student evaluations continue to be positive. I knew I was on to something good for myself and my students.

Phase 4- -2005 to 2008
(4 classes)

Summary	A	B	C	D	F	I	W	TOTAL
Number	4	13	72	27	7	2	1	126
Percentage	3%	12%	55%	21%	6%	2%	1%	100%

During Phase 4, seventy-four (70%) percent of students received a passing (A, B or C) grade while twenty-one (27%) percent received a failing (D or F) grade. The pass rate continued to be significantly higher (70% versus 61%) and the failure rate continued to be significantly lower (27% versus 35%) compared with my overall grade distribution percentages for twenty (20) years. The percentage of students receiving a grade of "C" increased significantly (57% versus 45%) while maintaining the academic rigor for "A" (3% versus 3%) and "B" (12% versus 13%).

During Phase 4, I incorporated all aspects of the ABCs of accounting concept into my Intermediate Accounting I courses. Increase emphasis was placed on the academic and behavior competencies needed to be successful. The ABCs of accounting has allowed me to cover more topics by teaching less. By teaching less mechanics and more concepts, I have been able to incorporate more behavior competencies into the learning process. Some of the behavior competencies include professional image, maturity, assertiveness, dependability, teamwork, and leadership skills. The ABCs of accounting concept has allowed students to take ownership for their own learning.

Summary
Intermediate Accounting I

	Pass	Fail	Teaching Technique
Overall: 89 to 08	61%	35%	
Phase 1: 89 to 94	57%	37%	Traditional
Phase 2: 95 to 99	59%	39%	Mixed
Phase 3: 00 to 04	72%	23%	Innovative
Phase 4: 05 to 08	70%	27%	ABC

Conclusion

Professors and students are being overwhelmed by the volume of materials in intermediate accounting textbooks. New pronouncements are constantly being issued by professional organizations. How should educators convey all of this new information to

students? To prepare students for the profession, it is imperative that students are able to learn new concepts using a consistent framework. I recommend the ABCs of accounting concept. **"A"** is for Allocation, **"B"** is for Book Valuation, and **"C"** is for Classification. This allows students to comprehend new material without getting bogged down into the weeds of details rules and procedures. The purpose of this paper was to convey the results of the author's use of the ABC's of accounting concept.

Since 1989, I taught thirty-four (34) sections Intermediate Accounting I. Over this time span, I have reported over one-thousand, four-hundred, sixty-eight (1,468) grades of student performances. My failure rate average thirty-five (35%) percent. Failure was defined as students receiving a grade of "D" or "F". This failure rate was unacceptable to me, thus I began to explore ways of reducing this rate without compromising the academic rigor required in the Intermediate Accounting I course.

The Intermediate Accounting I grade distribution shown a significant improvement from Phase 1 (1989 to 1994) to Phase 4 (2005 to 2008). The pass rate percentage increased from fifty-seven (57%) percent to seventy (70%) percent, while the failure rate percentage decreased from thirty-seven (37%) percent to twenty-seven (27%) percent. The percentage of students receiving a grade of "C" increased significantly from forty-two (42%) percent to fifty-five (55%) percent while maintaining the academic rigor for "As" (3% versus 3%) and "Bs" (12% versus 12%). The ABC of accounting concept has allowed me to cover more by teaching less. By teaching less mechanics and more concepts, I have been able to incorporate more behavior competencies into the learning process. Some of the behavior competencies include professional image, maturity, assertiveness, teamwork, and leadership skills. In short, student learning increases, pass rate increases without lowering the academic rigor, and increase the overall student satisfaction with Intermediate Accounting I.

Recommendations

Accounting is the language of business and more colleges and universities are requiring its students to take additional accounting beyond principles of accounting. Thus, a typical Intermediate Accounting I course will have a majority on non-accounting majors. Thus I recommend that the ABC of accounting concept be introduced at the beginning of the course. See appendix for a typical format that should be included in the course syllabus and posted to the instructor website. In addition, at the beginning of each chapter, the ABC of accounting concept should be briefly re-introduced to student to focus their perspective. Students should be made aware that they must take ownership for their own learning and that significant class time will be devoted to incorporating more behavior competencies into the learning process. In summary, the ABC of accounting concept has allowed students to take ownership for their own learning. Thus students are able to learn more material and professors are able to teach less.

Appendix

The ABCs of Accounting

A- -Allocation

B- -Book Valuation

C- -Classification

and the

BIG "D"

D- -Disclosure

Basic Elements of Accounting

Asset

Liability

Equity

Revenue (Gain)

Expense (Loss)

Generally Accepted Accounting Principles

Economic Entity   Historical Cost

Going Concern   Realization

Periodicity   Matching

Monetary Unit   Full-disclosure

Restatements of Financial Statements: An Analysis of Revenue Restatements Initiated by Internal and External Prompters

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Abstract

Generally accepted accounting principles require the restatement of financial statements for changes in accounting principles and error corrections. Such restatements can have a significant effect on reported income for current and prior years. In 2007, the General Accounting Office updated a study in which the GAO identified and studied 1,390 financial statement restatements due to error corrections announced by publicly listed companies during the period July 2002 – September 2005. Most restatements were initiated by the reporting company (internal prompters), but 14% were initiated exclusively by external prompters, either the SEC or the external auditors.

Recent turmoil in the securities markets have brought into question the compensation provided corporate executives, which may include compensation linked to revenue targets. The purpose of this paper is to study restatements linked to revenue errors that were initiated by external prompters versus internal prompters and to determine if there is a correlation with executive compensation plans. Within the GAO study, 45 companies reported revenue restatements initiated exclusively by external prompters (the SEC or auditor). This paper compares the executive compensation plans for these companies with 45 randomly selected companies that reported revenue restatements initiated by internal prompters to test differences between the two groups.

Introduction

Financial statement restatement is a topic of increasing importance, as the Financial Accounting Standards Board (FASB) is shifting towards a convergence with International Financial Reporting Standards (IFRS). As part of this convergence, the FASB issued Statement of Financial Accounting Standard 154: Accounting Changes and Error Corrections (SFAS 154), which became effective for fiscal years beginning December 15, 2005. This statement addresses the requirements for reporting financial statement restatements. Because investors depend heavily upon independently audited financial statements when making investment-related decisions, proper restatement techniques and regulations are important. New rules may improve the transparency of restatements; investors, however, may still react to unexpected changes in previously reported income.

This paper analyzes restatements due to revenue recognition violations to determine whether these restatements had a negative impact on the stock price of the firm reporting the restatement. In addition, cash bonuses are analyzed to determine whether there is a difference concerning the amounts of incentive pay at stake between companies reporting internally and externally prompted revenue restatements.

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Review of Literature

The following sections provide a brief overview of accounting rules for changes in accounting principles and error corrections. The history and effects of financial statement restatements are necessary in understanding the application and regulations of accounting for such restatements. Also included is a summary of the implementation of "clawback" provisions as included in Section 304 of the Sarbanes-Oxley Act of 2002.

Statement of Financial Accounting Standard 154 (FASB 2005) was issued in response to an ongoing attempt by the Financial Accounting Standards Board to move towards an international set of accounting standards. The FASB determined that in order to facilitate a change towards one set of international accounting standards, steps must be taken to reconcile differences between IFRS and GAAP (Bloom & Fuglister, 2006, p. 44). As a result, SFAS 154 came into effect, replacing APB Opinion 20 and SFAS 3. SFAS 154 addresses financial statement restatement techniques for reporting changes due to errors presented in past financial statements; it also changes the requirements of reporting for changes in accounting principles (FASB, 2005).

As interpreted by the U.S. General Accounting Office (2002), "A financial statement restatement occurs when a company, either voluntarily or under prompting by its auditors or regulators, revises its public financial information that was previously reported" (p. 1). A restatement also can occur due to mandated changes in accounting principles, error corrections, typographical errors, and minor wording changes (Turner & Weirich, 2006, p. 13).

A 2005 study by Linn and Diehl showed that financial statement restatements were on the rise (p. 36). Because of the broad nature of restatements, many problems can arise in accounting for these restatements. Whether it is due to poor internal controls, human error, technical malfunction, or outright fraud, accounting errors will inevitably penetrate the financial reporting process. SFAS 154 addresses the reporting guidelines for financial statement restatement. Under SFAS 154, the reporting entity must provide full disclosure of the nature of the error being restated (Bloom & Fuglister, 2006, p. 47).

SFAS 154 requires companies reporting a change in an accounting principle to do so through retrospective application, except for the case in which the new pronouncement provides specific rules for transitioning between the two accounting principles (FASB, 2005, p. 1). Retrospective application calls for the reporting entity to restate past financial statements to reflect the change of the accounting principle. The net effect of the change is reported as an adjustment to the balance in retained earnings or other appropriate equity account beginning with the earliest year being presented in the comparative financial statements. By restating the financial statements, external users are able to obtain information that is more useful and a more accurate comparison of a company's financial position (Kieso et al., 2007, p. 1155).

Accounting for error corrections in previously issued financial statements is done so through financial statement restatement (AICPA, 1971, p. 65). FASB (2005) defines an accounting error as an:

Error in previously issued financial statements—an error in recognition, measurement, presentation, or disclosure in financial statements resulting from mathematical mistakes, mistakes in the application of GAAP, or oversight or misuse of

facts that existed at the time the financial statements were prepared. A change from an accounting principle that is not generally accepted to one that is generally accepted is a correction of an error. (p. 3)

SFAS 154 requires entities reporting restatements due to error corrections to do so through a prior period adjustment as well as through certain supplementary disclosures. The reporting entity should report the cumulative effect of the error applicable to prior periods being presented as an adjustment to the carrying values of the assets and liabilities of the first period being presented. Any necessary offsetting adjustment should be made to retained earnings or other appropriate equity account for the first period being presented. Lastly, each period being presented should be restated to reflect the error correction. Supplementary disclosures relating to error corrections require the reporting entity to disclose "the effect of the correction on each financial statement line item and any per-share amounts affected for each prior period presented," as well as "the cumulative effect of the change on retained earnings or other appropriate components of equity, as of the beginning of the earliest period presented" (Williams & Carcello, 2005, p. 5).

In their 2006 report, the U.S. General Accounting Office classifies restatements due to error corrections into nine categories: cost or expense, revenue recognition, securities-related, reclassification, other, acquisition and merger, related-party transactions, in-process research and development, and restructuring assets or inventory. The focus of this paper is on revenue restatements, which, according to the U.S. General Accounting Office (2006b), occur due to improper revenue accounting. This includes instances in which "revenue was improperly recognized, questionable revenues were recognized, or any number of other mistakes or improprieties that led to misreported revenue" (p. 22).

According to the *Dictionary of Human Resource Management* (2001), executive pay can be separated into four elements: basic pay, an incentive bonus scheme, a share option scheme, and an executive benefit package. Incentive based compensation has historically been commonplace in the retention of qualified executive officers. Financial indicators such as total revenue, earnings per share, and net income are examples of performance measures that are used in determining executive bonus schemes. However, as evidenced by accounting scandals such as Enron and WorldCom, it is not uncommon for senior executives to act unethically in the hopes of achieving performance targets which in turn can result in larger incentive payments.

As a deterrent to this unethical behavior, Section 304 of the Sarbanes-Oxley Act of 2002 includes a clawback provision. This clawback provision calls for the repayment of ill-gotten gains by certain senior executive officers in the case where "there is a restatement because of material noncompliance, due to misconduct, with financial reporting requirements under the federal securities laws" (Goodman & McPhee, 2008, p. 7). One of the limitations of Section 304 is that precedent has established that only the SEC may bring a claim against these officers for the repayment of incentive bonuses; private plaintiffs such as the company or shareholders do not have right to such a claim (Goodman & McPhee, 2008). However, clawback provisions can be adopted by companies through the form of compensation agreements and other contractual provisions. In fact, the number of these clawback contracts has risen sharply over the past several years. According to Gold (2008), "The increase in the use of clawbacks indicates

that companies have begun to understand the implications of misconduct, forcing executives to consider more seriously their decision-making" (p. 11).

Methodology

For purposes of this study, restatements announced after the issuance of the Sarbanes-Oxley Act of 2002 will be analyzed to determine whether revenue restatements had a direct impact on the stock price of the firm issuing the restatement. Also, cash bonuses will be analyzed to determine whether or not there is a difference concerning incentive compensation between companies with internally and externally prompted revenue restatements. Restatement announcement dates were drawn from a restatement database issued by the U.S. General Accounting Office, report no. GAO-06-1053R. This report lists restatements that occurred primarily due to accounting errors or financial reporting fraud between July 1, 2002, and September 30, 2005.

GAO-06-1053R lists companies reporting restatements, announcement dates for the restatements, the prompter(s) of the restatements, and the reasons for the restatements. In total the GAO report includes 1,390 restatements, some of which were restatements of multiple years. Of these, the company, the auditor, or the SEC exclusively prompted 991 of the restatements, and a combination of factors prompted the remaining restatements. As summarized in Table 1, the 991 restatements are separated into internally prompted restatements, in which the company was the prompter, and externally prompted restatements, in which either the external auditor or the SEC was the prompter. Restatements are also separated into restatements related to revenue and related to other factors.

Table 1. Announced Restatements Included in GAO report							
Reason for restatement	Internal Prompters		External Prompters				Total	
			Auditor Prompted		SEC Prompted			
	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage
Revenue	214	26.7%	16	20.8%	29	26.1%	259	26.1%
Other	589	73.3%	61	79.2%	82	73.9%	732	73.9%
Totals	803	100%	77	100%	111	100%	991	100%

Of the 991 restatements identified, 259 (26.1%) related to revenue errors. Of these revenue-related restatements, 214 (83%) were prompted by the company itself, and 45 (17%) were prompted by either the auditor or the SEC. This paper compares the 45 externally prompted restatements with a random sample of 45 internally prompted restatements. Appendix A includes a list of all companies included in this study.

Information regarding the restatements was gathered using the EDGAR Database. Annual and quarterly reports were used to determine total net revenue before and after

the restatement. Definitive proxy statements were used to determine cash bonuses paid to the top senior executives. In the instances where a restatement involved multiple periods, this process was repeated for each period.

For analysis, this paper evaluates the following hypotheses:

H_1: The stock price effects of the restatements will be greater for companies with externally prompted restatements than for companies reporting internally prompted restatements.

H_2: The percentages of bonus pay to total compensation will be greater for executives in companies reporting externally prompted revenue restatements than for executives in companies reporting internally prompted revenue restatements.

H_3: The amount of bonus compensation at stake will be greater for executives in companies restating revenue due to externally prompted restatements than for executives in companies restating revenue due to internally prompted restatements when the adjustment to revenue is negative.

H_4: The amount of bonus compensation at stake will be greater for executives in companies restating revenue due to internally prompted restatements than for executives in companies restating revenue due to externally prompted restatements when the adjustment to revenue is positive.

Stock Price Effects: Hypothesis One

For this study, a two-day event window is used to measure the effect of the change in stock price. The formula used to measure this realized return (R_R) is: $(P_c-P_o)/P_o$, where P_o is the closing price on the day before the restatement occurred and P_c is the closing price on the day after the restatement occurred. Also taken into account is the expected return of the stock. To measure the expected return (R_E), the S&P 500 index was used; the same three day window was applied as well as the same computation as above. In order to try and measure only the abnormal return (R_A) due to the restatement, the expected return is subtracted from the change in stock price. Thus, $R_A = R_R - R_E$. This three day event window as well as the expected and abnormal return approach is consistent with previous studies (U.S. General Accounting Office, 2006b).

Bonus Pay as a Part of Total Compensation: Hypothesis Two

If a larger amount of their compensation was comprised of incentive bonuses, senior officers would theoretically be more apt to try and maximize their bonuses. In order to do so, the officers would be under more pressure to try and reach higher performance indices.

Restated Bonus Pay: Hypotheses Three and Four

If adopted by the company in the form of contractual or compensation agreements, top executives would have potentially had to refund a portion of their incentive compensation. This study does not analyze which companies have adopted clawback provisions as part of their compensation agreements. Rather, it makes the assumption that, if clawback provisions had been adopted by all of the companies included in the study, the senior executives of companies with externally prompted restatements would have more at stake than those of companies with internally prompted restatements.

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Consistent with top executives facing negative consequences if a restatement forces the company to decrease revenues or earnings, if enacted, clawback provisions would have a greater effect on negative revenue adjustments versus positive revenue adjustments. Therefore, both externally and internally prompted restatements are separated further into two categories: restatements forcing a negative adjustment to revenue and restatements forcing a positive adjustment to revenue. For this study, revenue is used as a hypothetical performance index to measure changes in incentive compensation. To test these hypotheses (H_2-$H4$), single-factor ANOVA analysis is used. Each test was conducted at the .05 level of significance. In the instances where no cash bonus was received, these occurrences were discarded from the study. Also, when the amount of the cash bonus was less than five percent of the base salary, these occurrences were discarded due to immateriality.

Analysis of Data

Hypothesis One

Ordinary least squares regression was used to measure correlations between revenue restatements and stock price fluctuations. The analysis focused on differences between restatements prompted by external auditors, the SEC, and internally. In addition, the time lapse between announcements and period(s) restated and the total amount of the restatements were controlled for. Tests failed to show any significant difference between internal and external audit prompting. However, t-tests indicate positive effects of SEC versus auditor and internally prompted restatements, which are significant at the 10% level.

For every restatement prompted by the SEC, the abnormal return of the stock price increased by 2.07% over the stock price of companies with auditor and company prompted restatements. This process was repeated excluding the expected and abnormal returns and only measuring the realized return. Again, we found that for every restatement prompted by the SEC, the realized return of the stock price increases by 2.07%. This process was repeated to study only restatements occurring within three years of the announcement date. The results were consistent, yielding a 2.6% increase for the abnormal return and a 2.6% increase for the realized return.

One possible explanation for the counter-intuitive change in the stock price could be that the market has already reacted and suppressed the price due to advanced warning. Then, when the actual news of the restatement came out, it may not be have been as bad as expected, causing a surge in the stock price. Another possible explanation for this could be that the companies with SEC prompted restatements were simply outperforming companies with auditor or company prompted restatements. Because this research does not include time series data, growth patterns before and after the announcement are not analyzed. Therefore, this research assumes that growth patterns are randomly distributed. We attribute this weakness in the data to a bias in the sample. Several of the companies included in this study have stock that is sold solely on the Over-The-Counter (OTC) Market. In addition, several of the companies' stock is inactive and reliable price information was unavailable. These reasons preclude this study from being conclusive.

Hypothesis Two

To test hypothesis two, the amount of the cash bonus was divided by the sum of the cash bonus plus the base salary. This process was repeated for each occurrence. So, $B_C = B_C + S_B$, where B_C is the cash bonus and S_B is the base salary. The results were then categorized by externally and internally prompted restatements and are summarized in Figure 1 below. A p-value of 0.405 indicates that there is no statistical significant difference between the two groups; therefore, hypothesis two is rejected.

Figure 1 - Testing Percentage of Bonus Compensation for External versus Internal Prompters

Prompter	Count	Sum	Average	Variance
External	289	100.512585	0.347794	0.0342923
Internal	298	107.260646	0.359935	0.0279887

Hypothesis Three

To test hypotheses three and four restatements were separated into two groups: restatements that had a negative adjustment to revenue and restatements that had a positive adjustment to revenue. Hypothesis three focused only on restatements that had a negative adjustment to revenue. The cash bonus (B_C) was first divided by the total net revenues prior to restatement (R_P) then divided by the total net revenues after the restatement (R_A). The difference between the two, the percentage change in the amount of incentive pay at stake (ΔB_C), was then classified as either an externally prompted or internally prompted restatement. So, $\Delta B_C = (B_C/R_P) - (B_C/R_A)$. This process was repeated for each occurrence.

Results of the tests are summarized in Figure 2 on the following page. A p-value of 0.036 indicates that there is a significant statistical difference between the percentage changes for the incentive pay at stake between companies reporting externally and internally prompted restatements. Because the difference in the average percentage change (ΔB_C) is nearly 95% in favor of externally prompted, one could reasonably infer that the mean ΔB_C is higher for companies with externally prompted restatements than for companies with internally prompted restatements.

Figure 2. Testing the Change in Bonus after Restatement for External versus Internal Prompters (Negative Revenue Restatements)

Prompter	Count	Sum	Average	Variance
External	192	-0.101045419	-0.000526278	1.29901E-05
Internal	233	-0.006603038	-2.83392E-05	9.1426E-09

Hypothesis Four

To test hypothesis four, the same process used to test H_3 as described above was repeated with the exception to the group of restatements being tested. This test focused only on restatement which had a positive restatement on revenue. Again, using $\Delta B_C = (B_C/R_P) - (B_C/R_A)$, the restatements were then categorized as either companies reporting externally prompted or internally prompted restatements. The process was then repeated for each occurrence. A p-value of 0.201 concludes that there is not enough statistical evidence to determine that there is a difference between ΔB_C for companies reporting

externally prompted or internally prompted restatements when there is a positive adjustment to revenue.

Figure 3. Testing the Change in Bonus after Restatement for External versus Internal Prompters (Positive Revenue Restatements)

Prompter	Count	Sum	Average	Variance
External	97	0.010343957	0.000106639	3.73321E-07
Internal	65	0.000590741	9.08832E-06	6.02365E-10

Conclusions

As expected, companies with externally prompted revenue restatements had more at stake, with respect to incentive compensation, than companies with internally prompted revenue restatements. Several reasons for these occurrences exist. First, if fraudulent activity was occurring, it would not be natural for the senior executives to "blow the whistle" on themselves. Additionally, senior executives would likely be more apt to voluntarily restate revenues if their losses due to clawbacks would be minimal. Concerning fluctuations in stock price, tests failed to show any significant difference between internal and external prompting. Positive effects on stock price fluctuation of SEC versus auditor and company prompted restatements were significant at the 10% level.

Section 304 of the Sarbanes-Oxley Act of 2002 applies only to incentive payments received by CEOs and CFOs. Because the nature of company specific clawback provisions varies, this study examined the cash incentives of the top five senior executives rather than only that of CEOs and CFOs. Additionally, some of these companies reported restatements for reasons other than solely revenue recognition violations. This hindered the study from showing any direct correlations between revenue restatements and fluctuations in the stock price. Future research could study revenue restatements for a similar time period prior to the issuance of the Sarbanes-Oxley Act to compare and contrast differences between the two periods. Additional performance indices such as pre-tax income and earnings per share could be used to search for correlations concerning incentive compensation between companies with internally and externally prompted revenue restatements.

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Appendix

Companies Included in the Study

Company	Announced	Prompter
Bio-Technology General Corp	08/02/02	Auditor
MTS Systems Corporation	10/28/02	Auditor
NCO Group, Inc.	02/11/03	Auditor
Sports Club Company, Inc.	05/23/03	Auditor
3D Systems Corporation	06/30/03	Auditor
Perot Systems Corporation	08/14/03	Auditor
MSC.Software Corporation	03/30/04	Auditor
Red Hat Inc.	07/13/04	Auditor
IMPAC Medical Systems, Inc.	09/29/04	Auditor
Electronic Data Systems Corp	11/15/04	Auditor
MDC Partners Inc.	11/15/04	Auditor
Petroleum Geo-Services ASA	11/16/04	Auditor
Apogee Technology, Inc.	04/15/05	Auditor
Bradley Pharmaceuticals, Inc.	04/21/05	Auditor
Credit Acceptance Corp	06/24/05	Auditor
Anchor BanCorp Wisconsin	06/29/05	Auditor
Symbol Technologies, Inc.	10/17/02	SEC
Zila, Inc.	10/24/02	SEC
Symbol Technologies, Inc.	02/13/03	SEC
Motient Corporation	03/14/03	SEC
Nanophase Technologies Corp	03/17/03	SEC
Networks Associates, Inc.	03/26/03	SEC
CPI Corporation	05/16/03	SEC
Audiovox Corporation	05/29/03	SEC
Warrantech Corporation	06/25/03	SEC
Imaging Technologies Corp	07/07/03	SEC
AOL Time Warner Inc.	07/23/03	SEC
Handleman Company	08/01/03	SEC
Rural/Metro Corporation	09/29/03	SEC
United Security Bancshares	11/14/03	SEC
United States Exploration, Inc.	01/14/04	SEC
Take-Two Interactive Software, Inc.	01/30/04	SEC

Safescript Pharmacies Inc.	03/08/04	SEC
Verdisys, Inc.	03/15/04	SEC
Computer Associates International, Inc.	05/06/04	SEC
Warrantech Corporation	06/09/04	SEC
Cardinal Health, Inc.	09/13/04	SEC
Motorcar Parts of America	11/16/04	SEC
Motorcar Parts of America	02/17/05	SEC
National R.V. Holdings, Inc.	04/01/05	SEC
Superclick, Inc.	06/13/05	SEC
Q Comm International Inc.	06/22/05	SEC
The Sportsman's Guide, Inc.	06/24/05	SEC
ClearOne Communications	08/18/05	SEC
Cardinal Health, Inc.	08/30/05	SEC
Aerosonic Corporation	03/17/03	Company
Corinthian Colleges, Inc.	08/23/05	Company
Quality Distribution, Inc.	02/02/04	Company
Rural/Metro Corporation	05/20/03	Company
CellStar Corporation	05/05/05	Company
August Technology Corp	09/28/05	Company
IKON Office Solutions	07/08/05	Company
MDSI Mobile Data Solutions	11/17/03	Company
Nortel Networks, Corporation	10/23/03	Company
Savient Pharmaceuticals, Inc.	01/05/05	Company
The BISYS Group, Inc.	05/17/04	Company
UniSource Energy Corp	08/23/04	Company
Veritas Software Corporation	03/15/04	Company
Glimcher Realty Trust	02/22/05	Company
BearingPoint, Inc.	11/18/04	Company
Carrier Access Corporation	05/20/05	Company
Integrated Electrical Services	12/14/04	Company
MAPICS, Inc.	07/30/02	Company
Natural Health Trends Corp	11/19/03	Company
Parametric Technology Corp	12/31/02	Company
Scott's Liquid Gold-Inc.	03/31/03	Company
TurboChef Technologies, Inc.	11/15/04	Company
The GEO Group, Inc.	08/10/05	Company
USEC, Inc.	03/11/05	Company
Gemstar-TV Guide	10/31/02	Company

International, Inc.		
Beasley Broadcast Group, Inc.	02/24/03	Company
Lakes Entertainment, Inc.	09/09/02	Company
Vectren Corporation	05/15/03	Company
Blount International, Inc.	11/02/04	Company
Bowater, Inc.	07/12/02	Company
Brightpoint, Inc.	05/06/05	Company
E-Loan, Inc.	11/04/04	Company
Intergraph Corporation	10/27/04	Company
JLG Industries, Inc.	02/18/04	Company
Lennox International, Inc.	03/11/04	Company
LION, Inc.	07/29/04	Company
Quest Software, Inc.	07/23/03	Company
Island Pacific, Inc.	10/28/04	Company
Photon Dynamics, Inc.	05/04/05	Company
WebMethods, Inc.	02/03/05	Company
Ultralife Batteries, Inc.	02/26/03	Company
Liberate Technologies	10/15/02	Company
Reliant Resources, Inc.	07/05/02	Company
Cutter & Buck Inc.	08/12/02	Company
Dana Corporation	09/15/05	Company
LCC International, Inc.	08/08/05	Company

A Study of Best Practices for State Oversight of Municipal Finance

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Abstract

This study is an initial look into the various municipal finance reform practices that have been enacted in those states that receive AAA bond ratings from the rating agencies for their general obligation bonds at the state and local level. North Carolina and Georgia are among the nine states to receive AAA bond ratings from *Moody's* their municipal bonds in 2008. The ratings agencies place heavy emphasis on the fiscal management policies and structures of state and local governments along with economic and demographic factors. Many investors and creditors, by association rely heavily on these respective ratings to classify the financial strength and measure of credit risk associated with debt issuances at the state and local level. This study takes an in-depth focus on the models of municipal finance oversight, with emphasis on debt management as well as fiscal policies employed in North Carolina and Georgia. Future research will study the other 7 states, Delaware, Maryland, Missouri, South Carolina, Utah, Vermont and Virginia as well as study the municipal finance practices employed in the other 43 states.

Introduction

Traditionally, a blurred yet divided line has separated the responsibilities of states and their localities. State governments most often provide higher education, health and welfare services, and highway maintenance and improvements. Local governments administer schools that are funded by both states and localities, provide local infrastructure, police and fire protection, and recreational services. Counties, cities, towns, villages, special districts, authorities, and school districts were all created by the state to enable self-government, and the division of labors that resulted has remained relatively constant across the last century.

However, a dramatic increase in state and local government per capita expenditures has occurred over the last four decades. Increasingly both state and local governments absorb rising costs of expanded services. In 1960, state and local governments combined spent approximately $1410 annually per resident. In 2004 estimates of the average per capita, expenditures topped $6600, approximately a 370% increase in costs over the previous amount (U.S. Statistical Abstract, 2008). The increasing costs of public services are not expected to slow in the coming years. Rather, governments at all levels are facing soaring health care and pension costs, increases in services to the aging, mandated public safety expenditures, and infrastructure replacement and maintenance (Pagano & Hoene, 2006). Furthermore, Fitch Ratings, a bond credit rating agency, recognized that the "… expense pressures facing governments,

particularly in health care, energy and cost of capital…" will be a concern to all government managers in maintaining their finances as well as to the investors investing in the government credit issuances (Fitch, 2008).

Mandated Financial Practices For Local Governments

States normally require local governments to follow generally accepted accounting principles, adopt an annual budget, follow recommended cash and debt management procedures, and have an independent financial audit conducted. However, some states take additional steps towards monitoring local government finances. The additional steps range from a uniform chart of accounts, debt management, financial trends monitoring, to implementing corrective actions when an entity receives a qualified or adverse audit opinion.

The origins of state-level oversight trace back to the 1800s when over 25 percent of local governments defaulted on their bonds during the first major depression to hit the United States (Hillhouse, 1936; ACIR, 1985; Cohen, 1989). Hillhouse notes that the exact date of the first municipal bond issuance is unknown; New York City is believed to be the first municipality to issue a bond security in 1812. His research also marks that most of the early municipal bond issuances were related to railroads since municipalities were pushing for transportation systems in their area (Hillhouse). In 1839, Mobile, Alabama was the first municipality to default on a municipal bond of $513,000 (Hillhouse, 1936; ACIR, 1973, Spiotto, 1995). The cities of San Francisco, Philadelphia, Detroit and Chicago also experienced defaults in the 1850s and 1860s as a result of bank failures (Hillhouse, 1936; ACIR, 1973, p. 9). As a result, the first state take over of a local government occurred in 1921 in Manchester, New Hampshire as a result of a bond default (Coe, 2007, p. 2). However, many states did not become involved in the financial affairs of their localities until the Great Depression era when many municipalities suffered shrinking revenues primarily from the increasing rates of tax delinquency along with decreasing property values. In addition to the loss of revenues, there was an increase in demand for public services due to massive unemployment (Hillhouse, 1936; Berman, 1995; Coe, 2007). Florida, North Carolina, Texas, Tennessee, New Jersey, New York, Michigan, Massachusetts, and Illinois all experienced the greatest number of municipal bond defaults. Further, not one single state escaped the Great Depression without at least one default. Southern states were hit especially hard and it was reported that "… defaults cover Dixie like the dew" (Hillhouse, 1936, p. 43).

Current State And Local Government Finance

The latest numbers are from the fiscal year 2005 showing that state and local governments collectively received $2.7 trillion in revenues and expended $2.5 trillion. States accounted for approximately 65 percent of the total revenues and 62 percent of total expenditures (U.S. Statistical Abstract, 2008). The highest expenditures were in the education, public welfare, highways and police and fire protection. At the end of 2008, the Federal Reserve showed that outstanding state and local debt was $2.2 trillion, an increase of approximately 55 percent since 2000. Of this outstanding debt amount, census data shows that states account for an approximate 39 percent, and local governments owe the remaining 61 percent. The majority of this debt is long-term bonds. These issuances were roughly two-thirds revenue bonds and one-third general obligation

(GO) bonds (Federal Reserve Board, 2009). Of the approximate $2.2 trillion in outstanding debt, most of the debt proceeds financed education, transportation, utility and industrial development projects, with a few bonds dedicated to refunding/refinancing older issuances. While state and local government debt is considered an acceptable method of financing public capital projects, issuing such debt incurs interest expenditures for these governments. In 2006, state and local government interest costs were approximately $97 billion (U.S. Statistical Abstract, 2008).

According to the Securities Industry and Financial Market Association, municipal bond investors are paying greater attention to the underlying ratings of governmental issuers. At the end of 2007, the three rating agencies had rated $131.6 billion in general obligation (GO) bonds and $297.4 billion in revenue debt (2008). In assigning a rating, the agencies (Moody's [Mergent], Standard and Poor's (S&P), and Fitch ICBA) assess a government's ability to pay the principal and interest on debt by evaluating its economic base, financial condition and practices, debt factors, governance and planning. A further, and significant, factor is a state's oversight of local government financial management practices. According to Moody's, "state and local general obligation ratings are measures of financial strength and reflect the margins of protection for debt obligations, both at present, and importantly, in the future…although economic and demographic factors provide the fundamental underpinnings of a government's financial strength, policy and management can have a profound influence….strong financial management practices in a state may mitigate the effects of a concentrated economy". Further, "…financial results are the product of many decisions and practices determined by state policy makers….this category of [management] rating factors captures a *willingness* to take proactive policy actions" (Moody's Investor Services, 2004). These management practices include institutional governance framework, including related constitutional provisions, budget and financial monitoring, and capital and debt planning processes. Furthermore, recent research has shown that states have an additional vested interest in their own, as well as their localities', financial management and performance since weak local performance (lower bond ratings, municipal bankruptcy, and fiscal stress) can have a negative effect on the state's overall bond ratings as well as other localities within the state (Deal and Bowling, 2009).

As of February 2008, 9 states received AAA bond ratings from *Moody's*, the rating judged to be the highest quality, with minimal credit risk. These states are Delaware, Georgia, Maryland, Missouri, North Carolina, South Carolina, Utah, Vermont and Virginia. To quantify these bond ratings in perspective, *Moody's* (Mergent) municipal bond yield averages on long-term bonds for April, 2009 were 5.10 for AAA; 5.35 for AA, and 6.10 for A bond ratings. Since the rating agencies have placed heavy emphasis on the fiscal management policies and structures of state and local governments, this study will focus on two state models of municipal finance oversight, with emphasis on debt management as well as fiscal policies utilized in North Carolina and Georgia.

Previous Research

Cahill and James (1992) studied how states were addressing problems of fiscal stress in local governments. Their research found that prior to the 1970s, many states

dealt with fiscal problems on a case-by-case basis. After the New York City and Cleveland, Ohio financial woes became public, states began to enact legislation that would deal with municipal financial emergencies.   Cahill and James also studied how the states employed their administrative approach to fiscal emergencies, oversight powers, and early warning systems. They found that most states that had either vested responsibility in an existing state agency, normally the governor or a department of community affairs, created a special administrative unit, or created a multi-member authority, commission or board which had five or more members. Further, most legislation stipulated that these bodies needed to be composed of residents who had some experience, expertise or certification in financial management.

Mackey (1993) conducted a survey for the National Conference of State Legislatures and found that 87% of the states require that local governments submit their audited financial report to a state department and 42% made the submission a condition of receiving state aid.   He also found that over half of these states require public authorities and other entities that issue moral obligation debt to report to the state agency on an annual basis. Five states (Arkansas, Arizona, Kansas, South Dakota, and Vermont) have no reporting requirement.

Berman (1995) found two types of approaches employed by the states since the 1930s. The first was direct legislation that addresses local government financial distress on a case-by-case basis. Berman considered this to be a reactive approach by the state government. The second type was legislation that authorized a state agency to monitor the financial trends of all of the state's municipalities and to intervene when those financial indicators point to impending financial problems for the local government.   His study showed that the second type of approach was quickly becoming more prevalent in state legislation and resulted in municipalities receiving "… a mixture of aid and regulation" (pp.57-58).

Honadle (2003) conducted a survey of how states approached local government fiscal crisis within their state and found that there were various approaches utilized by the states from a mixture of predicting, averting, mitigating and preventing local government fiscal stress and thus municipal bankruptcy to no state intervention at all.   Honadle (2003) found that "… state policies and practices relative to local government fiscal crises vary considerably across the 50 states from no role to monitoring to state-takeover of local governments in emergency status" (Honadle, 2003, p. 1).

Coe (2009) studied how states detect distress, assist troubled localities, and the range of authority exercised to intervene in local fiscal affairs. He conducted a survey of nine states to determine how the state detects sign of fiscal stress in a local government and the actions taken by the state to predict or deal with fiscally-stressed local communities. He found that four of the nine states have a strong intervention system in place that enables the state to intervene in the local government financial affairs, three of the nine have a weak system that "slaps the local government on the wrist but allows them to continue operating in a fiscally disastrous fashion; and two of the states do not have an oversight system nor provide any assistance to local government units when they encounter fiscal problems. Coe (2007) has also studied North Carolina and this research will add to his contribution to the literature.

For this study, research was conducted by reviewing the state's legislation, regulations, and state agency websites to ascertain the specific practices employed in

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municipal financial management by the state government. Furthermore, phone interviews were conducted with the state agency representatives to gain a better understanding of the financial oversight practices.

North Carolina Local Government Finance Practices

North Carolina's Local Government Commission, a division of the State Treasurer's Office, was created in 1931 to help address the problems in local government finance caused by the Great Depression. At that time, over 62 counties, 152 cities and towns, and 200 special districts were in default on their outstanding municipal bond issuances. The *Local Government Finances Act*, North Carolina General Statute §159-3, created the LGC to provide technical assistance to local governments and public authorities in North Carolina. The Commission (LGC) has a nine-member board that directs the operations. The members are the State Treasurer, State Auditor, Secretary of State, Secretary of Revenue Department, 3 Governor Appointees, 1 Appointee by the President of the Senate, and 1 Appointee by the Speaker of the House. As to the three gubernatorial appointees, one must be a representative of the city governments. The respective appointee must have served or be currently serving as a mayor or member of a governing council of a North Carolina city. Another gubernatorial appointee represents the counties and must have served or be currently serving as a member of a North Carolina county commission. The State Treasurer serves as Chairman and selects the Secretary of the Commission, who heads up the administrative staff serving the Commission [approximately 33 members]. The State and Local Government Finance Division, housed in the State Treasurer's office, has three sections – The Debt Management Division; The Fiscal Management Division; and the Capital Facilities Division. The Debt Management Division and Fiscal Management Division address the fiscal management concerns of the local governments. The regulatory authority for these divisions is derived from *The Local Government Budget and Fiscal Control Act* (§159 Subchapter III) and the *Local Government Bond Act* (§159 Subchapter IV). Both of these Acts were enacted in 1971.

The LGC meets quarterly, with the four member executive committee meeting in the months when the full LGC does not meet. Special meetings, such as severe fiscal stress by a locality, may be called as needed. The LGC oversees fiscal operations of cities, counties, school systems, charter schools, and special authorities. The oversight system has two principal components: 1) control over debt issuance and 2) budgetary and fiscal oversight authority. Presently, North Carolina is the only state legally responsible for the issuance of all local government debt. Through the Debt Management Division, the LGC directly issues and approves the sale of both state and local government debt instruments and sells all general obligation bonds competitively. Local governments can privately place enterprise bonds and certificates of participation with an underwriter after the LGC enters into a bond purchase agreement/acceptance contract. The LGC also maintains the bond records, register of bonds, and monitors the debt service payments as well as issues *The Bond Reporter* to the public on a monthly basis.

If a unit of government fails to pay any installment of principal or interest on its outstanding debt, which includes general obligation bonds, special revenue bonds, bond anticipation notes, tax anticipation notes, or revenue anticipation notes, and remains in

default for 90 days, the Commission has the statutory powers to investigate the municipality's fiscal affairs, consult with the municipality governing management, and negotiate with its creditors to work out a plan for repayment of the debt.

The LCG can order a local government to raise taxes or other revenues in adequate amounts to make the necessary debt service payments. The Commission will enter an order to the local government to enact the plan within 90 days, and if met with resistance by the local government, the Commission may request a court order enforcing the plan of adjustment. Once the local government is under the plan of refinancing, the Commission has the authority to require periodic reports on the municipality's fiscal affairs and must review and approve the annual budget ordinance submitted by the municipality to the Secretary of the Commission (Deputy State Treasurer). The Secretary may recommend changes to the budget; those changes must be implemented by the local governing officials before adoption of the local budget can take place (North Carolina Statute §159-176). The Commission will remain involved until the municipality has made satisfactory progress towards repayment of debt payments under the refinancing plan (Confidential Interview with Public Official, November 20, 2008).

As far as financial oversight, through the Fiscal Management Division, the LGC monitors the local government finances by regulating the audit process; extensive review of financial reports; assists fiscally stressed localities; utilizes financial intervention in a fiscal emergency of a local government; and has the statutory authority to approve all Chapter 9 municipal bankruptcy filings. To facilitate this process, the LGC requires the local governments to use the state's standard audit contract; approves the local governments' auditor selection; approves the audit contract; and permits final payment to the auditor only after the financial report is received and approved by the LGC. The LGC also maintains 5-year comparative financial data for all municipalities and counties and provides training/technical assistance to local government financial personnel and independent governmental auditors.

The Fiscal Management Division also monitors and analyzes the financial and accounting practices of the local governments. This division derives its statutory authority from *The Local Government Budget and Fiscal Control Act* (1973) which prescribes fiscal and accounting standards for local governments and authorities. The legislation addresses preparation of the annual budget ordinance, fiscal and internal controls, accounting systems, capital reserve requirements, financial reporting, annual audits and related requirements, investments, and risk management. This division also monitors the fiscal health of the local governments as well as provides technical assistance and training to local governments and the certified public accountants retained by those local governments for accounting and auditing services. In the area of fiscal health monitoring, the local government must submit its annual Comprehensive Annual Financial Report (CAFR) to the Commission and the staff will input the financial data into a database where statistical trends are analyzed and historical data are maintained (2004, pp. 1-6).

According to research (Larkin and Schaub, 1999; Lawrence, 2006; Coe, 2007), approximately 25% of the nation's AAA rated local governments are found in North Carolina - more than any other state. Further, Fitch improves the credit ratings of any North Carolina bonds that are rated below AA by one or two step upgrades – "…as a result of the LGC" thus those bonds that would normally receive a BBB would receive a

BB rating under the current LGC oversight structure (Larkin, 1999). [However, there are very few instances of a rating below AA.] The average municipal bond yields are normally .04% to .08% below the interest rates incurred by equally rated local government entities in other states. Research conducted by David Lawrence of the University of North Carolina quantified that the North Carolina local government interest savings were approximately $6.75 million in 2005 with $7.5 billion in outstanding bonds and installment purchases rated.

In 2006-2007, the LGC sold general obligation bonds totaling $587 million at a true interest cost of 4.0824 percent. This rate compares to a national bond buyer's index of 4.21 percent for that period. For the FY 2007, the LGC fiscal year budget was $4.4 million with a staff of 33 individuals. Approximately 40% of the staff are licensed CPAs. Local governments' costs of compliance are nominal according to the annual report from the State Treasurer (Annual Report, 2007). Finally, the bond rating agencies single out North Carolina as an exemplary system and no other state has been given this distinction to date (Larkin and Schaub, 1999).

Georgia's Local Government Finance Practices

The State of Georgia has over 700 local government units and has several financial management practices in place that are administered by the Department of Community Affairs and The Georgia Department of Audits and Accounts. The decision to pursue local government accountability and transparency practices was brought about by the creation of the Georgia Future Communities Commission (GFCC) in 1996 through state legislation (HR 324). The purpose of the commission was to "…examine governmental, social, and economic issues confronting local governments; to assess the future implications for community and economic development if current negative trends in our cities and counties are not corrected; to determine what changes are needed in local government structure to provide an environment conducive to quality of life and economic prosperity; and to develop specific proposals to ensure that all of Georgia's local governments become catalysts for economic prosperity" (Georgia Future Communities Commission). The GFCC was comprised of nine private sector members appointed by the Georgia Chamber of Commerce; 10 members of the General Assembly, five appointed by the Speaker of the House of Representatives and five appointed by the President of the Senate; five county officials appointed by the Association County Commissioners of Georgia; one county constitutional officer appointed by the County Officers Association of Georgia; and five municipal officials appointed by the Georgia Municipal Association. The chairperson was selected by the Governor from among the nine private sector members.

In the 1997 legislative session, the GFCC recommended several financial measures to the General Assembly – one of which was to call upon the Department of Community Affairs to publish financial and non-financial indicators for communities with annual expenditures greater than $250,000. In order to facilitate this report, each unit of local government is to submit an annual report of local government finances to the Department of Community Affairs (DCA). The report shall include the revenues, expenditures, assets, and debts of all funds and agencies of the local government, and other such information as may be reasonably requested by the Department (Georgia Code

§36-81-8). Further, each local independent authority also is required to submit an annual report of indebtedness to the DCA. Both local governments and local authorities must submit these reports as a condition of such local entity receiving state appropriated funds from the department. The timeline is 180 days after the fiscal year end. The DCA also has the statutory responsibility to require any municipality, county, local government authority, board, or commission that is empowered to enter into debt to report individual issues of debt for all general obligation bonds, revenue bonds, notes, certificates of participation, or other such obligations exceeding $1 million to the Department of Community Affairs within 60 days of debt issuance (Debt Issuance, 2009).

Using the annual reports as well as the related qualitative information, the DCA prepares an annual Report on Local Government Finances for all Georgia local governments as well as a Report on Indebtedness of local independent authorities. These reports are available to the public on the department website. As a result, stakeholders can find the total amount of revenues, expenditures, and debt service costs on an annual basis. In 2007, revenues for both counties and cities totaled $15.5 billion and expenditures totaled $16.6 billion which indicates that either debt or state aid filled the expenditure to revenue gap as Georgia is a balanced budget state (Georgia Local Government Finance Highlights, 2008).

Another recommendation of the GFCC was to improve government accountability by making financial information reported by Georgia's local governments more comparable to enable local taxpayers and local policy makers to better understand and evaluate government service delivery and operations. As a result, HB 491 was passed to give the DCA and the State Auditor requisite authority to develop a uniform chart of accounts for the local governments in cooperation with the Georgia Municipal Association and the Association County Commissioners of Georgia (Uniform Chart of Accounts, 2007). The chart of accounts is used by all local governments in preparation of their annual financial reports which are to be audited on either an annual or biennial basis.

The Nonprofit and Local Government Audits Division is responsible for review of annual audit reports of nonprofit organizations contracting with the State local governments, including counties, consolidated governments, municipalities, and regional development centers. Local governments in Georgia having annual expenditures of $300,000 or more are required to have an annual audit. Local governments with less than $300,000 in expenditures may elect, in lieu of an annual audit, to provide for an annual report of agreed upon procedures or a biennial audit covering both years. The audit report or report of agreed upon procedures is required by state law to be submitted to the State Auditor for review. If the report contains any findings or recommendations, the local government is also required to submit written comments on the findings and recommendations, including a corrective action plan, to the State Auditor for review. Local governments which do not submit acceptable audit reports to the State Auditor are subject to the provisions of state law that "No state agency shall make or transmit any state grant funds to any local government which has failed to provide all the audits required by law within the preceding five years." Furthermore, if the local government does not file an annual audit or correct the deficiencies as noted in the audit, the State Auditor shall publish in the local newspaper by means of a prominent advertisement or news article (which cannot be placed in the legal notice section of the newspaper) stating

that the governing authority of the local government has failed or refused, as the case may be, to file an audit report or to correct auditing deficiencies for the fiscal year or years in question. The notice shall further state that such failure or refusal is in violation of state law (Georgia Audits, 2008). Presently, the repository shows over one-thousand audited financial statements as well as corrective action plans (where findings were indicated) and state auditor follow-up of the correction action plans for the fiscal year 2007 (Audit Report Repository, 2009). The Local Government Section of the Department of Audits and Accounts keeps an updated repository to verify potential grantees eligibility to receive state grant fund transmittals and all state departments who distribute funding to local entities are to verify the eligibility of the local government prior to disbursement (Georgia Code §36-81-7).

Finally, Georgia is one of three states in the United States that expressly prohibits any of its local governments to file for Chapter 9 bankruptcy protection (Georgia Code §36-80-5). Normally, when a municipality undergoes major financial problems, the municipality will dissolve and transfer its assets and related liabilities to the county within which the municipality exists under Georgia Code §36-68-1. The county government is then responsible for providing the essential public services to the citizenry.

Conclusion

Both of these states have taken a vested interest in their local government financial practices and seem to keep a tight control over these finances. Whereas North Carolina takes a stronger oversight role by approving debt issuances of local governments, reviewing the annual financial reports and related audits as well as utilizing intervention practices, Georgia also takes proactive steps to avoid financial distress as well as provide transparency by monitoring debt issuances and annual audits and providing these findings to the public on a regular basis. Both states employ a uniform chart of accounts as well as both states employed a commission form of oversight to ensure accountability and transparency. The GAO (2007) has stated that "…in the absence of policy changes, large and growing fiscal challenges for the state and local government sector will begin to emerge within the next few years" (p. 1). The driving fiscal challenge will be escalating benefit costs, unfunded pensions, and increasing service costs as well as a flat or declining revenue growth from tax revenues. As such, many states, such as Alabama and California who both have a high number of municipal bankruptcies thus indicating fiscal stress at the local levels, must consider the best municipal oversight system to put into place at the state government level to avoid the stigma attached to multiple municipal bankruptcies as well as maintain services to the citizenry and confidence in the bond markets.

Dillon's rule states that local governments are the creations of state government. In studying the New York fiscal crisis as well as other local government fiscal problems, the ACIR continuously reinforced to the Congress that the states had the responsibility to monitor and evaluate the finances of their local governments and that federal involvement was in violation of the U.S. Constitution (1973, 1985). In the current economic times, many local governments will be faced with multiple fiscal challenges and states will be faced with answering the questions such as "Do we bail Locality X out of trouble?", or "Should the state take control of the finances for Locality Y?" Currently, Alabama is

facing this painful dilemma in that Jefferson County is facing over $3 billion in bond defaults and the FBI has arrested the Birmingham mayor for his involvement in connection to the fiscal mismanagement. For any local government experiencing fiscal stress, the citizen essentially bears the brunt of the fiscal stress either in an increased tax burden to offset higher debt and service expenditures combined with a loss or a reduction of government services.

Future research would be two-fold – the first step is to continue this body of research by documenting each state's different municipal finance laws and administrative rules and regulations to create a database of like and differing methods of overview of municipal finance documents and practices. The database could then be used to ascertain which states take a proactive, reactive, or inactive role when a municipality encounters fiscal stress. Secondly, after the database is created, the data could be utilized to quantify the relationship between differing levels of municipal financial reform including allowing municipal bankruptcy, approval of debt issuances, audit practices, and budget oversight have an effect on the bond ratings both at the local and state level. Although several states are still in a reactive mode to financial oversight at the local level, it is apparent that states such as North Carolina and Georgia have taken a proactive stance in their municipal finance oversight and have been rewarded with the highest bond ratings for their practices.

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Baby Boomer Turnover and Retention Strategies

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Abstract

Organizations that fail to maintain an aggressive and effective employee retention program will allow their talent to walk out of their doors taking with them training and job experience that will benefit the gaining organization. Literature has shown that there are identifiable factors that cause employees to leave their employers and seek opportunity elsewhere. Once managers are aware of these factors, a set of initiatives can be implemented to avoid this loss of human capital. The purpose of this paper is to explore what other business entities have experienced regarding employee retention issues and identify those intrinsic factors that affect employee turnover.

Background and Significance of the Problem

The labor supply continues to be tight and indications are that this trend will persist for a variety of reasons. The American Society for Training and Development (2003) stated that the economic boom of the late 90's along with a slowing of growth rate of the United States will make for workforce shortages in the 21st. century (p. 11). The fact that the United States had experienced a lower birth rate in the late nineties equates to fewer future workers, compounding the workforce shortage problem. In addition, the baby-boomers are facing retirement, which will lead to an even smaller workforce pool. Cascardo (2002) reports that a dearth of healthcare workers needed to fill hospital jobs will create a healthcare crisis (p.3).

The American College of Healthcare Executives surveyed 984 hospital CEOs in November of 2002 to ascertain their most pressing concerns. Seventy-one percent said that personnel shortages were their number one concern (American College of Healthcare Executives, 2003). According to a writer for *Modern Healthcare*, contrasts the recent Y2K scare, a mere "blip on the computer screen," against the impending healthcare worker shortage that will hit in 2011: "That's the year an already chronic shortage of front-line healthcare workers is set to become an epidemic. I very much doubt we will be looking back on 2011 with the same nonchalance as we do the millennium bug" (Sloane, 2003, p. 1). The importance of the workforce shortage cannot be overstated as it is just one of the dynamics affecting employee retention. Other dynamics may include the demographic make-up of the workforce, able-bodied available workers present, skill level of the workers, current unemployment rate, economic growth, and organizational leadership's ability to recognize the need and plan for retention strategies. The solution may well be a multifaceted, comprehensive, and may require collaborative partnerships between government, academia, and industry; but more research is required.

Economic Dynamics External to the Organization

One of the ongoing challenges of managing the human resources component in any business is ensuring adequate staffing levels. With fewer people entering the workforce, it is imperative that leaders employ effective employee retention strategies. It is becoming clear some businesses are recognizing that strategies that worked yesterday will not be as effective in today's or tomorrow's workforce environment. One reason is fundamental to demographics, a significant segment of the workforce known as the baby-boomers face retirement. But this seems to be just half of the story, as replacements for the baby-boomers do not appear to be coming, in which case the shortage of workers will become worse. According to the American Hospital Association's (AHA) Strategic Policy Planning Committee "This extra large cohort of workers [baby-boomers] is followed by the 'baby bust' generation, a relatively small pool of workers" (2001, section 4, para.1). This is strong evidence that suggests a workforce shortage is going to be here for a while and that businesses must take employee retention seriously if they want to meet the challenge of finding workers. In addition, "Since 60 % of boomers are planning early retirement, the skilled-labor gap will begin building to a crisis even if the economic slowdown continues" (Whithers, 2001, para. 5). While it is true that "the healthcare industry continues to suffer from a lack of qualified workers, especially registered nurses" (Cascardo, 2002, section 1, para. 1), it is also true "shortages are not limited to any one occupation. Though the nursing shortage has received much attention, hospitals also face a decreasing applicant pool of pharmacists, technicians, technologists, therapists, housekeepers, food service workers, information service specialists, medical record coders and others" (American Hospital Association, 2001, para. 5).

The labor-supply shortage makes employee retention a strategic initiative for any business, but especially small hospitals and medical practices. According to the American College of Healthcare Executives (ACHE) (2002), the current healthcare industry is plagued with "staff shortages, higher patient volumes, and dwindling profit margins." In addition, "the healthcare industry must understand that workforce retention is a major factor in an organization's success" (p. 1). Visionary business leaders recognize that employee retention is a serious issue in today's healthcare related industry. One such leader suggests a broader and more permanent fix for combating turnover by making retention a part of the organizational culture. Barbara Blakeney, president of the American Nurses Association states, "You have to create a culture of retention" (Cadrain, 2002, sec. 4, para. 2). Those in fiduciary positions also advocate employee retention for their organizations. Peg Neuhauser, PhD and "noted sociological expert" is cited in an article in the Trustee Bulletin (July/August, 2003, p. 6). She advises other trustees to "Keep in mind the need to accomplish a high [employee] retention impact. . ." (p. 7).

Turnover Causation

Employees leave jobs for various reasons and finding remedies suitable to the organization may be a daunting task. Even if the remedies are employed it is no guarantee that the employees will be happy and stationary, but management must try. Studies, such as the one involving members of the Development Dimensions International Benchmark Group, have indicated that there is a correlation between employee job satisfaction and

intent to voluntarily terminate (Bernthal & Wellins, 2001). John Gering (2002), of the management-consulting firm, CG & A, expresses employee dissatisfaction this way; "The gap between the words and the behaviors of the company is the measure of employee dissatisfaction" (p. 5). According to Business Research Lab (2003), a Delaware based Limited Liability Company specializing in business consulting, "In the employee satisfaction studies we have done, we've never found a firm with low employee recognition scores and high employee satisfaction scores" (para. 1). While job satisfaction is comprised of several dynamics, the common denominator seems to be the role that the supervisor plays. Businesses today are leaner and less hierarchical; this fact has impacted and changed the way that contemporary employees view their immediate supervisors. As a result, supervisors need to change the way they view their employees. "Employees think of their immediate supervisors as the primary representatives of their employers' missions, policies, systems, and practices" according to Bruce Tulgan, co-founder of RainmakerThinkingInc. With this significant shift of "organizational representation," it becomes crucial for immediate supervisors to build trusting and collaborative relationships with staff. "The day-to-day communication between supervisory managers and direct reports has more impact than any other single factor on employee productivity, quality, morale, and retention" (Fast Company, 2003. p. 1). The Business Research Lab used their online survey (sampling and population undisclosed) to determine if the respondents had ever quit their job because of their supervisor. The online poll ("Ever Quit a Job Because of Supervisor?") ended March 22, 2000. Results show that 58% had done so. The relationship that supervisors have with subordinates has never been more important. "Let's be clear about something. People don't leave organizations. They leave managers who continually fail them in some important respect (Catlette & Hadden, 2000, sec. 4, para. 2).

Employees want to be treated with respect, feel like they have a voice, and that their opinion matters. They resent feeling like a commodity. It is during these times of skilled labor shortages that managers should be responsible for retaining their top people. "HR experts such as San Francisco State University's John Sullivan, say those same managers are probably to blame for their own worries" (Dobbs, 2001, para. 1). Many of our business leaders fail to understand how important it is to develop a trusting relationship with the talent in their organizations. In fact, in many cases, employees are afraid to voice their opinions about organizational issues.

Employees distrust their employer and their supervisor and it is the responsibility of leadership to correct this condition. If it isn't corrected, then in the perception of the employee, conditions deteriorate and the motivation to leave increases. In his writing "People Don't Leave Jobs, They Leave Their Bosses," Kelloway (2004) suggests that money is not as an important factor as is leadership. "Leadership, not salary, emerges as a cause of a great deal of turnover" (p. 2). Cox (2004) & Associates, a healthcare-consulting firm based in Brentwood, Tennessee, has conducted nearly 300 healthcare organizations. Their findings support that managerial relationships are key to turnover. "In most surveys about retention in nursing, the relationship with the manager is among the top three reasons why nurses leave their jobs" (p. 1).

Stress levels for the employees of business firms continue to increase with each new day. Doing more with less seems to be the mantra of modern business cultures, and it is no different in modern health care. Although small health care businesses do not

have shareholders in the traditional sense, patients and their families are the primary stakeholders. They are demanding in terms of patient care and expect a return on their investment. The level of expectancy by patients and their families continues to increase as they become more informed as consumers. They are keenly aware that they can take their patronage to the business down the street. In addition, the reimbursement dollar is stretched, additional workloads are put on employees, and staff positions are eliminated. An increased workload presents unique burdens on staff in that they are often limited to an eight-hour workday and without overtime the only recourse would be to work harder and faster. This type of stress is referred to as "Quantitative Overload" (Cummings and Worley, 1997, p. 431).

Retention Strategies

Hiring the right people to begin with seems to be a winning strategy. According to Jim Collins, the author of 'From Good to Great,' "By recruiting the best possible personnel, a firm can improve its returns on each payroll dollar." In addition, "The executives who ignited the transformations from good to great did not first figure out where to drive the bus and then get people to take it there. No, they first got the right people on the bus (and the wrong people off the bus) and then figured out where to drive it" (Longenecker, Moore, Petty, & Palich, 2006, p. 421). Conducting pre-employment screening contributes greatly to choosing the right employee for the job. This should be an integral part of a retention strategy. Several pre-screening benchmarks include: cultural fit, family stability, good work ethic, solid employment record, and good references. Study results show that some employers are not relying on historical data alone, but are looking to see if the candidates match up to what the company has to offer to include energy level, forthright responses, carriage of the person, personal chemistry, location of residence, and evidence that he or she has made the major decisions in life. Job shadowing is another technique that is producing marked results in a small mid-western hospital. St Francis Medical Center has adopted a job previewing technique that allows perspective employees to try out for the job by shadowing a department worker throughout the day. This provides a realistic experience that will help the prospect to accept or decline the position. The benefits are real; the number of job applicants has increased, which provides the 189-bed hospital with a greater number of potential employees to choose from. Also, if the prospect is hired, chances are they will stay in the position because they came in with eyes wide open. The data that supports this show that the turnover percentage dropped from "20.6 in 2000 to 15.7 in 2003." This strategy proved successful "after staffing shortages resulted in some patients being diverted to other hospitals" (Huff, 2005, p. 1).

In a project where Izzo Consulting (2001) reviewed several large retention studies, which included studies by the Gartner Group, Fortune, and Wyatt International, they identified the lists of key reasons employees left their employers. The following are listed in order beginning with the number one reason; "(1) lack of recognition, (2) inequities in salary, (3) long-term sense of purpose and mission are missing, and (4) insufficient opportunities for professional and career development (promises may not match reality)" (p. 1). The review was conducted in July 2000. "Salary is important, but

seldom the sole reason. Salary offers of 20 % or higher are hard to beat; being within 10-15 % may be adequate for retention" (p. 1).

Employee Recognition is perhaps one of the easiest of the problems to resolve. It begins with a simple "thank you" (Herman, 2000). Recognition can be as simple as expressing to the employee that he or she has performed well on a particular task or as complicated and expensive as awarding all expense paid trips to deserving employees. Although recognition and incentives tied to it are not always free of expense, any expenditure seems well worth the investment in terms of employee satisfaction and its impact on employee decisions to remain with their employer. Recent research indicates that retention should begin on the employee's first day of work. The process of assimilating newly hired staff into the organizational culture is important. This period is particularly critical because the employee is still evaluating the employers for personal fit.

Other strategies include the use of compensation plans as a crucial component to an employee retention strategy. Innovative thinking put to trial and run basis seem to reveal interesting results. "A growing number of compensation plans are now focused on cutting costs while retaining valuable staff. This is an abrupt change from just last year when most human resource specialists were working hard to attract talent and keep pace with soaring pay levels" (IOMA, 2002, p.1). IOMA also conducted a survey where small organizations (up to 500 employees), mid size organizations (from 500 to 1,499 employees), and large organizations (1,500 or more employees) were surveyed. Respondents were asked to answer specific questions on those methods used to cut costs and improve retention. Types of organizations surveyed included wholesale and retail companies, trade companies, educational institutions, financial and banking firms, business services, manufacturing companies, nonprofit entities, technology companies, and insurance firms. Results showed that the most popular method was to reduce or eliminate merit pay increases according to 22 % of the respondents for all organizations combined. Some employers are going further and tightening guidelines for merit increases in addition to reductions for amounts paid. Instituting pay for performance is the next most popular method to reduce compensation costs with 19.4 % of respondents citing this option. Changing the base pay or bonus mix was next at 17.5 %. Benchmarking or establishing salary levels was favored by 15.5 % of respondents and viewed this as a long-term strategy. Other strategies were discussed and most were industry specific (IOMA). One strategy that most any business can employ is becoming an employer of choice. In more progressive organizations where it is realized that in order to maintain staffing levels, it is necessary to become an organization where staff want to work.

Understanding, identifying, and addressing causes of employee turnover are components of an employee retention strategy. Resolving these issues positively impacts the morale among the staff of an organization. This is essential, especially in today's market place, where proactive leaders see that employees want more than just a job- they want fulfillment, sense of accomplishment, and social interaction. In short, they want a psychological paycheck. As a result, the business will realize greater employee satisfaction which will lead to higher productivity, greater customer satisfaction, and the leader will find it easier to reach business goals and objectives. "In the short term, however, hospitals and medical practices must work harder to provide better workplace

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conditions and to offer employees the flexibility to balance their work and family demands" (Cascardo, 2002, sec. 2, p. 3).

Strategic human resource planning plays an ever increasingly important role in employee retention. The human resource function in businesses today must acknowledge that the demographics of the workforce have been changing and will continue to change in the years to come. Therefore, it is imperative that hiring practices be adapted accordingly. Small firms are at a disadvantage in attracting and keeping good employees. They need to make use of every strategy possible to avoid HR issues and problems. The biggest problem has been shown to be retaining good employees. The best employees contribute the most to a small firm but also can easily find other jobs. Maintaining a satisfied work force may make for a more efficient and effective organization (Thomas, Franklin, and Rainsford, (2005).

Study

A survey was distributed at a local hospital to seek answers to questions of longevity and retention factors. All staff members were given an opportunity to participate. Fifty-six percent of the total staff turned in completed survey sheets. The questionnaire was circulated anonymously and returned voluntarily. The questionnaire consisted of 15 questions on work-life issues related directly to employee retention. These intrinsic factors included: (a) current rate of pay or salary; (b) provision of educational benefits; (c) peer-to peer relations; (d) internal job opportunities; (e) external opportunities (another department); (f) supervisor-to-subordinate relationship; (g) equitable treatment from supervisor; (h) recognition for job well done; (i) traditional rewards; (j) job related training; (k) job-related stress; (l) working in a good organization; (m) orientation program; (n) type of work or job satisfaction; and (o) the amount of control employees have over work issues.

A second part of the survey asked if the employer (in this case the hospital) was meeting the needs of the employees. Again, the employees were queried on 15 factors; the working relationship with supervisor, the working relationship with co-workers, job satisfaction, internal promotion opportunities, promotion/transfer to another department, equal treatment and recognition by the supervisor, job-related stress, the kind of place it is to work, orientation programs, the amount of control over work issues, hourly pay, educational reimbursement, and traditional reward systems.

Results and Discussion

Survey data indicated that the opinions of the staff relative to the intrinsic factors that affect employee retention, parallel the research discussed in the Literature Review. To reiterate, the staff indicated that the following were significant intrinsic factors that impacted their decision to remain employed with the hospital: relationship with their supervisors, working relationship with co-workers, job satisfaction, levels of stress, rewards system, equal treatment and recognition by supervisor. The remaining factors, while not as important to the employees, were still significant. They included: hourly pay, educational reimbursement, internal promotion, promotion/transfer to another department, traditional rewards program, job-related training opportunities, orientation

programs, and control over work issues. Only two of the fifteen factors tested were not significant.

Part II survey results indicated that the Hospital met or exceeded employee expectation (fulfillment) in eight of the fifteen factors that affect employee retention. The factors that scored highest include: the working relationship with supervisor, the working relationship with co-workers, and job satisfaction. Other factors which scored almost as high included: internal promotion opportunities, promotion/transfer to another department, equal treatment and recognition by supervisor, job-related stress, the kind of place it is to work, orientation programs, and the amount of control over work issues. The remaining factors were scored lower by the staff and included the hourly pay, educational reimbursement, and the reward system.

In a review of the Survey results, a correlation was developed that shows the relative relationship between the employee's expectations and the hospital's fulfillment of the deficient factor.

Table 1. Comparison of Expectation vs. Fulfillment Indexes

		Fulfillment Factors Correlation Matrix				
$Rank_{diss}$	Z_{obs}	Factor #	R_{diss}	R_{exp}	Description	$Rank_{exp}$
1	-5.776	1	-3.5	3.9	Hourly Pay or Salary	11
2	-2.045	2	-1.2	0.1	Educational Expenses	15
3	-1.922	9	-1.2	4.9	Traditional Rewards	14
4	0.064	10	0.0	5.1	Job-Related Training	8
5	0.189	11	0.1	6.2	Job-Related Stress	7
6	0.25	5	0.2	11.1	External Promotion	12
7	0.355	4	0.2	2.9	Internal Promotion	13

In analyzing these data, the relationships can be denoted as 'crucial' where there is a dissatisfaction (fulfillment) relativity index (R_{diss}) < 1 and a matching expectation relativity index (R_{exp}) > 1. This relationship corresponds to a factor with significant expectation and less than significant fulfillment (dissatisfaction). This was noted in all except one of the deficient fulfillment factors, that being Factor (Question) 2, Education Expense Reimbursement, where a 'disconnect' seems to have occurred. In other words, the employees had less than significant expectations (Null Hypothesis could not be rejected) while believing that the Hospital fell short in meeting their needs. As suggested earlier, it is plausible that this apparent anomaly may have occurred due to low participation in such a benefit, if it existed, which could yield these observations.

Clearly, the most 'crucial' factor appears to be remuneration (Hourly Wage or Salary). This factor has almost equal absolute Relativity Indexes. The employees felt strongly about its importance and felt strongly that the hospital fell short in meeting these needs.

Conclusions and Recommendations

It seems evident that development of an employee retention strategy for the Hospital should address, as a minimum, these crucial factors in this order of precedence: (a) Hourly Wage or Salary, (b) Traditional Rewards, (c) Job-Related Training, (d) On-the-Job Stress, (e) External Promotions, and (f) Internal Promotion.

Attention was then turned to the remaining crucial factors. While these factors are not unexpected based on the research reviewed, it is important to note their degree of importance for the Hospital, which like most modern businesses, has limited capital resources to invest in a retention program. Therefore, it is best to apply the available resources to those factors highest on this list.

The literature review of previous research has proven invaluable in this study as it revealed specific intrinsic factors that affect the employee's decision regarding leaving or staying with their present employer. The level of significance of these factors relevant to employee retention attitudes and the credibility of the literature review seemed verified by the respondents to this survey.

Conclusions of this study underscore the importance of formalized employee retention efforts, especially in the health care industry. It appears to be a nationally recognized problem. The current labor shortage is difficult to manage now and it will become worse in the near future as demographic changes in the workforce reduce the total number of workers. Organizations will need to incorporate employee retention into their strategic planning efforts in order to maintain appropriate staffing levels. Turnover is costly not only in terms of direct turnover costs, but indirect costs as well that might include a negative impact on customer service, productivity, and employee morale. High turnover negatively impacts the organization's ability to maintain its competitive advantage in the market place.

Organizations today are leaner and less hierarchical; this fact has impacted and changed the way that contemporary employees view their immediate supervisors. As a result, supervisors need to change the way they view their employees. Because organizations today have become less mechanistic and more organic, it is imperative that organizations: (a) develop the concept of self-leadership among the employee ranks, (b) encourage flexibility, creativity, autonomy, and ownership among it organizational members, and (c) treat the organizational member as its most valuable asset.

Maintaining appropriate staffing levels via an employee retention plan has never been more important. For certain, there is a direct correlation between staffing levels and the ability for an organization to attain its goals and objectives, thereby impacting organizational effectiveness as well as primary mission attainment. High employee turnover can have a negative impact on the financial health of a healthcare organization and its ability to deliver quality patient care.

Recommended research includes surveying current employee retention strategies that have proven successful for other organizations. Values and attitudes toward work continue to change and as each new generation comes of age, a current assessment of employee opinions is necessary in an attempt to stay abreast of changing employee perceptions.

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Trade Liberalization and Imperfect Markets

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Abstract

We use a three country – one good Cournot oligopoly model to investigate feasibility of Free trade areas (FTAs) between two of the three countries. Using a linear demand, constant marginal cost and welfare function which is a sum of consumers' surplus (CS), profits and tariff revenues. We derive optimum tariff before and after an FTA is formed. We show that although tariffs imposed by FTA members are lower than pre FTA tariffs, the optimum tariff imposed by the non-member remains unchanged. We also show that an FTA will be supported by member countries if gain in CS at home and gain in market shares in partners' market exceed loss in market share at home and loss of tariff revenues. Finally we show that although non-member's CS and TR do not change under FTA, its market shares in FTA members' markets increase. Hence its welfare also increases.

Keywords: FTA; Optimum tariff; Welfare; Imperfect Competition
JEL Classifications Codes: F10; F13; F15

Introduction

It is well known that under GATT and WTO movement towards preferential trade agreements (PTAs) by which regional trade agreements are formed has gained significant momentum. This is what Bhagwati (1992) called "regionalism". In 2000, according to WTO report, PTAs identified 172 trade accords with 68 under negotiation (Bond et all 2004). Among these free trade areas (FTAs) accounted for 148 of these agreements and 67 of those under negotiations[1]. This has generated a considerable interest among trade theorists. Recent literature reflects that (see, among others, Ornelas (2008), Furusawa and Konishi (2007), Bond et al (2004), Panagarya and Duttagupta (2002), Panagarya (2000), Krishna (1998), Levy (1997), Grossman and Helpman (1994,1995) and Bhagwati (1993). The key issues are twofold. First, under what conditions PTAs (in particular, FTAs) will be supported by member countries and second, whether PTAs are compatible with multilateral trade liberalization. Using a median voter model by Levy (1997) has shown that if multilateral liberalization is infeasible then trading blocks do not make it more feasible. Grossman and Helpman (1994) have shown that FTA will be acceptable if lobbying contribution from exporters who stand to gain from FTAs outweigh the political cost of decline in welfare. Panagarya and Duttagupta (2002) conclude that for a given level of protection the FTA that may not be politically viable in the presence of tariff may be accepted in the presence of quota or voluntary export restraint. Richardson (1993) demonstrates, using a three-good model, that formation of FTA may lead to reduction of

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[1] FTAs are PTAs with zero tariff.

external tariff. Grossman and Helpman (1995) argue that viability of FTA is enhanced by trade diversion rather than trade creation. Finally, in a recent paper Ornelas (2008) uses a competitive linear model to show that FTA reduces tariff on excluded countries. Lower tariff is shown to increase aggregate economic efficiency and bring multilateral trading system closer to global free trade. Ornelas (2008) has further shown that FTAs and multilateral trade liberalization are not only compatible but multilateral cooperation is more effective in enhancing global welfare when it is accompanied by regionalism such as FTA or PTA.

The papers discussed above use model of perfect competition to conduct their analysis. Krishna (1998), Bond et al (2004) and Freund (2000) investigated these questions using a Cournot oligopoly model. Krishna (1998) finds that the greater the degree of trade diversion the more likely it is that FTA will be accepted. When an FTA is formed, each member benefits in terms of profits of its firms from obtaining preferential access to partner's market but loses from giving a similar access to partner in its own market. In the absence of trade diversion this is a zero sum game. But if members can capture part of outside country's share in union's market without corresponding loss in outside market they can generate positive benefit. Krishna (1998), in a three-country model asks whether an initially feasible multilateral liberalization remain is feasible after two of the three countries have formed an FTA. He answers it in the negative. Bond et al (2004) also arrives at similar conclusion. In their model, free trade induces members of FTA to reduce tariff. This improves rest of the world's terms of trade and welfare. But the rest of the world responds by raising tariff. Hence, FTA may underline global free trade. Freund (2000), using a Cournot oligopoly and repeated game framework, investigates how multilateral liberalization impacts decision to form FTA. Initially each country levies some multilateral tariff on the other two countries. She has shown that in this setting welfare gain from forming PTA is greater than the gain from move to free trade when tariff in low while the reverse in true when it is high. Hence, PTAs are more sustainable when multilateral tariffs are low. Therefore, multilateral trade liberalization may lead to free trade.

In this paper, we use a three country-one good Cournot oligopoly model to analyze the condition under which an FTA between two of the three countries will be supported by the members. We also investigate the effects of FTA on the third country (the non-member). Specifically, we extend Krishna (1998) and Brander-Krugman (1983) model to derive optimum tariff under FTA and show that the optimum tariffs imposed by members are lower than that prevailed before FTA while the optimum tariff imposed by the third (non member) country remains unchanged. These results are consistent with Bagwell and Staiger (1999) and Freund (2000). However, our results differ from Bond et al (2004) in that in Bond et al (2004), although FTA reduces tariff imposed by members, the rest of the world raises tariff. Also, in Krishna (1998), an FTA will be by members only if members gain at the expense of the non member (trade diversion). However, in this paper we show that for an FTA to be feasible, members' profits do not have to increase and non members' profit does not have to decrease. In fact, in our model, it is shown that under FTA, non members' profit and welfare will increase.

This paper is organized as follows: in the second section, we present the model and derive the main results. This is followed by a section with concluding remarks.

Trade Liberalization

(2.1)   The Model

We consider a model of trade in which three countries, 1, 2, and 3, trade in one good, Q. This is an extension of the model suggested by Brander-Krugman (1983), and Krishna (1998) where firms from each country producing homogeneous products compete in each other's markets. We also assume the presence of a competitively produced numeraire good traded freely across markets. We let i= 1,2,3 and j=1,2,3 and use the following notations:

q_j^i represents quantity supplied by country i's firm in country j's market,

P_j denotes the equilibrium price in country j's market,

π_i denotes profit made by country i's firm,

t_j is the specific tariff imposed by country j on import, and

C_i denotes a constant marginal cost.

Following Krishna (1998), we assume that aggregate utility in country j takes the form,

$$U_j(K, Q_j) = K + (A_j Q_j - \frac{1}{2} Q_j^2),$$

where K denotes the consumption of numeraire good and $Q_j = \sum_i q_j^i$ denotes the total sales of the good in country j's market by firms from all three countries. That is $Q_j = q_j^1 + q_j^2 + q_j^3$. This implies that price in country j is a linear function of the total output, $P_j = A_j - Q_j$ where A_j is constant. Each firm treats each country as a separate market.

We employ the most frequently used oligopoly model, Cournot model, where each firm assumes other firms hold output fixed in each country. Therefore, firm from country i chooses quantity to supply in country j by solving the following problem:

$$\text{Max } \pi_i = \sum \left\{ (A_j - Q_j) - (C_i - t_j) \right\} q_j^i \qquad (1)$$

First order conditions yield: for i and j =1, 2, 3,

$$q_j^i = \frac{1}{4} \left\{ A_j - 3(C_i + t_j) + \sum_{k \neq i} C_k + t_j \right\} \text{ for } i \neq j \qquad (2)$$

$$q_i^i = \frac{1}{4} \left\{ A_j - 3C_j + \sum_{k \neq i} C_k + t_i \right\} \qquad (3)$$

From (1), (2), and (3) we get,

$$\pi_i = \sum_j (q_j^i)^2 \qquad (4)$$

From (2) and (3) we derive the following comparative static results:

$$\frac{\partial q_j^i}{\partial t_i} = \frac{1}{2}, \ \frac{\partial q_j^i}{\partial t_j} = -\frac{1}{2}, \text{ for } i \neq j, \text{ and } \frac{\partial q_j^i}{\partial t_k} = 0, \text{ for } j \neq k$$

(5)

Note that results in (5) are not surprising. An increase (resp. decrease) in tariff will raise (resp. lower) domestic production and reduce (resp. raise) imports. A tariff on imports protects domestic producers by raising importing nations cost of production.

(2.2) *Optimal Tariff*:

The idea that consuming nation has an incentive to impose tariff on the import of the imperfectly competitive good so as to extract some of the rent earned by the producers has been used extensively in the literature on trade policy. The optimal tariff, a tariff that maximizes welfare, has been discussed and analyzed by Brander-Spencer (1984, 1985), Levy and Nolan (1992), Cheng (1988), Dixit (1988) and Krugman (1989). In this section we derive optimal tariff for country i before and after a free trade arrangement between two countries FTA.

Given the quasi linear utility function welfare effects can be measured by standard surplus measures. Letting W_i represent welfare of the country i, government choosing optimal tariff solves the following problem: For $i =1, 2, 3$,

$$MaxW_i = CS_i + \pi_i + TR_i ,$$

where CS_i and TR_i denote consumers' surplus and tariff revenue respectively for country i. Note that,

$$CS_i = \frac{(A_i - P_i)}{2} Q_i \tag{6}$$

and

$$TR_i = \sum_j t_i q_i^j , \text{ for } i \neq j \tag{7}$$

Differentiating W_i with respect to t_i and using (4), (5), (6) and (7), we get:
For $i =1, 2, 3$

$$\frac{\partial w_i}{\partial t_i} = \frac{\partial CS_i}{\partial t_i} + \frac{\partial \pi_i}{\partial t_i} + \frac{\partial TR_i}{\partial t_i} = -\frac{1}{2} Q_i + q_i^i + \sum_{j \neq i} q_j^i - t_i$$

The optimal tariff is found by setting $\frac{\partial W_i}{\partial t_i} = 0$ and solving t_i. This yields,

$$t_i = \frac{1}{2} Q_i \tag{8}$$

In the following section we will further assume $c_i = C$ for all i. That is we assume all nations' costs are similar. Then using (2) and (3) we get, for $i =1, 2, 3$,

$$t_i = \frac{3A_i - 3C}{10} \tag{9}$$

It is clear from (9) that the higher (resp. lower) the A_i the higher (resp. lower) is the optimum tariff. Note that in Krishna (1998), tariff was chosen arbitrarily rather than optimally.

We, now, consider an FTA between two countries. Suppose, without loss of generality, country 1 and 2 decide to eliminate tariff on each other's imports while maintaining tariff on Country 3. In view of FTA, we derive new optimal tariff to be imposed by country 1 and country 2 on country 3. We denote optimal tariff under FTA by t_{iF} for $i =1, 2,$ and 3.

Under FTA, using (4), (5), (6) and (7), for country $i =1, 2$, we have

$$\frac{\partial CS_i}{\partial t_{iF}} = \frac{1}{4} Q_i , \quad \frac{\partial \pi_i}{\partial t_{iF}} = \frac{1}{2} q_i^i , \text{ and } \frac{\partial TR_i}{\partial t_{iF}} = q_i^3 - \frac{3}{4} t_{iF} .$$

Therefore, under FTA, $\dfrac{\partial W_i}{\partial t_{iF}} = -\frac{1}{4}Q_i + \frac{1}{2}q_i^i + q_i^3 - \frac{3}{4}t_{iF}$. Note that

$$q_i^j = \tfrac{1}{4}(A_i - C + t_{iF}), \text{ for } i \text{ and } j=1,2, \quad \text{and} \tag{10}$$

$$q_i^3 = \tfrac{1}{4}(A_j - C - 3t_{iF}), \ i=1,2. \tag{11}$$

Setting $\dfrac{\partial W_i}{\partial t_{iF}} = 0$ and solving for t_{iF} we get,

$$t_{iF} = \frac{3(A_i - C)}{21} \text{ for } i = 1, 2 \tag{12}$$

Note for country 3, the optimum tariff does not change. Hence,

$$t_3 = t_{3F} \tag{13}$$

From (9) and (12) it is clear that

$$t_i > t_{iF} \quad \text{for } i = 1, 2 \tag{14}$$

It is interesting to note, from (13) and (14), that although optimal tariff imposed by country 3 does not change under FTA between country 1 and country 2, FTA leads to a lowering of optimal tariff imposed by country 1 and country 2 on country 3's imports. However, closer inspection reveals that the result is not surprising. This is consistent with "tariff complemantarity effect" suggested by Bagwell and Staiger (1999) where FTA members always find it attractive to impose a lower tariff on nonmembers.

(2.3) *Feasibility of FTA*

We, now, examine the feasibility of an FTA between country 1 and country 2. In particular we will specify conditions under which an FTA will be supported by country 1 and country 2. In other words, we will specify conditions under which, for $i=1, 2$, W_{iF}, welfare under FTA, exceeds W_i, welfare before FTA. In Krishna (1998), profit plays a critical and decisive role in determining the trade policy. Producers will lobby for and support policy if the proposed policy results in an increase in profit. However, in this paper consumers and government also have a say in determining policy. We consider a more general version of welfare that includes consumers' surplus, profit and tariff revenue.

We let CS_{iF}, π_{iF} and TR_{iF}, for $i = 1, 2$ denote consumers' surplus, profit and tariff revenue under FTA. Then the difference between welfare level after and before FTA is,

$$W_{iF} - W_i = (CS_{iF} - CS_i) + (\pi_{iF} - \pi_i) + (TR_{iF} - TR_i) \tag{15}$$

A sufficient condition for FTA being supported by countries 1 and 2 is that all three parties, (consumers, producers and government) support the proposed policy. In the following, we will examine each component one at a time.

First we compare CS_{iF} with CS_i. We let, for $i = 1, 2$ and $j = 1, 2, 3$, q_{iF}^j denote sale of Country $j's$ good in country i's market after FTA. Using (10) and (11) and (12) we get,

$$CS_{iF} = \tfrac{1}{2}(q_{iF}^1 + q_{iF}^2 + q_{iF}^3)^2$$

$$= \frac{1}{2}\left[\tfrac{1}{4}(A_i - C + \frac{3(A_i - C)}{21}) + \tfrac{1}{4}(A_i - C + \frac{3(A_i - C)}{21}) + \tfrac{1}{4}(A_i - C - 2\frac{3(A_i - C)}{10})\right]^2$$

Also using (2), (3), and (9), for i=1, 2,

$$CS_i = \tfrac{1}{2}(q_i^1 + q_i^2 + q_i^3)^2$$

$$= \tfrac{1}{2}\left[\tfrac{1}{4}(A_i - C + 2\tfrac{3(A_i - C)}{10}) + \tfrac{1}{4}(A_i - C - 2\tfrac{3(A_i - C)}{10}) + \tfrac{1}{4}(A_i - C - 2\tfrac{3(A_i - C)}{10}) \right]^2$$

Therefore, we get,

$$CS_{iF} - CS_i = \frac{828}{11025}(A_i - C)^2 \tag{18}$$

It is clear that $(CS_{iF} - CS_i) > 0$.

Due to FTA, tariff on imports from partner countries is removed and, by (14), tariff on imports from country 3 is reduced. This leads to an increase in imports from the partner country and country 3. Also, this implies a decrease in sale for the domestic producers. However, a positive CS implies that increase in sales imports will outweigh the decrease in sale by domestic producers.

Next we compare π_{iF} with π_i. Note for $i = 1, 2, j = 1, 2$ and $i \neq j$, we get using (4), (10) and (11),

$$\pi_{iF} = (q_{iF}^i)^2 + (q_{iF}^i)^2 + (q_{iF}^i)^2$$

$$= \left[\tfrac{1}{4}(A_i - C + 2\tfrac{3(A_i - C)}{21}) \right]^2 + \left[\tfrac{1}{4}(A_j - C + \tfrac{3(A_j - C)}{21}) \right]^2 + \left[\tfrac{1}{4}(A_3 - C - 2\tfrac{3(A_3 - C)}{10}) \right]^2 \tag{19}$$

$$\pi_i = \left[\tfrac{1}{4}(A_i - C + 2\tfrac{3(A_i - C)}{10}) \right]^2 + \left[\tfrac{1}{4}(A_j - C - 2\tfrac{3(A_j - C)}{10}) \right]^2 + \left[\tfrac{1}{4}(A_3 - C - 2\tfrac{3(A_3 - C)}{10}) \right]^2$$

(20)

After some tedious algebra, we get,

$$\pi_{iF} - \pi_i = \frac{351}{4900}(A_j - C)^2 - \frac{384}{4900}(A_i - C)^2, \; i, j = 1,2 \tag{21}$$

Therefore, a necessary condition for $(\pi_{iF} - \pi_i) > 0$ is

$$A_j > A_i \text{ for } i,j = 1, 2 \text{ and } i \neq j \tag{22}$$

The condition (22) is similar to Krishna (1998). Note that $q_i^i > q_{iF}^i$, $q_j^i < q_{iF}^i$, for $i \neq j$ and $q_3^i = q_{3F}^i$, for i, j=1,2. This implies that under FTA partners lose market share at own home while gaining market shares in partners' market. Their market shares in country 3 remain the same. Thus if gain in sales abroad is sufficiently large to outweigh the loss of sale at home then profit will be larger under FTA. However, for this to happen, partner's market must be large relative to home market. It can be shown that under this model, <u>both</u> home and partner country profits cannot be higher under FTA than before.

Finally, we compare TR_{iF} with TR_i. Note that $TR_{iF} = t_{iF}(q_i^3)$ and $TR_i = t_i(q_i^j + q_i^3)$, for $i = 1, 2, \; j = 1, 2$ and $i \neq j$.

Using (9), (10), (11) and (12) we get,

$$TR_{iF} = \frac{3(A_i - C)}{21}\left(\tfrac{1}{4}(A_i - C - 3\tfrac{3(A_i - C)}{21}) \right) = \frac{9(A_i - C)^2}{441} \tag{23}$$

$$TR_i = \frac{3(A_i - C)}{10}\left[\frac{1}{4}\left(A_i - C - 2\frac{3(A_i - C)}{10} + A_i - C - 2\frac{3(A_i - C)}{10}\right)\right] = \frac{6(A_i - C)^2}{100} \qquad (24)$$

Therefore, $TR_{iF} - TR_i = -\frac{873}{22050}(A_i - C)^2 < 0$

Note that under FTA, optimal tariff imposed by countries 1 and 2 on country 3's imports is lower and thus country 3's exports to countries 1 and 2 increases. However, it is not enough to overcome the loss of tariff revenue from its partner country. Therefore, tariff revenue under FTA is lower.

Combining (15), (18), (21) and (25) we get,

$$W_{iF} - W_i = \frac{828}{11025}(A_i - C)^2 + \frac{351}{4900}(A_j - C)^2 - \frac{384}{4900}(A_i - C)^2 - \frac{873}{22050}(A_i - C)^2,$$

for i, j=1,2 and $i \neq j$.

Simplifying we get,

$$(W_{iF} - W_i)\rangle 0 \text{ if } \frac{(A_j - C)^2}{(A_i - C)^2} > \frac{1890}{3159} \qquad (26)$$

Similarly,

$$W_{jF} - W_j > 0 \text{ if } \frac{(A_j - C)^2}{(A_i - C)^2} < \frac{3159}{1890} \qquad (27)$$

Combining these two inequalities (26) and (27) both nations will approve FTA if

$$\frac{1890}{3519} < \frac{(A_j - C)^2}{(A_i - C)^2} < \frac{3519}{1890}, \text{ for } i, j\text{=1,2 and } i \neq j. \qquad (28)$$

Note in Krishna (1996) profit was decisive in determining the feasibility of FTA. Therefore, it was necessary for both members to gain at the expense of nonmember-trade diversion. The larger the trade diversion, the more likely it is that members will support an FTA. However, we do not require the nonmembers to lose market share to make an FTA feasible. This is because of the presence of a more general welfare function and tariff rates being determined optimally in our paper.

Finally we consider the effect of an FTA between country 1 and country 2 on the welfare of country 3, the non-member. We let $w_3, CS_3, \Pi_3,$ and TR_3 denote welfare, consumer's surplus, profit and tariff revenue earned by country 3 respectively before FTA and $w_{3F}, CS_{3F}, \Pi_{3F},$ and TR_{3F} represent the same after FTA.

Hence,

$$W_{3F} - W_3 = (CS_{3F} - CS_3) + (\Pi_{3F} - \Pi_3) + (TR_{3F} - TR_3).$$

Note that using (16) and (17) we get, for i=1,2,3,

$$CS_{3F} = \tfrac{1}{2}\sum_i (q_{3F}^i)^2 \text{ and } CS_3 = \frac{1}{2}\sum (q_3^i)^2.$$

Since $t_3 = t_{3F}$ by (13), $q_{3F}^i = q_3^i$, for i=1,2.

Also, since $t_3 = t_{3F}, q_3^3 = q_{3F}^3$ by (3)

Therefore,

$$CS_{3F} = CS_3. \tag{29}$$

Also, since $t_{3F} = t_3$ by (13) and $q^i_{3F} = q^i_3$ for $i=1,2$,

$$TR_{3F} = TR_3 \tag{30}$$

In view of (29) and (30), we get,

$$W_{3F} - W_3 = (\Pi_{3F} - \Pi_3).$$

Using (4), we get, for $i=1,2,3$

$$\pi_{3F} = \sum_j (q^3_{jF})^2 \text{ and } \pi_3 = \sum_j (q^3_j)^2 .$$

Finally, using (9), (10), (11), and (12) we get ,

$$(\pi_{3F} - \pi_3) = \left[\tfrac{1}{4}\{A_1 - C - 3t_{1F}\}\right]^2 + \left[\tfrac{1}{4}\{A_2 - C - 3t_{2F}\}\right]^2$$

$$+ \left[\tfrac{1}{4}\{A_3 - C + 2t_{3F}\}\right]^2 - \left[\tfrac{1}{4}\left(\frac{4(A_1 - C)}{10}\right)\right]^2 + \left[\tfrac{1}{4}\left(\frac{4(A_2 - C)}{10}\right)\right]^2$$

$$+ \left[\tfrac{1}{4}\left(\frac{4(A - C)}{10}\right)\right]^2$$

$$= \tfrac{51}{4900}\left[(A_1 - C)^2 + (A_2 - C)^2\right]$$

Note $(\pi_{3F} - \pi_3) > 0$. Therefore, $W_{3F} > W_3$.

FTA between country 1 and country 2 leaves total output sold in country 3 unchanged. Therefore, price and consumers' surplus do not change. Also, since tariff imposed by country 3 does not change, total import and hence, tariff revenue do not change. However, a lower tariff imposed by FTA members leads to an increase in market share for country 3 in FTA members' market. Therefore, profit and consequently, welfare for country 3 increase.

Conclusion

Using a three country-one good Cournot oligopoly model, we have analyzed the feasibility of an FTA between two of the three countries. In this model, governments choose tariff endogenously by maximizing a welfare function which is a sum of consumers' surplus, profit and tariff revenue. We have shown that tariffs imposed by FTA members are lower under FTA than those that prevailed before FTA was formed. However, tariff imposed by the non-member remains unchanged. Our result differs from Bond et al (2004) in that tariff imposed by rest of the world in Bond et al (2004) increases. We also show that an FTA will be supported by the member countries if gain in Consumers' surplus at home and an increase in profit in partners' markets exceed loss in profit at home and an increase in tariff revenue. Finally the non-member experiences a higher welfare due to FTA since its profits are higher while consumers' surplus and tariff revenue remain unchanged. The result differs from Krishna (1998) in that we do not need FTA members to gain at the expense of the non-member for FTA to be viable.

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Does the Recession Mean We Can Hire Nurses? -
A re-examination of the Registered Nurse Shortage

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Abstract

One of the greatest challenges faced by healthcare human resource executives has been that of nurse staffing. The healthcare industry has long reported nursing shortages, and the Bureau of Labor Statistics (2007) projects that by the year 2020 there will be a shortage of more than 1 million nurses. The current economic recession in the United States, attempts to stimulate the economy, efforts to reduce the costs of healthcare, and changes in the practice of medicine influence the demand for nurses. This paper attempts to examine existing and emerging trends impacting the availability of nursing personnel. Some positive recent trends include $500,000,000 allocated for addressing health professional shortages in the American Recovery and Reinvestment Act of 2009, increased enrollment in re-certification programs, growth in accelerated degree programs for non-nursing graduates, declining recruitment of nurses by the pharmaceutical industry, increased interest in healthcare professions as an economic safe-haven, and forestalled retirements due to current economic conditions. These positive trends are balanced by demand increases that stem from the expansion of healthcare benefits to millions of Americans who were previously uninsured, the increased care needs of an aging population of baby boomers, the expanded role of nurses in the health care delivery system, and capacity constraints in schools of nursing. This paper attempts to provide current information for use in strategic manpower planning regarding nursing staffing.

Introduction

Nursing is the largest health care profession with an estimated 2.9 million licensed RNs in the United States and approximately 700,000 licensed LPNs (Steiger, Bausch, Johnson, and Peterson, 2006). Registered nurses are projected to generate about 587,000 new jobs over the 2006-16 period, one of the fastest growth rates among occupations (Bureau of Labor Statistics, 2009). Nurses are employed in many settings including public health, long-term care, and hospitals. Approximately sixty percent of nursing jobs are in hospitals (Ibid.). The Department of Health and Human Resources (2004) estimates that by 2020 the national nurse shortage will increase to more than 1 million full-time nurse positions. According to these projections, which are based on the current rate of nurses entering the profession, only 64 percent of projected demand will be met.

Increasing Supply

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According to a report by the American Association of Colleges of Nursing (2009), 2008 was the eighth consecutive year of enrollment gains in college nursing programs. Interest in nursing programs remains high, with schools of nursing receiving many more qualified applicants than can be accommodated. Preliminary data for 2008 indicate that more than 27,000 qualified applicants were turned away from entry-level baccalaureate nursing programs due to capacity constraints (Ibid.). It is reasonable to expect that capacity in nursing schools may soon be expanded utilizing a portion of the $500,000,000 specifically allocated in the American Recovery and Reinvestment Act of 2009 for addressing health professional shortages. In addition to an increased supply of nurses attributable to enrollment gains in colleges of nursing, demand for nurses is also being answered by inactive nurses that are returning to active practice.

Bernardo, Burns, Hoffman, Dailey and Hornyak (2009) report that an improvement in the supply of nurses is being provided by the return of inactive nurses to active practice. Many nurses who left the field and put licensure on inactive status are now enrolling in refresher courses. Refresher courses provide a fast track to registered nurse employment for those who wish to return to the profession. A recent study of nurses involved in a refresher course found that enrollees had a mean age of 50 years, an average RN licensure of 25 years, and an average absence from nursing practice of 13 years (ibid). Another force which may be driving a return to active nursing is reduced opportunities in other industries. Many non-practicing nurses have become medical or pharmaceutical sales representatives. According to Loftus (2008), large pharmaceutical companies are currently reducing sales forces. In addition to inactive nurses returning to practice and a reduction in alternative employment opportunities in the pharmaceutical industry, another positive development toward increasing the supply of nurses is growth in accelerated degree programs for non-nursing graduates.

Shifts in the economy have increased interest in the nursing profession among "second-degree" students. For those individuals holding a degree outside the nursing field, accelerated baccalaureate programs offer a fast track for becoming a registered nurse, with programs generally running 12-18 months in duration. Accelerated Master's degrees in nursing are also gaining popularity. Accelerated masters programs in nursing are geared to non-nursing graduates, and generally require three years to complete. Students in the masters programs usually complete baccalaureate-level nursing courses in the first year, followed by two years of graduate study. Though not new to nursing education, accelerated programs have proliferated over the past fifteen years. According to Brewer, Kovner, Poornima, Fairchild, Kim, and Djukic, (2009), in 1990, 31 accelerated baccalaureate programs (BSN) and 12 accelerated master's programs (MSN) were offered around the country. Today, 205 accelerated BSN programs are operating, with another 37 programs in the planning phase. The number of accelerated master's programs (MSN) currently stands at fifty-six.

Many factors affecting the availability of nurses are cause for optimism in the near term. Though the supply of nurses seems to be increasing at a reasonable rate, new roles for nurses, an aging population, an expansion in health care benefits, and training capacity constraints may more than offset the increase in supply.

Increasing Demand

The demand for nurses is growing quickly. In addition to opportunities for registered nurses practicing in traditional roles, there is increasing demand for nurse practitioners and clinical nurse specialists in many fields. There is growing evidence that the expanding role of advanced practice nurses and nurse practitioners as physician extenders may provide cost effective relief to the current shortage of primary care physicians and specialists. Further, demand increases that stem from the expansion of healthcare benefits to millions of Americans who were previously uninsured, and the increased care needs of an aging population of baby boomers create new roles and opportunities for nurses.

The American Association of Nurse Practitioners (2009) reports that more than 125,000 nurse practitioners (NPs) practice in the United States. The nurse practitioner movement started in the 1960s because of a physician shortage. Nurse practitioners have graduate, advanced education and clinical training beyond registered nurse preparation. Most have master's degrees and many have doctorates. The first nurse practitioners were educated at the University of Colorado in 1965; and programs soon spread across the U.S. Close to 6,000 new NPs are prepared each year at over 325 colleges and universities. Nurse practitioners specialize in many areas, including: acute care, family care, gerontology, neonatal, oncology, pediatrics, psychiatric, and women's health. Nurse practitioners also practice in many sub-specialty areas such as: allergy and immunology, cardiovascular, dermatology, emergency, gastroenterology, neurology, orthopedics, and urology to name but a few.

The clinical nurse specialist movement developed in response to the specialized nursing needs of increasingly complex patients. Clinical nurse specialists like specialist physicians are advanced practice specialists with in-depth knowledge and skills that equip them as adjunct practitioners in specialized clinic settings. Clinical Nurse Specialists (CNS) are licensed registered nurses who have graduate preparation (Master's or Doctorate) in nursing as a Clinical Nurse Specialist. According to the Bureau of Labor Statistics (2009), there are currently 218 master's programs for the preparation of clinical nurse specialists. Specialties that employ clinical nurse specialists may be defined in terms of: population (e.g. pediatrics, geriatrics, and women's health), setting (e.g. critical care, emergency room), disease or medical subspecialty (e.g. diabetes, oncology), type of care (e.g. psychiatric, rehabilitation), or type of problem (e.g. pain, wounds, stress). An estimated 69,017 RNs have the education and credentials to practice as clinical nurse specialists (National Association of Clinical Nurse Specialists, 2009).

In addition to opportunities for Nurse Practitioners and Clinical Nurse Specialists, there are growing opportunities for nurses in jobs that require little or no direct patient care, but still require an active RN license (Bureau of Labor Statistics 2009). Case managers ensure that all of the medical needs of patients with severe injuries and severe or chronic illnesses are met. Forensics nurses participate in the scientific investigation and treatment of abuse victims, violence, criminal activity, and traumatic accident. Infection control nurses identify, track, and control infectious outbreaks in health care facilities and develop programs for outbreak prevention and response to biological terrorism. Legal nurse consultants assist lawyers in medical cases by interviewing patients and witnesses, organizing medical records, determining damages and costs, locating evidence, and educating lawyers about medical issues. Nurse administrators supervise nursing staff, establish work schedules and budgets, maintain medical supply

inventories, and manage resources to ensure high-quality care.   Nurse educators plan, develop, implement, and evaluate educational programs and curricula for the professional development of student nurses and RNs. Nurse informaticists manage and communicate nursing data and information to improve decision making by consumers, patients, nurses, and other health care providers. RNs also may work as health care consultants, public policy advisors, pharmaceutical and medical supply researchers and salespersons, and medical writers and editors.

It is reasonable to anticipate that recent legislation will increase the demand for healthcare services and thus the demand for nurses. The American Recovery and Reinvestment Act of 2009 provides a 65 percent premium subsidy under the provisions of COBRA to extend health insurance coverage for unemployed Americans. Additionally, recent revisions included in the Children's Health Insurance Program Reauthorization Act of 2009 expand medical coverage eligibility to approximately four million persons not previously covered by the SCHIP program. Additional benefits will also be provided under the Medicare program as the U.S. population ages.

The aging of the U.S. population will increase demand for healthcare services. According to the U.S. Census bureau (2008) seventy–five million babies were born in the United States between 1946 and 1964, which is 70% more than the preceding two decades. By the year 2050, it is estimated that 30% of the U.S. population will be over 65 years of age. The number of individuals over 85 will double. Those individuals over 85 are projected to grow from 4 million in 2000 to 19 million by the year 2050 (US Census Bureau 2008). This age group tends to require far more direct patient care than the younger elderly. Compounding this problem is the realization that many nurses currently in practice are aging baby boomers. Promotional activities directed toward increasing the ranks of nurses have resulted in an additional 185,000 nurses entering the field between 2002 and 2006, however 60% of these individuals are over 50 years old (Buerhaus, Donelan, Ulrich, Norman & Dittus, 2006), and more than 40% of active nurses are over 50 years old (Steiger et al 2006)

Overall job opportunities for registered nurses are expected to be excellent, but may vary by employment and geographic setting. Employment of RNs is expected to grow 23 percent from 2006 through 2016 and, because the occupation is very large, many new jobs will result.   According to estimates by the Bureau of Labor Statistics (2009), by 2016 registered nursing is projected to generate 587,000 new jobs, among the largest number of new jobs for any occupation. Additionally, hundreds of thousands of job openings will result from the need to replace experienced nurses who leave the occupation. Naturally questions are raised as to why we have a shortage of nurses, and are we developing long term solutions?

Discussion and Conclusion:

Researchers have pointed to a number factors contributing to the nursing shortage. Goodin (2003) in a review of the literature concerning the nursing shortage found the most frequently researched factors contributing to the nursing shortage are the ageing of the current workforce, a lack of nursing faculty and nursing program capacity, increased workloads due to sicker patients, quality of work life, and a poor image of the nursing profession (Smith 2006). Responding to factors contributing to the nursing shortage

Goodin (2003) cites a variety of solutions offered in the literature including but not limited to: recruiting potential nursing candidates at an early age, increasing loan and scholarship programs for nursing students, encouraging more men and ethnic minorities to enter the profession, offering more flexible educational opportunities utilizing technology, easing the immigration process for nurses from other countries, attracting individuals to consider nursing as a second career, offering continuing education, improved benefits, salaries, and work schedules, career ladders, retention bonuses, enhanced nurse recognition programs, improving the image of the profession, and supporting the passage and enactment of nursing shortage bills. For more than thirty years the healthcare industry has sought a solution to cyclical acute shortages of nurses, and generally a demand for nurses that consistently exceeds supply.

Evidence indicates that a shortage of nurses will persist in the foreseeable future unless fundamental changes are made. While there are more nurses entering the field, un-met demand for nurses performing traditional clinical roles is compounded by growing demand for nurses in non-clinical and physician extender roles. While nurses are entering the field in record numbers in response to economic conditions, the majority of nurses entering as second career nurses or re-entering the field through refresher courses are more than fifty years old. Older nurses will not resolve long term supply problems in a profession populated by many baby boomers expected to retire in the near future. The current economy may provide short-term relief, but long-term relief is not likely. Perhaps now is the time to ask new questions concerning the shortage of Registered Nurses (RNs).

An example of asking new questions to find solutions can be found in the response to demand for additional primary care and specialist physicians. Solutions were found by changing existing rules, expanding boundaries, and re-design of existing educational programs. In response to physician shortages among both primary physicians and specialist, physician compensation and benefits were not increased, more medical schools were not built, compressed physician training programs and second career physician programs with abbreviated instruction were not developed - we altered existing structures. Structural changes resulted in Advanced Practice Nurses, Nurse Practitioners and Physicians Assistants delivering care and performing duties historically the domain of physicians. Over time physician extenders have been given the opportunity to write prescriptions, plan and direct patient care, take an active role in the performance of surgery, and set up independent practice in rural/underserved areas.

Perhaps now is the time to examine existing structures in the nursing profession. Can we leverage the expertise of nurses? Should current nursing roles, regulations, and educational programs be re-designed to enable other health care professionals such as Emergency Medical Technicians, Licensed Practical Nurses, and Paramedics to serve as nurse extenders after completing additional training? Will advances in technology utilizing computerized diagnostics and / or tele-medicine reduce the demand for direct care? Should aging baby boomers who choose to age in place be trained to participate more fully in the delivery of their own care? The questions asked here represent a limited sample of questions that are yet to be raised. History indicates that power for developing solutions comes from the proper diagnosis. Developing a proper diagnosis results from investigating the right questions. Thus, it is the conclusion of the authors that our ability to satisfy the demand for nurses will not be improved long term by current economic

conditions and legislation, but by re-framing the problem and responding with appropriate solutions.

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Academic and Professional Dishonesty

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Introduction

Student academic dishonesty, commonly referred to as cheating, is a major problem for institutions of higher education (Christians, et. al., 1996; Lanier, (2006). Leading experts in academic dishonesty research report that cheating among college students is frequent and growing (McCabe & Trevino, 2002). McCabe, et. al. (2002) completed a study of 4,500 high school students. Results showed that 75 percent of them had engaged in serious cheating and more than half reported plagiarizing work they found on the Internet (Slobogin, 2002).

Research suggests that academic dishonesty is especially prevalent among business students who are the most likely to cheat in college. Research also indicates that cheating is far more common among students who participated in academic dishonesty at the high school level (Arenson, 2006; Slobogin, 2002). Furthermore, cheating is correlated with other unethical or deviant behaviors such as petty theft and lying (Harding, et. al., 2004). Placing this relationship within the context of increasing levels of academic dishonesty among business students only adds to the seriousness of the problem for educators, professionals, corporations and society at large.

Method

This study provides insight into students' perceptions of academic dishonesty and dishonesty in the workplace. A 65 item survey was administered to 127 undergraduate business students. All students had received in-class lectures on ethics in the workplace. Survey items asked students about the following:

- Frequency, seriousness and types of dishonesty
- What the penalties should be for dishonesty
- If they has cheated and/or were aware of others cheating
- How frequently they believed certain types of cheating took place within the School of Business
- If engaging in various types of behaviors are considered dishonest

Survey items covered the following broad categories of cheating/dishonesty: plagiarism, students working together on assignments when prohibited, cheating on tests, falsifying data, and fabricating data/information. All students were guaranteed anonymity and informed that their participation was not required as part of their grade for the course.

Results

Major results of the study indicate that frequency of student cheating is determined by the student's definition of cheating (r=.89); the frequency of students who engage in a "cheating behavior" is higher for those students who define an act as unethical compared to students who define the same act as cheating (t=14.76, p<.0001;

students are willing to engage in behaviors they define as "wrong" even when the behaviors carry the risk of punishment (68.9%); and student definitions of cheating have a strong impact on their likelihood to cheat (r=.81). Finally, students who cheat in academia report significantly more cheating behaviors in the workplace (t=12.97; p<.001), define "minor" cheating behaviors in the workplace as "not cheating" or "not unethical" (t-10.64, p<.001), and are willing to cheat at work despite the risks (t=9.78, p<.001).

Other results include:

- Students are willing to cheat at work despite the risks associated with getting caught,
- 68% of students have observed another student cheating in class, but 96% of them have never reported another student for cheating,
- 81% agree that students who are caught cheating are penalized, but 65% indicate that students who cheat are never caught,
- 48% of the students admitted they have cheated on an assignment or test while attending college, but only 21% agree that cheating is a serious problem on campus and only 13% believe that cheating is a serious problem in the School of Business.
- 50% say there should be no penalty for "trivial" cheating, 45% say students should receive an F on the assignment for "serious" cheating, and 35% say students should be "warned" for serious cheating but not penalized.

Participants in the study were also asked why they cheated. Forty-nine percent indicated they cheat to save time, so they have more time for "fun". Sixty-two percent indicated they cheat to get a good grade when they had not studied. Seventy-one percent indicated they cheat to relieve the stress of competition, and fifty-two percent cheat to get a good grade and "be successful".

Participants were also asked to indicate the extent to which specific behaviors constituted cheating. Over one-third indicated that working with others on a task when collaboration was prohibited is not cheating, while fifty-nine percent indicated that this was trivial cheating. In addition, nineteen percent indicated that using a false/forged excuse to get an extension on a deadline or an exam is not cheating, while thirty-one percent said these behaviors are only trivial cheating. The items that students were most likely to rate as "serious cheating" are turning in work completed by someone else (75%), copying from another student during a test (74%), using notes or a cheat sheet during a test (71%) and copying verbatim from written or electronic sources and not using quotation marks (71%).

Analysis was conducted to determine the relationship between cheating in school and dishonest behaviors in the workplace. High relationships were found for cheating in high school (r-.88), cheating during college (r=.79), age such that younger students commit more dishonest acts in the workplace than do older students (t=9.92, p<.001), gender indicating that cheating males commit more dishonest acts in the workplace than do females (t-6.45, p<.01) and GPA such that students with lower GPAS are more likely to be dishonest in the workplace that are students with higher GPAs (t=6.24, p<.01).

All students either currently held a job or had been employed in the past. When asked about dishonesty in the workplace, students reported the following:

- 89% had stolen at least one item from work,
- 39% had falsified documents/exaggerated their resume

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- 77% had faked an illness
- 88% had lied to the boss
- 56% had knowingly violated a company policy
- 42% had witnessed misconduct in the workplace but chose not to report it
- 12% had violated a law to "get ahead"
- 21% had stolen someone's ideas or suggestions
- 59% had left work early
- 22% had "borrowed" from the till
- 48% had given merchandise to friends without the friends paying for it
- 9% had skimmed/padded expanses

In summary, student cheaters are twice as likely to be professionally dishonest. Students who view cheating as not cheating or trivial cheating are nearly three times to be professionally dishonest. Students who engage in serious academic cheating behaviors are five times more likely to be dishonest in the workplace, and forty-nine percent of student cheaters say you must cheat on the job just to stay ahead. In addition, academic cheaters are more likely to steal from the company ($t=7.69$, $p<.01$), fake an illness ($t=6.62$, $p<.01$), lie to the boss ($t=5.92$, $p<.05$), violate company policy ($t=5.01$, $p<.05$) and witness work misconduct but not report it ($t=8.03$, $p<.01$).

Conclusion

In order to stem the cheating/dishonesty epidemic, universities must communicate to students that honesty and integrity (Lampert, 2004; McCabe & Pavela, 1997) are basic campus priorities, place the primary responsibility for cheating on the students, create honor codes (McCabe& Treviño, 1993) using student input to increase the level of acceptance of the code and reward honesty (Alschuler & Blimling, 1995). In addition, schools of higher education must eliminate those situations that provide students with an opportunity or reason to cheat and discuss accrediting and professional standards related to education and the business world.

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Relationship Between Follower Behavior Style and Perception of Effective Leadership Characteristics in Adult Learners

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Abstract

This quantitative study researched and analyzed whether a relationship exists between follower behavior style of adult learners and preferred leadership characteristics. Follower behavior has become more important for managers in order to ensure open communication in a diverse work environment. In this research, leadership theories, behaviors, and followership were discussed. The research questions asked "What are the follower perceptions of effective leadership characteristics?" and "Do behaviors influence perceptions of effective leadership characteristics?" were addressed. The target population was faculty and working adults enrolled at two colleges in Fort Worth, TX. The survey instruments used were the DISC Styles Insight instrument and the Leadership Perceptions Survey. The surveys were administered in person by the researcher in the classroom. Chi-square and cross tabulation methods were used to analyze the data. The findings reflected various relationships between follower behavior and preferred leadership characteristics. Some of the findings further confirmed finding of other researchers, and other relationship findings were unique to this study. Demographics and overall preferences were also scrutinized with findings similar to other researchers. The implications of the findings were that perception of effective leadership characteristics are influenced by follower behavior style. The findings of this study assist in a better understanding between followers and leaders, thus improving communication, and ultimately, overall production. Future research could scrutinize each behavior individually by various demographics or use other cross-sections of populations or by occupation.

Introduction

Research studies have shown the importance of the leader-follower relationship (Devine, Maidu, & Kleimenhagen, 1997; Van Dick, Hirst Grojean & Wieseke, 2007). People have different concepts of what is considered a good leader, and various thoughts on leadership theory have been advanced. Some of the theories include transactional leadership theory in *Leadership Secrets of Attila the Hun* (Roberts, 1985)*,* the transformational leadership of *Bass & Stogdill's Handbook of Leadership* (Bass, 1990), and the more recent visionary leadership theories of Kouzes and Posner's (2007) *The Leadership Challenge.*

Research has suggested that people have different responses to the various types of leadership styles (Cufaude, 2001). An understanding of follower perceptions of effective leaders can assist in establishing more effective management and communication among leaders and followers (Bono & Judge, 2003). This study examined the relationship of follower behavior styles and follower perceptions of effective leadership characteristics. Follower behavior styles were determined using the

DISC Styles Insight 2006.g instrument; and then followers were asked what characteristics they preferred in a leader, using the 20 characteristics discerned by Kouzes and Posner (1995) in the Leadership Perceptions Survey. Data analysis determined if follower behavior style was dependent or independent of the 20 leadership characteristics stipulated.

Effective leadership is vital in the workplace. To improve leadership skills, it is important to obtain feedback from followers and others (Atwater, Waldman, Atwater & Cater, 2000; Ostroff, Atwater & Feinberg, 2004; Roush, 1992). Research has indicated that leaders are agreeable to changing behavior based on feedback. It is essential to understand the followers' behaviors to enhance leadership skills, mutual understanding, and communication (Hautala, 2005). Many studies have targeted the leader, with little emphasis on follower perceptions.

The purpose of this study was to examine follower behavior style and the follower perceptions of effective leadership characteristics. Previous studies investigated leader-follower relationship (e.g. Bono & Judge, 2003; Dvir, Eden, Avolio & Shamir, 2002; Kark, Shamir, & Chen, 2003). These studies focused on the leader characteristics, whereas the current study focused on the followers' perceptions of effective leadership characteristics, and then went farther to seek a relationship between followers' behaviors and leadership perceptions. The findings of the study laid a theoretical foundation for perceptions of effective leadership characteristics that may provide reasoning for future research. By studying the relationships between follower behavior style and follower preferred leadership characteristics, leaders can seek ways to encourage a productive workforce by understanding those behaviors. The results might provide a more thorough understanding of the relationship between employees and leaders, increase effective communication, and lead to higher productivity.

Significance of the Study

The importance of follower feedback is essential in effective leadership (Atwater et al., 2000; Ostroff et al., 2004; Roush, 1992). Research has shown that leaders are agreeable to changing behavior based on feedback. It is important to understand the followers' behaviors to enhance leadership skills, mutual understanding, and communication (Hautala, 2005). One way to understand followers better is to consider their behaviors and their preferences for specific leadership characteristics. The relationship between follower behavior style and preferred leadership characteristics can advance the leader toward mutual understanding and improved communication.

Research Hypotheses and Variables

Hypotheses HO1 through HA20 address the variable behavior style with each of the variables of leadership characteristics. The variable, behavior style, has four variable values: dominance, influencing, compliance, and steadiness. An example of the hypotheses follows:

Hypothesis HO1: The follower's perception of the importance of *mature* as an effective leadership characteristic is independent of the follower's behavior style.

Hypothesis HA1: The follower's perception of the importance of *mature* as an effective leadership characteristic is dependent on the follower's behavior style.

The independent variable studied was the behavior style of the sample group derived from the use of the DISC Styles Insight 2006.g instrument. The four variable values are dominance behavior, influencing behavior, steadiness behavior, and compliance behavior. Every individual is affected differently in any given situation, which brings about different behavior styles and emotions. By understanding the different styles of behaviors in individuals, leaders can improve communication (Bonnstetter, Suiter, & Widrick, 1993). Marston (1979) constructed the DISC instrument based on his 1928 research of human behaviors. Marston's studies explored individual emotional responses to self, others, and the environment using Jung's (1921) concept of psychological types. The DISC focused on an individual's behavior, or more simply, how people act (Bonnstetter & Suiter 2007). People with similar behaviors tend to display specific types of behavior common to that style. Four behavior styles considered when using the DISC Styles Insight instrument are: dominance, influencing, steadiness, and compliance.

Each of the four behavior styles has its own characteristics that describe how the behavior style is motivated, how to communicate with each style, and the preferred type of work environment. Response modes indicate the negative or positive extreme for each behavior style linked with behavior characteristics.

The dependent variables studied were the 20 leadership characteristics as identified by Kouzes and Posner (1995): honest, inspiring, fair-minded, broad-minded, dependable, cooperative, caring, mature, loyal, straightforward, independent, forward looking, competent, supportive, intelligent, courageous, imaginative, determined, ambitious, and self-controlled. The Leadership Perception Survey (Powell, 2003), a Likert-type survey adapted from Kouzes and Posner's (1995) framework on most admired leadership characteristics, was presented to the participants. The leadership characteristics were refined from over 200 characteristics to the current 20 characteristics.

The Leadership Perceptions Survey is based on Kouzes and Posner's (1995) framework. It includes definitions of terms, which were not part of the original research, included in Powell (2003), which were derived from the 2002 Oxford English Dictionary Online. The dependent variables included: mature, ambitious, inspiring, independent, fair-minded, intelligent, forward-looking, supportive, broad-minded, straightforward, dependable, courageous, imaginative, caring, honest, determined, co-operative, loyal, self-controlled and competent.

Nature of the Study

This quantitative study used chi-square tests of independence for analysis of the two surveys: the Leadership Perceptions Survey to determine follower perception of effective leadership characteristics, and the Style Insights instrument to determine follower behavior style. The Leadership Perceptions Survey is based on Kouzes and Posner's (1995) Leadership Profile Indicator, which distinguished the 20 preferred leadership characteristics shown in the center column of Figure 1. The 20 leadership characteristics listed are the dependent variables.

The Styles Insight instrument distinguishes the four basic behaviors of normal people (Bonnstetter & Suiter, 2007). These behavior styles include dominance, influencing, steadiness, and compliance. Behavior style was the independent variable and had four variable values.

The population consisted of two university campuses in the city of Fort Worth, TX. These institutions of higher education provided evening college courses for working adults (Drewett, 2007; Simmons, 2007). The diverse population contained over 600 individuals, with 93% of the population currently employed (Drewett, 2007; Simmons, 2007) in varying areas of industry, including self-employment. Several similar personality and leadership studies involved students as the sample group (Fleenor & McCauley 1996: Keller 1999; Vance, Groves, Yongsun, & Kindler, 2007). Other studies targeted demographics such as hospice volunteers or advertising professionals (Mitchel & Shuff 1995; Till, Zaravkovic, & Morrison 2007).

Literature Review

A transition has been observed in the relationship between leaders and employees over the past few decades. Some say the reason is the change of the social contract (Bass, 1990). Top management–those executives at the very top of an organization—are the most influential (Flood, Smith, & Turner, 2000). Top executives have the authority and responsibility to steer the organization in strategic management process. Having the skills to be successful in strategic management is required for success in the 21st century leadership environment.

This section provides a review of the literature surrounding leadership. A historical perspective of leadership is discussed, followed by the changing vision for leadership in the 21st century. Addressed are the leadership contributions of Bass, Mintzberg, Hersey and Blanchard, Kotter, Bennis, and Kouzes and Posner. The theories are critiqued, with common themes analyzed. This is followed by descriptions of the research instruments, the Styles Insight instrument and the Leadership Perceptions Survey. The literature review closes with a synthesis and evaluation of the research, taking into consideration the research questions.

Leadership

Leadership theorists abounded over the past century. Each theorist looked through a different lens, from a different angle, and then defined leadership from a unique perspective. Through the past several decades, leadership theorists evolved and expanded thoughts on what constitutes good leadership. A seminal leadership researcher, Bass (1990) defined leadership as transformational, transactional, or laissez-faire leadership. Hersey and Blanchard (1972) focused on the ability to facilitate change in the workplace, and Kotter (1988) expressed leadership conditioning in his theory of leadership, as did the leadership foundations of Mintzberg (1973). The more recent theorists, Kouzes and Posner (1995) and Bennis and Thomas (2002), proposed more contemporary visionary leadership theories.

Bass's Contribution

Bass (1990) identified three categories of leaders: transformational, transactional, and laissez-faire. Distinct characteristics comprise each model and have divergent effects on followers. Transformational and transactional leadership styles are active forms of leadership, whereas laissez-faire is defined as an absence of leadership.

When leaders, students, and project managers were asked to describe the characteristics and behaviors of effective leaders, "they described leaders who had the greatest influence on them as transformational: inspirational, intellectually stimulating, challenging, visionary, development-oriented, and determined" (Avolio & Bass, 2004, p. 3). Transformational leaders expand and lift up the ideas and interests of their workers, along with ensuring that the organizational mission is kept in sight (Bass, 1990). Transformational leadership is a nurturing, coaching type of leadership.

Transactional leadership has been portrayed at the opposite end of the spectrum from transformational leadership (Burns, 1978), although that view is changing (Bass, Avolio, Jung, & Berson, 2003) to one that more clearly defines and closes the gap in the areas of performance and motivation. Transactional leaders construct a foundational relationship with followers by communicating clear expectations and responsibilities, negotiating, and recognizing those followers who achieve the expected outcomes (Bass, 1985). Transactional leaders use contingent rewards to influence employees to act and attain not only what is in the interest of the subordinates, but also the goals of the leader (Bass, 1990). This type of leadership often involves negative reinforcement, corrective criticism, and negative feedback.

The laissez-faire leader avoids responsibility, decision-making, and supervisory actions. There is an absence of leadership by the leader. Bass (1990) stated that the laissez-faire leader is "in contrast to that of autocratic leaders, who displayed a much greater frequency of order giving, disrupting commands, praise and approval, and nonconstructive criticism" (p. 545). Under a laissez-faire leader, goals are not accomplished, quality is lacking, and less work is completed, all which can frustrate and discourage followers who are under this type of leadership.

Mintzberg's Contribution

Mintzberg (1973) synthesized management research along his own observations to articulate points for effective management that transcends into leadership. Observations included the evaluation of chief executives from large American organizations in various industries where observations and activities were recorded and analyzed. The findings brought forth specific roles that managers carried out and created five points for effective management.

Mintzberg (1973) took a different perspective of leadership theory: its evolution. Mintzberg described 10 characteristics believed to be essential in effective leadership that included figurehead, leader, liaison, spokesman, monitor, entrepreneur, disseminator, resource allocator, disturbance handler, and negotiator. Mintzberg's management roles take on leadership characteristics, guiding the thoughts on effective management towards effective leadership. Management is defined separately from leadership, making the two separate considerations of workplace characteristics. Focusing on essential characteristics in leadership theory, again, the follower is not considered.

Hersey and Blanchard's Contribution

Leadership is a process of influencing individuals toward accomplishing goals in a specific situation (Hersey & Blanchard, 1981). Leadership style is related to the behaviors observed. When attempting to influence the activities of individuals, the

leadership style exhibited will depend on the situation. Hersey and Blanchard emphasized two influences on leadership: task behavior and relationship behavior.

Task behavior is the extent to which a leader defines roles for followers. Relationship behavior is the extent to which a leader has open relationships with followers. Leaders who display relationship behavior are thought to be democratic or employee oriented. Depending on the development of the follower, the leader might change leadership style, increasing or decreasing task or relationship behaviors. The behaviors are categorized into four areas, which include delegating, participating, selling, and telling. Perceiving the type of situation that the follower faces and adjusting the leadership behavior to the situation can increase the likelihood of the leader to cope effectively, creating effectiveness and goal attainment. There may not be a perfect leadership style (Blanchard & Hersey, 1996). Research over time has indicated that the various approaches to leadership are perhaps not that different. Four basic styles are telling or directing, persuading or coaching, participating or supporting, and delegating or entrusting.

Hersey and Blanchard (1981) and Blanchard and Hersey (1996) considered leadership in a situational environment, encompassing the workplace and focusing on the follower. Among the first leadership theorists to considered followership, they included consideration for developmental circumstances. Does the follower know the realm of the task; does the follower need supervision and guidance; is the follower knowledgeable of the tasks involved and therefore independent of the leader? The type of action the leader takes depends on the developmental stage of the follower, emphasizing action, not essential leadership characteristics.

Kotter's Contribution

All organizations are vulnerable to change. Mistakes are caused by leaders who do not have a sense of urgency, talk too much about a situation instead of taking action, or declare a winning situation before everything is resolved (Kotter, 2005). Leaders can emphasize key tasks to implement successful change in business. Effective leaders at all levels are seen to have specific traits that assist in successful change management.

There are leaders at all levels in an organization. At each level, leaders have varying responsibilities; they have similar traits and perform the same leadership roles (Kotter, 2005). Effective leaders have traits that include vision for the future, interest in a cause, and energy to work through obstacles. Traits of effective leaders include that leaders keep convictions, are driven by goals, are interested in causes, have a quest for learning, and invest in change efforts.

There is a distinct difference between management and leadership. Kotter (2005) wrote that leadership is approximately 80% change, in which establishing direction, motivating, and inspiring people are involved. Change management holds a vital role in business. Within the global environment, changing demographics, a cross-cultural work environment, and new technology, leaders who can institute change effectively are needed. The other 20% of leadership is managing people, versus leading people. Managing involves planning, budgeting, organizing, and problem solving.

Kotter (2005) focused leadership theory toward the changing work environment of the 21st century. The emphasis is on the levels of leadership in an organization and on what is expected at those levels. Similar to Mintzberg (1973), Kotter defined

management and leadership separately, with a concentration on leadership characteristics and traits. Task management is considered, with little or no attention to followers.

Bennis's Contribution

Bennis (1984) proposed that four competencies make effective leaders, as opposed to effective managers. After interviewing 90 leaders in business, he concluded, "The factor that empowers the workforce and ultimately determines which organizations succeed or fail is the leadership of those organizations" (p. 15). The competencies include management of attention, management of meaning, management of trust, and management of self. Leadership has an impact throughout the organization, as people need to believe that they are important and an essential part of the organization.

The components of leadership expressed by Bennis and Thomas (2002) include adaptive capacity, the ability to engage others, compelling voice, and sense of integrity. They believed that the first of the leadership characteristics, adaptive capacity, is the most vital of the characteristics for a successful leader. Adaptive capacity involves being able to take advantage of opportunities when they present themselves and to remain open-minded to change. Fast-growing organizations today experience change almost daily; adaptive leaders must be willing and able to change quickly, as well.

The second of Bennis's leadership characteristics is the ability to engage others. Authentic leaders have an ability to draw people to them. These leaders communicate a vision, making people want to join in the vision (Bennis, 1984). Expressing the vision enables all to understand organizational goals. Interpersonal and emotional intelligence articulate understanding and effective communication with people. Leaders make ideas real and dreams possible using words or stories to make those dreams a reality to followers.

Compelling voice is the third characteristic that great leaders possess. Compelling voice is described as how a person expresses who he or she is. Voice is the self-confidence and the stature a person possesses (Bennis, 2003). The last of Bennis's characteristics is a sense of integrity. A sense of integrity is composed of competence and ambition. Integrity is the moral compass that drives the leader to make the right decisions. "Those leaders who are good as well as successful fought tirelessly to reduce suffering, to create opportunity and equality, to promulgate fairness, to support free inquiry, and to extend basic rights to all" (Bennis, 2003, p. 22). Having the knowledge and expertise in specific skills illustrates the competencies in speech and action. Finally, ambition is the sense of wanting to accomplish particular goals for the organization. The four competencies described by Bennis and Thomas (2002) are broad categories of leadership that other researchers could dissect into more definitive categories.

Kouzes & Posner's Contribution

Kouzes and Posner (1990) asserted, "Successful leadership depends far more upon the follower's perception of the leader's abilities than upon the leader's own perceptions" (p. 29). These researchers focused on characteristics of leadership based on the follower's perceptions. Since 1980, the focus of the researchers was asking managers about perception of a leader's essential qualities. This led them to identify 20 most admired leadership characteristics (Kouzes & Posner, 1995). After several years of research, the 20 characteristics were identified (see Figure 1). Four crucial attributes that

top the list are honesty, competency, forward-looking, and inspiring. Of these four crucial attributes, honesty was chosen more often than any other characteristic in every survey that was conducted (Kouzes & Posner, 1990). A leader's behavior, ethical practices, personal integrity, and deeds show honesty. Employees want a climate of trust and safety for their careers. Having expertise in leadership skills helps define a competent leader–a leader who can make decisions and be forward-looking. Leaders must offer a sense of direction, a vision for the organization. Having a positive outlook and being energetic and enthusiastic is important in order to inspire workers. A leader who is inspiring and has passion toward the goals can pass this enthusiasm on to others (Kouzes & Posner, 1990).

The 20 characteristics proposed by Kouzes and Posner (1995) were the results of over 400 case studies that gathered information on admired leaders from North America, Mexico, Western Europe, Asia, and Australia. A qualitative study was followed by a series of quantitative research approaches that focused on the leadership behaviors that influence an individual's preference for leadership.

Kouzes (2005) remarked in his more recent writings that five fundamental characteristics of leaders do not change. The first leader characteristic identified is leadership development. The second fundamental characteristic is that individuals act to create the organizational culture of a company. This leader characteristic contributes to molding the behavior of the organization. "Leaders are judged by how they spend their time, how they react to critical incidents, the stories they tell, the questions they ask, the language and symbols they choose, and the measures they use" (p. 6). Leaders make a difference by expressing to followers the path to goal attainment. The best leaders know how to liberate others, not control them.

Kouzes and Posner are renowned researchers in the area of business leadership. Boal (2000) considered both Kouzes and Posner to be researchers of visionary theories of leadership. Leadership that is visionary has the understanding that leaders have distinct characteristics that lead them to plan the future of the organization. The leadership characteristics sought are those that will bring a vision to the organization in time of change or chaos, or will transform the organization to achieve success (Boal, 2000). Having visionary leaders can assist the organization through these difficult times, improving the chances for successful change and strategic goal attainment.

When evaluating Kouzes and Posner's (1995) leadership theory, it is evident that the focus is on followers. The 20 most admired leadership characteristics were gathered by asking followers what was most important in a leader. The research lens measures leadership in a new approach, taking into consideration the follower versus the traits, actions, or behaviors of leaders. The importance of followers is just now being realized.

A Synthesis of the Theorists

Leader competencies develop over time (Majiujs, Harris, Lumby, Morrison, & Sodd, 2006), indicating that mentoring and coaching play an important role in the development of leaders. With a global environment, it is important to take the first step by identifying competencies in a leadership development process (Bueno & Tubbs, 2004). For today's leader, the most important competencies would be those that transcend across cultures within the organization and in the various outside environments with which the organization may transact business. A taxonomy of those competencies is listed in Table 1.

When scrutinized, the theories discussed appear to be layers; that is, different views, epistemology, or assumptions about the nature of reality of leadership. Research by Bennis (2004) and by Kouzes and Posner (1995) have similarities, in that both list competency, ambition, knowledge, intelligence, caring, vision, and forward thinking as important to leadership. Hersey and Blanchard (1981) had similar thoughts on the management aspect of leadership, while Mintzberg's (1973) management-leadership strategies and development of subordinates have different processes of management and leadership. Critiquing the theorists' contributions, several common themes can be ascertained, which include influencing others, interpersonal skills, and change for the future.

Three common themes are noted throughout the reviews: influencing others, interpersonal skills, and change for the future. Following is a synthesis of the themes.

Influencing Others

Bass's (1990) main theme for transformational leadership is influencing followers with transactional, transformational. or laissez-faire (no influence) leadership styles. The specific trait mentioned is idealized influence, which guides the followers to success for themselves and the company. Hersey and Blanchard (1981) similarly focused on the leader adapting interpersonally by directing the follower, based on the development of the follower. Mintzberg's (1973) ideas on processing information, monitoring, and being the spokesperson compare to the other leadership theories with the emphasis on influencing others.

Interpersonal Skills

Interpersonal skills are the second common theme. Bennis and Thomas (2002) stated that engaging others is one of the critical components of great leaders. Bass (1990) emphasized the importance of individual consideration in transformational leadership. Mintzberg's (1973) constructs of interaction, liaison, and figurehead all involved interpersonal skills as a factor of successful leadership. Each of these emphasized interpersonal skills as an important component of leadership.

Change for the Future

The final common theme evaluated is change for the future. Change for the future involves a strategy and a vision to know what path to walk. Kotter (2005) emphasized vision as a construct in leading change in the organization. Adaptive capacity and vision are two themes in Bennis and Thomas' (2002) leadership qualities that also influence change. Kouzes and Posner (1995) emphasized creating change as an effective leadership strategy.

When evaluating the criteria used by the various leadership theorists, it can be assessed that the context of the environment at the time influenced what were measured, analyzed, and determined to be the strategies or components of leadership. When critiquing the theorists' contributions, several themes can be depicted. Global markets and strategies have had an impact on leadership theory, with the focus of the research lens moving from the traits, characteristics, and behaviors of the leader to involving the followers, not only in what makes that leader successful, but also in the follower's impact on organizational success.

A 21st century global leader is needed in business to survive the turbulent and ambiguous environment (Bennis, 1989). The managers of yesterday would suffice, although today's environment would suffocate them. The changing focus on leadership from what traits or behaviors a good leader may have to what a follower's impact on success could be is just now being understood.

Leadership Contributions Summary

Though each theory has a separate focus, making each unique, the leadership theories build upon each other and provide a good foundation for visionary leaders in the 21st century. Part of being a successful leader today involves the ability to influence others, having interpersonal skills, and holding a vision for the future of the organization. Attaining the vision involves a process for change. Effective leaders design and generate change (Javidan & House, 2001), and the most current trend toward visionary leadership emphasizes that change. These leaders are transition designers who execute change within organizations (Barnett & Tichy, 2000). Today's leaders are constantly evaluating and rethinking business strategy and formulating transitional processes to aid in the development of personnel to ensure competitive advantage. It is vital to the success of the organization to anticipate what changes must take place, and what assets and skills will be needed as situations evolve (Aaker, 1989). Using transitions to invigorate change means teaching others to adapt to a continuous environment of change. Interpersonal skills continue to be an important aspect of leadership. When developing organizational talent, leaders must constantly restructure the organization, bringing new challenges that can stretch employee skills and abilities; this can lead to an energized workforce (Javidan & House, 2001). Having visionary leadership can assist in maintaining a competitive strategy in today's business environment.

Followership

Followership is one of the various ways the research lens focuses when observing leadership. Much emphasis has been on the leader's characteristics, traits, and behaviors, and little emphasis has been on followers. Followers can have an impact on a leader's success and leaders can impact followers' success (Bass, 1990; Burns, 1978; Kouzes & Posner, 1987). Kouzes and Posner (1995) found that followership is an essential component of successful leadership. Kouzes and Posner affirmed that, "Leadership is in the eye of the follower" (p. 15). Bennis (1991) postulated, "The longer I study effective leaders, the more I am persuaded of the under-appreciated importance of effective followers" (p. 7).

Followers want leaders who display the leadership characteristics: competent, inspiring, trustworthy, and visionary. Followers are impacted by leader's skills and behaviors (Bass, 1990). Leaders can be supportive or destructive in the effectiveness of followers. The more that is known about what is expected in the leadership-followership relationship, the better the chances for success. While leaders are held responsible for organizational success, a follower's contribution is often overlooked (Bennis, 1991). "The longer and harder we look at leadership, however, the more we realize that the success of great leaders depends on the ability to establish a base of loyal, capable, and knowledgeable followers" (Lundin & Lancaster, 1990).

The Styles Insight 2006.g Instrument

The Styles Insight 2006.g instrument is a survey designed to measure behavior based on Marston's (1928) published research in *Emotions of Normal People*. The instrument identifies what Marston points out as normal emotions (Byrne, 1929) and has changed little over the years. Marston, a Harvard graduate, constructed the DISC instrument based on his research of human behaviors. Marston's research explored individual emotional responses to self, others, and the environment. All individuals are affected differently in any given situation, which makes them react with different behavior styles and emotions. At work, a person's behavior may change to fit the situation, which is called *adapted behavior*. The *natural style* indicates behaviors that do not change much. The Styles Insight instrument groups behavior style into four values. Those normal emotions, or four behavior styles, are categorized as dominance, influence, steadiness, and compliance. People with similar behaviors tend to display specific types of behavior common to that style. By understanding the different characteristics of behaviors in individuals, leaders can improve communication (Bonnstetter et al., 1993).

The Styles Insight instrument has been used in the research of behaviors in the workplace, sales performance, and safety issues (Bonnstetter & Suiter, 2007). Leadership behavior influences the information gained from employees (Detert & Burris, 2007), providing ideas for improvement. Better communications can influence the effectiveness of teams, help resolve and prevent conflict, and gain influence or credibility from others. By communicating the organization's culture and values, the organization can benefit by attracting employees of compatible behavioral traits (Barnett, 2003). To attract, motivate, and retain different generations of workers, an organization must work with a shared vision and shared values. Employees who like the work they do and are committed to organizational goals are more likely to remain with an organization, even when enticed by higher salaries (Goleman, 1998). Committed employees often stay in one organization, motivated to do their best work.

The Styles Insight instrument stipulates four behavior styles or variable values (Bonnstetter & Suiter, 2007). First is the dominance behavior style, in which people take on behavioral characteristics such as ambitious, forceful, decisive, direct, independent and challenging. Next is the influencing behavior style. This area includes expressive, enthusiastic, friendly, demonstrative, talkative, and stimulating behavioral characteristics. Steadiness is a third behavior style and has behavioral characteristics such as methodical, systematic, reliable, steady, relaxed, and modest. The last behavior style is compliance, which includes analytical, contemplative, conservative, exacting, careful, and deliberative traits. Based on the answers chosen in the survey, the individual may show some characteristics in each behavior style, although most will have a dominant behavior style. The dominant behavior style for each individual was the behavior style used in this study.

The Leadership Perceptions Survey

The Leadership Perceptions Survey (Powell, 2003) is based on Kouzes and Posner's (1995) framework of most admired leadership characteristics. Kouzes and Posner are known for the Leadership Practice Inventory (LPI), which has been used in many areas of industry, including nursing (Bowles, & Bowles, 2000; Chiok Foong Loke, 2001), information technology (Summer, Bock, & Giamartino, 2006), and education (Centini, 2005; Stout-Stewart, 2005).

The Leadership Perceptions Survey uses Kouzes and Posner's (1995) 20 most admired leadership characteristics, which have been applied in researching perceptions of tens of thousands of followers in several countries. It asks respondents to rank each characteristic on a Likert-type scale from 1-7. Powell (2003) used the Leadership Perceptions Survey to analyze the preferences of leadership of various generations in a university setting, including Baby Boomers, Generation X, and Generation Y. The research findings indicated that each generation had a different preference for leadership.

Summary

To achieve success, leaders must gain the respect and trust of the employees with whom they work (Kouzes & Posner, 2003). Motivation is a key trait in leaders. Leaders are driven to achieve beyond the stated goals (Goleman, 1998). Leaders take risks, accept responsibility, and assume accountability for achieving the organization's goals. Leaders can promote an open and fair environment where there is effective and open communication, which in turn can foster new ideas. Linking leaders who have an understanding of the employee-held values can influence the followers by affecting the follower's behavior (Offermann, Hanges, & Day 2001). Followers who value intrinsic rewards were drawn more towards transformational leaders (Ehrhart & Klein, 2001) whose characteristics include inspiring, caring, and supportive. An analysis of follower behavior may bring more insight into what leadership characteristics are best suited for motivating the diverse workforce of today.

The literature review relays information on the transformational, transactional, and laissez-faire leadership of Bass (1995); on the situational leadership of Hersey and Blanchard (1972); on the ability to facilitate change in the workplace of Kotter (1988); and the expressed leadership conditioning aspects of Mintzberg (1973). The more recent theorists, Kouzes and Posner (1995) and Bennis and Thomas (2002) addressed the visionary leader needed in the global market.

The literature review went on to synthesize the leadership theorists, looking at the common themes of influencing others, interpersonal skills, and change for the future. The literature review expanded on the behavior styles of the Styles Insight instrument, explaining each of the four values, and described the Leadership Perceptions Survey. The research methodology follows.

Methodology

The methodology describes the research design used to test the hypotheses. It first addresses the purpose of the study, the research foundations, and identification of the hypotheses and variables. Next, the sample design and data collection procedures are addressed. Finally, it concludes with a discussion of the data analysis techniques utilized.

Purpose of the Study

Research has shown positive outcomes when considering the needs of the follower in regard to leadership (Hersey & Blanchard, 1981; Lundin & Lancaster, 1990). The purpose of this quantitative research study was to investigate follower behavior style relationship with follower perceptions of effective leadership characteristics.

Research Foundations

Leadership research abounds today, facilitated by exploding world markets, cultural considerations, and expanding businesses. The majority of previous transformational leadership research focused on leader effectiveness and mediation (Rubin, Munz, & Bommer, 2006). More recently, visionary leadership has been introduced and explored. Follower and leader differences both influence leadership behavior (Murphy, 1996). This research focused on individual differences in behavior style and their relationship to follower perception of effective leadership characteristics.

Research on leadership perceptions has encompassed various leadership measurement instruments, such as the popular Multifactor Leadership Questionnaire (MLQ) that takes into consideration transactional, transformational, and laissez-faire types of leadership (Bass & Avolio, 1999). The MLQ has been used repeatedly in leadership research over the last decade. A more recent approach to leadership theory is Kouzes and Posner's (1995) visionary leadership characteristics, which consider aspects of transformational leadership.

Kouzes and Posner's (1995) visionary leadership approach considers the visionary values characteristics needed in today's global business environment. The *Leadership Challenge* concept considers components of leadership and it was found to be "most precise and reliable for respondents with low to medium leadership competence" (Zagorsek, Stough, & Jaklic, 2006, p. 180). Research by Powell (2003) investigated perceptions of effective leadership, although it was based on generational views.

Several studies explored the relationship between follower behavior and leadership characteristics (Devine et al., 1997; Van Dick et al., 2007), although most emphasized follower satisfaction, and few used the Styles Insight instrument. The instrument has been used by researchers who attest to its reliability and validity ("DiSC Validation Research Report," 2005; Klassen, 2006). Using both the Styles Insight instrument and Kouzes and Posner's 20 characteristics of leadership was a new approach in this area of research.

Research Design

This non-experimental, non-parametric study used two survey instruments to gather quantitative data: the Styles Insight instrument, and the Leadership Perceptions Survey. The research attempted to answer the following question: Is follower behavior style dependent on or independent of follower perception of effective leadership characteristics? To answer this question, the following enabling questions were developed to guide the research:
1.   What are the follower perceptions of effective leadership characteristics?
2.   Do behaviors influence perceptions of effective leadership characteristics?

Participants

Two university campuses in the city of Fort Worth, TX were contacted, and permission was gained to conduct this study (Drewett, 2007; Simmons, 2007). These institutions of higher education provide evening college courses for working adults. Drewett and Simmons reported a diverse population of over 600 individuals, with 93% of the population currently employed. Many of the students in the study were working toward advanced management degrees to enhance the management skills they currently

used. Selecting a sample of working adults in higher education provided the opportunity to collect information from a variety of organizations. The institutions sampled had a student population involved in varying areas of industry, with some self-employment. Fort Worth is home to several large organizations such as: Burlington Northern Santa Fe Corporation, AMR Corporation, Lockheed Martin Corporation, Radio Shack Corporation, and Alcon Laboratories. Several similar personality and leadership studies also involved students as the sample group (Fleenor & McCauley 1996: Keller 1999; Vance et al., 2007). Other studies involved targeted demographics such as hospice volunteers or advertising professionals (Mitchel & Shuff 1995; Till et al., 2007).

Each of the institutions' faculties was briefed on this study by the researcher and was willing to have students participate. Five classes were randomly selected from each college's Spring 2008 schedule. A suitable time was arranged with the faculty to have the researcher distribute the surveys. Approximately 200 students were asked to volunteer to participate in the study.

Measurement Plan

Studies in relationships between behavior and leadership have been performed using various other instruments, such as Myers-Briggs Type Indicator and the MLQ. Using the Styles Insight instrument and Kouzes and Posner's 20 characteristics in this relationship study was a new approach. Kouzes and Posner's (1995) visionary leadership approach considered the characteristics needed in today's global business environment.

Styles Insight 2006.g Instrument

The behavior style instrument, Styles Insight, has been used by researchers who have attested to the reliability and validity of the instrument ("DiSC Validation Research Report," 2005; Klassen, 2006). Watson (2004) attested to the reliability of the instrument, checking for internal consistency using Spearman-Brown split-halves and the Kuder-Richardson Formula 21 reliability coefficients. The mean coefficient for each dimension was dominance $r = .91$, influencing $r = .90$, steadiness $r = .92$, and compliance $r = .89$. The one-page survey asks the respondents to make choices of behaviors that most (M) describe them and least (L) describe them. There are 24 boxes; each box contains four phrases from which the respondent makes the two choices. Figure 2 presents an example of one of the 24 boxes of phrases.

The individual's behavior style depends on the choices made in the least-like and most-like categories chosen in the survey. Each response relates to a specific behavior style; the M and L responses are tabulated electronically and graphed. The most-like responses and least-like responses for each behavior style are computed from a low of 0 to a high of 21, indicating which behavior style is the most dominant. The individual's responses can produce thousands of varieties in the descriptors graph.

The adapted and natural styles are shown in Figure 5. Graph I, the adapted behavior style, is generated from the *most* responses. These responses identify a person's reaction to the environment. The responses indicated in Graph I focus on the respondent's behavior in the workplace. Graph I is the respondent's adapted behavior and reflects behaviors that are indicated in a specific environment outside the natural home environment. Graph II relates the *least* responses of the survey and the individual's natural behavior style. Research has shown that people are most honest when asked what

they are least like. Graph II identifies the basic behavior of the respondents. The environment stipulated when taking the survey was the work environment; the research focused on the follower's work environment. The *most* graph with the highest score indicated the adapted behavioral style, which could show the follower adapted to the leader. Therefore, the *least* graph, or natural style with the highest indicated behavioral style was used in the research analysis. The behavior style with the highest score that is dominant on the natural graph was used in the analysis to indicate a true relationship, if any. The adapted style was not used because the follower might have been adapting behavior to favor the leader.

Leadership Perceptions Survey

Kouzes and Posner's (1995) framework of most admired leadership characteristics was selected and adapted for use in this study for a variety of reasons. First, the authors studied leadership for over two decades, identifying over 200 different values, traits, and characteristics of leaders. Second, the framework of 20 most admired leadership characteristics has been developed and tested for over 20 years on over 20,000 people (Kouzes & Posner, 1995, p. 20). The most admired leadership characteristics have been refined for validity and reliability from the original 225 different characteristics, values, and traits gathered from survey participants through the more than 20 years of research to its current 20 by several independent judges and by Kouzes and Posner (1995). The leadership characteristics instrument using Kouzes and Posner's characteristics of admired leaders contains these refined 20 characteristics of leaders: honest, forward-looking, inspiring, competent, fair-minded, supportive, broad-minded, intelligent, straightforward, dependable, courageous, cooperative, imaginative, caring, determined, mature, ambitious, loyal, self-controlled, and independent. The survey was previously used in research regarding generational perceptions, with the characteristic technology added by Powell (2003).

A Likert-type survey asked respondents how they felt about each leadership characteristic, scoring from 1 = *not at all important*, 2 = *of very little importance*, 3 = *of little importance*, 4 = *of marginal importance*, 5 = *of some importance*, 6 = *important*, and 7 = *of great importance*. Demographic information was collected on this survey by asking birth date and gender. The characteristics are the foundation for Kouzes and Posner's Leadership Practices Inventory, which has been tested and validated throughout leadership literature. Figure 6 illustrates a section of the survey used. The instrument, based on Kouzes and Posner's (1995) framework, includes definitions of terms (not part of the original research) included in Powell (2003) that were derived from the 2002 Oxford English Dictionary Online.

Data Collection Procedures

Data were collected using survey questionnaires administered by the researcher. A script with instructions for completion of the survey was noted on the survey form and read to participants. When answering participant questions, guidance was directed toward the survey form in regard to completion of the survey and definitions. The purpose of the study was explained to the participants by the researcher and instructions were given for completing the surveys. The Styles Insight instrument was administered first, followed by

the LPS. Each survey was number coded to ensure that the surveys were paired. A demographic section included age and gender.

Data Analysis

This quantitative study tested variables for independence using the statistical procedure chi-square test of independence due the involvement of nominal data where there are groups of two or more categories (Cooper & Schindler, 2006). These non-parametric tests looked for significant differences between the variables.

The independent variable, style, had four possible values: the behavior styles of dominance, influencing, compliance, and steadiness. When analyzed from the respondents' surveys, the behavior with the highest score was considered the most dominant behavior.

The dependent variables, defined in the introduction, included the 20 leadership characteristics of mature, ambitious inspiring, independent, fair-minded, intelligent, forward-looking, supportive, broad-minded, straightforward, dependable, courageous, imaginative, caring, honest, determined, co-operative, loyal, self-controlled, and competent. Each leadership characteristic was rated using a Likert-type scale with 1 = *not at all important* to a high of 7 = *of great importance*. The responses were categorized as 1–4 being a negative response, not an effective leadership characteristic, and 5–7 being a positive response, an effective leadership characteristic. The data for this quantitative study were analyzed using SPSS 14.0 for Windows.

Data Collection and Analysis

The purpose of this section is to discuss the results of the research conducted. A description of the sample with demographic information of the respondents is discussed, including age and gender. Response rate is addressed, along with descriptive statistics and results pertaining to the hypotheses. The researcher conducted an analysis of the relationship between follower behavior style and perceived effective leadership characteristics.

Population Sample

Within the two colleges in Fort Worth, TX, composed 95% of working adults, approximately 523 students were enrolled. Faculty members were asked to allow the researcher into classrooms to conduct the research, and 10 classes were surveyed within 2 weeks' time. Of the 523 students enrolled, 198 were sampled. The researcher administered the two surveys in the classroom, asking students to participate. The classrooms were selected randomly, and five classes were selected from each institution. One class was not surveyed due to the cancellation of the course. The study was conducted over a 2-week period. Of the 198 respondents, 169 or 85.4% of those completed the survey appropriately. The response rate equaled 49.5% of the population, with 42.3% of the population providing completed surveys, making the survey useable. The response rate was sufficient to conduct valid research.

Respondent Demographics

The 169 respondents filled in the appropriate blocks for gender and year of birth. There were 117 male respondents, or 69.2%, and 52 female respondents, or 30.8%. Each respondent answered in response to age; the average age was 37.02. Figure 7 indicates the ages of the respondents.

Respondents completed the Styles Insight instrument; the natural behavior style category percentages are shown in Figure 8. Of the 169 respondents, 49 (29%) were D for dominance behavior. Thirty respondents, 17.8%, were determined to be I for influencing behavior, 41 respondents, 24.3 %, were determined to be S for steadiness behavior, and 49 respondents, 29%, were determined to be C for consensus behavior.

Respondents completed the Styles Insight instrument; the adapted behavior style category percentages are shown in Figure 9. Of the 169 respondents, it was determined that 43 or 25.4% were D for dominance behavior. Thirty-four respondents, 20.1%, were determined to be I for influencing behavior, 30, or 17.8 %, were determined to be S for steadiness behavior, and 62, 36.7%, were determined to be C for compliance behavior.

Hypothesis Testing

Hypothesis HO1: The follower's perception of the importance of mature as an effective leadership characteristic is independent of the follower's behavior style.

This hypothesis was evaluated by responses to preference of leadership characteristic *mature* using the respondent's natural behavior style. The response *important* was coded as 1. The responses *not at all important, of very little importance, of little importance, of marginal importance, of some importance,* and *of great importance* were coded as 0. Statistical analyses are presented in Tables 2 and 3. Since the *p*-value was .002, the null hypothesis was rejected; there was sufficient evidence to conclude that a follower's perception of the importance of *mature* is dependent of the follower's behavior style. This hypothesis was evaluated by comparing the responses *of some importance* with the natural behavior style. HO1 shows that the Ss and Cs are evenly split with the Ds and the Is weighted heavily negative and the Ds negative.

Hypothesis HO7: The follower's perception of the importance of forward-looking as an effective leadership characteristic is independent of the follower's behavior style.

This hypothesis was evaluated by responses to preference of leadership characteristic *forward-looking*. The response *of great importance* was coded as 1 and the responses *not at all important, of very little importance, of little importance, of marginal importance, some importance,* and *important* were coded as 0. Statistical analyses are presented in Tables 4 and 5. Since the *p*-value was .026, the null hypothesis was rejected; there was sufficient evidence to conclude that a follower's perception of the importance of *forward-looking* is dependent of the follower's behavior style. HO7 shows that the Ds are evenly split evenly with the Ss and Cs weighted heavily negative and the Is negative.

Hypothesis HO8: The follower's perception of the importance of supportive as an effective leadership characteristic is independent of the follower's behavior style.

This hypothesis was evaluated by using the adapted behavior style with the responses to preference of leadership characteristic *supportive*. The response of great importance was coded as 1 and the responses *not at all important, of very little importance, of little importance, of marginal importance, of some importance,* and

important were coded as 0. Statistical analyses are presented in Tables 6 and 7. Since the *p*-value was .043, the null hypothesis was rejected; there was sufficient evidence to conclude that a follower's perception of the importance of *supportive* is dependent of the follower's behavior style. HO8 shows that the Ds are evenly split with the Ss and Cs are weighted heavily negative.

Hypothesis HO9: The follower's perception of the importance of broad-minded as an effective leadership characteristic is independent of the follower's behavior style.
This hypothesis was evaluated by responses to preference of leadership characteristic *broad-minded*. The response *important* was coded as 1 and the responses *not at all important, of very little importance, of little importance of marginal importance, some importance,* and *of great importance* were coded as 0. Statistical analyses are presented in Tables 8 and 9. Since the *p*-value was .009, the null hypothesis was rejected; there was sufficient evidence to conclude that a follower's perception of the importance of broad-minded is dependent of the follower's behavior style. HO9 shows that the Ds are evenly split with the Cs weighted negative and the Is and Ss are weighted heavily negative.

Hypothesis HO12: The follower's perception of the importance of courageous as an effective leadership characteristic is independent of the follower's behavior style.
This hypothesis was evaluated using the respondents' natural behavior style and by responses to preference of leadership characteristic *courageous*. The response *of great importance* was coded as 1 and the responses *not at all important, of very little importance, of little importance, of marginal importance, some importance*, and *important* were coded as 0. Statistical analyses are presented in Tables 10 and 11. Since the *p*-value was .015, the null hypothesis was rejected; there was sufficient evidence to conclude that a follower's perception of the importance of *courageous* is dependent of the follower's behavior style. HO12 shows that the Ds and Is weighted negatively and the Ss and Cs are weighted heavily negative.

Follower Perception of Leadership Characteristics
Table 12 indicates the mean overall score for each of the leadership characteristics. Dependable, honest, loyal, and fair-minded were the leadership characteristics with the highest means, indicating the importance of these characteristics.

Results, Conclusions, and Recommendations

The purpose of this section is to summarize the research findings from the surveys that were completed by the respondents. The conclusions are discussed based on the analysis of those findings and provides answers to the research questions addressed in this study. Finally, the present recommendations based on the research findings as well as recommendations for future research.

Summary of Research Findings

Demographic Summary

The 169 respondents filled in the appropriate blocks for gender and year of birth. There were more male respondents, 117 or 69.2%, and fewer females in the study, with 52 female respondents or 30.8%. The average respondent age was 37.02 years.

Behavior and Leadership Perceptions Summary

The study analyzed the relationship between follower behavior styles and the perception of effective leadership styles using chi-square tests. Five of the 20 null hypotheses were rejected. The results of the analysis and research suggest that some behaviors influence perceptions of effective leadership characteristics. Due to limited variability in responses of the Leadership Perceptions Survey, responses *of some importance* and *of great importance* were considered separately in the analysis.

Research Questions

Conclusions for Research Question 1

The first research question asked, "What are the follower perceptions of effective leadership characteristics?" This question was examined through an analysis of means. Similar to the findings of Powell (2003), relationships were found in perceived effective leadership, though the behaviors that had the highest means were different. The leadership characteristics of dependable, honest, loyal, and fair-minded had the highest average scores of the 20 leadership characteristics. This compared with Kouzes and Posner (1995) top percentage characteristics of honest, forward-looking, inspiring, and competent. These researchers used a large sample over several years. Powell's (2003) sample consisted of students and faculty at an institute of higher education, then categorized by generational division. He analyzed mean by generation and different methodology than Kouzes and Posner (1995) or this study. Powell (2003) found that the characteristic of *dependable* had the highest mean, followed by honest, fair-minded, and broad-minded. These results had some variation in perceived effective leadership characteristics compared to the other studies. A comparison of the three study results are shown in Table 13.

The perceived effective leadership characteristic of *honest* was selected as most important by respondents in each study. Powell (2003) found similar results, with his study having the leadership characteristics of *fair-minded* and dependable as important leadership characteristics. The leadership characteristic of *loyal* remains dissimilar to the other study results. In each of the three studies analyzed the leadership characteristic *honest* remains consistent as being an important leadership characteristic. Given that Powell (2003) and this study had comparable samples, it can be said that students have different views on what is considered effective leadership characteristics than the sample that Kouzes and Posner (1995) analyzed.

Conclusions for Research Question 2

Research question 2 was, "Do behaviors influence perceptions of effective leadership characteristics?" Chi-square tests for independence resulted in the leadership characteristics of mature, forward-looking, supportive, broadminded, and courageous indicating a relationship with behavior styles suggesting dependence. These unique findings are due to the comparison with behaviors using the Styles Insight instrument.

Other studies made comparisons using leadership characteristics with generational differences, such as Powell (2003), or with the most admired leadership characteristics as perceived by respondents (Kouzes & Posner, 1995). The studies done by Kouzes and Posner (1995), used different methodology emphasizing overall means and preferences vice Chi-Square Test for Dependence, as this study used for analysis. Due to limited variability in responses of the LPS responses, the chi-square tests considered the responses *of some importance* and *of great importance* separately in the analyses for both the natural behavior styles and the adapted behavior styles.

Hypothesis HO1: The follower's perception of the importance of mature as an effective leadership characteristic is independent of the follower's behavior style. HO1 indicates that the behavior styles Steadiness and Compliance are evenly split with the behavior style Dominance and the behavior style Influencing weighted heavily negative and the behavior style Dominance weighted negative. Followers with the behavior style Influencing do not perceive this leadership characteristics as being important.

The leadership characteristic *mature* is described in the survey as-*having powers of body and mind full developed; Not childish* - was perceived as being negative to D and I behaviors. These behavior styles share some of the behavior modes interpreted by Marston (1979), as shown in Figure 3.9 – extrovert, direct, risk-taking and change-oriented. Both Compliance and Steadiness behavior styles perceived the leadership characteristic–mature-to be positive. The Compliance and Steadiness behaviors styles are continuity-oriented which could lead them to want a mature leader that considers risks taking time to weigh options before a decision is made.

Hypothesis HO7: The follower's perception of the importance of forward-looking as an effective leadership characteristic is independent of the follower's behavior style. HO7 indicates that the Dominance behavior style are evenly split with the behavior styles Steadiness and Compliance are weighted heavily negative and the behavior style Influencing is weighted negative. The behavior styles Steadiness and Compliance do not perceive this leadership characteristic as being important.

The leadership characteristic *forward-looking* was found to be perceived as negative for the S and C behaviors. These behavior styles share some of the behavior modes interpreted by Marston (1979), as shown in Figure 3.9 – introverted, risk assessing, and continuity oriented. The leadership characteristic *forward-looking* which is described in the survey as – *looks towards the future; visionary; expectant regarding potential lies ahead; direction oriented*-was perceived as being negative to the behavior styles Steadiness and Compliance. Both *Dominance* and *Influencing* behavior styles perceived the leadership characteristic *forward-looking* to be positive. The Dominance and Influencing behaviors styles are more directive in behavior which could lead them to want a leader that is visionary and looks towards the future.

Hypothesis HO8: The follower's perception of the importance of supportive as an effective leadership characteristic is independent of the follower's behavior style. HO8 indicates that the Dominance and Influencing behavior styles are evenly split with the Steadiness and Compliance behavior styles weighted heavily negative. Steadiness and Compliance behavior styles do not perceive this leadership characteristic as being important.

The leadership characteristic *supportive* was found to be negative for the Steadiness and Compliance behavior styles who shared some behavior modes described

by Marston (1979) and shown in Figure 3.9 – introvert, indirect, risk-assessing and continuity oriented. The leadership characteristics – *supportive* – which is described in the survey as – *provides means by which one may accomplish something' sustaining; encourages activity* – was perceived as being negative to Steadiness and Compliance behavior styles. Both Dominance and Influencing behavior styles perceived the leadership characteristic *supportive* as being positive. The Dominance and Influencing behavior styles are change oriented which could lead them to want a leader that encourages accomplishment of goals which in today's environment leaders often deal with change.

Hypothesis HO9: The follower's perception of the importance of broad-minded as an effective leadership characteristic is independent of the follower's behavior style. HO9 indicates that the behavior style Dominance are evenly split with the Compliance behavior style weighted negative and the Is and Ss are weighted heavily negative. Influencing and Steadiness behavior styles do not perceive this leadership characteristic as being important.

The leadership characteristics *broadminded* was found to be negative for the Influencing and Steadiness behavior styles who share some behavior modes interpreted by Marston (1979), shown in Figure 3.9 – optimistic and accepting. The leadership characteristics – *broadminded* – which is described in the survey as – *willing to consider others' opinions; open to new ideas and ways of doing things; not dogmatic* was perceived as being negative to Influencing and Steadiness behavior styles. Both Dominance and Compliance behavior styles perceived the leadership characteristic *broadminded* to be more positive. The Dominance and Compliance behavior styles are more controlling, judging and pessimistic which makes this outcome enigmatic.

Hypothesis HO12: The follower's perception of the importance of courageous as an effective leadership characteristic is independent of the follower's behavior style. HO12 indicates that the behavior styles Dominance and Influencing weighted negatively and the behavior styles Steadiness and Compliance are weighted heavily negative. The behavior styles Steadiness and Compliance do not perceive the leadership characteristic-*courageous*-as being important.

The leadership characteristic *courageous* was found to be very negative for the Steadiness and Compliance behavior styles who share some behavior modes interpreted by Marston (1979), shown in Figure 3.9 – introvert, indirect, risk-assessing and continuity-oriented. The leadership characteristic *courageous* which is described in the survey as – *brave; fearless; valiant; desirous; eager to do something: willing to accept new challenges* – was perceived as being very negative to Steadiness and Compliance behavior styles. Both the Dominance and Influencing behavior styles perceived the leadership characteristics – *courageous* – as also being negative. The totality of results of the hypotheses – Research question 2 asks "Do behaviors influence perceptions of effective leadership characteristics?" the answer is yes due to the analysis and finding of relationship between behaviors and perceptions.

Considering the hypotheses that indicate a statistical significance whereby the null was rejected-in four of the five hypotheses the extroverted Dominance and Influencing behavior styles and the introverted Compliance and Steadiness team up with similar perceptions of leadership characteristics. The four leadership characteristics that were shown to have a statistical significance where the behavior styles paired up in this way

are mature, forward-looking, supportive, and courageous. Only the leadership characteristic-*broadminded*-had a different outcome in which the behavior styles Influencing and Compliance responded heavily negative for this leadership characteristics.

The results stated are exclusive to this study compared to research stated in the literature review due to using a unique behavioral instrument – the Styles Insights DISC Behavior Instrument. Previous research using this instrument along with Kouzes and Posner's (1995) leadership characteristics not found nor a similar methodology.

Summary of Research Questions

This research study sought to answer two research questions focusing on the relationship between follower behavior style and follower perceptions of effective leadership characteristics. The findings of this study indicate that there is a relationship between follower behavior style and preferred leadership characteristics. By studying the relationships between follower behavior style and follower preferred leadership characteristics, leaders can begin seeking ways to encourage a productive workforce by understanding those behaviors.

Recommendations for Future Research

This study focused on follower behaviors and the relationship of follower perceived effective leadership characteristics. Future studies could scrutinize each behavior individually by various demographics. Other cross sections of populations could be studied, including samples by occupation, by culture or race, or by separate behavior styles. To address the variability a forced ranking of leadership characteristics survey could be used. This study could be replicated using additional respondent data to further clarify and confirm this study's findings.

Follower perceptions in leadership are important. Having a better understanding of follower preferences of leadership can lead to improved communication. Workshops for leaders could be designed to help develop the leadership characteristics that are perceived as most important by followers. This would lead to more awareness of behaviors, determine which characteristics are perceived, and improve overall communication between followers and leaders.

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Appendix

Table 1. Taxonomy of Leadership Theory

Theorist	Bass	Bennis & Thomas	Hersey & Blanchard	Kotter	Kouzes & Posner	Mintzberg
Contribution	Transformational Leadership	Great Leader Qualities	Situational Leadership	Leading Change	Leadership Challenge	Management Leadership
Theme or Traits	Idealized Influence	Adaptive Capacity	Telling Directing	Vision	20 Effective Leadership Char'istics	Interaction Liaison Figurehead
	Inspirational	Engage Others	Selling Coaching	Deep Convictions	Leader Development	Process Information Communicate, Monitor Spokesman
	Intellectual Stimulation	Voice	Participating Supporting	Goal Driven	Create Change	Resource Allocator Negotiator Decision Maker
	Individual Consideration	Integrity	Delegating Observing	Quest for Learning	Lead by Example	
		Trust		Comm'catn	Make a Difference	

Table 2 Cross Tabulation for H1

Crosstab for Mature

| | | | Mature | | Total |
			Neg = 1-5,7	Pos = 6	
Natural	Dominance	Count	33	16	49
		% within Natural	67.3%	32.7%	100.0%
	Influencing	Count	26	4	30
		% within Natural	86.7%	13.3%	100.0%
	Compliance	Count	20	21	41
		% within Natural	48.8%	51.2%	100.0%
	Steadiness	Count	24	25	49
		% within Natural	49.0%	51.0%	100.0%
Total		Count	103	66	169
		% within Natural	60.9%	39.1%	100.0%

Table 3 Chi-square Tests for H1

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	14.679 [a]	3	.002
Likelihood Ratio	15.929	3	.001
Linear-by-Linear Association	6.914	1	.009
N of Valid Cases	169		

[a] 0 cells (.0%) have expected count less than 5. The minimum expected count is 11.72.

Table 4 Cross Tabulation for H7

Crosstab for Forward Looking

			ForwardLooking		Total
			Neg = 1-6	Pos = 7	
Adapted	Dominance	Count	21	22	43
		% within Adapted	48.8%	51.2%	100.0%
	Influencing	Count	21	13	34
		% within Adapted	61.8%	38.2%	100.0%
	Steadiness	Count	23	7	30
		% within Adapted	76.7%	23.3%	100.0%
	Compliance	Count	46	16	62
		% within Adapted	74.2%	25.8%	100.0%
Total		Count	111	58	169
		% within Adapted	65.7%	34.3%	100.0%

Table 5 Chi-square Tests for H7

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	9.243 [a]	3	.026
Likelihood Ratio	9.154	3	.027
Linear-by-Linear Association	7.910	1	.005
N of Valid Cases	169		

[a] 0 cells (.0%) have expected count less than 5. The minimum expected count is 10.30.

Table 6 Cross Tabulation for H8

Crosstab for Supportive

			Supportive		Total
			Neg = 1-6	Pos = 7	
Adapted	Dominance	Count	25	18	43
		% within Adapted	58.1%	41.9%	100.0%
	Influencing	Count	16	18	34
		% within Adapted	47.1%	52.9%	100.0%
	Steadiness	Count	21	9	30
		% within Adapted	70.0%	30.0%	100.0%
	Compliance	Count	46	16	62
		% within Adapted	74.2%	25.8%	100.0%
Total		Count	108	61	169
		% within Adapted	63.9%	36.1%	100.0%

Table 7 Chi-square Tests for H8

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	8.131 [a]	3	.043
Likelihood Ratio	8.098	3	.044
Linear-by-Linear Association	5.059	1	.025
N of Valid Cases	169		

[a] 0 cells (.0%) have expected count less than 5. The minimum expected count is 10.83.

Table 8 Cross Tabulation for H9

Crosstab for Broad Minded

			BroadMinded		Total
			Neg- = 1-5,7	Pos = 6	
Adapted	Dominance	Count	20	23	43
		% within Adapted	46.5%	53.5%	100.0%
	Influencing	Count	26	8	34
		% within Adapted	76.5%	23.5%	100.0%
	Steadiness	Count	24	6	30
		% within Adapted	80.0%	20.0%	100.0%
	Compliance	Count	42	20	62
		% within Adapted	67.7%	32.3%	100.0%
Total		Count	112	57	169
		% within Adapted	66.3%	33.7%	100.0%

Table 9 Chi-square Tests for H9

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	11.683 [a]	3	.009
Likelihood Ratio	11.557	3	.009
Linear-by-Linear Association	3.737	1	.053
N of Valid Cases	169		

[a] 0 cells (.0%) have expected count less than 5. The minimum expected count is 10.12.

Table 10 Cross Tabulation for H12

Crosstab for Courageous

			Courageous		Total
			Neg = 1-6	Pos = 7	
Natural	Dominance	Count	28	21	49
		% within Natural	57.1%	42.9%	100.0%
	Influencing	Count	20	10	30
		% within Natural	66.7%	33.3%	100.0%
	Steadiness	Count	34	7	41
		% within Natural	82.9%	17.1%	100.0%
	Compliance	Count	40	9	49
		% within Natural	81.6%	18.4%	100.0%
Total		Count	122	47	169
		% within Natural	72.2%	27.8%	100.0%

Table 11 Chi-square Tests for H12

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	10.512 [a]	3	.015
Likelihood Ratio	10.479	3	.015
Linear-by-Linear Association	9.198	1	.002
N of Valid Cases	169		

[a] 0 cells (.0%) have expected count less than 5. The minimum expected count is 8.34.

Table 12 Ranking of Preferred Leadership Characteristics by Respondents

	N	*Min.*	*Max.*	*M*	*SD*
Dependable	169	4	7	6.662722	0.576
Honest	169	4	7	6.544379	0.707
Loyal	169	4	7	6.390533	0.81
FairMinded	169	3	7	6.360947	0.89
Competent	169	2	7	6.284024	0.894
Intelligent	169	4	7	6.059172	0.857
BroadMinded	169	2	7	6.017751	0.973
SelfControlled	169	1	7	5.994083	1.115
Mature	169	1	7	5.982249	1.072
Supportive	169	2	7	5.946746	1.093
ForwardLooking	169	1	7	5.923077	1.118
Cooperative	169	2	7	5.911243	1.096
Straightforward	169	1	7	5.905325	1.036
Courageous	169	1	7	5.775148	1.068
Caring	169	1	7	5.745562	1.277
Independent	169	1	7	5.739645	1.156
Determined	169	2	7	5.698225	1.106
Inspiring	169	1	7	5.662722	1.185
Ambitious	169	1	7	5.497041	1.44
Imaginative	169	1	7	5.295858	1.228
Valid N (listwise)	169				

Table 13 Taxonomy of Means for Perceived Effective Leadership Characteristics

Leadership Characteristic	Kouzes & Posner (1995)	Powell (2003)	This Study
Honest	X	X	X
Forward-Looking	X		
Inspiring	X		
Competent	X		
Fair-Minded		X	X
Dependable		X	X
Loyal			X
Broad-minded		X	

DISC Behavior Styles ⇒	Leadership Characteristics ⇒		Outcomes
Dominance	Self-Controlled	Honest	Leadership Satisfaction
	Fair-Minded	Intelligent	
Influencing	Broad-Minded	Ambitious	Organizational Commitment
	Forward-Looking	Caring	
Compliance	Straightforward	Inspiring	Leadership Effectiveness
	Dependable	Imaginative	
Steadiness	Cooperative	Competent	
	Independent	Mature	
	Supportive	Courageous	
	Determined	Loyal	

Figure 1. Conceptual framework of study

M	L	
		Easily led, follower
X		Bold, daring
		Loyal, faithful, devoted
	X	Charming, delightful

Figure 2. Example of behavior box choices

M	L	
-	C	Easily led, follower
D	D	Bold, daring
S	-	Loyal, faithful, devoted
I	I	Charming, delightful

Figure 3. Example of scoring scheme for Styles Insight instrument

Dominance	Influencing	Steadiness	Compliance
Demanding	Effusive	Phlegmatic	Evasive
Egocentric	Inspiring	Relaxed	Worrisome
		Resistant to Change	Careful
Driving	Magnetic	Nondemonstrative	Dependent
Ambitious	Political		Cautious
Pioneering	Enthusiastic	Passive	Conventional
Strong-Willed	Demonstrative		Exacting
Forceful	Persuasive	Patient	Neat
Determined	Warm		
Aggressive	Convincing	Possessive	Systematic
Competitive	Polished		Diplomatic
Decisive	Poised	Predictable	Accurate
Venturesome	Optimistic	Consistent	Tactful
		Deliberate	
Inquisitive	Trusting	Steady	Open-Minded
Responsible	Sociable	Stable	Balanced Judgment
Conservative	Reflective	Mobile	Firm
Calculating	Factual	Active	Independent
Cooperative	Calculating	Restless	Self-Willed
Hesitant	Skeptical	Alert	Stubborn
Low-Keyed		Variety-Oriented	
Unsure	Logical	Demonstrative	Obstinate
Undemanding	Undemonstrative		
Cautious	Suspicious	Impatient	Opinionated
	Matter-of-Fact	Pressure-Oriented	Unsystematic
Mild	Incisive	Eager	Self-Righteous
Agreeable		Flexible	Uninhibited
Modest	Pessimistic	Impulsive	Arbitrary
Peaceful	Moody	Impetuous	Unbending
Unobtrusive	Critical	Hypertense	Careless with Details

Figure 4. DISC behavior descriptors
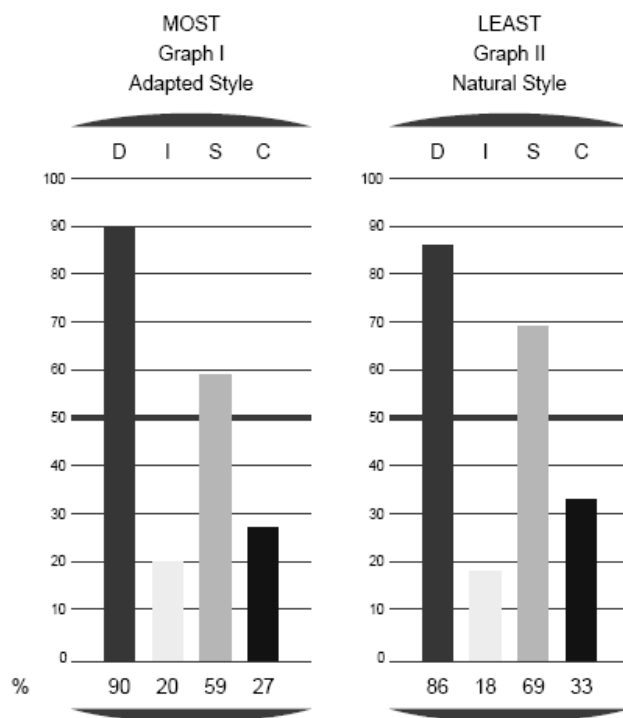
Figure 5. DISC adapted and natural styles

1. *Mature*: Having powers of body and mind full developed; Not childish.

|--|--|--|--|--|--|

1 2 3 4 5 6 7 _____ (item rating)

2. *Ambitious*: Thrusting after honor or advancement; Aspiring to high position;

Strongly desirous and eager to be or do something.

|--|--|--|--|--|--|

1 2 3 4 5 6 7 _____(item rating)

Figure 6. Excerpt of Leadership Perceptions Survey

Respondent Age Histogram

Mean =37.02
Std. Dev. =10.455
N =169
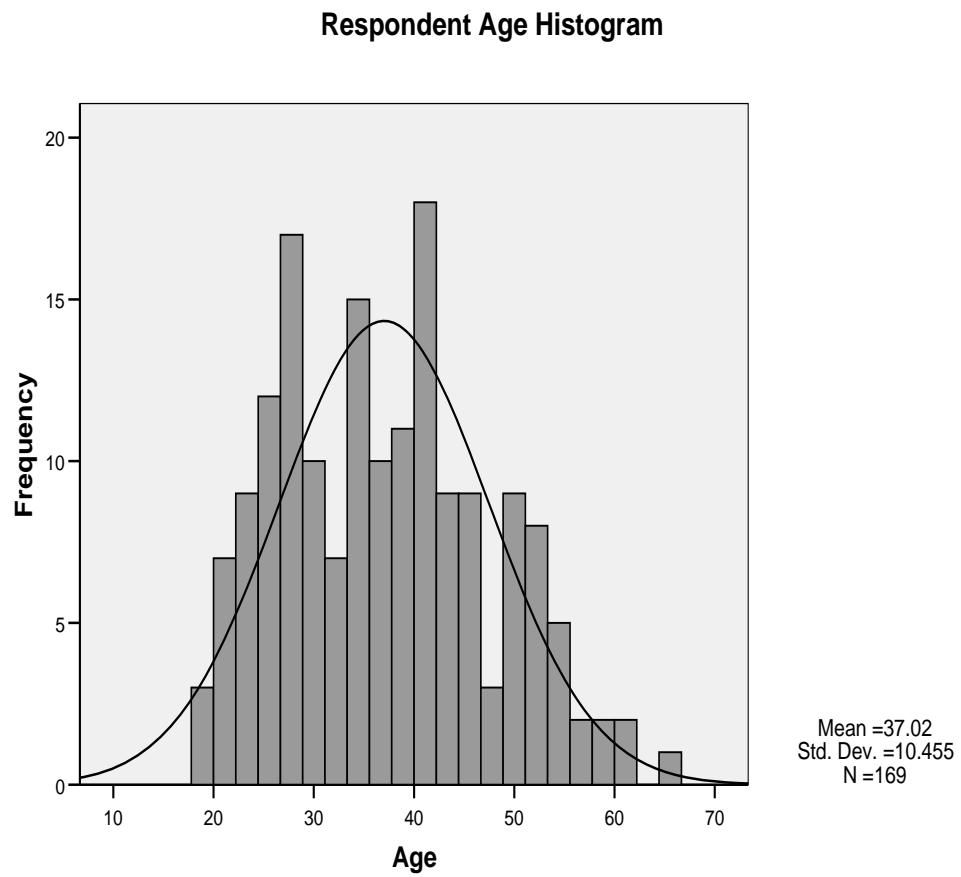
Figure 7. Respondent age histogram

Natural Behavior Style Percentages
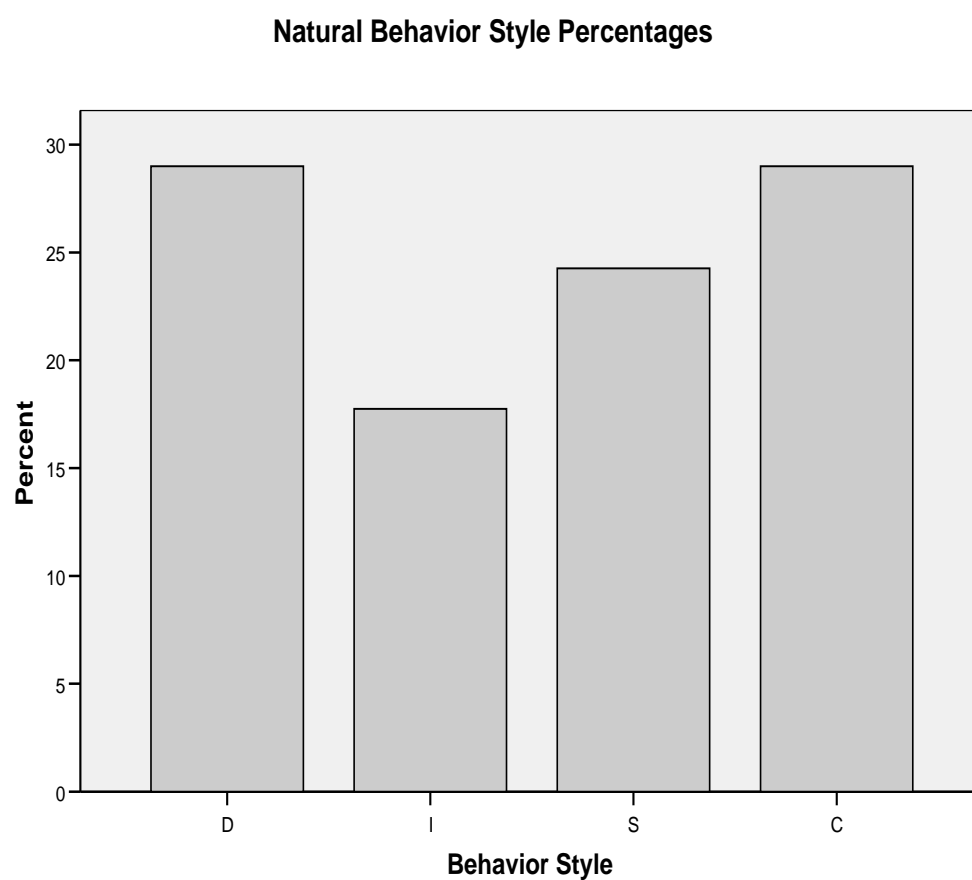
Figure 8. Natural behavior style percentages
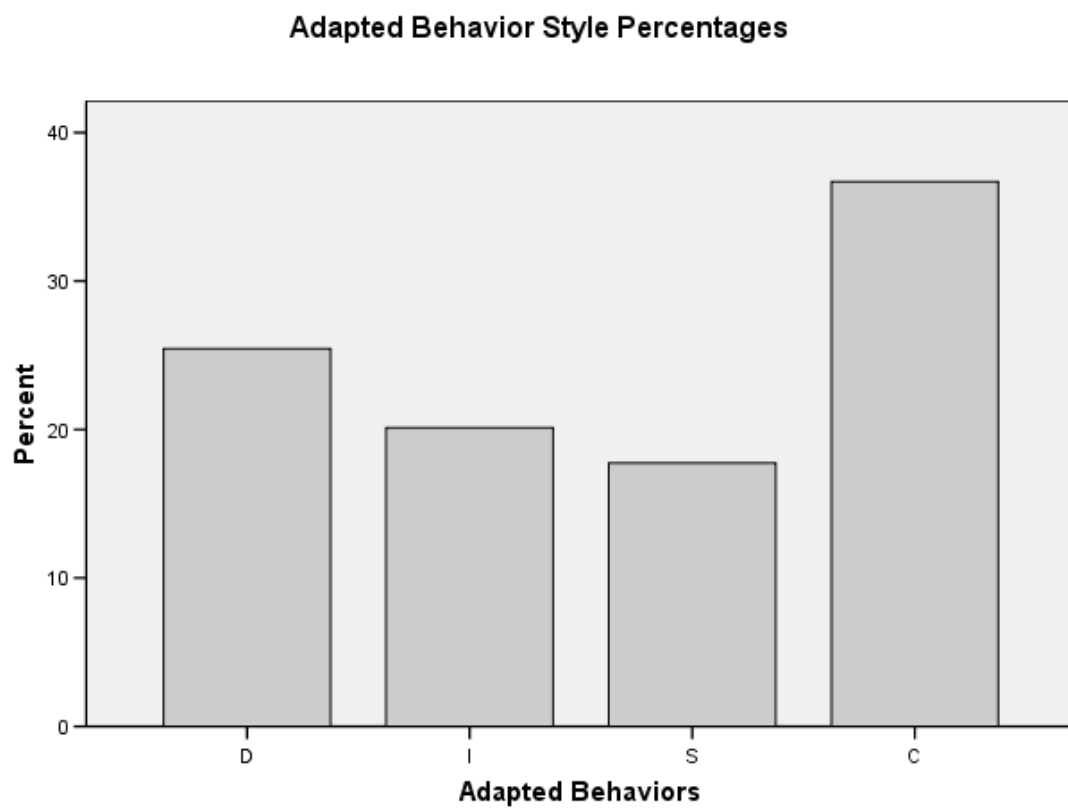
Figure 9. Adapted behavior style percentages

Analyzing Inventory: A Case Study Related to Inventory Costing Assumptions and the Potential Effect of Eliminating Lifo

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Abstract

This paper is a case study related to the dominant inventory method used by two industry segments: the semiconductors and other electronic components industry segment and the industrial and farm equipment industry segment. The results indicate that selection of an inventory cost flow assumption in these industries relates to industry-specific characteristics. The industry with frequent production innovations and low production costs tends to use FIFO cost flow assumptions, while the industry with less production innovations and high production costs tends to use LIFO cost flow assumptions.

As the SEC and key stakeholders in the accounting profession discuss the potential adoption of International Financial Reporting Standards, industries using LIFO must begin anticipating the effect of a transition from LIFO to an alternate cost flow assumption. This paper analyzes the effect of a LIFO adjustment by using the reported LIFO reserve as a surrogate for a change in cost flow assumptions. Results confirm a significant effect on measures of financial strength and liquidity.

Introduction

Inventory values play a critical role in determining a company's reported profit on the income statement and current assets on the balance sheet. Generally accepted accounting principles (GAAP) in the United States, as well as International Financial Reporting Standards (IFRS), allow a company to select a cost flow assumption to determine the inventory value. The cost flow assumption that is used can cause significant differences in the resulting inventory valuation, particularly in a period of changing prices.

In the United States, most companies select from one of three traditional cost flow assumptions: first-in, first-out (FIFO), last-in, first-out (LIFO), or average. Both GAAP and the Internal Revenue Code permit these methods. Under tax laws, however, companies that use LIFO for tax purposes must also must LIFO for financial reporting purposes.

IFRS, on the other hand, permits only FIFO and average and prohibits the use of LIFO for financial reporting purposes. With conversion to IFRS under study by the U.S. Securities and Exchange Commission and the accounting profession, this difference is sparking renewed interest in the effect of cost flow assumptions on reported inventory.

LIFO has been widely used in the United Stated for many years. During the severe inflation of the 1970's, many companies switched their inventory method from first-in, first-out (FIFO) or other related inventory accounting methods to LIFO.

Changing to LIFO brought those companies significant benefits through the reduction of taxes and, hence, improved their cash positions. To improve comparability, the SEC requires companies using LIFO to disclose the estimated difference between FIFO and LIFO values (the LIFO reserve).

Interestingly, however, not all companies adopted the apparently beneficial LIFO method. In 1988, the AICPA completed a survey of accounting methods and found that, under inflation, 37 percent companies still used FIFO exclusively. This unexpected finding led many researchers to study inventory accounting, looking for the factors contributing to selection of the cost flow assumption. The purpose of this paper is to study the relationship between the industry and the choice of the inventory cost flow method and to examine the effect of the LIFO adjustment on each company's financial result. The results, thereby, may contribute to discussions related to the future changes if IFRS are adopted in the United States.

Review of Literature

For many companies, inventory represents a large part of total assets. Generally accepted accounting principles provide guidance for inventory valuation, and many studies and research exist regarding the three common inventory cost flow methods permitted by U.S. GAAP.

General Accepted Accounting Principles

Based on U.S. GAAP, a company can choose one of several systematic inventory cost flow assumptions to value inventory. ARB 43 (AICPA, 1953) established the original standards for inventory accounting. According to ARB 43, there is no requirement that the cost flow assumption be consistent with the physical movement of the good, but the method adopted should clearly reflect periodic income. In some situations, a company can apply one cost flow assumption to a portion of the inventory and another to other portions of the inventory. However, in order to make the financial report consistent between years, the cost flow methods adopted for inventory valuation should be consistently applied unless the method fails to reflect the company's financial position.

The three most common inventory cost flow assumptions are FIFO, LIFO, and average. The first-in, first-out (FIFO) method assumes that the first unit purchased is the first sold. This results in the inventory being valued close to current replacement cost. During periods of inflation, the use of FIFO results in the lowest estimate of cost of goods sold among the three approaches and the highest net income. The last-in, first-out method assumes that the last unit purchased is the first sold. This results in costs of goods sold that closely approximates current replacement cost; however, the inventory value is based on costs incurred in past years. During periods of inflation, the use of LIFO results in the highest estimate of cost of goods sold among the three approaches and the lowest net income. If a company has to draw down inventory (commonly known as a LIFO liquidation), this results in an artificially higher net income. The average cost method takes the weighted average of all units available for sale during the accounting period to determine the cost of the unit used (Kieso, Weygandt and Warfield, 2007, pp. 382-384).

After determining the cost of inventory, a company must also apply the lower-of-cost-or-market rules. If inventory declines in value below its assumed cost, a company must abandon the historical cost principle to report its inventory at the lower-of-cost-or-market value. This means that valuations would represent the market value instead of FIFO, LIFO or average cost (Kieso, et al., 2007, pp. 422-429).

Understanding the Dollar Amount of LIFO in Financial Reports
To improve comparability, the U.S. Securities and Exchange Commission added a provision in 1972 that requires supplemental disclosures by companies that use LIFO. Such companies are required to disclose the difference in inventory valuation between FIFO and LIFO (the LIFO reserve) at each balance sheet date. The LIFO reserve can be used to adjust the beginning and ending inventories, and consequently the cost of goods sold, and to restate income as if a company used FIFO (Pfeiffer, 2007).

Adjustment of the LIFO financial reports is very important for evaluating the credit worthiness of companies with different inventory methods. Sander and Hughes (2005) illustrated the effect of LIFO on some measurements of financial strength, operating efficiency, and credit scores that incorporate inventory, such as working capital, inventory turnover, and Altman's Z-Score credit scoring system. They found that for LIFO companies in a period of rising prices, inventory, financial strength measures and the credit scores are understated, however operating efficiency measures are overstated. Jennings, Simko, and Thompson (1996) analyzed the LIFO reserve footnote disclosures as supplements to LIFO income statements and balance sheets; they suggested that the disclosure of LIFO reserves contains incremental information relative to the LIFO balance sheet but not relative to the income statement.

Other research attempts to relate the inventory method with the company's performance. Pincus and Wasley (1996) indicated that the market response to LIFO adoptions disclosed at any time, other than the earnings announcements date, showed that "early" LIFO adoption announcements might signal information about earnings growth. Bar-Yosef, Hughes, and Venezia (1995) claimed a company's higher proportion of FIFO inventory is a signal of relatively lower future changes in production costs, which is considered more efficient. Guenther and Trombley (1994) found the LIFO reserve has a significant negative relation with the market value of the company's equity.

Convergence Issues
The current U.S. GAAP and IFRS convergence projects generate new concern about the inventory valuation method. In November 2004, FASB issued FAS 151 (FASB, 2004) to address the accounting for abnormal amounts of idle facility expense, freight, handing costs, and spoilage. This statement narrowed the difference between U.S. GAAP and IFRS related to the accounting for inventory costs. However, there are other significant differences. For one, LIFO is permitted by U.S. GAAP but prohibited by IFRS (IASB, 2005). At the same time, U.S. GAAP does not explicitly require a consistent cost formula for all inventories similar in nature, but IFRS does.

Availability of LIFO in the future is threatened by both IFRS and congressional action (Storey, 2008). Therefore, many studies and research are starting to address the possibility of the repeal of LIFO and to suggest new improvements on cost flow method. PriceWaterhouseCoopers (PWC) believes that LIFO should be continually used for tax

purpose because it clearly reflects the income for tax purpose and is supported by sound tax policy (Rabinowitz, Turgeon, and Zarzar, 2007). Numerous LIFO companies have complained about repealing LIFO because repeal will significantly increase their taxable income and have a bad effect on any generated deferred tax liability (Peric, 2007). Bahnson and Miller (2004) state that simply getting rid of the conformity rule is not enough; they provide a three-phase solution that can bring more useful information to the investors while preserving tax equity. Their three-phase solution involves repealing the conformity rule, creating new GAAP for inventory, and combining LIFO and FIFO. Later, Miller and Bahnson (2008) state that convergence is an excellent opportunity to either eliminate LIFO or disable the IRS conformity rule. They also suggest reporting the company's holding gains and losses separate from its marketing profits.

If U.S. GAAP is to remain in step with international accounting standards, inventory cost flow assumptions will continue to be an important accounting issue, as well as a tax issue. Current inventory methods all have their pros and cons. According to Miller and Bahnson (2008), this may be the right time to develop a new method that will report inventory at its fair value.

Methodology and Data Collection

This study compares two industry sectors that were found to use different cost flow assumptions for inventory: the semiconductors and other electronic components industry segment and the industrial and farm equipment segment. Prior analysis determined that these segments used different assumptions, and financial data were collected to study these differences.

Companies for the study were selected from the 2008 *Fortune* 1000. Data were collected from the ten largest companies in each industry segment. (These companies and their rank are listed in Appendix A.) Using the corporate annual reports for 2005-2007, we compiled the following information: inventory cost flow assumption, total inventory, LIFO reserve (if applicable), percentage of LIFO inventory (if applicable), research and development expenses (R&D), sales, cost of good sold (COGS), total current assets, and total current liabilities.

To help explain why the two industries have different dominant inventory method, two parameters are calculated: the ratio of R&D expenses to sales and the ratio of COGS to sales (i.e. production costs). Results are analyzed using frequency distribution, mean, and standard deviation. Those two parameters are calculated using equation (1) and (2) respectively.

(1) Ratio of R&D expenses to sales = R&D expenses / Sales

(2) Ratio of COGS to sales = COGS / Sales

For companies that use LIFO, equation (2) was recalculated by adjusting for the LIFO reserve as follows in equation (3).

(3) $COGS_{FIFO} = COGS_{LIFO} - (LIFO\ reserve_{Begin} - LIFO\ reserve_{End})$

Finally, the paper studies the effect of LIFO on financial statements through selected financial indicators, including current assets, working capital, the inventory to sales ratio, inventory turnover, and current ratio. Paired t-tests are used to evaluate the statistical significance of the effect of the LIFO adjustment on these ratios.

Analysis of Data

A total of 20 companies, 10 for each industry segment, were studied in this project. The inventory cost flow assumptions that were used by those companies are shown in Table 1.

Table 1 Inventory Cost Flow Assumption				
Industry Segment	Company	Inventory Cost Flow Method		
		FIFO	LIFO	Average
Semiconductors and Other Electronic Components	Intel	√		
	Texas Instruments	√		
	Jabil Circuit	√		√
	Sanmina-SCI	√		
	Applied Materials	√		
	Advanced Micro Devices	√		
	Micron Technology			√
	Nvidia	√		√
	SanDisk	√		
	Broadcom	√		
Industrial and Farm Equipment	Caterpillar	√	√	
	Deere	√	√	
	Illinois Tool Works	√	√	
	Cummins	√	√	
	Eaton	√	√	
	Trane	√	√	
	Parker Hannifin	√	√	
	ITT	√	√	
	Terex	√		
	Dover	√	√	

As shown in Table 1, the dominant inventory methods used by the two industry segments are different. In the semiconductors and other electronic components segment, 7 out of 10 (70 percent) companies use FIFO exclusively; one (10 percent) uses the average method exclusively, and 2 out of 10 (20 percent) use a combination of FIFO and the average method. No company uses the LIFO method.

However, in the industrial and farm equipment industry, one out of 10 (10 percent) companies uses FIFO exclusively, and all other companies (90 percent) use a combination of LIFO and FIFO. According to footnote disclosures, inventories in the United States are generally accounted for using last-in, first-out (LIFO), and international inventories are accounted for using the first-in, first-out (FIFO) method. Therefore, for the inventories in the United States, the dominant inventory method used in the semiconductor segment is FIFO, but LIFO is the dominant inventory method used by the industrial and farm equipment segment.

Why do these two industries favor different inventory methods? This paper studied two common business ratios, R&D expenses to sales ratio and production cost, to answer that question. Tables 2 and 3 summarize the results of these analyses.

Table 2 R&D Expenses to Sales Ratios							
Semiconductors and Other Electronic Components				Industrial and Farm Equipment			
Items	R&D/Sales (%)			Items	R&D/Sales (%)		
	2007	2006	2005		2007	2006	2005
Intel	15.13	16.68	13.14	Caterpillar	3.35	3.47	3.19
Texas Instruments	15.54	15.43	16.14	Deere	3.80	3.65	3.49
Jabil Circuit	0.27	0.35	0.47	Illinois Tool Works	1.26	1.07	1.01
Sanmina-SCI	0.29	0.39	0.26	Cummins	2.52	2.83	2.80
Applied Materials	15.73	13.09	9.67	Eaton	2.57	2.58	2.57
Advanced Micro Devices	29.94	21.24	22.12	Trane	1.32	1.26	1.20
Micron Technology	11.95	15.27	13.44	Parker Hannifin	2.50	2.36	2.17
Nvidia	16.88	18.04	15.03	ITT	2.02	2.06	2.23
SanDisk	12.13	10.49	9.43	Terex	0.76	0.69	0.76
Broadcom	35.72	30.45	25.5	Dover	2.94	2.45	2.82
Average	15.36	14.14	12.52	*Average*	2.30	2.24	2.22
Standard Deviation	11.09	9.03	8.13	*Standard Deviation*	0.97	0.99	0.94
Average Yearly Increase	10.75%			*Average Yearly Increase*	1.78%		

As shown in Table 2, R&D expenditures are higher in the semiconductor segment than those in the industrial and farm equipment segment. Furthermore, companies in the semiconductor segment increased their R&D expenditure on an annual basis (10.75 percent average increase) more than did companies in the industrial and farm equipment segment (1.78 percent average increase). This indicates that production innovations are more frequent in the semiconductor industry.

One may conclude, therefore, that industries with frequent production innovations may tend to use FIFO while industries where production innovations are less frequent may tend to use LIFO. The rationale may be that the success of R&D expenditure is uncertain and unobservable. If the company's future costs are dependent on the success of R&D expenditure, the future production cost will be uncertain and unpredictable. Therefore, the benefit of using LIFO is not observable.

Another parameter studied is production cost ratio, which is defined as cost of goods sold divided by sales. To make the data comparable for the LIFO inventory, cost of goods sold is adjusted by the amount of the LIFO reserves. (This make the inventories approximately equal to a FIFO value.) Table 3 summarizes the production cost of each studied company.

Table 3 Production Cost Analysis	
Semiconductors and Other Electronic Components	Industrial and Farm Equipment

Items	Production Cost (%)	Items	Production Cost (%)
Intel	48.08	Caterpillar	77.24
Texas Instruments	47.00	Deere	75.20
Jabil Circuit	93.39	Illinois Tool Works	64.61
Sanmina-SCI	94.67	Cummins	80.32
Applied Materials	55.86	Eaton	71.94
Advanced Micro Devices	62.38	Trane	71.70
Micron Technology	81.05	Parker Hannifin	76.84
Nvidia	54.38	ITT	71.31
SanDisk	76.28	Terex	79.40
Broadcom	48.52	Dover	63.67
Average	66.16	Average	73.22
Standard Deviation	18.69	Standard Deviation	5.72

As shown in Table 3, the average production cost is lower in the semiconductor segment than in the industrial and farm equipment segment. Furthermore, the production cost is more variable in the semiconductor segment.

Figure 1 shows the distributions of production costs for the industries. This figure illustrates the uncertainty of production costs in the semiconductor segment compared to the uniformity of production costs in the industrial and farm equipment segment. The four companies with highest production cost in the semiconductor segment (Sanmina-SCI, Jabil Circuit, Micron Technology, and SanDisk) are also the four companies with the lowest R&D expenditures. The two companies with the highest production cost have significantly lower R&D expenditures than other companies in the same industry. This result indicated that production costs of companies in the semiconductor segment are dependent on their R&D activities. For the other companies in the semiconductor segment, the production costs are lower than the production costs of the companies in industrial and farm equipment segment.

The lower average production cost in the semiconductor segment suggests that the industries with lower production costs tend to use FIFO while the industries with higher production costs tend to use LIFO. The rationale may be that LIFO provides a greater impact on profits and using LIFO provides a bigger tax benefit.

Figure 1. Production Cost Distribution

(a) Semiconductors and Other Electronic Components

(b) Industrial and Farm Equipment
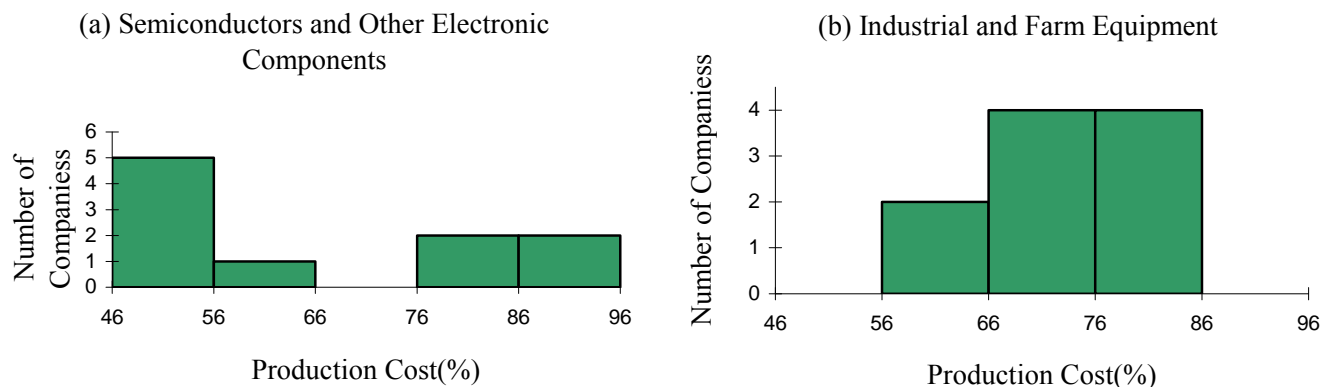
Effect of LIFO Adjustment on Company Performance Evaluation

Footnote disclosure of the LIFO reserve allows recalculation of inventory and cost of goods sold to approximate the effect of using FIFO. This allows users of financial information to compare companies that use different inventory methods. To measure the effect of this recalculation, LIFO inventories in the industrial and farm equipment segment were recalculated. Table 4 summarizes the changes in reported inventory, current assets, and working capital for companies that used LIFO.

Table 4			
Effect of LIFO Adjustment on Selected Balance Sheet Data			
Company	Percent Increase In Inventory	Percent Increase In Current Assets	Percent Increase (Decrease) In Working Capital
Caterpillar	36.33	10.27	80.97
Deere	52.75	5.31	16.91
Illinois Tool Works	7.63	2.01	3.87
Cummins	5.02	1.77	4.04
Eaton	7.28	2.27	9.75
Trane	10.19	1.09	1.89
Parker Hannifin	14.50	5.29	11.34
ITT	10.88	1.96	(18.35)
Dover	7.63	2.04	6.02
Average	16.91	3.56	12.94

As in Table 4, the LIFO adjustment increased reported inventory by an average of 16.91 percent. This result implies that the LIFO-based balance sheet understated the value of inventory by approximately 16.91 percent. This effect is quite variable by company ranging from 5.02 percent to 52.75 percent. The effect of the LIFO adjustment, therefore, is obvious and depends on the company's percentage of LIFO inventory. Companies carrying a higher percentage of LIFO inventory show bigger changes. The increase in inventory directly affects other measurements. As shown in Table 4, recalculating the LIFO inventory increased current assets by 3.56 percent and, hence, working capital by 12.94 percent.

The change in inventory valuation also affects key financial ratios, such as inventory turnover, inventory to sales ratio, and current ratio. The changes of those ratio measurements caused by the LIFO adjustment were analyzed using the paired t-tests to exam the impact of the inventory adjustment on a company-by-company basis. To evaluate the results, a level of significance of $p<0.05$ and a one-tail approach are used. The results of the t-test are shown in Table 5.

Table 5				
Effect of LIFO Adjustment on Selected Inventory Related Ratio				
Ratio	Mean Results	Mean Results	Mean	Statistical

Measurement	reported by the company	adjusted by LIFO Reserve	Percentage of Difference Between Using The LIFO method and FIFO Method	Significance of the Difference (p value)
Inventory Turnover	6.85	5.93	(13.96%)	0.00296
Inventory to Sales Ratio	0.11	0.14	16.91%	0.01178
Current Ratio	1.60	1.66	3.27%	0.00124

The p values in the Table 5 indicate that the effects of the LIFO adjustment on some inventory-related performance measurements are highly significant. If using FIFO, the average inventory to sales ratio would increase 16.91 percent, and average current ratio would increase 3.27 percent. However, the inventory turnover would decrease 13.96 percent. This indicates that there is a trade-off in using LIFO: using LIFO generates tax savings but impairs the company's financial position.

Summary and Conclusions

In this project, the inventory cost flow assumptions of two industry segments were compared, generating the following results. For the inventories in the United States, FIFO is the dominant inventory cost flow assumption used by the largest companies in the semiconductors and other electronic components industry segment, and LIFO is the dominant inventory cost flow assumption used by the largest companies in the industrial and farm equipment industry segment. Industries with frequent production innovations, where production costs are relatively more uncertain, tend to use FIFO while industries where production innovations are less frequent tend to use LIFO. Industries with low production costs tend to use FIFO while industries with high production costs tend to use more LIFO. The use of LIFO significantly undervalues a company's financial position and measures of operating efficiency. The significance of the effect depends on the company's percentage of LIFO inventory.

In practice, the factors that influence a company's choice of cost flow assumptions may be complex and multifaceted. In this paper, however, we only studied the dominant inventory method used by two industries and examined the possible reasons that may explain why these two industries favor different inventory methods.

As the SEC and accounting profession consider the implications of conversion to IFRS, more research is needed to determine the impact on financial reporting. Some changes, such as the elimination of LIFO, may have significant effects in some industry segments, such as the industrial and farm equipment segment, and may have little effect in other industry segments, such as the semiconductors and other electronic components segment. Faced with the potential elimination of LIFO, this is an opportune time for additional comprehensive studies on the appropriate inventory methods for U.S. companies.

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APPENDIX 1		
Companies Included in the Study		
Industry	Company	Rank in 2008 Fortune 1000
Semiconductors and Other Electronic Components	Intel	60
	Texas Instruments	185
	Jabil Circuit	219
	Sanmina-SCI	255
	Applied Materials	270
	Advanced Micro Devices	406
	Micron Technology	427
	Nvidia	543
	SanDisk	561
	Broadcom	575
Industrial and Farm Equipment	Caterpillar	50
	Deere	102
	Illinois Tool Works	155
	Cummins	206
	Eaton	207
	Trane	241
	Parker Hannifin	247
	ITT	285
	Terex	287
	Dover	331

Engaging Business Students in a Virtual Learning Community,Emphasizing Writing…Realized, Integrating Instructional and Information Technology Tools

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Abstract

During the fall 2008 semester, requests for proposals (RFPs) were sent to faculty to develop innovative ways of integrating students in learning communities on a college campus. The Learning Community project that was implemented supports an increase in the utilization of technologies, promotes change in faculty and student attitudes, and improves the writing proficiencies of students and faculty, all in an effort to support the university's Quality Enhancement Plan (QEP) of *Writing…Realized.*

The Virtual Learning Community (VLC) utilized an Online Thematic Design in which students were engaged in an online learning community. The VLC allowed students to utilize pod casting, digital lectures, and Blackboard Vista to facilitate the completion of an end-of-course project. The Online Thematic Design of the VLC encapsulated three learning modules, each reflecting the "bridge" courses for College of Business (COB) students. The "bridge" courses serve as core classes which are required by all Business majors. The courses included in the VLC were: Fundamentals of Computer Applications, Business Communications, and Principles of Marketing.

The findings from the project revealed that some faculty remain reluctant to use technologies, while others embraced the tools to increase student motivation; both faculty and student attitudes toward writing…realized were favorable and students generated a successful Marketing plan, while faculty generated a research study that supports the university's teaching mission.

Introduction

In a recent article entitled "*Research Re-Examined*", published in <u>BizEd</u>, the leading accreditation journal of the Association to Advance Collegiate School of Business (**AACSB, 2008**), there is clearly a need to change the way writing is produced, and ultimately how the results of writing are being utilized within the Business (B) School. In other words, accreditation agencies are beginning to focus not only on the quantity of writing publications, but the quality of those outputs. The report suggests that B-Schools "align their research (writing) outputs with their missions, while finding ways to increase the value of their research (writing) to students, practitioners, and society at large" (**Shinn, 2008**).

If the mission of the B-School is teaching, then "we [AACSB] ought to be rewarding scholarship that supports that mission" (**Shinn, 2008**). Many schools are teaching institutions; hence, the support of such writing activities that lend themselves to practical exercises and real-world learning should be supported.

Literature Review

The purpose of this study is to identify a method to increase B-School students and faculty in writing initiatives, recognizing that accreditation teams will ultimately be able to "weigh diverse forms of scholarship, instead of limiting their review to writings published in top tier journals" (**Shinn, 2008**).   Writing should address practical, and not just theoretical, applications. Writing should have a connection to the business world and not just remain in a silo among academicians, but shared among students, business practitioners, and the local, regional, and national communities.

Furthermore, written activities should maximize the use of both Instructional and Information technology tools in order to contribute to the collaboration and dissemination of those writing efforts. This research study supports a university's faculty learning goal "to increase faculty competencies in utilizing state-of-the-art techniques and instructional technologies to teach writing literacies in discipline-specific courses in the core" and "to promote change in faculty attitudes towards the value of enhancing writing skills in all disciplines" of the Writing…Realized Quality Enhancement Plan.
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Instructional Technologies

Motivation is an important component in getting students and faculty within the B-School involved in writing activities. If students and faculty could understand how their writing interests, serves to benefit both teaching and learning, then it is presumed that the acceptance of diverse forms of writing may increase faculty involvement in such activities. If faculty has a clear understanding of how diverse writing activities play a role in intellectual contributions and the promotion and tenure process, then such efforts would be generated and valued-added.

The ARCS Model of Motivation (**Kruse, 2008a**), an Instructional Technology construct, was developed by John Keller as a strategy to motivate learners; however, such model could easily serve as a framework from which to motivate B-School faculty and students to engage in writing activities. The ARCS Model stands for Attention, Relevance, Confidence and Satisfaction.

Keller believed that gaining <u>Attention</u> should include sensory stimuli (interest retaining), inquiry arousal (thought provoking), and variability (multi-media). <u>Relevance</u> is achieved by helping faculty answer the question "*What is in it for me*?" when conducting written work. Confidence provides a benchmark from which, if faculty understands that if they put a "good faith" effort in producing writing, those activities will be rewarded. <u>Confidence</u> is diminished if faculty finds it difficult to produce writings that are not recognized as being valuable or "in-field". Finally, <u>Satisfaction</u> is achieved if students and faculty can "find their new skills immediately useful and beneficial on their job" (**Kruse, 2008**).

The ARCS Model is not a replacement of Robert Gagne's Conditions of Learning (**Bostock, 2006**) or Robert Gagne's Nine Events of Instruction (**Kruse, 2008b**), but serves as a supplement to Gagne's work**.** Notwithstanding, Gagne' was instrumental in using Instructional Theory in the design and development of computer-based and multi-media-based learning, another key component of engaging B-School faculty and students in writing activities.

Information Technologies

Dr. Erik Peterson recently presented "*7 Revolutions: Global Trends and Grand Strategy*" during a University System of Georgia Faculty Development Workshop (**Peterson, 2007**). The 7 Revolutions examined were 1) population and demographics; 2) resource management; 3) technology innovation and diffusion; 4) information and knowledge; 5) economic integration; 6) conflict; and 7) governance.

Germane to his presentation, and key to this study, was the 2025 prediction on how technology, information, and knowledge were key global trends. The use of *technology*, transfer of *information*, and acquisition of *knowledge* would quadruple over the next few years. The strategy, however, would be to capitalize on ways in which to utilize these Information Technology tools. In other words, how can the use of *technology* help B-School students and faculty gain access to *information* in an effort to improve their *knowledge* of both discipline-specific content, but also find ways to produce written publications that benefit student, practitioner, and society at large? Access to such tools serve as the framework for gaining Attention as noted above in the ARCS Model of Motivation.

Apple Computers recently (**Apple, 2008**) examined the role and value of information in the teaching and learning process. Technology, information, and knowledge are becoming more and more accessible to both student and faculty. Faculty are coming to realize that traditional ways of teaching and learning, as well as, writing have changed--if not drastically.

Writing in the B-School mimics that of shifts in paradigm within corporate organizations and shifts from "white boards" to Smart Boards within academia. Central to the shift is the involvement of stakeholders (students) as change-agents. Writing in isolation, both theoretically (i.e. *Research Re-Examined*) and literally (lacking collaboration) is a thing of the past. As it was in 1972 that Mr. Rene' Dubos coined the phrase "think globally, act locally" (**Dubos, 2008**).

Student Attitudes

Collaborative writing among faculty and students take advantage of information sharing with real-time knowledge gain at the core. Students and faculty within the B-School that utilize *technology* tools such as iPods for podcasting, digital recorders for communication sharing, streaming videos for visual understanding are able to maximize their writing activities using multi-sensory methods, inquiry arousal, and variability.

B-School students that utilize *information* sources such as Galileo, The New York Times Knowledge Network, CNN Student News or *social networks* such as Face book or My Space all create access to resources that lend itself beneficial to the students in developing the five focus areas of writing, including 1) critical thinking, 2) information acquisition (research skills), 3) visual constructs, 4) technology application, and 5) reflective practice.

Student-centered writing activities help strengthen the university's Quality Enhancement Plan (QEP) of "Writing, Realized: Developing Literacies in a Technological Age" (**Quality Enhancement Plan, 2008**). Specifically, this proposal supports student learning goal to "improve students' attitudes toward writing in all disciplines as a core value" and goal to "improve the writing proficiencies of freshman and sophomore students through enhanced instructional support".

Learning Communities

Collaborative writing, using such technology, among faculty and involving students creates a Learning Community. For students, writing will help them understand how to produce Business communications, clarify career goals, enhance preparation for graduate training, and increase their self-confidence. For faculty, engagement of students in writing efforts will strengthen pedagogical strategies, create close associations with students, and assist in maintaining an active and lively writing regimen while at the same time support their professional growth. *Virtual*-Learning Communities like *Living*-Learning Communities and Learning Communities in general are beneficial to both faculty and students.

According to *The Washington Center for Improving the Quality of Undergraduate Education*, "students involved in learning communities become more intellectually mature and responsible for their own learning and develop the capacity to care about the learning of their peers. Faculty members involved in learning communities that facilitate cross-faculty collaboration are expanding their repertoire of teaching approaches, continually revising their course content, and acquiring new scholarly interests. Learning community faculty members are also building mentoring relationships with each other and are more frequently engaging with beginning students and general education offerings" (**http://www.evergreen.edu/washcenter/lcfaq.htm, 2008**). In a book entitled Creating Learning Communities written by *A Coalition for Self-Learning*, learning communities are beneficial not only to home schoolers (self-learners), but also to others.

Methodology

The *Virtual* Learning Community utilized an online Thematic Design in which six students were engaged in an online learning community. The average number of students enrolled in each of the three courses were twenty-five (25), however, only six of those students were able to arrange their schedules to accommodate enrollment in all three courses simultaneously, a challenge that limited the population of the study.

The *Virtual*-Learning Community utilized WebCT Vista, and other technologies to facilitate the completion of an end-of-course Marketing Plan. *Virtual* Learning Communities have been used to increase the number of undergraduate students obtaining degrees in S.T.E.M. areas (**Sendaula and Biswas, 2004**)

The Thematic Design of the course was such that students were provided with three (3) learning modules; each reflecting three "bridge" courses in the College of Business (COB) Program of Study. The "bridge" courses serve as CORE classes which are required by all Business majors. All students were simultaneously enrolled in all courses at the same time during a 16-week semester.

The three learning modules included course content specific to writing a Marketing Plan. Fifteen percent (15%) of the student participant's final grade in each course was determined by the assessment of the Marketing Plan. Learning Module tools that were created for Students and Faculty to maximize their *Virtual* communications skills included: Podcasting (Visual) – Faculty used podcasting to communicate directly with the students. Faculty engaged in Instructional Technology Training Center (ITTC) Workshops for "Podcasting Orientation" in which they can learn how to create and

effectively use Podcasts pertaining to Business Plan generation, entrepreneurship, business organizations. Digitized Lectures (Auditory) – Faculty recorded information and lecture materials using a Digital Recorder. This information will be uploaded into the Virtual Learning Community in WebCT for students to listen to and gain a better understanding tasks being completed. WebCT Vista (Textual) - Students utilized the URL, Chat room, and Discussion Board tools as additional technology components to support collaboration and communications.

Campus-Wide departments were instrumental to the success of the learning community. The following departments offered support: The Center for Economic Education/Small and Minority Entrepreneurship served as a data warehouse for providing students with samples of Marketing Plan documentation and materials. Student Activities helped facilitate student involvement in student organizations in which students attended District and State competitions for Marketing Plan knowledge.   Instructional Technology Training Center (ITTC) department hosted Podcasting and iTunes Orientation workshops. The ITTC department also introduced the participants to the iTunes U that is a feature on the university campus.

According to the AACSB study (**Shinn, 2008**), qualitative research studies should be valued. Qualitative research attempts to obtain a more complete picture of an educational process and findings will include descriptions of student activities or student outcomes. The following research questions were investigated and the outcomes are found below.

Question 1: Will faculty and students involved in a Virtual Learning Community produce writing that is value-added?

Question 2: Will faculty involved in a Virtual Learning Community increase their competencies in the use of technology?

Results and Conclusions

Student participants in the study were evaluated based on several means of assessment. Learning Outcomes are those events and/or activities that you hope the student (and faculty) gain from having been involved in the research study. The following outcomes were used to measure and answer the research questions. There were two student goals and one faculty goal. In addition, there were three goals related to their involvement in the Learning Community.

Based on Table 1.0 below, all outcomes were achieved, with the exception of those relating to Facebook and Myspace. At the advice of the Instructional Technology staff, the use of social networking for student-faculty communications was discouraged due to the potential legal ramifications of doing so; hence, the use of course management platforms were preferred.

Table 1.0

Outcomes Assessment of the Virtual Learning Community Goals

Student Goals	ACTUAL Outcomes	Means of Assessment	Criteria for Measuring Success	Use of Results	A	MP	NP
Involve students in writing a Marketing Plan to be presented at an upcoming Competitive Event.	Students demonstrated a basic understanding of the elements of a Marketing Plan.	Drafts of each section of the Marketing Plan were due on a weekly basis.	Success was determined by evaluating their writing style and creativity	The completed Marketing Plan was entered in a Competitive Event in the spring 2009.	🟩		
Engage students in learning communities where they can utilize social networking as a framework for Teaching and Learning	Students were expected to create a Face Book or My Space account with a link to the Virtual Learning Community project.	Social networking websites were expected to be created by the group at a learning community weekly meeting.	Success was to be determined by the review of the social network account and the ability for the Virtual Learning Community link to be observant.	Face Book and My Space were to be used twice per day for students to communicate with their peers and faculty involved in the project.			🟥
Faculty Goals	Expected Outcomes	Means of Assessment	Criteria for Measuring Success	Use of Results			
Involve faculty in writing that is value-added to students.	Faculty generated a research paper from this Virtual Learning Community project.	Faculty conducted weekly focus-group sessions to evaluate the effectiveness of the program.	Success was determined by the completion of a research presentation and submission.	The study was presented at the Society for Business, Industry and Economics conference held in April 2009.	🟩		
Learning Community Goals	Expected Outcomes	Means of Assessment	Criteria for Measuring Success	Use of Results			
Engage students and faculty in learning how to use software technologies for *knowledge acquisition*.	Students and Faculty learned how to use Galileo, The NY Times Knowledge Network, The CNN Student News, and WebCT URLs to find supporting	An organizer page was created in WebCT with links to each of these components (Galileo, NYT, CNN, URLs).	Students were required to visit the links at least twice per week to acquire information for their Marketing Plan.	Information from these resources were used to provide support and reference materials for the Marketing Plan and the research documents.	🟩		

	information to complete the Marketing Plan (students) and the research study (faculty).		Faculty were required to visit the links at least once per week to acquire information for the research study.		GREEN	
Engage students and faculty in learning how to use software technologies for *social networking*.	Students and faculty were expected to learn how to create and use Face Book, My space, WebCT Chat rooms and Discussion Boards to support communications about the Business Plan and "Best Practices".	Social networking websites were expected to be created by the group at a learning community weekly meeting.	Success was to be determined by the review of the social network account and the ability for the Virtual Learning Community link to be observant.	Face Book and My Space were to be used twice per day for faculty to communicate with their peers and students involved in the project.		RED
Engage students and faculty in learning how to use hardware technologies for information *creation* and *dissemination*.	Students and faculty learned how to record information on a Digital Recorder, upload Podcasts on an iPod, and share this information among the Virtual Learning Community participants.	iPod training was conducted by the IT department. Students and faculty were taught how to record information on the Digital Recorders and upload this information to WebCT.	Success was determined by student's ability to watch Podcasts created and/or sent by Faculty. Success was determined by faculty's ability to record voice requirements on the digital recorders for the student's usage.	Podcasts were used in the WebCT course and on the iPods. Digital lectures were uploaded to the WebCT course.	GREEN	

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A = Achieved;   **MP = Making Progress**   **NP = No Progress per: Removed**

Further Research

The researchers suggest that the study be duplicated to include a greater population of participants. One approach would be to conduct a cross-disciplinary study to students engaged in writing exercises across the curriculum. While this study focused on the engagement of students and faculty in working together to generate value-added written deliverables, a future study should focus on the comparison between the amount of time a faculty spends in developing online learning tools and the amount of time a student spends on utilizing such tools, all in an effort to increase learning opportunities for both faculty and student.

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Original Case Writing as a Teaching Method

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Abstract

This paper discusses the usefulness of original case writing by business students as an effective teaching method. In an educational environment that is increasingly experiential in nature, original case writing is an effective manner for helping students develop a variety of skills ranging from research skills to writing skills to business analysis and strategy recommendation skills. Following a discussion of ways to effectively implement case writing as a teaching method, a marketing case prepared by students in a Consumer Behavior course taught by the author is presented as an example of the output of students assigned to prepare an original case.

Introduction

The quest for more effective teaching methods is a part of every instructor's existence. In the quest to produce learning outcomes commensurate with stated goals, instructor's often engage in various trial-and-error teaching experiments in the effort to find methods that do, in fact, result in student learning and, at the same time, fits the instructors interests, personality, and professional goals. Some of these trials produce a desired outcome, while others fall flat. One tried-and-true teaching method is the use of case studies. Business instructors have employed the case method for decades to generally good effect. In addition to the long recognized virtues of the case method, this decades old teaching method is consistent with the current emphasis on experiential learning.

Traditionally, the case teaching method has involved the assigning of a case written for the purpose of assisting instructors in efforts to achieve a particular teaching goal. Such cases are often written by someone other than the instructor and the situation presented in the case may have occurred a number of years in the past. While such cases continue to have a useful function in the teaching of business strategy, instructors of business strategy may do well to consider expanding their view of the way cases can contribute to student learning to include student-written cases.

Literature

While it may appear that experiential learning is a new approach to teaching, it is actually a topic that has been discussed for many years. Forman (2006) has reviewed a substantial portion of the literature pertaining to experiential learning. Following are some of the literature resources he lists and discusses that well serve to inform an instructor wishing to learn more about experiential learning.

The concept of experiential learning has been refined and expanded for at least the better part of a century. Early in the twentieth century Dewey (1916) put forth the idea that experience should be linked with learning. Allport (1945) posited that

participation in learning activities results in learning outcomes that are more meaningful for the learner. Around the same time Piaget (1950) discussed the internalizing of an environment by accommodation and assimilation of experience into one's currently existing body of knowledge. Further, the works of Coleman (1976) and Kolb (1984) point to the usefulness of greater student participation in the educational process. For example, Kolb's model of experiential learning contains four stages: concrete experience, reflective observation, abstract conceptualization, and active experimentation, all desirable abilities for students to develop.

A number of authors have documented the benefits of experiential learning. Rolls (1992) has expounded on the virtues of experiential learning for the opportunity to combine theory and practice. Frontczak and Kelly (2000) promote experiential learning as a way to increase student motivation and for the potential such learning offers for improving communication skills and the integration of conceptual information and theories and a more realistic setting than is true in the traditional classroom setting.

Teaching Through Original Student-Written Cases

Forman (2006) discusses the difference between the assigning of a traditional case for students to analyze and the assigning of an original case to be written by students. Following are shortcomings he lists for the traditional use of a case assigned for students to analyze. First, the lengthy time period between the case study and it's availability for students to use may diminish the usefulness of the case. As Forman states, "In essence, the traditional case-study method is analogous to looking in a rearview mirror." Kennedy, Lawton, and Walker (2001) support this sentiment. In addition to this shortcoming, traditional case studies can only provide indirect experiential learning opportunities. Whatever is in the case is the result of the unique and subjective perspectives of the case author(s). Thus, students assigned a traditional case do not have an opportunity to engage in the important process of gathering and evaluating relevant information for themselves.

In contrast to these shortcomings, Forman lists several advantages for the original student-written case approach. First, the approach is consistent with the stated benefits of experiential learning. Second, it is a substantive writing experience that should assist in the goal of helping students become better written communicators. Third, there is the potential for an instructor to publish the case study when students produce a well-written case study.

CENGAGE Learning™ provides on its website a manual by Paul Swiercz that is a useful resource for helping instructors in the transition from having students act as passive analysts to case developers. The approach documented is called *SWIF Learning—Student-Written, Instructor-Facilitated Case Writing.* This learning technique is designed to engage students fully in the educational experience and ease the transition from the classroom to the workplace. As a guide for action the manual should assist an instructor to overcome the already mentioned shortcomings of the traditional case methods; the limiting of students to the role of passive analysts who use facts and events reported by someone else. Instead, SWIF Learning allows, and requires, students to become, at the very least, researchers, writers, and team-members.

Student written cases can take at least two forms. They can be prepared using only secondary sources or they can be prepared by the use of secondary sources and direct contact with the leadership of a firm that has been recruited for the purpose of being the subject firm of the case. Both approaches have advantages and disadvantages. Forman (2006) present an approach in which direct contact with firms is used as part of a case-writing model used in introductory MBA courses. An issue of particular note with the direct-contact approach is the ability to acquire sensitive data, particularly in privately owned firms. The problem, obviously, is avoided when using only published materials. The decision as to which approach to use must be left to the instructor's discretion based on factors such as whether or not the class is a graduate class or undergraduate class and the part the case plays in the totality of the course requirements.

Author's Experiences and Recommendations

As is true with all attempts to incorporate a new teaching element in a class, implementing a student-written case component in a class is something of a trial-and-error process. Discovering a process that accomplishes the desired learning outcomes may require several semesters. Following are some insights gained by the author across several semesters and classes where student-written cases have been assigned in Consumer Behavior classes.

Concerning the positives of student-written case assignments, the foremost, in the author's opinion, is that student learning does seem to occur in a way and at a level not always evident in other assignments and activities. In addition, courses topics seem to have enhanced relevance to the students when they are required to research a real-world situation with the goal of discovering the driving factors of current buying and consuming practices in a specific context. Subject matter that can be viewed as something that exists only in a textbook or in the context of the classroom is discovered to exist beyond those places. Most students respond in a generally positive manner to the assignment. As an additional task among many others a student carrying a full-load must complete, the assignment is not typically met with great enthusiasm when the assignment is made. However, after completing the assignment it appears that most students feel some positive has been accomplished.

On the negative side, student enthusiasm can vary according to the subject of the case. Student sensitivity to their personal interest in a subject can impact the quality of the contribution of the individual student in a group preparing a case. This may lead to a degree of frustration as some group members feel one or more individuals are not fully contributing to the group effort. However, this provides a teaching moment if the instructor monitors the progress of the groups.

A tendency of students is to rely too heavily on on-line information resources. It is recommended that instructors include a requirement that students must engage in research beyond the internet when gathering information to use in writing the case. It is also recommended that instructors have intermediate deadlines to be met on the way to the due date for the finished product. For example, an instructor might set a deadline for the information gathering phase, another for a detailed outline for the case, and the due date for the finished product. Without intermediate deadlines the instructor loses the opportunity for input that can lead to a better final case product. In addition, intermediate

deadlines help prevent the students/groups from beginning the project too close to the deadline for the finished case to be able to do the best job in preparing the case.

Conclusion

The use of student-written cases is potentially a useful teaching method for instructors of business courses across all business disciplines. The potential for enhanced learning outcomes and opportunities for student-instructor interaction make this method one at least worthy of consideration and perhaps a trial implementation. In the appendix that accompanies this paper is a sample student-written case.

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Appendix

RECONNECTING WITH THE LAND: A MARKETING CASE ON THE DECLINE OF HUNTING AND FISHING

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CLASSIC SMALL TOWN CRISIS

Tully, New Hampshire is just like any other country town community found in New England. The countryside is covered with natural wonders and beauty. Three large lakes and two smaller ones provide the community with a strong love and appreciation for fishing. For generations, families have taken their children to the lakes, teaching them the pastime of fishing and its connection to the community. The woodlands surrounding the community are home to an abundance of wildlife, and hunting is also taught to children at a very young age.

Bruce Matthews has lived in the Tully community nearly his whole life. Matthews began teaching his son the basics of fishing, hunting, and trapping at young age. They were able to enjoy these sports for many years, but over time a subtle problem started to arise in the community. What was once a peaceful, simple, and undisturbed country town, started becoming a somewhat split community. As is the case with many smaller communities, more and more people came from the city in pursuit of a "country" lifestyle. This process is also known as Rurbanization.

A CHANGE IN SCENERY

Rurbanization is a term that refers to the invasion of rural areas by affluent urban and suburban people seeking a "country" lifestyle. Soon, the woods and fields where Bruce Matthews and his son would hunt were bulldozed and made ready for housing development. In fact, the field where Matthew's son trapped his first gray-tailed fox was developed for an estate that cost nearly $1 million. Also, the lakes that the Tully community valued so dearly were also developed for housing. Areas of lake were fenced up to allow privacy for new homeowners. Soon, areas of recreation that were available to everyone were now available to no one.

As the years passed, Matthews began to see his son become less interested in the outdoor sports. It seemed like the new affluent members of the community had also brought a change in lifestyle for the town as well. The attitudes and values of these newcomers were quite different from culture that had existed in Tully years before their arrival. This adjustment in the culture also brought about economic change. New businesses arrived on the scene at the demand of the new upper-class members of Tully. Now, members of the community had many more options of how to spend time besides using the outdoor recreation destinations that nature had supplied to them. As Matthew's son became opened to more options of ways to spend time, his love for the outdoor sports became less and less.

RURBANIZATION AND ITS EFFECT ON THE PARTICIPATION OF OUTDOOR SPORTS

This problem of Rurbanization is sadly not isolated to the community of Tully, NH. In fact, this problem exists in hundreds of rural communities all over the country and has directly affected the participation of hunting and fishing.

A study done almost a decade ago by US Fish and Wildlife Reserve showed that fishing and hunting participation in the US had dropped significantly. In the 18 to 24 year age group, fishing participation dropped from 20% in 1991 to 13% in 2001. Hunting participation also dropped in the same age group from 9% in 1991 to 6% in 2001. That study was conducted eight years ago and the numbers have only continued to drop.

Reasons cited by the US Fish and Wildlife Reserve for these declines are five-fold. The fast-paced life of many Americans trying to earn a living in today's society causes less money to be spent on recreation and more spent on paying off mortgages, car loans, health care, and college tuitions. Many Americans are tied down by their jobs, so recreation time is scarce.

As America becomes more urbanized, fewer people are growing up in rural areas of the country. These are the areas where hunting and fishing are common activities. Organized sports have taken the place of outdoor sports even in many of these rural communities, resulting in families traveling out of the local communities to more urban areas where organized sports take shape.

Computers and technology have changed the way that children grow up in today's society. Many children spend their free time surfing the internet and playing video games, rather than getting outside to learn skills such as hunting and fishing.

Hunting has become a difficult sport to take up. Several reasons contribute to this problem. Owning a firearm has become increasingly expensive and a hassle in many jurisdictions. The cost of license fees has also continued to increase over the years. Though this fee is not much, the current economic situation forces many families to forego want expenditures for basic needs. Also, finding land to hunt on is difficult due to the increasing lack of public land.

Anti-hunting activist and their campaigns are having a notable impact on America's youth. Children are bombarded with messages about how hunting and fishing is unethical and is sometimes referred to even as murder. The potential impacts of these problems could have catastrophic consequences if the interest of hunting and fishing activities continues to decline. Wildlife populations could potentially overpopulate into troublesome levels. An overpopulation of deer for example, will cause more car accidents, resulting in injuries or possibly even deaths.

Revenue losses in tourism could also be a result. There are many rural areas that depend on the hunters and fishers that travel to their communities during peak seasons. This loss of revenue is predicted to reach the billions. The purchase of hunting and fishing licenses will also decrease, resulting in states and local government seeing significant revenue loss.

State fish and wildlife departments will also experience downsizing. Conservation and wildlife programs will lose funding and experience a decrease in

participation for local residents. Children will lose an appreciation of wildlife and nature. They will never experience all of the life lessons that hunting and fishing teach.

A SPORTSMANS PARADISE IN JEOPARDY

Alaska has always been regarded a haven for outdoor enthusiasts. The state is second to none in fishing and big game hunting. Over the years, millions have traveled there in search of a once in a lifetime hunting or fishing expedition. Sadly though, Alaska is experiencing a decline in out-of-state outdoor enthusiasts. The major reason for this decline is location. Alaska is isolated far away from its fellow states. Over the last decade, the cost of travel has hit an all time high. The cost of traveling to Alaska is especially high. Many sportsmen are beginning to hunt and fish locally. Another reason is the shift in culture to simply view wildlife instead of hunting it. Activities participated in by families on vacation include whale watching, backpacking, and other outdoor recreation excluding hunting and fishing.

PROBLEMS IN THE HOOSIER STATE

Since the last study performed by Indiana Department of Natural Resources in 2001, fishing is down 12% and fishing is down 6 percent. In a 2006 survey done by National Survey of Fishing, Hunting, and Wildlife, Indiana's numbers had plummeted dramatically. Since the survey was conducted, there has been a decline of 85,000 people hunting, 224,000 fishing, and 500,000 participating in other wildlife associated activities. The explanation for these numbers is expressed unanimously with hunters and fisherman across the country. Fishing and hunting licenses have greatly increased in price, causing many people to save the money they once spent for the license. Fishing licenses in Indiana just a decade ago were only $6. Today, the same license cost $17, a significant jump for lower income families in the rural parts of the state. Also, the state is losing money on the license fees and special taxes paid by hunters and fisherman for firearms, ammunition, archery, and fishing equipment. The money from these taxes goes directly back into the state parks and wildlife conservation areas. As the revenue from these licenses and taxes continues to fall, a new question arises for the furthering of these sights.

RECONNECTION

Perhaps one of the main problems facing the hunting and fishing world, is that people are failing to see the importance of reconnecting with the land. Before the time when grocery stores were so prevalent, people saw the land as a way of life. Hunting and fishing fulfilled basic needs. It seems like this idea has gotten lost in time. In order to understand where we come from and how we got here, we must reconnect. This concept of reconnection to the land is central to the components that must be communicated for hunting and fishing participation to regain stability.

A DECISION TO BE MADE

If this growing crisis is to be addressed in the outdoor sports industry, it needs to be addressed now. State departments, outdoor enthusiast's societies, and outdoor educators have to look at what their options are for creating a remedy for this growing problem. As the continual expansion of society grows out from the city and into the country, these groups must find ways to continue the traditions of hunting and fishing the land.

While the urbanization of rural communities and changes of rural culture are inevitable, there are solutions that can be reached to help the survival of this declining sport.

SOLUTIONS

Communities, societies, and government departments who all oversee the furthering and regulating of outdoor sports, namely hunting and fishing, must consider several alternatives to solving the problem at hand. Several suggestions are listed as strategies to keeping these strong traditions alive and passed down through the generations.

(1) Including the appreciation of outdoor sports in the education process--Schools could include some elements of hunting and fishing to the curriculum. Physical education would be a great way to do this.

Advantages: Through implementing these outdoor activities into the curriculum, it allows children to gain a deep appreciation for these activities at a young age. Also, it allows the chance for children who have not been previously exposed to these sports to have an opportunity to be informed and enjoy them.

Disadvantages: In communities that are more urbanized, this kind of solution could be considered violent or extreme. It would be in the best interest of this suggestion to try the program out in an a rural community who's values and attitudes reflect a desire to reconnect to the land through hunting and fishing.

(2) Raising awareness about the serious implications of the decline in outdoor sports.

Hunting and fishing are traditions passed down through family generations. If the decline of children's participation in hunting and fishing is not taken seriously by parents, then these traditions will be lost over time. One solution to this problem would be for state Departments of Natural Resources to host "parent-child" hunting and fishing competitions throughout the state. This would encourage participation and friendly competition, as well as knowledge and teaching about outdoor sports.

Advantages: Children and their parents are able to engage in reconnecting with the land and experiencing the ways of the generations that preceded them.

Disadvantages: Many families will avoid the cost of a program or activity like this, since they could see more beneficial activities to spend money on for their children.

(3) Run several ads--By running several commercial ads featuring high profile, professional fisherman and hunters, awareness can be created about the decline of these sports. These individuals would encourage the purchasing of hunting and fishing licenses to promote the strengthening of family activity and stewardship of the land.

Advantages: The ads will promote interest in children who have never engaged in these activities before. The ads could also serve to encourage parents to resume their

abandoned passions for outdoor sports or to pursue interests that were never there in the first place. Through use of the media, masses of people will be reached.

Disadvantages: The cost forked out by the state departments or special interest groups to run an ad like this will be costly. There is also the potential that the ad could end up being less effective than thought of originally.

(4) Reaching urban communities--Several programs could be put together for urban communities and children that had not been previously exposed to outdoor activities. Perhaps a certain conservation organization could partner with the YMCA. The conservation organization could set up booths on YMCA property promoting hunting and fishing. This could provide children and families exposure to things such as archery, fishing equipment, and possibly even guns. These event programs would provide a safe atmosphere for children to first experience the world of outdoors. Several trained professionals would need to be in attendance.

Advantages: Many children and parents would be reached, who otherwise would not have had the opportunity to participate in these activities.

Disadvantages: There could be low levels of interest and acceptance in these areas where outdoor sports seem foreign or unpopular. It may be hard to find a partner who is willing to help in this effort. Also, finding volunteers to teach the children and their families about these skills could be difficult to find or to attain commitment from.

RECOMMENDATIONS

Though many of the suggested solutions to this rising problem in outdoor sports could be useful, no solution is greater than the suggestion of the retelling and passing down of stories. The oral tradition of storytelling about a great hunt or a great day of fishing is something kept very sacred in these rural communities. Families must continue this art. They must talk about the places, the timing, the atmosphere, and all the other aspects of these events. When story telling about these events become real, then these places become home.

The issue of rurbanization will continue to be a problem. But it will take a conscious effort of both the people of the rural communities and the urban newcomers who decide to reside there. The urban people must understand that there is an existing culture in the rural community. They must understand that they are bringing a completely different lifestyle to the table. They also must attempt to understand the rural culture. Urban newcomers must drop the fundamentalist views that they may have about coming to the rural community. This predetermined attitude could bring devastating effects to a well established culture. Rural communities must embrace their urban friends. Through this crisis, there remains a great deal of hope. Rurbanization could potentially open the door to a solution. Rural communities must make sure that their tradition is ever-present, and that it becomes a way of life for many of their new urban friends as well.

In conclusion, this crisis of hunting and fishing declination must be addressed now. There are several suggested solutions for how this problem can be remedied. We live in a society where so many of the traditions of our past and forefathers are thrown out the window to make room for more convenient ways of life. We must make sure that

these traditions of hunting, fishing, and continual stewardship of the land do not get lost in the mix.

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Environmental Impacts on GPA for Gifted and Talented Schools: An Attitude, Interest, Values and Behavioral Approach

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Abstract

This research explores the impact of students' ability to adjust to school environment at a residential gifted and talented upper-level high school for math and science. Students in their junior and senior years were given the DISC (Dominance, Influence, Steadiness, and Conscientiousness) behavioral instrument and tracked over a two year period. The DISC has been used in job profiling to help companies make better hiring decisions such that employee retention and job success are maximized. The DISC identifies a person's adapted behaviors based on what he or she believes about the environment, and also identifies the person's natural or preferred behaviors. Stress from the environment can be measured by reviewing the difference between the adapted and natural behaviors. Dissimilarity between the adapted and natural behavioral styles would indicate more stress related to the environment. The individual difference scores for the four DISC components were added to create a new variable, TotalD. The study used multiple regression analysis to assess the impact of TotalD scores on the outgoing grade point average of the student. Results indicate that the greater the TotalD score, the lower the outgoing GPA. Further analysis showed via t-tests that students with an outgoing GPA of 3.60 or higher were most affected by this TotalD score. This research illustrates that the DISC can be used with relatively young subjects to determine how well they are adjusting to the environment. Findings can also be used to help improve retention at the institution and better predict those who may be most at risk for attrition.

Introduction

The DISC has been used in job profiling (Furlow, 2000) to help companies make better hiring decisions such that employee retention and job success are maximized. Support for hiring practices that intentionally result in a closer match between an employee's behavior preferences and job skills are found in companies as diverse as Walt Disney's the Magic Kingdom and Southwest Airlines (Connellan, 1996; Freiberg & Freiberg, 1997; Sartain & Finney, 2003). Companies use these practices because their employees generally have higher levels of motivation and a lower turnover rate while the companies themselves tend to have better overall organizational performance with significant reductions in the cost of doing business (Collins, 2001 and Curphy, 1988).

An upper-level residential school for accelerated learners faces many of the same concerns as employers. The school administration wants to attract and retain students who have both the social and academic skills needed to be successful in the residential

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school environment (Brody & Benbow, 1986; Caplan, Henderson, Henderson & Fleming, 2002; Lupkowski, Whitmore & Ramsey, 1992; Muratori, Colangelo & Assouline, 2003; and Noble & Drummond, 1992). As in industry, when the fit between student social and academic skills is strong, the students potentially have a greater likelihood of persisting and being more successful while the cost to the school in lost funding opportunities for other potentially successful students decreases.

Despite the best efforts of the institution, students in the program sometimes drop out. Other than academic criteria, there are no additional predictors of success used by the institution to evaluate prospective students. There is significant investment of time and money in selecting high school juniors and seniors to attend an accelerated residency school for gifted and talented students. Furthermore, students who drop out cannot be replaced, which can impact future school funding.

The purpose of this study is to identify additional variables that would predict student retention or provide an early warning of students at-risk for leaving. Success in this study was measured as the outgoing grade point average (endGPA) of the student. Multiple regression analysis was used to determine predictors of this dependent variable. Identification of predictor variables (e.g., sex, grade rank, incoming GPA, outgoing GPA) could assist the school administration in screening students for admission and providing an early warning of students at-risk for dropping out. Retention is a significant component of state funding. Furthermore, it would reduce the emotional stress of both students and parents created by the student's dropping out of school before graduating.

Theoretical Background

Identifying and selecting gifted and talented students has been researched for over 40 years (Johns Hopkins University, 1999). Joseph S. Renzulli, Director, The National Research Center on the Gifted and Talented, University of Connecticut, has indicated that highly productive people have three interlocking clusters of ability that can be applied to gifted and talented students: above average ability, task commitment, and creativity (Renzulli, 1986). Sternberg and Wagner (1982) have described giftedness as a kind of mental self management with three characteristics: adapting to environments, selecting new environments, and shaping environments. They also describe three skills typically used: separating relevant from irrelevant information, combining isolated pieces of information into a unified whole, and relating newly acquired information to information acquired in the past.

When gifted and talented students were compared with students of the same age group, personality and behavioral differences were found (Mills, 1993). In this case the Myers-Briggs Type Indicator dimensions were used for comparison resulting in the gifted and talented students conveying greater preferences for introversion, intuition, and thinking. Additionally, the academically talented students expressed a preference for a perceptive style. These students gave emphasis to thinking over feeling. They tended to score higher on achievement drive and lower on interpersonal and social concerns.

Dealing effectively with people through self-awareness has been identified as important to success for both students and employees. Drucker (2005), recognized for his consulting and writing related to effective management practices said, "History's great achievers – a Napoléon, a da Vinci, a Mozart – have always managed themselves." Part

of managing oneself as proposed by Drucker includes understanding oneself and building on one's strengths. This includes understanding how one gets things done and how this is similar to or different from how others get things done. Goleman (2004) argues, "People who have a high degree of self-awareness recognize how their feelings affect them, other people, and their job performance."

One approach to increasing self-awareness and the impact one has on others that is recommended by Rehling (2004) is improving understanding of conversational styles. The DISC approach is one way to improve dyadic and team relationships (Bjorseth, 2004).

Stress can be significant for gifted and talented students (Kaplan & Geoffroy, 1993; Macham, 1991). Kaplan (1990) describes the impact of stress in gifted students as the following:

"Many gifted youngsters have a heightened sensitivity to their surroundings, to events, to ideas, and to expectations. Some experience their own high expectations for achievement as a relentless pressure to excel. Constant striving to live up to self-expectations--or those of others-- to be first, best, or both can be very stressful. With every new course, new teacher, or new school questions arise about achievement and performance, since every new situation carries with it the frightening risk of being mediocre. Striving becomes even more stressful when unrealistic or unclear expectations are imposed by adults or peers. The pressure to excel, accompanied by other concerns such as feeling different, self-doubt (the "imposter" syndrome), and the need to prove their giftedness can drain the energy of gifted students and result in additional stress."

Kaplan then suggests that stress can hinder the gifted student's thinking, concentration, and decision making:

"It leads to forgetfulness and a loss of ability to focus keenly on a task, and it makes students overly sensitive to criticism. Under these conditions, they perform less well and are more upset by their failures."

When gifted students are placed in direct competition with other gifted students, self-concept can decrease which sometimes leads to an increase in stress. (Kaplan & Geoffroy, 1993).

Renzulli & Park (2007) have suggested that schools must identify and pay attention to signs of frustration and discontent in gifted students. They also suggested that schools should change school culture to provide challenging curriculums to accommodate the student's learning needs and interests. Earlier Silverman (1993) recommended that schools should provide learning communities by factoring into the classroom various kinds of students. Renzulli and Park (2007) cautioned schools to "*Find ways to affirm students who don't fit the 'good student' mold* " (p. 40).

The literature related to effectiveness in communication and work skills shows both commonalities and differences when approaching this topic. Four style-based factors frequently identified as being closely related to effective communications and work skills are D or Dominance, I or Influencing, S or Steadiness or Supportiveness, and C or Compliance or Conscientiousness (Bonnstetter & Suiter, 2007; Straw, 2002; Wittmann, 2008; Zigarmi, Blanchard, O'Conner & Edeburn, 2005). Four other somewhat similar style-based factors related to effective communication and relationships use terminology such as Driver or Director, Expressive or Socializer, Amiable or Relater and Analytical

or Cautious (Alessandra, O'Connor & Alessandra, 1990; Bolton & Bolton, 1996; Merrill & Reid, 1981).

Style Insights – DISC is produced by Target Training International – Performance Systems, Ltd. TTI "uses the term 'style' as originally suggested by Fritz Perls to relate more to the specifics of how someone does something (Watson & Klassen, 2004, p. 4)." The Style Insights - DISC (Dominance, Influencing, Steadiness, Compliance) behavioral instrument produced by TTI has made changes to newer versions of their instrument as a means of keeping pace with current terms and descriptors being used (Watson & Klassen, 2004). The material produced by TTI also includes measures of behavioral hierarchy factors which relate to the ability to call upon many or fewer behavioral skills (Bonnstetter, 2006) and measures both natural and adapted behaviors (Watson & Klassen, 2004).

The DISC theory was originally developed by Marston (1928) and published in *The Emotions of Normal People*. Using DISC terminology Marston described people as behaving along two axes, passive or active, depending on the individual's perception of the environment as either antagonistic or favorable (Bonnstetter & Suiter, 2007). These can be grouped into four quadrants as follows:

1.   Dominance (D) generates activity in an antagonistic environment;
2.   Inducement (I), later changed to Influencing, generates activity in a favorable environment;
3.   Steadiness (S) generates passivity in a favorable environment; or
4.   Compliance (C) generates passivity in an antagonistic environment (Bonnstetter & Suiter, 2007).

Vrba (2008, pp. 9 - 10) defines each of the DISC factors as follows:

Dominance. Dominance style of behavior is direct and decisive. This individual feels that it is important to achieve goals, they do not need to be told what to do, and they set high standards. When projects take too long they grow impatient: they enjoy competition and want to win. They are sometimes blunt and come to the point directly. "D" individuals tend to be direct, controlling, risk-taking, pessimistic, judging, extroverted, change-oriented, and fight-oriented.

Influencing. The Influencing behavior style reflects outgoing, optimistic individuals who love to communicate, and are people persons. These individuals tend to participate in team and group activities; they like the limelight though may not want to lead. "I" individuals prefer to be direct, accepting, risk-taking, optimistic, perceiving, extroverted, change-oriented and flight-oriented.

Steadiness. The Steadiness behavior style shows sympathetic, cooperative behavior. Helping others and fitting in are important to these individuals though they are hesitant to implement change and do not like to be in the limelight. "S" individuals tend to be indirect, accepting, risk-assessing, optimistic, perceiving, introverted, continuity-oriented, and flight-oriented.

Compliance. Compliance behavior style tends to be reliable and trustworthy. These individuals will plan out a strategy considering all the facts and possible

malfunctions, and they prefer to work alone. "C" individuals prefer to be indirect, controlling, risk-assessing, pessimistic, judging, introverted, continuity-oriented, and fight-oriented.

Marston did not develop the DISC instrument, but his work did lay the foundation for the current DISC behavioral instrument (Bonnstetter & Suiter, 2007). Walter Clarke developed the first DISC related instrument entitled Activity Vector Analysis (Personality Insights, 1940). The Style Insights – DISC instrument used in this study was developed and validated by Bonnstetter (2007) and Target Training International, Ltd. Over 20 years of research and validation studies have been completed. The most recent validation study was conducted by Klassen (2006).

Use of the DISC model provides a behavioral framework to help people understand their behavior preferences, learn to identify behavior preferences of others, and learn to identify specific behaviors best suited for various organizational environments (Warburton, 1983). According to Warburton (1983, p. 2), "this is the information which they require for maximum productivity and to build multiform, harmonious relations with others." Working with a model such as that provided by the DISC approach helps overcome the belief that only people who are like me are the best choice for work positions or team members for a school project (Hymowitz, 2004; May & Gueldenzoph, 2003).

Personality and the relating behaviors have been found to predict job satisfaction (Judge, Heller & Mount, 2002). Another study found that personality and job satisfaction were significantly correlated in intensive care, non-intensive care and perioperative nurses (Hart, 1986). The importance of helping people in organizations understand and use behaviors effectively can be directly related to turnover. According to Schoeck (2007), "85% of turnover is due to behavioral incompatibility." Shepherd (2005) has reported increased profits when employee work styles are compatible with the work styles preferred by the organization. Part of the increase in profits could be related to a decrease in employee turnover because of the improvement in person/job fit.

A number of studies have researched the value of using the DISC instrument to predict success. One study found that it can be useful in predicting the success of sales managers (Devine, Naidu, Kleimenhagen, 1997). Bonnstetter (2006) studied 670 top performing sales people from companies in both the U.S. and Germany. He found that behavior, particularly behaviors related to D, S, and C, were shared by top performers in sales in both countries.

The DISC system (Scarbecz, 2007) has also been used as a communication tool to motivate patients to engage in healthy behaviors. By using the DISC system to establish a rapport with dental patients, Scarbecz reports dental professionals having increased success with persuading patients to accept treatment plans that are essential for their health and well-being.

Another study suggests that the DISC system can be used to profile jobs and then hire those persons that match the profile (Furlow, 2000). Hall, in Bonnstetter & Suiter (2007), found that persons with high Dominance and low Steadiness scores have a higher chance of accidents in certain occupations. Hall also found that persons with a high Steadiness or Compliance score have a greater likelihood of their using safer behaviors.

The DISC report identifies two behavioral styles, Natural (Graph 2) and Adaptive (Graph 1). The Natural Style represents the behaviors one exhibits when they are not under pressure. This is said to be the "real you." The Adapted Style predicts one's behaviors when placed in an environment that the person perceives as demanding certain behaviors (Bonnstetter & Suiter, 2007). Warburton, in Bonnstetter & Suiter (2007), found a direct correlation between a person's DISC Natural Style behaviors and that same person's match to their environment (job or home) or Adapted Style behaviors. Warburton revealed that the greater the disparity between the DISC natural behavioral style and the environmental adapted behavioral style, the greater the stress. Furthermore, Warburton's research gives evidence that the DISC natural and adapted behavioral disparity is a predictor of job satisfaction, mental health, physical health, alcohol use and absenteeism (Bonnstetter & Suiter, 2007). Thus, the greater the difference between Graph 1 and Graph 2, the greater the potential for stress.

Students vary in their ability to self-manage the level of stress associated with adapting to a learning environment different from their natural behavioral style and the learning process involved in the environment. The self-generated energy that gives behavior direction toward a particular goal is, according to Zimmerman (1985), a key component of self-motivation. Certainly self-motivation includes the ability of a person to choose to regulate their behaviors as they determine appropriate for effectiveness in specification situations (Smith, 2001).

Artino (2008), studying students in a traditional classroom and an online classroom, did report research findings that showed students with higher self-regulating behaviors tended to have higher GPAs. Research findings reported by Bagamery, Lasik and Nixon (2005) support earlier work of Black and Duhon (2003) related to gender and grades as they relate to student performance. Both groups of researchers have reported that gender and grades are significant determinants of student performance.

Noble and Smyth (1995) reported that females in an accelerated school setting are more likely to earn grades equivalent to males who are participating in a similar academic environment. Females in this accelerated academic environment are also more likely to persist effectively in math and science courses. This level of persistence tends to be higher than that of their peers in a less challenging academic environment or one where peer support for female achievement in the areas of math and science is not strong. One rationale proposed for this difference is that both males and females in the accelerated learning environment provide a support network for each other where high achievement in math and science is encouraged by their peers.

Bagamery, Laski and Nixon (2005) further reported findings that age (or rank in school) was not a significant determinant of student performance. Students who tend to perform well at one age or grade in school have a tendency to continue to perform well as they progress through school.

The methodology used in this research project and the hypotheses evaluated are addressed in the following section.

Methodology & Hypotheses

A two-year, accelerated public residential state high school for students in their junior

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and senior years was utilized in this study. The school is located in the south-central US; studies at the institution focus primarily on mathematics, science, computer science and humanities. It is part of that state's flagship university system. Admission to the school is competitive and selective; previous GPA at the student's home high school is used as a criterion, along with ACT or SAT scores.

This research explores the impact environment has on academic performance at an accelerated residential gifted and talented upper-level high school for math and science. Students in their junior and senior years were given the DISC (Dominance, Influence, Steadiness, Conscientiousness) behavioral instrument and tracked over a two year period to identify predictor attributes of success. Data were collected from 211 students, including academic and personal demographic information along with DISC scores. All data collection was completed in a computer lab with online testing; results were provided to the students approximately two months following their participation.

Four independent variables were utilized in this study (TotalD, Sex, Grade, and GPA). TotalD is the sum of the absolute value of the difference between each DISC variable from his or her Adapted Style and Natural Style, and is a measure of stress. Sex is a dummy variable (0 = female, 1 = male), Grade (rank) is the numerical year of their grade level (11 or 12), and GPA (entering) is the earned GPA each student brought with them from the previous high school (freshman and sophomore years). The observed dependent variable was endGPA, the cumulative GPA earned while at this institution.

Based on the literature discussed above, it is hypothesized that the following relationships will exist between the independent variables and the dependent variable endGPA:

Hypotheses Matrix: Effect of Independent Variables on endGPA

Hypothesis	Independent Variables	Directionality
H1	TotalD	s.d. (-)
H2	Sex	n.s.d.
H3	Grade (rank)	n.s.d.
H4	GPA (entering)	s.d. (+)

s.d. = significant difference and direction of difference
n.s.d. = no significant difference

Results

"Success" at this institution was operationalized as Grade Point Average earned while at the two-year school (endGPA), and was the dependent variable. The mean endGPA was 3.55, while the median was 3.56.

Values of three of the independent variables were based on institutional data (sex, grade and entering GPA). The remaining independent variable was calculated post-hoc based on student responses to the DISC instrument.

The DISC reports an individual score for each of the four components, but in both the subject's "natural" and "adapted" or environmental styles. Thus, there are Dn, Da, In, Ia, etc., scores for each student. A third set of four measures was calculated as "difference" scores (Dd, Id, etc.) that is the absolute value of the difference between the

adapted and natural states. Finally, a new composite variable, the Total Difference (TotalD) score, was calculated that is the sum of Dd, Id, Sd and Cd. These scores were used in multiple regressions (Table 2) and t-test comparisons of students above or below various endGPA cutoff values (Table 3).

Table 1 shows inter-item correlations between the four independent variables and the dependent variable. There is a significant negative correlation between TotalD and endGPA (r = -.143; p = .041). Other significant relationships include GPA with endGPA (r = .717; p = .000) and Grade with endGPA (r = -.178; p = .011). These indicate that as TotalD and Grade increase, endGPA decreases; while incoming GPA and endGPA are highly correlated. The strength of this latter correlation is so strong as to suggest the possibility of multicollinearity in a regression equation calculated subsequently. GPA and endGPA are independent measures, though, since students effectively begin anew once they start at this institution.

Table 2 shows the results of 7 regression equations that were calculated. A full model (Model 1) was calculated first using all four independent variables (R-square = .540). In this model both Grade and GPA were significant predictors, while TotalD was less than marginally significant. Sex was insignificant and thus not deemed a relevant predictor of endGPA.

In Model 2, sex was removed since it was the least-important variable in the previous model. Overall R-square was virtually unchanged; Grade and GPA remained highly significant predictors, while TotalD improved slightly toward being significant.

Models 3-5 explored different combinations of two of the three remaining independent variables. In Model 3, Grade and GPA were once again shown to be highly significant, with r-square (.534) only marginally less than in Models 1 and 2. Model 4 include Total D (still not significant) and Grade (highly significant), but the exclusion of Grade caused R-square to drop to .520. In Model 5, Grade and Total D were included, and were both significant. It took the removal of GPA to cause TotalD to become a significant predictor, but R-square dropped to 0.050.

Models 6 and 7 were simple regressions with only GPA (Model 6) and TotalD (Model 7) included. Both variables were very significant in their separate models, but Model 6 had a much higher R-square than did Model 7.

The possibility of multicollinearity in the model by virtue of the GPA variable is strong, even though, as indicated above, they are independent measures. Still, the strength of this relationship is both intuitive and supported in the literature. While GPA and endGPA are independent, in one sense endGPA is but a continuation (albeit after a restart) of what a student has already been capable of attaining. Thus, a student who entered with a high GPA will likely continue in a similar fashion.

The role of TotalD only becomes apparent, though, once GPA is removed from the mix. Further analysis of endGPA based on only TotalD showed specifically where the impact is felt the most. Table 3 includes the results of three t-tests for independent means. The first t-test used the median endGPA value (3.56) as the cutoff for analysis, resulting in two equally sized groups. While those at or above the median had lower TotalD scores, the difference in means was not significant. But when the cutoff was increased to 3.60, the difference in means became very significant. Raising the cutoff to 3.65 revealed an even more significant difference. The implication of these findings is that students with higher endGPAs have less stress than their peers with lower endGPAs.

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Based on the results of the analyses above, we thus retain H1, H2 and H4, while rejecting H3. The incoming GPA is a very strong predictor of endGPA, as supported in the literature. Grade (H3) was significantly and negatively related to endGPA, showing that as students moved from 11th to 12 grades their cumulative GPAs dropped (thus opposing prior research findings). There was no gender-based difference in endGPA, thus affirming prior research findings. Finally, stress, as measured by the TotalD score, was shown to be a significant predictor of endGPA (albeit a weak one).

Discussion

The data used in this research project focuses solely on student scores on the DISC and outgoing GPA's. There has been no involvement of administration/management training in the DISC system that would help them see specific benefits in approaching students and/or employees based on style needs and preferences.

Natural DISC scores reflect a person's preferences for behaviors. Adapted DISC scores reflect the behaviors a person believes are needed for a particular situation (e.g., job or school environment). The greater the disparity between natural and adapted scores, the greater the likelihood that a person's stress level is increasing (Warburton, 1983). While moderate to moderately high levels of stress may help increase productivity, the point at which stress becomes negative and results in nonproductive behavior will vary.

Someone in a new job or who is adjusting to a new school environment may initially have higher differences between their Adapted and Natural scores and thus have a larger overall Difference score. Even someone who tends to use behaviors from each of the four styles to adapt to situational needs will, over time, risk burnout and excessive fatigue if they are not able to use some of their preferred behavior in productive ways.

If the job characteristics (i.e., course requirements) aren't motivating or rewarding, then making a change such as adapting your DISC scores might not always work. Ree and Carretta (1999) implicitly support this concept where research they conducted indicated that lack of ability may not be the problem. Their research indicated that it is possible for the student to simply find the job characteristics (e.g., course requirements) to be demotivating.

DISC style preferences, both Natural and Adapted, can be one factor contributing to a student or employee's success. While style fit (sum of the difference in Adapted and Natural styles) for both the individual and the organization is important, DISC style alone may not be the only predictor of success. The fact that only data relating to the DISC system were used in this project is a limiting factor in the research. Additionally, directionality (direction of the difference scores between the Adapted and Natural DISC scores) should be explored and is a limiting factor.

Also, the data in this research project apply to performance of accelerated junior and senior students at a residential school. Without additional research, it cannot be generalized beyond this one group and setting.

Further research is needed to expand analysis of data related to the DISC system and to include another potentially important component, a measure of attitudes and values. Behaviors typically reflect how a person behaves while values reveal why a person makes specific choices.

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This research could be expanded in several ways. One dimension that would add depth would be to involve the administration and faculty of the school in DISC training and get their support for its use by them in interacting with the students. Another would be to determine the specific environmental factors that influence performance for those that had high sum of difference scores. This could lead to a more successful and well rounded learning environment.

Future research should consider directionality of the differences between Adapted and Natural DISC scores. Earlier research has suggested that a higher Adapted D and C score was a predictor of success (Deviney, Mills & Gerlich, 2009). This would suggest that students adapting to a task environment would be more successful than those that cannot.

Finally, future research should incorporate a measure of attitudes and values. If the DISC styles indicate *how* one behaves*,* and individual attitudes and values measure *why* a person makes various choices, it would seem important to analyze outcomes on attitudes and values independently and to also combine behaviors, attitudes and values measures to see if the overall combination does in fact provide a more complete picture.

Future research needs to address each of these limitations, individually and collectively, to identify possible relationships that could support or even change the direction of findings when examining style based on the single factor with the highest score.

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Appendix

Table 1: Correlations

		TotalD	endGPA	GPA	grade	sex
TotalD	Pearson Correlation	1	-.143(*)	-.097	.064	.078
	Sig. (2-tailed)		.041	.165	.353	.261
	N	211	205	208	211	211
endGPA	Pearson Correlation	-.143(*)	1	.717(**)	-.178(*)	-.073
	Sig. (2-tailed)	.041		.000	.011	.299
	N	205	205	202	205	205
GPA	Pearson Correlation	-.097	.717(**)	1	-.027	-.122
	Sig. (2-tailed)	.165	.000		.696	.080
	N	208	202	208	208	208
grade	Pearson Correlation	.064	-.178(*)	-.027	1	-.072
	Sig. (2-tailed)	.353	.011	.696		.298
	N	211	205	208	211	211
sex	Pearson Correlation	.078	-.073	-.122	-.072	1
	Sig. (2-tailed)	.261	.299	.080	.298	
	N	211	205	208	211	211

* Correlation is significant at the 0.05 level (2-tailed).

** Correlation is significant at the 0.01 level (2-tailed).

Table 2: Regression Models

Factor/Model	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7
TotalD	B= -.001 t= -1.484 p= 0.139	B= -.001 t= -1.446 p= .115		B= -.001 t= -1.512 p= .132	B= -.001 t= -1.955 p= .052*		B= -.001 t= -2.060 p= .041*
Sex	B= .014 t= .606 p= .545						
Grade	B= -.065 t= -2.811 p= .005*	B= -.067 t= -2.896 p= .004*	B= -.068 t= -2.936 p= .004*		B= -.081 t= -2.487 p= .014*		

GPA	B= .884	B= .879	B= .888	B= .888		B= .898	
	t= 14.350	t= 14.448	t= 14.640	t= 14.353		t= 14.550	
	p= .000*	p= .000*	p= .000*	p= .000*		p= .000*	
R-squared	0.540	0.539	.534	.520	.050	0.514	0.020

* significant at p = 0.05 level

Table 3: T-tests for Independent Means: TotalD by endGPA groups

endGPA Group/Stats	N	Mean	Std Dev	t	p
>= 3.56	103	57.59	26.793	-1.661	0.098
<3.56	102	64.04	28.749		
>= 3.60	87	55.55	25.252	-2.338	0.020*
< 3.60	118	64.67	29.210		
>= 3.65	70	53.26	22.864	-2.835	0.005*
< 3.65	135	64.71	29.513		

df = 203

* significant at p = 0.05 level

An Analysis of International Internship Programs Based on the Hospitality, Leisure and Tourism Industries

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Labor needs at a variety of companies are frequently erratic in nature. Factors affecting the labor force include seasonality, labor force availability and quality of available workers. Work organizations that rely heavily on part time workers are particularly in need of reinforcing work forces. Domestic employees can prove problematic for companies that use large numbers of seasonal workers as they frequently can't find them in large enough numbers to fully staff there facilities. As a result a growing number of work organizations are relying heavily on international workers who are brought into the country to work under special federal visa programs. These visa programs require that the workers be affiliated in many instances with an educational experience at an Institution of Higher Learning. Several years ago the Walt Disney Company embarked on a course to rapidly increase the total number of international internship students. Today that program alone employs over 5,000 students annually. Other companies and of particular note some amusement park operators on the New Jersey Shore rely on International workers for over fifty percent of their work force. As these programs continue to grow in difficult economic times they have varied impacts on the workplace and academia. This paper provides an overview of aspects of the operation of International Internship Programs from the perspective of both businesses and institutions of higher education. The paper examines the qualities of successful programs, issues and ethics regarding such programs and contains additional analysis of the operation of such programs and their economic impact.

Introduction

Even in difficult economic times many tourist attractions and other hospitality, leisure and tourism related businesses experience difficulty in staffing their facilities. The leisure ant tourism related industries are most privy to these types of problems, but other industries also experience some seasonality and rapidly changing needs in their workforces. As a result of this staffing problem many facilities have turned to non-traditional employment scenarios to keep their work forces within budgetary restrictions and also to have operational stability. This paper examines the some of the dimensions of employment programs largely utilizing International students and other international workers who are mostly in the college age population. Some of these programs are done in conjunction with colleges and universities and have academically based components. Other internship or work exchange programs have no educational components. Both types are considered herein. These programs are examined herein largely from the viewpoint of the hospitality, leisure and tourism related industries, however most aspects of this exploration can also be ported over to other industries or industry groups. The market considerations, program types, operational considerations and economic impacts of such programs are all discussed. Persons reading this article will acquire a broad operational knowledge of these types of programs and well as an understanding of their

impacts on the hospitality, leisure and tourism industry and the greater economy as well. The current growth of these programs which appears to be occurring at a rate of approximately 3 to 5% annually in spite of the weak U.S. and worldwide economy also contributes to the need to further investigate these programs. (1)

Methodology

This study utilizes various literature found regarding the regulation and operations of such programs.   The author analyzed a convenience sampling of operating programs in the preparation of the manuscript.

Types/Backgrounds Of Programs & Government Regulation

There are several general types of programs which are basically dictated by governmental regulations falling under what is usually a "J" visa classification. The ones that most pertain to or have potential for participation by academic organizations and particularly those of a post secondary nature are considered herein.   These regulations stem from various type classifications that are provided by the federal government which allow for the sponsorship of such international workers by business or business in conjunction with colleges and universities, other third parties or virtually independently. The purpose of all such programs is to: "Is to increase mutual understanding between the people of the United States and the people of other countries by means of educational and cultural exchanges. Educational and cultural exchanges assist the Department of State in furthering the foreign policy objectives of the United States." (2)) The classifications are varied and each have different regulations that would take a paper unto itself to fully examine. These regulations and classifications can be fully read on the U.S. Department of State Website. A pragmatic explanation of the different classifications (types of experiences) that exist is as follows:

1.   Internships- This category appears to exist for post graduate non-entry level casual labor internship experiences. These must be according to federal code, "opportunities for international participants who are looking to gain work-based practical training and internships in the United States. The regulations prohibit sponsors from placing interns in unskilled or casual labor positions….Further; sponsors must not place interns in positions that require more than 20 per cent clerical or office support work." (3). This category appears to be for what most academics would call higher level or senior year internships. These internships are sometimes even in short supply for U.S. students. This experience must be engaged in by the potential applicant within one year after completion of an academic program in their home country or the applicants must be active students at the post secondary school level in their home country.

2.   Camp Counselor-This category is strictly reserved for foreigners who are coming to the U.S. to work as summer camp counselors. This is a category that is used heavily in the camping segment of the leisure industry. (4)

3.   Summer Work/Travel-This category is available for foreigners who wish to engage in almost any type of employment in the U.S. for a period not to exceed four months in length. These programs must occur during the students regularly scheduled summer recess periods. This appears to be the category that is in greatest use by the

hospitality, leisure and tourism industry at present due to the summer seasonality of many of the businesses in our related industries. (5)

4.   Trainees-The training program provides exchange visitors the opportunity to enhance their skills in their chosen career field through participation in a structured training program and to improve their knowledge of American techniques, methodologies, or expertise within their field of endeavor.   The trainee category seems to be the most widely used for more comprehensive internship/trainee programs. It is intended for students or graduates needing practical training in a variety of industry categories relating to their academic programs including: Agriculture, Forestry and Fishing, Arts and Culture, Aviation, Construction and Building trades, Education, Social Sciences, Library Science, Counseling and Social Services, Health Related Occupations, Information Media and Communications, Management, Business, Commerce, and Finance, Public Administration and Law Sciences, Engineering, Architecture, Mathematics, and Industrial Occupations.   According to the Dept. of State these programs "prohibit sponsors from placing trainees in unskilled or casual labor positions…..Further, sponsors must not place trainees in positions that require more than 20 per cent clerical or office support work. A J-1 (J-1 is the class of Visa number assigned to this type of Visa by the federal government and covers most situations herein) training program is intended to provide exchange visitors the opportunity to enhance their skills in their chosen career field through participation in a structured training program and to improve their knowledge of American techniques, methodologies, or expertise within their field of endeavor. **Use of the Exchange Visitor Program for ordinary employment or work purposes is strictly prohibited. Sponsors may not place trainee participants in positions which are filled or would be filled by full-time or part-time employees….**(Requirements for participation include:) A degree or professional certificate from a foreign post-secondary academic institution from outside the United States and at least one year of prior related work experience in his or her occupational field outside the United States, or five years of work experience outside the United States in the occupational field in which they are seeking training. The maximum duration for the trainee category is 18 months except for the following restrictions: (a) Agriculture programs are limited to a maximum duration of 12 months (b) Hospitality training programs are limited to a maximum duration of 12 months; **any hospitality training program longer than six months must have at least three departmental rotations**. The training (in any category of work) cannot duplicate a trainee participant's prior training and experience." (6) It should be further noted that due to abuse in regards to hospitality and tourism positions in this category the government recently categorized those positions as a separate industry class whereas they used to be considered part of the Management, Business, Commerce and Finance Category previously listed. (7)

Sponsoring academic institutions or other sponsors need to be approved by the State Department and then they are able to utilize the government's SEVIS system which stands for: Student and Exchange Visitor Information System.   The sponsoring organizations are responsible for maintaining the standards for these programs and certifying that they are meeting the standards. The Student and Exchange Visitor Information system enables sponsoring institutions to issue such forms as the DS-2019 which is the form required to be issued by the sponsor to the approved foreign participant for many of these programs. Sponsors may fall into a variety of categories including

fully accredited academic institutions and foreign study agencies/not for profits. There are numerous resources on the internet to help potential sponsors and there are also resources to help potential applicants. Many of these can be found by searching for J-1 programs on a variety of search engines on the internet.

Marketing and Program Purpose Considerations

Considerations need to be made on several fronts as one examines such programs. There are considerations that affect the need for such employment programs from the employer's side, but there are also considerations that need to be made from the viewpoint of the host educational institution.

Employer Side Consideration
The reasons to engage in these employment programs for businesses can be varied. These include:

1.   Control of labor costs-Costs for foreign workers can be greatly reduced. These programs generally require that participants have health insurance with a maximum of a $500 deductible per occurrence. Such insurance for the age groups that usually participate in these programs is very inexpensive in relationship to other programs. Insurers are easily found by searching for "foreign student health insurance" on Google or any other diverse internet search engine. Reasonable plans that qualify under federal government guidelines are as little as $30 per month of the stay in the USA and the fees for these are normally paid by the foreign visitor. Further, these workers are sometimes paid at slightly lower wages than U.S, workers.

2.   Stability and Predictability of Labor-Once recruited and placed these workers rarely quit and go home. Further many of them can't quit due to financial considerations or the fact that they are enrolled in academic course work which will not be completed if they do not complete there full stay and work experience in the USA These factors pretty much make turnover rates predictable so there is no need to worry that you will lose these workers in large numbers during the height of the annual tourist season or for that matter at any other time of the year that they are being used in the workforce.

3.   Ease of recruitment-Institutions of Higher Learning and other educational partners as well as agencies will recruit students for these various programs at no cost to the employer. A complete list of participating agencies/businesses/educational partners can be found on the Dept. of State Website (6) :

4.   Highly motivated and interested workforce-The workers recruited are frequently eager to learn about U.S. culture and our workplace. They frequently demonstrate above average motivation and good customer service skills to spark up the workforce.

5.   Better Worker Supply-In many markets seasonal employees are hard to find due to the demographics of the local population. Such programs clearly help alleviate this deficit.

6.   Increased Work Force Diversity-These programs can help increase work force diversity and also provide workers who can speak a variety of foreign languages which can in turn provide better customer service for foreign visitors. (7)

Sponsor Side (Educational Partner) Considerations

Factors regarding these programs for sponsors such as colleges, universities, not-for-profit and other business agencies include:

1.   Economic Factors-Economic factors of various types influence the marketability of these programs. Of particular importance is what it costs to go to School in the country that is hosting the potential participants. Certain countries have low or no tuition costs for college students. In these countries generally speaking the cost for the offered program must be lower than that of the cost in countries where tuition is paid. This situation however is circumvented by the eagerness to study abroad factor cited below and how the program is ultimately constructed.

2.   Programmatic Factors-These are discussed greater in length later in this article, however, most programs include some type of services prior to being stationed on the work site and some of these services such as cultural orientations or educational coursework appear to be required by the State Department.   Formal educational programs that are offered in conjunction with the work experience can increase the attractiveness of the program and having a variety of different tangible academic credits, certificates or other awards as a result of completing the program appear to enhance marketability and value.   Other services such as sightseeing and on-site supervision of students are also marketable items which increase attractiveness of these programs.

3.   Cultural Exchange/Learning Needs Factor-Residents of countries that have had restricted travel to the U.S. such as China, Eastern Europe, etc. or perhaps are rapidly developing and have a need for cross-cultural experiences and learning about management and marketing from more developed nations seem to have a demonstrated higher propensity to participate in these programs.   This is particular true of nations in Asia and China seems to be the leading location influenced by this factor. The cultural educational component for most of these programs must be apparent and extensive to meet state department requirements.

4.   Pricing-Pricing of these programs seems to range from as little as $500 per foreign applicant for a program that does nothing more than place a student at a USA work site to programs over $6,000 in cost that include many educational or other features. There are also fees and expenses such as government visa fees, transporation and health insurance fees that must be paid by applicants over and above any educational or service/processing fees that are charged. More expensive programs will frequently be all inclusive even providing on arrival some USA transportation, sightseeing, supervision on the work site, health insurance, meals and educational instruction and field supervision throughout the program.

5.   Revenues-International programs can be profitable. There are many organizations which solely operate from the profits or operating surpluses from these programs. There are others that generate millions of dollars per year for their academic institutions.

Program Types/Features

Program types seem to range on a broad continuum of features. Some programs consist of little more than recruiting and placing the students and some have many

educational experiences provided throughout the stay in the United States. An attempt to classify various program features that are present in a variety of programs known to the author are discussed below and this is followed by six different program descriptions representative of currently operating programs:

1.   Recruitment- Recruitment of participants is a base feature. There are no programs without recruitment and sourcing of participants overseas is a significant worldwide cottage industry. This is present in all forms in every program. In some cases the recruitment is done solely by a third party not-for-profit or educational institution and the foreign clients are simply placed at a variety of work places who have agreed to "host" the workers for a given period of time. In other cases co-recruiting occurs where companies partner with various third parties to go out in the field to various locations or educational institutions abroad to actually co-recruit persons who may wish to participate in the program.

2.   Pre-Work Assignment Sightseeing and or Study-More extensive and expensive programs may offer lengthy orientations on arrival that may last from one to two weeks or may simply be a couple of days. Obviously the longer these programs are the higher the costs will be.

3.   During Work Assignment Classes-Classes must be provided on a continuing basis for some of the programs to qualify participants for visas. These programs must be taught and instructed by a qualified participating academic institution. At other times it may simply be desirable to have ongoing class meetings with qualified faculty to enhance the value of the overall academic experience. Classes are sometimes but rarely also offered by the employer and in at least one case (Disney) these classes are certified by the American Council on Education (ACE). This organization takes classes taught by businesses and equates them to regular college level classes. The class work during the work experience seems to dramatically improve retention and productivity of foreign workers as they are working with an additional purpose of earning academic credit.

4.   Internship Supervision-Internship supervision is provided either full or part time by the educational sponsor. On the job supervision is always, of course, provided by the employer.

5.   Public Relations and Liaison to Academic Institutions-These programs require faculty and staff who are knowledgeable about cultural assimilation programs, and subject matter that is being taught that relates to any work or educational experiences. It is essential that faculty and staff have solid credentials in the academic areas in which these programs are functioning and should be able to fully discuss their fields and the nature of work experiences in the host industries.. Further it is essential that these personnel be able to communicate with and relate to foreign faculty at feeder schools overseas. U.S. faculty and staff participating in such programs will engage in a good amount of public relations work and hosting of visiting faculty from overseas participating institutions.

6.   Cultural Adjustment/Orientation-In addition to a focused educational program these programs require cultural education about life in the USA and also should engage in monitoring of participant behavior and health throughout the experiences.

Six Different Program Scenarios ranging from simplistic to full blown and also the related State Department Program Categories they fall under follow:

1.   Camp Counselor Programs-Camp counselor programs are actually utilized by hundreds of camps every summer. Camps either need to be accredited by the American Camping Association or a bone fide youth agency such as the YMCA or Boy Scouts. In these programs the foreign visitors are simply assigned to traditional camp roles ranging from general counselor to waterfront specialists, nature specialists, high adventure specialists, etc.   This type of program could be utilized by an amusement facility or attraction that also runs a day camp in house. Camp Counselor programs can be enhanced by adding additional educational elements which from what this author has seen is rarely or ever done.

2.   Elaborate Pre-Work Educational Program with On-Site Supervision or assistance-One such program brings students to the NYC area for 12 days prior to departing to the work site in another state.   The students arrive in groups of approximately 125 students. Each cohort, as they are called, has a full orientation and training program including the completion of instruction for a three credit class given by the University. Some work for this class may be completed either via independent study once at the work site or via additional class work provided by the University once at the work site. Any academic institution that is located near an area that has good sightseeing opportunities can form a program like this that is very attractive. Many foreign students have never been in the USA at all so getting to see a second area of the USA before proceeding to their worksite is a great advantage to them. One school that started this program saw its program grow from 25 students per program to 500 students per program twice annually in just two years.   This program is also the most expensive one of its kind so apparently the attractiveness of such programs is enticing. (Example for the Internship Category.)

3.   Short Pre-Work Orientation Away From the Worksite-In this scenario students are given a brief orientation away from the worksite by an educational institution including social/cultural information. They are then pretty much moved to the worksite and the employer takes over from there. The employer may not provide much more than a work position or may provide some training opportunities and may do little life supervision during the experience. (Example for the Internship Category.)

4.   No Orientation w/Work Supervision by the Educational Institution-In this scenario the educational sponsor does little more than sponsor the students and then also provides on site supervision and some guidance for the students while they are working at the work site. (Example for the Internship Category.)

5.   Placement Only-Many programs basically are third party recruitment programs where workers are recruited by a third party and then placed at a work site. The third party provides some assistance to the foreign student in coming to the U.S., but usually provides little or no assistance once they are on the work site. This is a common scenario in the Summer Work/Travel category.

6.   Work Site Experience w/Continual Educational Program-In this scenario a nearby university or college provides a full instructional program occurring on several "off days" each week for the student. This type of program provided by the university or college seems to match most accurately with the trainee category.

Operational, Ethical and Public Relations Issues

The total spectrum of operational advice and procedures goes beyond the scope of this article, but some of the more important issues are discussed herein.

There is a profound difference between internships, summer work programs, and training programs. There are different perceptions of how much an educational sponsor or institution should be involved with work place decisions. If a U.S. based internship student has problems at the work place the sponsoring institution may very well be told what is wrong. This may not be the case for work programs that are not classified as internships. This is one of the items that differentiate an internship from a work experience. A work experience is not an internship; the educational institution does not have an inherent right to become involved when something goes wrong. They may not have a legal right to some information when the student is an intern either, but certainly the partnership between the academic institution and the employer usual plays a strong role in fostering cooperation.

Ethical issues abound relating to the operation of these programs. Students should be treated as one would treat any other student at an educational institution. There are issues of privacy and issues of on the job treatment that become important. When a foreign student is dismissed from a job whatever the cause they lose their Visa to stay in the USA. This is unlike an American Student who simply goes home and perhaps can even cover up or rationalize whatever wrong doing they have engaged in if in fact there has been wrong doing. Educational institutions are sometimes put at the mercy of the employer acting as a judge and jury of international students. It is strongly recommended that educational institutions take the time to review all work situations with interns and provide whatever advice and guidance they can provide to comfort students particularly if there is any degree of doubt regarding what any student did. Further this would appear to be an obligation being that it is the educational institution and not the business that is actually the liable sponsor for the student. We would do the same for our U.S. interns and certainly there are key human rights issued involved if we fail to do this for foreign visitors.

Construction of programs in the intern and trainee categories seems to require that strong academic programs accompany the internship/trainee work programs. The construction of such programs seems to vary greatly and it is uncertain as to what does and does not meet governmental standards so this is a possible area for problems due to an apparent gap between the qualities of some of the programs and the suggested standards. Educational institutions participating in and sponsoring and certifying these programs to the government would seem to need to maintain a high ethical standard in providing quality educational programs that are staffed by well qualified teaching professionals in the fields representing the nature of the placements of the interns and trainees.

The U.S. Embassy and Consulate and even foreign embassy's and consulates pay close attention to the implications of these programs. The U.S. Consulate in Shanghai, China for example holds weekly meeting times for educators to stop by and discuss their programs. It is essential to the government that these programs meet several tests. The programs when applicable need to have sound educational components. Further, it must be demonstrated that most if not all VISA recipients do go back to their home country on completion of their USA work requirements. Educational institutions can promote the return by putting stipulations on their programs that encourage the return of students to

their home country. These can include the awarding of degrees and certificates for completion of the program.   Such awards may be withheld if participants to not return to their home countries and should not be issued until participants do return to their home countries.

A quality experience should be maintained on all fronts. Employers should recognize interpersonal and multi-cultural differences of the participants. Employers should provide a variety of services that will help International Students succeed. Staff should be assigned to watch over the quality of these experiences and look for abuses. Over the years a variety of work place abuses have occurred with international students. These have included discriminatory practices by certain managers and also over working of the foreign workers who are sometimes unfortunately viewed as "captives" as they can not return home in many cases until the completion of their programs simply because they can not afford to do so. Educational institutions should provide quality instruction provided and guided by qualified faculty in the leisure, tourism and hospitality fields. The educational program should be commensurate to programs utilized by American students.

Employers using international students under the J visa classification categories need to think carefully particularly in difficult economic times of how they are interacting with the local American workforce. There are certainly advantages to using International workers as cited earlier, but a possible disadvantage can be disenfranchising the local workforce when they are shut out of working because too many international workers are being employed and in reality this does appear to be prohibited under the regulations. Further increases in labor pools as a result of too many foreign workers being deployed can also cause the level of pay for hourly workers to be artificially deflated. Employers should be very cautious about over utilization of international workers if the use of these workers is indeed impacting availability of positions and salaries for American workers as it appears to be stated in the regulations that this is not allowed..

Economic Impacts

The economic impacts of such programs can be significant. Initial revenues for third parties such as Universities or other involved agencies or businesses can range from $500-$6,000 or more per student. Further spending occurs by the foreign participants throughout their stay as it is estimated that they spend most of their wages in the local economy on living expenses, entertainment, and merchandise.   This means that over a four month period each student contributes about $800 per month to the host economy surrounding the work location. This can be viewed as tourist expenditure which enjoys a high multiplier effect in most cases. Additionally, with larger program fees in the $6,000 range about 1/4 of the funds are spent on lodging, entertainment, meals and transportation in the local community. So, a program in the New York area of this type that engages 1,000 students per year total would generate about 10.5 million dollars (1000 students X $1,500 x 7) in total economic activity based on the commonly accepted tourism multiplier of seven times expenditures in the New York Area.   This does not account for additional revenues poured into the local economy from the remaining $4,500 per student, but since most of this is not tourist expenditure but rather expenses on educational programs where the multiplier effect is not as pronounced, but even so

conservatively this should generate another $20 million dollars or more in the local economy. (8)   It should be noted that these students will still spend the earlier mentioned $200 per week ($800 per month as mentioned earlier) in the local economies of the work host that can be counted as tourist expenditure with the higher multiplier effect once again.

Conclusions and Recommendations

The programs discussed herein can be highly beneficial to the tourism and leisure industries by providing enthusiastic and energized workers who are in plentiful and stabile supply at reasonable if not reduced costs.   They can also enhance revenues at educational institutions and provide multicultural exposure for students, faculty and staff. Educational institutions can also utilize these programs to better their relationships with potential employers and donors to their schools.

These programs do require a close degree of monitoring in the area of ethical and operational considerations and staff and monetary commitments must be made to make sure that the programs are quality in nature.   As the government monitors these programs abuse by just a few businesses or educational institutions or not-for-profits could lead to curtailment or reduction of these programs.

There is lots of research that can be conducted about these programs.   These may include studies regarding the operations of these programs including satisfaction studies of participants, impact of these workers on U.S. employees and availability of jobs and impact on wage levels for U.S. Workers, and economic impact studies. Research can also be conducted on the conformity and legality of such programs in relationship to federal guidelines.

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Culture-Free or Culture-Bound?
Two views of swaying branches

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Abstract

This paper presents a brief overview of the culture-free hypothesis of cross-national organizing and the culture-bound hypothesis of cross-national organizing. The first suggests that culture has no influence the way organizations are structured and is supported with significant research showing organizations within many nations around the world reflect the same relationships between size, specialization, formalization, and decentralization. The culture-bound approach is more intuitively appealing and can also be supported with many reports of how organizations differ in internal organizational features. The approaches are framed with the etic and emic perspectives of observation to show that the positions are not mutually exclusive but are complimentary. A model is posited that unifies the two hypotheses in an effort to provide future research with a framework that can extend current knowledge.

No one man, however brilliant or well-informed, can come in one lifetime to such fullness of understanding as to safely judge and dismiss the customs of institutions of his society, for those are the wisdom of generations after centuries of experiment in the laboratory of history.

Will Durant

The roots of organizational studies are deeply rational. Modern society was thought to be dominated by a "logic of organization" where the functioning of society was based on "organization rather than on randomly allocated or 'anarchic' market advantages or birth privileges" (Reed, 2006, p. 23). Society and its organizational units could be managed through universal scientific laws of administration, posited through the writings of Taylor (1912), Weber (1947), and Fayol (1949), void of human emotions and values (Reed, 2006). Emerging alongside the rationalist approach was the view of organizations as social systems that must facilitate individuals. This introduced "soft system" methodologies of the Human Relations approach (Checkland, 1994). Closer inspection reveals the Weberian bureaucracy, Fayolian administrative model, and Taylorist scientific principles not only provided an international element from the beginning but also reflected the concerns and cultural backgrounds of the times (Schneider & Barsoux, 2002). From the beginning the field has been engrossed in a methodological and theoretical tug-of-war between the soft and hard elements of organization, the universal and local influence of structure, and culture-free and culture-bound hypotheses of cross-national organization.

In 1964 Crozier wrote, "Intuitively, however, people have always assumed that bureaucratic structures and patterns of action differ in the different countries of the Western world and even more markedly between East and West. Men of action know it and never fail to take it into account. But contemporary social scientists...have not been

concerned with such comparisons" (Crozier, 1964, p. 210). The field responded with a flourish of activity that resulted in a division between proponents of the culture-free hypothesis and the culture-bound hypothesis of the influence of culture on structure of organizations across nations. This paper will address the two hypotheses and then present a discussion of the methods within the framework of etic and emic approaches to the study of organizations. Finally a model will be presented that attempts to bridge the gap between the two approaches.

The Culture-Free Hypothesis

The culture-free hypothesis is best represented by the research of Hickson and his associates (Hickson, Hinings, McMillan, & Schwitter, 1974; Hickson D. J., McMillan, Azumi, & Horvath, 1979; Hickson & McMillan, 1981; Pugh, Hickson, & Team, 1993). Others had conducted cross-national research prior to Hickson's work but the focus was on worker attitudes rather than characteristics of the organizations. The lack of an acceptable framework on which to base a standardized cross-national analysis limited researchers' abilities to conduct organization focused research across cultures. The Aston Program provided the needed framework.

The Aston researchers developed scales to measure organizational structure and context. Functional specialization, role formalization, standardization of rules and procedures, organization configuration, and centralization of decision making were the variables that made up the structural component. The contextual component was comprised of origin and history, ownership and control, size, charter, technology, location, and interdependence with external constituencies such as customers and suppliers (Seror, 1988). The measures used were not concerned with personal values, attitudes, or motivation in order to minimize potential contamination by culturally influenced variables from the perceptions organization members may have of their organization (Hickson, Hinings, McMillan, & Schwitter, 1974).

The objective of the culture-free studies (Hickson, Hinings, McMillan, & Schwitter, 1974; Hickson D. J., McMillan, Azumi, & Horvath, 1979; Hickson & McMillan, 1981; Pugh, Hickson, & Team, 1993) was to discover a universal explanatory model of organizational structure that could be used to account for all kinds of organizations (Brossard & Maurice, 1976). The results of the reseach found positive correlations between organization size and both specialization and formalization and negative correlations between organization size and centralization (Hickson, Hinings, McMillan, & Schwitter, 1974). The magnitude of the correlations varied widely for some countries. Hickson et al. (1974) explained, for example, Indian organizations may be less formalized or less autonomous than American organizations but larger Indian organizations would be more formalized than smaller Indian organizations and dependent Indian firms will be less autonomous than relatively independent Indian firms. The point of the studies was not to compare small organizations across nations or large organizations across nations. The purpose was to investigate relationships between contextual and structural variables within a nation compared to the relationships in other nations. The pattern of relationships, formalization and specialization increase with size, have been reproduced across several studies covering several countries (Singapore, Check-Teck, 1992; Finland, Routamaa, 1985; Poland, Kuc, Hickson, & McMillan, 1980;

Hong Kong, Birnbaum & Wong, 1985; Britain, Jordan, Poland, Japan, and Sweden, Pugh, Hickson, & Team, 1993; and Canada, US, and Britain, Hickson, Hinings, McMillan, & Schwitter, 1974). The consistency of results support the "bold" hypothesis that these relationships will hold for all organizations in all societies (Hickson, Hinings, McMillan, & Schwitter, 1974).

The explanation for the "bold" hypothesis comes from the "logic of industrialism" (Harbison & Myers, 1959; Kerr, Dunlop, Harbison, & Myers, 1960). There are steps which all societies must complete as they move toward industrialization. They must build up organizations capable of combining factors of production. Successful combining of the factors of production depends on a pool of qualified managerial talent who have knowledge of the methods of organizing and managing firms. As the organizations grow they encounter problems of coordination and there is a greater need for structure, specialization, reliance on rules and decentralization (Harbison & Myers, 1959; Kerr, Dunlop, Harbison, & Myers, 1960). "Whether the culture is Asian or European or North American, a large organization with many employees improves efficiency by specializing their activities but also by increasing, controlling, and coordinating specialties" (Hickson, Hinings, McMillan, & Schwitter, 1974, p. 64).

Hickson et al. (1974) quipped, "the technological equipment of an oil refinery requires much the same operators and supervisors wherever it is" (p.64) but not all researchers agreed with the culture-free hypothesis. Gallie (1978) studied oil refineries in Britain and France and failed to support the culture-free position. He instead found substantial differences in attitudes and relations with managers between the British and French workers and concluded that the key to understanding the differences lies in the national differences. This study would be one of several that contested the culture-free hypothesis and instead suggested that culture has a significant influence on organizations. This approach is known as the culture-bound approach.

The Culture-Bound Hypothesis

There have been many studies that disagreed with the culture-free hypothesis and have concluded that researchers need to take the cultural context of an organization into account (Child & Kieser, 1993; Clark, 1979; Hofstede, 1979; Maurice, 1979; Tayeb, 1988; Hall & Xu, 1990; Tayeb, 1990; Tayeb, 1994; Ofori-Dankwa & Reddy, 1999; Hofstede & Hofstede, 2005). In the late 1950's and early 1960's researchers began to write about cultural differences across nations. For example, the Japanese were said to be more subservient to higher authority levels because Japanese society stressed group identification. This led workers to perceive authority as being being excercised on behalf of the group or collective (Abegglen, 1958; Azumi, 1969). Crozier (1964) suggested differences in the way French, American, and British workers use rules and procedures.

Hofstede (1979, 2005) has presented the greatest volume of research showing differences in culture between nations and that those differences influence the organizations found in each nation. Organizations have both structural and human aspects. "The people involved [in the organizations] react according to their mental software [that is, their culture]. Part of this mental software consists about people's ideas about what an organization should be like" (Hofstede & Hofstede, 2005, p. 242). Power distance and uncertainty avoidance influence our thinking about organizations the most

because these dimensions help answer two critical organizational questions: who has the power to decide what (hierarchy)? And what rules or procedures will be followed to reach the desired organizational goals (formalization) (Hofstede & Hofstede, 2005)?

Owen Stevens is referenced by Hofstede as having noticed differences in the way MBA students from France, Germany, and Britain responded to case assignments. This led Stevens to develop cultural profiles of the three countries (see Figure 1). Stevens characterized the French as the "pyramid of people" or a traditional bureaucracy because they were characterized as more formalized and centralized in their approach. The Germans were characterized as a "well oiled machine" because of their formalization and decentralization.

(Insert Figure 1 here)

Stevens described the British approach as the "village market" because it was neither formalized nor centralized but allowed the demands of the situation determine the requiste structure. Studies cited in Schneider and Barsoux (2002) supported the conceptualization of Stevens: French firms were more centralized and formalized with less delegation than the British firms; German firms were more likely to be decentralized, specialized, and formalized and were more likely to cite structure as key factors for success; British firms showed a greater concern for flexibility and were more decentralized and less formalized; and Asian firms were more autocratic and paternalistic than their European counterparts. Schneider and Barsoux (2002) went on to present descriptions of Viking Management, Brazilian Management, and Indonesian Management. The evidence of cultural differences between nations is overwhelming. The message is clear that one cannot base a prediction on structure or process from a single cultural dimension. A multi-dimensional, multi-determined approach is required inorder to understand the relationships that exist and to explain how culture influences the organizaton.

As people share a common culture system they are likely to influence the organizations they enter. The patterns of relationships, rules and belief systems, expectations about authority and its legitimate use, an individual's rights and obligations to the collective all influence the structure of organizations (Child, 1981; Meyer & Scott, 1983; Miller, 1987). Organizations develop within an institutional logic that is peculiar to each society (Maurice, Sorge, & Warner, 1980); as people enter the organization, depending on the power at their command, they shape the structure in ways that reflect their learned culture (Child, 1981). If two nations have differing cultural orientations there should be tendencies toward differing patterns of organizational structure within those nations (Child, 1981).

Research conducted by Child and Kieser (1993) found that German and British firms reflected the relationships posited by the culture-free hypothesis (size was positively associated with specialization, formalization, and decentralization) but also that Germans had more respect for authority, placed a greater value on authority, and were more directive than the British. Child and Kieser went beyond the structural aspect and investigated the underlying culutures. When they examined the operational decisions in marketing, production, andpurchasing they found that the German firms were actually more centralized than the structural analysis had revealed. At higher level decisions the

German firms were more similar to the British. But when it came to making decisions at the operational level, managers routinely took the decisions to a higher level.   Child and Kieser's research, therefore, finds support for the culture-free hypothesis and support for the culture-bound hypothesis as well. How can this result be possible when there has been so much contention between the two approaches? The answer can be found through an understanding of the etic and emic views of the organization.

Etic versus Emic Views of the Organization

Kenneth Pike related his experience traveling through the jungles of the Amazon headwaters of Peru listening to his host, Esther, explain the difficulties of translating the New Testament into the language of the Piro Indians. Suddenly she looked up and gazed intently toward some trees lining the shore of the lake and said, "Look, there's something worth shooting out there." All that Dr. Pike could see was the swaying of a few branches and he asked, "The wind?" "No," she replied, "the branches are moving too far in a small area, it must be a monkey or large bird. Oh for a boy with a bow and arrow." It was this event that revealed the difference in perspective between himself, an outsider, and Esther, an insider to the ways of the Amazon. He only saw the trees on the shoreline moving with the wind. She saw clues to the presence of meat that would be a much needed addition to an otherwise skimpy diet. His description of the event would be true for Peru, Memphis or many other places. It was true and valid but it did not have the same reference as Esther's. She was reacting from a different view point, despite the fact that they shared the same scene. Her view was filled with relevance, experience, purpose and meaning absent from his (Pike, 1957).

Pike coined the terms etic, to refer to the detached observer's view, and emic, for the normal participant, to describe what he had learned on the Amazon. Emic and etic constructs are both descriptions, accounts, and analyses expressed in terms of the conceptual schemes and categories but the key difference is in the nature of the knowledge and who deems the knowledge meaningful. It is the members of the culture under study, the insiders, who deem emic constructs as appropriate and meaningful and it is the scientific observers who deem etic constructs as appropriate and meaninful (Lett, 1996). The distinction between the perspectives has everything to do with the nature of the knowledge and nothing to do with the manner by which the knowledge is obtained.

Table 1 presents a comparison of the etic and emic perspectives. Emic knowledge is critical for an intuitive and empathetic understanding of culture. Etic knowledge is critical for cross-cultural comparisons because such comparison is dependent on standard units as categories (Lett, 1996). However, either view by itself is restricted in scope and can lead to a kind of distortion; both views must be considered if any event is to be well understood (Pike, 1957).

(Insert Table 1 here)

If we were to research a tree and our methodology consisted only of close inspections of the leaves we would logically conclude that all trees are different, there are few similarities between trees and our knowledge base would only grow as we become aware of the individual leaves on each different specie of tree. On the other hand, if our

approach was to observe from a distance a group of trees we may notice that all of the trees have brances, root systems, trunks and leaves. Our conclusion here might be that all trees are the same. Either conclusion alone would be faulty and could lead us to distorted views of the trees. If we follow Pike's recommendation and consider both views of the tree learn the similarites and the distinctions that exist with the trees.

The parallel with organizations is clear. The organization consists of both hard and soft elements. The hard elements are the objectively assessable characteristics of organizational structure that the Aston researchers have measured (Hofstede & Hofstede, 2005); the etic knowledge. The soft elements are more subjective and reflect the values and attitudes of the people within a culture (Hofstede & Hofstede, 2005); the emic knowledge. Birnbaum and Wong (1985) observed that studies that focused on the organizational level of analysis, the emic view, tended to support the culture-bound position and the studies that focused on the relational properties of structure, the etic view, tended to support the culture-free position. Tayeb (1994) also notes that the explanation of findings between the two groups often lies in the aspect of the organization the researcher chose to study, did they study the universals (etic) or the (emic) "locally meaningful elements" (p.439). The dissension between the culturally-free and culturally-bound hypotheses can be reconciled by considering they represent two equally valid yet separate views of the organization. They are each seeing the "swaying branch" from their perspective alone which has led to a distorted, one-dimensional view of the organization.

The basic purpose of comparing organizations across nations is to contribute to an understanding of how and why organizations are similar and different (Lammers and Hickson, 1979). While there are studies that have discussed the micro versus macro view of the organization (c.f. Winch, Clifton, & Millar, 2000) more often there is a competition for the exclusivity of one hypothesis over the other. This has led several reviews of the field to conclude with less than optimistic evaluations of the current state of knowledge. Roberts (1970) suggests nothing new has been learned and said the increment in knowledge over the years seems minimal and not worth the effort that has been expended. Child (1981) expressed disappointment with the progress the field has made in the comparative study of organizations across nations. When our attention is turned to waging non-productive debates over supremecy of one viable position over another viable position rather than seeking how these can views can co-exist we are confounding the issues we mean to clarify. The focus of cross-national studies needs to be on bringing the etic and emic perspectives together in with a unifying framework that provides the theoretical linking necessary to join the views together. Child and Kieser (1993) have suggested a model we will examine next.

A General Model of the Relationship between Context, Structure, Role, and Behavior

The separatist tendencies of the culture-free and culture-bound hypotheses call for a unifying framework that will demonstrate the links between the positions. "A sociologically valid theory of organization must take cultural settings into account" (Child & Kieser, 1993, p. 472). But at the same time, "an approach which which considers the organization in its most formal sense, excludes individual actors"

(Broussard & Maurice, 1976, p.14). The model proposed by Child & Kieser (1993), and modified here, provides the unifying framework that takes into account both the influence of context and culture on structure (see Figure 2).

(Insert Figure 2 here)

The "logic of industrialization," the backbone of the culture-free approach, suggests that as organizations grow and face greater problems of coordination they must respond with greater structure, specialization, and formalization (Harbison & Meyers, 1959; Kerr et al., 1960). The model depicts the mediating influence of these "organizational principles of business practices" on the structuring of the organization and the specification of roles in the organization. Cultural influences are felt through socialization processes in the family and educational system, through previous work experiences, and other formative influences. These in turn will influence the orientation of managers and employees to concepts such as authority, control, work, etc., and will influence how managers and employees interpret socially acceptable behaviors in the work roles. The model allows for the cooperative influences of culture and context (Child & Kieser, 1993).

The model also includes the etic and emic approaches to show the complimentary nature of the views. The etic view represents the universals of visible structure that can be viewed from a distance (Tayeb, 1994) and can be measured with standardized approaches such as the Aston Program. The emic view represents the insider perspective that accounts for the cultural influences that may not be visible to the casual observer. So we can separate the etic and emic approaches by considering the view of the organization from a purely structural, organizational perspective that accounts for the logic of industrialization juxtaposed against the influence of culture on the context and intrepretation of work roles and behavior. "An understanding of structure, therefore, requires reference not only to such dimensions as centralization, specialization, and formalization, but also to the relationships, processes and actions which lie behind these dimensions" (Tayeb, 1994, p.439).

Conclusion

There is substantial and valid research behind both the culture-free and culture-bound positions for each to want to claim supremecy in the discussion of organizations. Each, however, has left gaps in their explanations have not been overcome. Through the understanding that each is viewing organizations from slightly different vantage points, both are relevant and important. Rather than expending effort in explaining why the one view explains more than the other view we need to look to the other view for explanations of the unexplained aspects of our own view. Future research efforts should expound on the model presented here and seek to combine elements of both etic and emic approaches to their research methodologies. Our attention should be turned to explaining the mechanism through which organiations emerge and evolve over time. Tayeb's (1988) research approach provides an excellent example of conducting both etic and emic research. The objective of cross-national studies is to discover a universal explanatory model of organizational structure that could be used to accont for all kinds of

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organizations (Brossard & Maurice, 1976). Understanding that there is no mutually exclusive correct hypothesis toward the study of organizations is a critical first step in adding to the knowledge of organizations across the natio

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Appendix

Uncertainty avoidance		
Village market (Anglo/Nordic)		**Family or tribe (Asian)**
Decentralized Generalist People as free agents Entrepreneurial Flexibility More delegation Coordination through informal, personal communication Output control		Centralized Paternalistic Loyalty Generalist Strong social versus task roles Personal relationships Social control
Well-oiled machine (Germanic)		**Traditional bureaucracy "pyramid of people" (Latin)**
Decentralized decision making Narrow span of control Specialist, technical competence Discretion limited by expertise Strong role of staff "experts" Top management team Industry and company knowledge Organized by function Compartmentalized (chimneys) Coordination through routines and rules Structural solutions Throughput control Efficiency		Centralized decision making Coordination at the top Less delegation "Cloisonne" highly specialized Strong role of staff Analytic ability Pyramid of people Informal relationships "Système D" Elitist (power and authority) Input control

Figure 1. Emerging Cultural Profiles (from: Schneider & Barsoux, 2002)

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A Comparison of the Characteristics of Etic and Emic Perspectives Based on Pike (1957) and Lett (1996)	
Etic	Emic
An alien view, the structuring of an outsider	A domestic view, leads to units which correspond to those of an insider familiar with the system
Is cross-cultural in that its units are derived by comparing many systems and by abstracting from them units which are synthesized into a single scheme which is then analytically applied as a single system	Is mono-cultural with its units being derived from the internal functional relations of one culture at a time
Is typological since its units lead to a classifying grid through which each system can be compared	Is structural since its units are derived from internal relations rather than a potentially irrelevant but prior grid
Approaches a new situation with units prepared in advance	Leads to units which are known only after the analysis is complete
Criteria are absolute	Criteria are relative to the particular system
Are measurable without reference to the particular system in which they are embedded	Are contrastive and observable only in reference to differential responses which they elicit in relation to other units of the system
Are the creation of the analyst	Are discovered by the analyst
Appropriateness and meaningfulness is determined by the scientific community	Appropriateness and meaningfulness is determined by the members of the culture under study
Validation comes through logical and empirical analysis	Validation comes through consensus

Table 1. A comparison of the characteristics of Etic and Emic Perspectives

An Innovation for Business Schools & IS Departments That Increases Enrollment

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Abstract

The enrollment in various university departments often changes over the years depending on various factors. If the enrollment in an information systems department or business college is stagnant or declining, what can be done to inject some new interest by prospective students in these programs? This paper proposes that these universities should investigate the SAP University Alliance to see how the universities current programs can be modified to be more attractive to current and prospect students.

Introduction

Enterprise Resource Planning (ERP) software is software that runs entire companies like Coca Cola or Home Depot and this kind of software runs most of the big companies in the world. The leading ERP company is SAP which is the world's largest software company. SAP employs more than 51, 500 in more than 50 countries in more than 120 countries and the SAP software is available in more than 40 different languages. Because SAP is such a large company with their software widely adopted all over the world, SAP is constantly in need of additional people who know how to use SAP software. In order to attempt to have a continuing supply of educated university graduates knowledgeable about SAP software, SAP created an association with universities called the SAP University Alliance (SAPUA).

SAP University Alliance (SAPUA)

SAP Education Alliances are designed to:
- Develop graduate and undergraduate learning programs that enable teaching and understanding of integrated business processes
- Encourage technically sophisticated graduates who can apply SAP solutions and technology to pursue careers in real-world business environments
- Create a network of university researchers who contribute to the body of knowledge and innovative applications of SAP solutions
- Provide the needed resources to help ensure a successful integration of SAP into the classroom, including curriculum materials and functional experts (Source: SAP Website: http://www.sap.com/usa/company/citizenship/education/index.epx)

The SAP University Alliance (SAPUA) is one of SAP's Education Alliances. According to SAP, the University Program offers the higher education community the same SAP business solutions used by thousands of companies to run their businesses (http://www.sap.com/about/citizenship/education/universityalliances/index.epx). SAPUA members benefit from access to:

- Curricula development workshops
- Curriculum materials
- A collaborative global network
- Professional development, research, and industry collaboration

SAPUA membership enables faculty and students to learn about SAP solutions. Member institutions access SAP applications that are hosted at University Competency Centers (UCCs). This arrangement enables faculty and students to focus on SAP use rather than maintenance and relieves universities from having to make large technology investments to provide access to SAP solutions.

SAPUA membership can be a focal point for university program differentiation and distinction. It has the potential to improve student recruiting, to enhance the university's reputation, and to improve the marketability of its graduates. It may also assist in attracting educators whose primary interests lie in enterprise systems and integrated business process solutions.

For students, SAP's University Program provides a vehicle for gaining hands-on experience with SAP solutions. Those that graduate with UA certification increase their chances of finding employment with SAP user organizations.

SAPUA member schools gain access to the SAP Business Suite family of solutions including SAP ERP. SAP sponsors professional development and networking opportunities including the annual Curriculum Congress. Faculty members at SAPUA member institutions can attend SAP-sponsored workshops and SAP customer training classes at no cost. Faculty at SAPUA member schools also access to information on SAP events, research, and downloadable curriculum materials via the Innovation Watch Web site.

Fees for annual program membership vary by country. In the U.S., the current annual SAPUA membership fee is $8,000.

SAPUA Member Institutions

The U.S. members of the SAPUA are listed in the Table 1.

Table 1 SAP University Alliance Program Members United States

Abilene Christian U	Sam Houston State U
Alfred U	Savannah State U
Arcadia U	Southeast Missouri State U
Arizona State U	Southern Illinois U, Edwardsville
Auburn U	Southern U and A&M College
Ball State U	St. John's U
Bentley College	St. Joseph's U
California State U - Chico	Stetson U
California State U - San Bernardino	Syracuse U
California State U - Fullerton	Temple U
Central Michigan U	Texas A&M U
Clarkson U	U of Arkansas
Cleveland State U	U of California - Irvine
The College of New Jersey	U of Cincinnati
Delaware County Community College	U of Delaware
Drexel U	U of Florida
Duquesne U	U of Georgia
Eastern Michigan U	U of Houston
Florida A&M U	U of Michigan - Dearborn
Florida International U	U of Mississippi
Fordham U	U of Missouri - Columbia
George Mason U	U of Missouri - Rolla
Georgia Institute of Technology	U of Nebraska - Lincoln
Georgia Southern U	U of Nebraska - Omaha
Grand Valley State U	U of North Carolina - Greensboro
Harvard Business School	U of Pennsylvania
Houston Baptist U	U of Scranton
Indiana U - Kelly School	U of Southern California
Indiana U - Kokomo	U of South Dakota
Indiana U of Pennsylvania	U of St. Thomas
Indiana U - South Bend	U of Tennessee - Knoxville
John Carroll U	U of Texas - Arlington
La Salle U	U of Texas - Dallas
Lincoln U	U of Wisconsin - Milwaukee
Louisiana State U	U of Wisconsin - Oshkosh
Northern Arizona U	U of Wisconsin - Parkside
Northern Michigan U	Villanova U
Northwestern Polytechnic U	Virginia State U
Pace U	Virginia Commonwealth U
Pennsylvania College of Technology	Washington College
The Pennsylvania State U	Western Michigan U
Purdue U	Wichita State U
Rider U	Widener U
Rochester Institute of Technology	William Paterson U

Rutgers U Salem State College	Youngstown State U

Innovation Watch (IW)

In order to help universities develop SAP curriculum, SAP has created a web site called Innovation Watch which is available to members of the SAP university alliance. This web site contains the proceedings of various SAP Academic conferences and various curriculum products that were developed with support from SAP and are available to SAPUA members at no cost.

SAP Annual Academic Congress

In order to help universities to keep up to date with new developments with SAP and education applications of SAP, a SAP Annual Academic Congress is held every spring, usually in a southern location. There is no registration fee and SAP provides all the meals. For 2008 the congress was held in Atlanta, GA. For 2009 the Congress will be in Charlotte, NC. See https://www.sdn.sap.com/irj/scn/uac?rid=/webcontent/uuid/e045327b-3aa8-2b10-208b-d6591f23226d.

SAP Summer Workshops

SAP offers one or two week summer workshops for faculty to become competent in various areas of SAP software. The first summer workshops were offered in Nova Scotia in 2000. Currently these workshops are held in Montreal, Milwaukee and Chico. Workshops are offered on many topics including the HEC Simulation, human resources, introductory accounting, SCM, CRM, Netweaver, business information warehouse, strategic enterprise management, accounting information systems and business process integration. SAPUA member schools are informed about the Summer workshops by SAP.

What Could a University Do If They Wanted to Use SAP

There are many ways a university could develop a curriculum using SAP but first we should look at what areas could be considered. SAP R/3 has modules that include financial accounting, controlling, fixed asset management, sales and distribution, human resources, production, material management, quality management, plant management. SAP also has software for SCM, CRM, PLM and SRM. With all this software available, many business and IS programs could use SAP software. The references from Abdinnour-Helm to McCarthy provide many ideas of how SAP can be incorporated in the IS and business curriculua.

Business Simulation

An introduction to information systems course is offered by most colleges of business. The HEC in Montreal has a world class business simulation program using SAP where teams of students can compete with other teams of students. Workshops on how to properly use this simulation are usually offered annually in Montreal, Milwaukee

and Chico and a short course on this simulation is usually offered at the spring SAP Academic Congress at no cost.

Human Resources (HR)

Courses in human resources are common in most business colleges. SAP has a HR module and it is a perfect fit to use in an HR course. Kathy Utrecht of Sam Houston State University has a complete set of step by step exercises for HR that are highly recommended. SAPUA member schools gain access to this information through the Innovation Watch web pages. Georgia Southern also has an HRIS course that has been offered for several years and has been joint taught by an HR and an IS faculty member, HR 4333.

Accounting

Most university college of businesses offer an Accounting Information Systems (AIS) course. The accounting modules in SAP are crucial modules. One way to introduce SAP to accounting students is to use the "Fly a Kite Case" which is an accounting case that is available from the Innovation Watch web site and it comes with a complete set of exercises that can be given to students. This case was developed by Ross Quarles at Sam Houston State University.

Information Systems

In most universities the information systems department offer the bulk of course using SAP. An introduction to ERP is a course that is usually offered by all SAPUA universities and is often the first course to be offered by a university starting to use SAP. Another course that can be offered is a course in the ABAP programming course. ABAP is a propriety programming that SAP developed to write their software. SAP can also be used in a business intelligence course. Table 2 contains a list of course where SAP can be used.

Table 2 Courses with SAP Content at Central Michigan University

Course Number	Course Title
ACC 370S	Accounting Systems and Controls
MGT 320S	Human Resource Management
MGT 333S	Purchasing Management
MKT 431S	Logistics Operations
FIN 482S	Working Capital Management
BIS 247S	SAP R/3 Fundamentals
BIS 357S	ABAP/4 Programming Fundamentals
BIS 497C	SAP Configuration
BIS 630S	Systems Analysis and Design-Accelerated SAP
MBA 619S	Accounting Information for Managers
MGT 597S	ERP: Business Processes Integration Supported by SAP R/3
MGT 633S	Human Resource Management
BIS 647S	SAP Enterprise Software Management
BIS 657S	ABAP/4 Programming for Managerial Systems
BIS 697C	SAP R/3 Configuration and Implementation

| MBA 797S | ERP: Business Processes Integration Supported by SAP R/3 |

From this table it can be seen that 7 of these courses are offered by the MIS department but 9 of the courses are offered by other business departments. See http://sapua.cba.cmich.edu/default2.asp?33.3

Model SAP Curriculum
The California State University at Chico and Central Michigan University are examples of mature usage of SAP in the business curriculum. For an example of what can be accomplished by a university new to the SAP curriculum, Georgia Southern University is a good example. Table 3 gives the URLs to the SAP curriculum at these universities.

Table 3 URLs to Model SAP Curriculums

University	URL of SAP Curriculum
California State University, Chico	http://portal1.cob.csuchico.edu/chico_01/courses.html
Central Michigan University	http://sapua.cba.cmich.edu/default2.asp?33.3
Georgia Southern University	http://cit.georgiasouthern.edu/is/sap.htm

SAP Certificate
One of the major benefits of belonging to the SAPUA is that the university is given the opportunity to offer an SAP certificate. If a university course has at least 30% of SAP content, a university can submit the syllabus of this course to SAP, who will likely approve the course. If a student can complete three courses with a 30% SAP content, the university can offer a SAP certificate signed by SAP and the university certifying that the student has successfully completed these 3 courses approved by SAP. This SAP certificate is highly sought after by students since a student with this certificate can be offered a job with a $10K - $30 K higher salary than a student without this certificate. This bonus for students taking SAP courses was also confirmed at Central Michigan University (CMU) and Andrea published a paper giving the results at CMU. This SAP certificate is also a great recruiting feature for the university.
At Georgia Southern University there are 5 courses that have at least a 30% SAP content that have been approved by SAP. These courses are listed in Table 4 below.

Table 4 Courses That Count Towards an SAP Certificate at Georgia Southern University

Course	Course Title
HR 4333	Human Resources IS
CISM 4237	Business Intelligence
CISM 4334	Introduction to ERP Using SAP
CISM 4335	ABAP Programming For SAP
CISM 4434	Enterprise Systems Configuration

Jobs

Students will often ask what the job prospects are in a particular area. This is a welcome question concerning SAP since even when it is difficult to find IS or business jobs there are often SAP jobs available. Table 5 is a listing of the number of SAP jobs available in selected states as of February 2009. A column listing the number of Java positions is also included for comparison. Many IS departments teach Java, as a skill students need to get jobs. As you can see from the numbers, SAP is a much more valuable skill for job seekers to have. Each school could use this site to gauge the skills they should be teaching for job seekers. See Indeed.com at http://www.indeed.com/.

Table 5 SAP Jobs in Selected States from indeed.com

State	Number of SAP Jobs	Number of Java Jobs
Alabama	316	41
California	5,528	738
Florida	1,259	216
Georgia	1,276	92
Louisiana	165	12
New York	2,226	651
North Carolina	1,021	112
South Carolina	272	33
Tennessee	365	32

Conclusion

A university looking for something new to offer that could attract new students should seriously investigate the SAP University Alliance and offering at least some of the courses mentioned above. The SAP curriculum at the California State University at Chico and Central Michigan University are good examples of what a mature SAP curriculum could look like. For universities just considering the implementation of SAP in their curriculum, the Georgia Southern University model in Table 4 could be one example of how to proceed.

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SAP Curriculum at Central Michigan University, http://sapua.cba.cmich.edu/default2.asp?33.3

SAP Curriculum at Georgia Southern University, http://cit.georgiasouthern.edu/is/sap.htm

Indeed, One Search, All Jobs, http://www.indeed.com/

Conservatism in Accounting Standards:
Theory vs. Practice

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Abstract

In SCON 2, the FASB defines conservatism as a "prudent reaction to uncertainty." While justified under some circumstances, the FASB cautions that conservatism may result in a systematic understatement of net assets and operating results, which conflicts with the financial reporting objectives of representational faithfulness, neutrality and comparability. This paper compares the FASB's theoretical position on the issue of conservatism as expressed in the conceptual framework with its practical approach to the issue as observed in existing accounting. We find that while the conceptual framework expresses a nonconservative position, many accounting standards reflect a conservative bias with respect to both recognition and measurement of assets and liabilities and gains and losses.

Purpose

The purpose of this paper is to compare the FASB's theoretical position on conservatism as described in the Statement of Financial Accounting Concepts (SCON) 2 with its practical position as reflected in various Statements of Financial Accounting Standards (SFAS). Watts (2003a) sates that conservatism can be observed both in the behavior of reporting entities and in the standard-setting process. The focus of this paper is on conservatism in the standard-setting process. We find that while the FASB takes a nonconservative theoretical position, many of its standards reflect a conservative bias. We cite existing literature to explain why the difference in theory and practice exists.

Historical Background

Conservatism has long influenced accounting practice. Sterling (1970) asserts that it is "the most ancient and probably the most pervasive rule of valuation." Basu (1997) cites evidence that conservatism in accounting has existed at least since the fifteenth century. The motivation for conservative financial record-keeping at that time (before the emergence of equity markets) may have been to avoid overcompensating managers whose pay was based on changes in owners' wealth, to protect creditors or to avoid paying property taxes.

In the early 20th century, with the emergence of corporations, British courts judged the impact of conservatism on financial reporting to be not only acceptable, but desirable (Hatfield 1916). Hatfield cites a case in which a British court stated that "the purpose of the balance sheet is primarily to show that the financial position of the company is at least as good as there stated, not to show that it is not or may not be better." Such systematic conservatism was cited as improving "the economic position of

the corporation" and preventing the payment of "fictitious dividends." While Hatfield disagrees with the principle of systematic understatement, he states that "in so far as the undervaluation of certain assets is merely an attempt to secure a more truthful conspectus of the entire situation, the action may be justified."

Bliss (1924) defined conservatism by the maxim, "anticipate no profit, but anticipate all losses." While perhaps extreme, this approach to conservatism has influenced accounting practice for the last eighty years. Throughout this period, accounting theorists have criticized the practice of conservatism, arguing that it results in a systematic, deliberate understatement of companies' net assets and misrepresents operating results (e.g., Hatfield 1916, Paton 1922, Backer 1955, Hendriksen 1977, Nikolai et al., 2007). Perhaps the most noteworthy criticism of conservatism comes from the FASB itself in SCON2 (paragraphs 91-97). While allowing that conservatism may sometimes represent a "prudent reaction to uncertainty," (pars.92 & 95) the FASB warns that conservatism should not be used to introduce a systematic, consistent bias toward understatement of profits and net assets (par. 93). Watts (2003a, 2003b) cites evidence that conservatism in accounting not only persists, but that accounting had become even more conservative in the last three decades of the twentieth century.

Definitions of Conservatism

Some definitions of conservatism focus on its impact on recognition while others emphasize measurement. For example, Bliss's definition of conservatism seems to focus on recognition rather than measurement. His approach would require losses to be recognized as soon as they can be anticipated, while recognition of gains should be deferred until verified. Basu (1997) and Watts (2003a) also focus on the recognition aspect of conservatism. Basu defines conservatism as ". . . accountants' tendency to require a higher degree of verification for recognizing good news than bad news in financial statements." Watts (2003a) refines Basu's definition, calling conservatism "the asymmetrical verification requirements for gains and losses."

The FASB's definition of conservatism relates more to the measurement issue. The FASB (SCON2, par. 95) defines conservatism as ". . . a prudent reaction to uncertainty to try to ensure that uncertainties and risks inherent in business decisions are adequately considered. Thus, if two estimates of amounts to be received or paid in the future are about equally likely, conservatism dictates using the less optimistic estimate." We accept both views of conservatism as two sides of the same phenomenon. Accordingly, we will examine standards that are consistent with either or both aspects of conservatism.

The Issue

SCON 2 implies to us that the FASB views conservatism as a necessary evil, at best; at its worst, conservatism results in a systematic, deliberate understatement of companies' net assets and misrepresents operating results, which conflicts with the goals of representational faithfulness (i.e., what is reported represents what it purports to represent), neutrality and comparability (par. 92). Watts (2003a), on the other hand, argues that conservatism persists because it serves the interests of reporting entities and

standard setters, as well as other stakeholders in the financial reporting environment. He states that standard setters bear greater political costs resulting from overstatements of net assets than from understatements of net assets.

Watts (2003a) cites the Enron example in which managers used mark-to-market accounting to report investments "without insuring verifiability of the market estimates." In valuing its short-term trading securities, SFAS 115 allowed Enron to select either a "bid" price or an "ask" price in adjusting its investments to market. Because in many cases, Enron was a major party (or the only party) establishing an ask price, it was able to post unrealistically high ask prices that far exceeded bid prices (Watts 2003a, Weil 2001). The result was significant overstatement of investments and unrealized gains, which benefitted Enron management in the form of bonus compensation (Watts 2003a).

The FASB was heavily criticized in the financial press and in the U. S. Congress as Enron's misdealings were revealed. The FASB was further criticized in the wake of the Enron scandal for its failure to establish recognition requirements for stock-based compensation schemes. It had chosen the less conservative requirement of disclosure, instead of recognition, of the cost of such schemes.

The examples of nonconservative accounting standards in the preceding discussion notwithstanding, we believe that despite the FASB's theoretical opposition to conservatism as expressed in SCON2, many of the FASB's pronouncements are consistent with Watts' more favorable view of conservatism. The next section of this paper examines specific standards that provide examples of conservatism in practice, which are at odds with the nonconservative position of the conceptual framework. We look at standards that predate the conceptual framework as well as later standards, because the FASB has the power to revise any earlier standard that is inconsistent with its framework.

Conservatism in the Authoritative Literature

ARB 43, Chapter 4 – Accounting for inventories
Inventories are accounted for at LCM, an oft-cited example of conservatism in accounting. More conservative still is the allowance of LIFO accounting for inventories, a practice disallowed in other countries. While ARB 43 was established before FASB came into existence, the FASB has made no move to amend or rescind the standard with respect to inventory accounting.

SFAS 2 and SFAS 86 – Research and development costs
SFAS 2 requires that research and development costs be expensed in the period incurred, even when the probability of future economic benefits sufficient to recover all capitalized costs is high. Prior to the issuance of SFAS2, companies often capitalized R&D expenditures, and then amortized them or wrote them off if and when the lack of future economic benefits warranted such a write-off. SFAS 86 defines research and development costs related to computer software, and specifies that, consistent with SFAS 2, all R&D costs associated with computer software should be expensed when incurred.

SFAS 5 - Contingencies

SFAS 5, which provides guidance in accounting for contingencies, specifies that gain contingencies are not to be recognized until realized (par. 17a). Loss contingencies, on the other hand, are to be recognized if such losses are probable and estimable (par. 8). While less extreme than the Bliss position of anticipating all losses but no gains, the verification requirement for recognizing revenues and gains (good news) is much higher than for recognizing expenses and losses (bad news), consistent with the Watts definition of conservatism.

Paradoxically, however, if a loss is considered probable, and there exist two estimates of the loss which are considered equally likely, SFAS5 requires that companies recognize the lower (less conservative) amount, and disclose in the notes the higher amount. Such an approach is in direct contradiction with SCON 2, par. 95, which states that "if two estimates of amounts to be received or paid in the future are about equally likely, conservatism dictates using the less optimistic estimate." Thus, SFAS 5 reflects a conservative bias with respect to recognition, but may be viewed as anticonservative with respect to measurement.

SFAS 13 - Leases

SFAS 13 established criteria for the capitalization of lease obligations in order to avoid off-balance-sheet financing by lessees. SFAS 13 requires the lessee to capitalize the lease by recording an asset and a liability equal to the present value of minimum lease payments if any one of the four following criteria is met:

1.   *The lease transfers ownership of the leased property to the lessee by the end of the lease term.*

2.   *The lease contains a bargain purchase option.*

3.   *The lease term is equal to 75% or more of the estimated economic life of the leased property.*

4.   *The present value of the minimum lease payments equals or exceeds 90% of the fair value of the leased property.*

SFAS 13 imposes additional criteria on the lessor before the lease can be accounted for as a nonoperating lease (i.e., sales-type, direct-financing, or leveraged lease), which would entail the recognition of a receivable on the balance sheet, and in the case of sales-type leases, revenue on the income statement. In addition to the requirement of meeting at least one of the four criteria for lessee capitalization, lessors must also meet the following two criteria. First, collectibility of the minimum lease payments must be reasonably predictable, and second, no important uncertainties relating to future costs to be incurred on the leased asset may exist. Thus, the two parties to the same lease who agree on all the pertinent assumptions about the lease (including the present value of minimum lease payments, the interest rate implicit in the lease, residual value, etc.) may be forced to account for the lease differently, because of the more stringent verification requirements imposed on the lessor. In other words, the additional verification requirements in SFAS 13 sometimes prevent the lessor from recognizing a "sale" of the leased asset, while forcing the lessee to account for the transaction as a "purchase."

SFAS 15 and SFAS 114 – Troubled debt restructuring

SFAS 15 prescribes the accounting treatment for debtors involved in a troubled debt restructuring (TDR). SFAS 114 provides guidance for creditors in TDRs. These two standards represent a conservative bias similar to that found in SFAS 13, because the accounting for the two parties to the same transaction is not always consistent. In a TDR involving a modification of terms (i.e., reduction in principal, reduction in the interest rate, or both), SFAS 15 prohibits the debtor from recognizing a gain on restructuring unless the **undiscounted** value of its future cash outflows under the restructuring is lower than the carrying value of the debt before restructuring. If this condition is met, the gain is limited to the difference in these two values. SFAS 114 requires the creditor to write down its restructured receivable to the **discounted** (present) value of the receivable, and recognize a loss equal to the difference between the carrying value of the receivable before restructuring and the discounted value of the receivable after restructuring. Because the undiscounted value of future cash payments is greater than the discounted value of future cash payments, the loss recognized by the creditor will always be greater than the gain recognized by the debtor, if a gain can be recognized at all. In this particular case, a conservative bias is found both in the verification requirement and in the measurement rules.

The conservative bias found in accounting for TDRs is particularly noteworthy for two reasons. First, imposing asymmetrical verification requirements and different measurement rules on the two parties to a TDR is inconsistent with SCON 2, which defines conservatism as a "prudent reaction to uncertainty," because no uncertainties exist with respect to the amount and timing of future cash flows (other than the risk of nonpayment by the debtor, which is a separate issue to be resolved by the creditor). A TDR involves a contractual change in an agreement between a debtor and a creditor that can be measured with certainty. Second, the requirement that the debtor record the restructured liability at the value of the undiscounted future cash outflows is inconsistent with SCON 7 of the conceptual framework, which states that a "measurement based on the present value of estimated future cash flows provides more relevant information than a measurement based on the undiscounted sum of those cash flows."

SFAS 109 – Interperiod income tax allocation

SFAS 109 provides guidance on accounting for interperiod tax allocation, which can result in recognition of deferred tax assets and liabilities. Under the standard, all future tax liabilities are recognized in full (not discounted) while future tax assets are recorded only if management deems that it is more likely than not that the assets will be realized in the future. This standard is inconsistent with SCON2, in that it imposes an asymmetrical verification requirement for the recognition of deferred tax assets and liabilities. Although SFAS 109 reflects a conservative bias, the bias is less extreme than that found in SFAS 5, in that it allows the recognition of a deferred tax asset before the asset is realized. It should be noted that SFAS 109 was issued, at least in part, because of strong negative reaction to SFAS 96, which was more restrictive than SFAS 109 with respect to the recognition of deferred tax assets before realization (SFAS 109, par. 73). In short, the FASB did not achieve the degree of conservatism in SFAS 109 that it had originally sought.

SFAS 128 – Earnings per share

SFAS 128 requires companies that have complex capital structures to report both basic earnings per share (EPS) and diluted EPS. Any potentially dilutive security whose impact on EPS is antidilutive (i.e., increases EPS or reduces loss per share) is ignored in computing diluted EPS. Thus, diluted EPS presents only a worst-case scenario to shareholders, not a "most-likely" case.

SFAS 141 – Business combinations

With respect to recognition of assets and liabilities, SFAS 141 reflects a shift away from the conservatism found in SFAS 5. The standard requires the acquiring company in a business combination to recognize all "assets acquired and liabilities assumed that arise from contingencies related to contracts" at the date of acquisition (par. 24a). For all other contingencies (noncontractual contingencies), the acquiring company "shall assess whether it is **more likely than not** as of the acquisition date that the contingency gives rise to an asset or a liability." If the test is met, the acquiring company must recognize and asset or a liability at acquisition date (par. 24b). This standard marks a dramatic shift from SFAS 5, which prohibited the recognition of any assets arising from contingencies, and required the recognition of liabilities arising from contingencies only if the likelihood of such liabilities being realized is considered probable and the amounts are estimable.

Interestingly, while SFAS 141 clearly reflects a departure from the conservatism found in SFAS 5 with respect to *recognition*, it still contains a bias toward conservatism with respect to the *measurement* of assets and liabilities arising from the contingencies referred to above. Paragraph 62 states that:

a.   A liability shall be measured at the **higher** of:
      (1) Its acquisition-date fair value; or
      (2) The amount that would be recognized if applying Statement 5.
b.   An asset shall be measured at the **lower** of:
      (1) Its acquisition-date fair value; or
      (2) The best estimate of its future settlement amount.

Thus, even in this standard, which reflects such a dramatic departure from conservatism with respect to recognition, we find a slight conservative bias with respect to measurement, with assets potentially being understated and liabilities potentially being overstated.

SFAS 142 – Goodwill and other intangible assets

SFAS 142 provides guidance on the recognition and measurement of impairment losses related to goodwill. Watts (2003a) views this standard as nonconservative, because it "replaces the amortization of goodwill with periodic assessment of whether goodwill is 'impaired.'" If impairment is indicated, goodwill is written down and an impairment loss is recognized. While a requirement for systematic amortization would likely result in a more conservative valuation of goodwill than the test for impairment, we believe SFAS 142 still reflects a slightly conservative bias, because no provision is made for the writing up goodwill and recording an unrealized gain.

SFAS 144 – Impairments of long-lived assets

SFAS 144 requires that long-lived assets shall be tested for recoverability whenever events or changes in circumstances indicate that their carrying amount may not be recoverable. If the test for recoverability is not met, the asset must be written down and an impairment loss must be recognized. As with SFAS 142, we believe SFAS 144 reflects a conservative bias, because no provision is made in the standard for writing the asset up and recording an unrealized gain.

SFAS 115 – Accounting for investments
At first glance, SFAS 115 seems to represent an exception to the conservative bias found throughout GAAP. It changed the reporting requirements for investments in certain debt and equity securities from lower-of-cost-or-market (LCM) to a fair-value basis, which imposes the same verification requirements for unrealized gains and unrealized losses. One explanation for the shift is that debt and equity securities have verifiable market values in most cases, which allowed the FASB to achieve its goal of providing relevant information without losing verifiability. In other words, LCM valuation of investments was an inappropriate application of the FASB's definition of conservatism, because given the availability of verifiable market values, there were not sufficient uncertainties regarding the value of investments to warrant a conservative valuation.

What the FASB did not count on was the ability of large players in the market to manipulate market prices to achieve a desired outcome. As discussed earlier in the paper, the Enron reporting scandal exposed a weakness in mark-to-market accounting for investments under some circumstances. Marking investments to market may be appropriate in cases where market values are independently verifiable as evidenced by numerous transactions between independent buyers and sellers. However, in markets characterized by few sellers or buyers and few transactions, dominant players, such as Enron, may have the ability to manipulate market prices to achieve desired reporting outcomes. It is our belief that such market conditions reflect the uncertainties referred to in SCON 2 par. 95, which concludes that "if two estimates of amounts to be received or paid in the future are about equally likely, conservatism dictates using the less optimistic estimate." In such cases, mark-to-market should be replaced with the more conservative lower-of-cost-or market, with market being the bid price (i.e., the "less optimistic estimate" than ask price).

Conclusion

Our review of the conceptual framework and selected financial accounting standards shows that while the FASB is theoretically opposed to accounting conservatism, many of its reporting standards that govern practice reflect a conservative bias. Our guess is that the conceptual framework may better represent the views of the FASB with respect to conservatism than specific accounting standards. After all, the conceptual framework is a statement of theory. It represents an ideal, but does not prescribe specific behaviors; therefore, its creation may have been less vulnerable to political pressures than the standard-setting process. In his regulatory explanation for conservatism, Watts (1977; 2003a;) maintains that "losses from overvalued assets and overstated income are more observable and usable in the political process than forgone

gains due to undervalued assets or understated income." He further states that ". . . this phenomenon provides incentives for regulators and standard setters to be conservative. . ."

The reporting scandals of the last decade clearly support this regulatory explanation of conservatism. Further, the finger-pointing and scapegoating that follow such scandals show how brutal the political environment in which the FASB operates can be. As we pointed out earlier, in the wake of the Enron scandal the FASB and the SEC were vilified in the press and on the floor of Congress, never for standards viewed as too conservative, but rather for standards that in hindsight, seemed lax. For example, the standard setters were criticized for their failure to require the expensing of stock options, for allowing Enron to offload liabilities from its balance sheet to unconsolidated special purpose entities, and for the latitude SFAS 115 gave to Enron in valuing its investments (Liesman et al. 2002; Weil 2001). The FASB has also been criticized for SFAS 13, because its bright-line provisions allowed "clever" managers to structure lease agreements that circumvented its lease capitalization requirements (Rapoport 2005).

We are now in the midst of another financial market scandal from which the FASB has not escaped entirely. Given the unforgiving political environment in which the FASB operates, we were not surprised to find a persistent conservative bias throughout the authoritative literature. We also found that the FASB's occasional departures from its conservative bias have exacted heavy political costs.

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Investigating the Mathematical Constructs of the Economic Order Quantity

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Abstract

The Economic Order Quantity (EOQ) is a mathematical model used to determine the optimal order quantity for inventory. This paper examines the basic structure and constraints of the EOQ model, with the primary focus on the mathematical constructs of the model itself. The extremities of the EOQ model are investigated to determine the sensitivity of the model to its various components. By encouraging students to look at the extremes of any model, including the EOQ, students should be better equipped to assimilate what the model is designed to capture.

Introduction

The Economic Order Quantity (EOQ) is a mathematical model used to determine the optimal order quantity for inventory. The basic structure and constraints of the EOQ model are discussed in this paper, but the primary focus is on the mathematical constructs of the model itself. This paper looks at the extremities of the EOQ model to determine the sensitivity of the model to its various components. By examining the extremities of the EOQ model, users of the model should be better equipped to assimilate what the model is designed to capture.

Overview of the Economic Order Quantity (EOQ) Model

One of the biggest dilemmas facing many companies is the management of inventory, which can sometimes be among the largest assets on the balance sheet. No business wants inventory disruptions to cause lost sales opportunities. However, overstocks can also be extremely costly to a business. The EOQ model is designed to assist in handling dilemmas inherent in inventory management. The basic version of the EOQ model is expressed as follows:

$$EOQ = \sqrt{(2DP \div C)}$$

where D = Demand in units for the time period under consideration

   P = Price or Ordering Costs for one purchase order

   C = Carrying Costs for one unit kept in stock for the entire time period under

      consideration

An Example of the EOQ Model

To illustrate the mechanics of the EOQ model, consider the following example:

Each month, HiTop Corporation uses 1,350 units of Z in its production. Each unit of Z costs HiTop $210. Annual carrying costs are estimated to be 15 percent of the $210 purchase price. Ordering costs consist of $3.84 per order service charge for placing the order through the most reliable mid-level supplier and $32 for delivering the order by truck to the company warehouse.

Question: What is the EOQ for Z and how much are the annual ordering costs and carrying costs?

Answer:

$$EOQ = \sqrt{(2DP \div C)}$$

where $D = 12 \times 1{,}350 = 16{,}200$ units per year

$P = \$3.84 + \$32 = \$35.84$ per order

$C = .15 \times \$210 = \$31.50$ per unit

$$EOQ = \sqrt{[2\,(16{,}200)\,(\$35.84)] \div \$31.50} = \sqrt{36{,}864}$$

$EOQ = \underline{192 \text{ units}}$

Ordering Costs $= DP \div EOQ = [16{,}200\,(\$35.84)] \div 192$ units $= \underline{\$3{,}024}$

Carrying Costs $= (EOQ \div 2)\,C = (192 \div 2) \times \$31.50 = \underline{\$3{,}024}$

Note that at the EOQ, Ordering Costs = Carrying Costs.

Assumptions of the EOQ Model

The EOQ model has several assumptions, including the following: First, an assumption is made that stockouts do not occur. Completely running out of an item, or having a "stockout" can necessitate an immediate remedy that can include extra costs for rush deliveries and other non-normal ordering costs. The EOQ model assumes adequate planning and stock-on-hand to avoid stockouts. Second, the EOQ assumes that the exact same number of units can be ordered at each order point. Third, the purchase cost per unit is assumed not to be affected by the quantity ordered. Fourth, ordering costs, carrying costs, and lead times on purchase orders are assumed to be constant and known. The impact of these assumptions depends on the details of the problem under consideration. For example, suppose that HiTop Corporation in the previous example met all the assumptions, except for the third assumption where the purchase cost per unit is assumed not to be affected by the quantity ordered. Suppose that HiTop could receive

a purchase discount for any order greater than 200 units. Using the EOQ model still has benefits for HiTop. Determining an optimal order quantity of 192 units without consideration of purchase quantity discounts is valuable information and quite possibly could lead to a decision to have an order quantity of 201 units, depending on the discount involved.

Extending the Model

Suppose the ordering costs for HiTop Corporation increased from the present level of \$35.84 to \$80 per order. What would be the new EOQ?

Answer:

$$EOQ = \sqrt{(2DP \div C)}$$

where D = 12 x 1,350 = 16,200 units

P = \$80

C = .15 x \$210 = \$31.50

$$EOQ = \sqrt{[2\,(16,200)\,(\$80)] \div \$31.50} = \sqrt{82,286}$$

EOQ = <u>287 units</u> (rounded)

What if the ordering costs increased from \$35.84 to \$80 per order, but the carrying costs decreased from 15 percent to 12 percent. What would be the new EOQ?

Answer:

$$EOQ = \sqrt{(2DP \div C)}$$

where D = 12 x 1,350 = 16,200

P = \$80

C = .12 x \$210 = \$25.20

$$EOQ = \sqrt{[2\,(16,200)\,(\$80)] \div \$25.20} = \sqrt{102,857}$$

EOQ = <u>321 units</u> (rounded)

Examining the Extremities of the EOQ Model

To better assimilate what the EOQ model is trying to capture, it is beneficial to look at the extremities of the model. The original example had EOQ model data as follows:

$$EOQ = \sqrt{(2DP \div C)}$$

Where D = Demand in units for the time period under consideration (16,200 units per year

        for HiTop)

P   = Price or Ordering Costs for one purchase order ($35.84 per order for HiTop)

C   = Carrying Costs for one unit kept in stock for the entire time period under

        consideration ($31.50 per unit for HiTop)

Consequently,

$$EOQ = \sqrt{[2\,(16{,}200)\,(\$35.84)] \div \$31.50} = \sqrt{36{,}864}$$

$$EOQ = \underline{192\ units}$$

To examine the extremities of the model, suppose that P = C where the price or ordering cost for one purchase order happened to be the same as the cost of carrying one unit in stock for the entire period under consideration.

Then, $EOQ = \sqrt{(2DP \div C)}$

But, P in the numerator would cancel C in the denominator and the equation would reduce to $\sqrt{}$

$$EOQ = \sqrt{2D}$$

$$EOQ = \sqrt{2\,(16{,}200)} = \sqrt{32{,}400} = \underline{180\ units}$$

What exactly does this mean? If HiTop needs 16,200 units, it is best to have 90 orders of 180 units rather than any other combination. To illustrate, select a value for P and C. Suppose P = C = $35.17 each. Then,

Ordering Costs = DP ÷ EOQ = [16,200 ($35.17)] ÷ 180 units = $\underline{\$3{,}165.30}$

Carrying Costs = (EOQ ÷ 2) C = (180 ÷ 2) x $35.17 = $\underline{\$3{,}165.30}$

Again note that at the EOQ, Ordering Costs = Carrying Costs.

This means the following:

Ordering costs = 90 orders at $35.17 per order   = $ 3,165.30

Carrying costs = ½ (180 items) in inventory at $35.17 per item   = $ 3,165.30

Total   = $ 6,330.60

Is this the optimum combination?

Suppose the EOQ were not used and 100 orders were made. Then,

Ordering costs = 100 orders at $35.17 per order   = $ 3,517.00

Carrying costs = ½ (16,200 ÷ 100 items) in inventory

          at $35.17 per item   = $ 2,848.77

    Total   = $ 6,365.77

Which is a higher total cost.

Alternately, suppose the EOQ were not used and 60 orders were made. Then,

Ordering costs = 60 orders at $35.17 per order   = $ 2,110.20

Carrying costs = ½ (16,200 ÷ 60 items) in inventory

          at $35.17 per item   = $ 4,747.95

    Total   = $ 6,858.15

Which is also a higher total cost.

Accordingly, by examining and testing the mathematical constructs of the EOQ model, it was found that a reduced version could be tested as follows:

$$\text{EOQ} = \sqrt{2D}$$

Testing the extremities of the EOQ model found that, even at the extremities, the model gave the optimum solution of 180. Additionally, by examining the reduced version, it can more readily be seen that with P = C, the square root gives the midpoint such that for any order, ½X and X will be the optimum solution. In this example, with 16,200 units needed, the optimum solution was 90 orders of 180 units each. Had the units needed been 5,000, the optimum answer would have been 50 orders of 100 units each. Suppose only eight units had been needed – the solution would have been two orders of four units each.

Summary and Conclusions

The primary focus of this paper was to test the extremities of the EOQ model in a way that should encourage users of the model not to simply "buy into" this or any other mathematical model, but to test the model in extreme cases to see if the promised results are actually there. When the EOQ model was simplified in this paper to the point to where P equaled C, the optimum solution was calculated and then tested with orders above and below the amount recommended. Examination of the mathematical constructs and extremities of the model better refines the focus on why the math is as it is – for example, the square root is needed in the EOQ to give the midpoint where the unknown is multiplied by itself to give twice the total desired units needed. By encouraging the users of any mathematical model (including the EOQ model) to look at the constructs and extremities of the model being used, they should be better able to assimilate what the model is designed to capture.

The Devaluation of the United States Dollar: Causes and Consequencs

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Abstract

This paper identifies many of the challenges that the U.S. dollar faced between 2002 and 2008, and also the consequences Americans are facing because of the dollar's free fall in value. Implications of the United State's current activities, both in- and outside of its borders, are examined in order to determine the causes of the decline of the U.S. dollar. The importance of addressing this problem cannot be ignored. One remedy would be to form a coalition with other countries to begin allowing all currencies to float freely in the exchanges thereby letting the market dictate currency prices. Of course, the likelihood of this is small. Another remedy that is within the power of the U. S., but also unlikely to take place, is to reduce government spending as well as the ever-increasing deficits. If drastic actions such as these are not instituted, further declines in the dollar's value will take place, and the ramifications will be severe.

Introduction

The beginning of the Twenty First Century has seen a tumble of the United States currency that, if it continues, threatens to knock the dollar out of its position as the primary currency of the world. From a high in 2002 to the recent low in the summer of 2008, the U.S. dollar has taken a dramatic dive, one that may continue for the foreseeable future if the causes accredited with its decline are not rectified. The decline of the U.S. dollar is already affecting the prosperity of millions of Americans. The rapid rise in oil prices that has taken place in 2008 is probably the most notable effect of the currency decline. In addition to losing its title as the bloodline of global commerce and security of the world, the American dream is at stake, and action must be taken to strengthen the value of the U.S. dollar.

This paper shows the causes that have besieged the U.S. dollar between 2002 and 2008, and also the consequences Americans are facing because of such a free fall. The implications of the current activities both in- and outside of the United States must be examined in order to determine the causes of the decline of the U.S. dollar. Remedies must be instituted or else further declines in its value will take place, and the ramifications will be severe. Drastic action must be taken to strengthen the U.S. Dollar.

This paper is divided into three main sections. The paper will first describe the causes that have led to, and continue to foster, the deterioration of the U.S. currency in the world markets. This includes America's appetite for imported goods, the federal government's fiscal policies, the emergence of the European Union and China, and the general globalization of the world market. Next, the paper will describe the consequences that have come about because of the sharp drop of the U.S. Dollar and its low value in

comparison to other currencies of the world. The consequences consist of high import prices, including commodities, diversification of currency because of current globalization and perceived risk of the dollar, and an increase in exports by U.S. manufacturers. The paper will then conclude with suggested, and common-sense, remedies which will combat the decline of the U.S. Dollar and help it reaffirm its title as the dominant currency of the world.

Breif History

According to the Federal Reserve Statistical Release, during the current decade, the U.S. dollar has seen one of the most severe and drastic devaluations in its history. In six short years its weighted average value in the world market, represented by the major currencies index, has declined from an average high of $112 in February 2002 to a low of $70 in July 2008 as shown in Chart 1 below. One U.S. dollar is now worth 38% less than it was in 2002 when looking at the broad spectrum of major world currencies that make up the Major Currencies Index (MCI). The MCI is issued by the Federal Reserve Statistical Release, and includes Canada, Japan, and many of the countries in the Euro area such as the United Kingdom, Switzerland, Australia, and
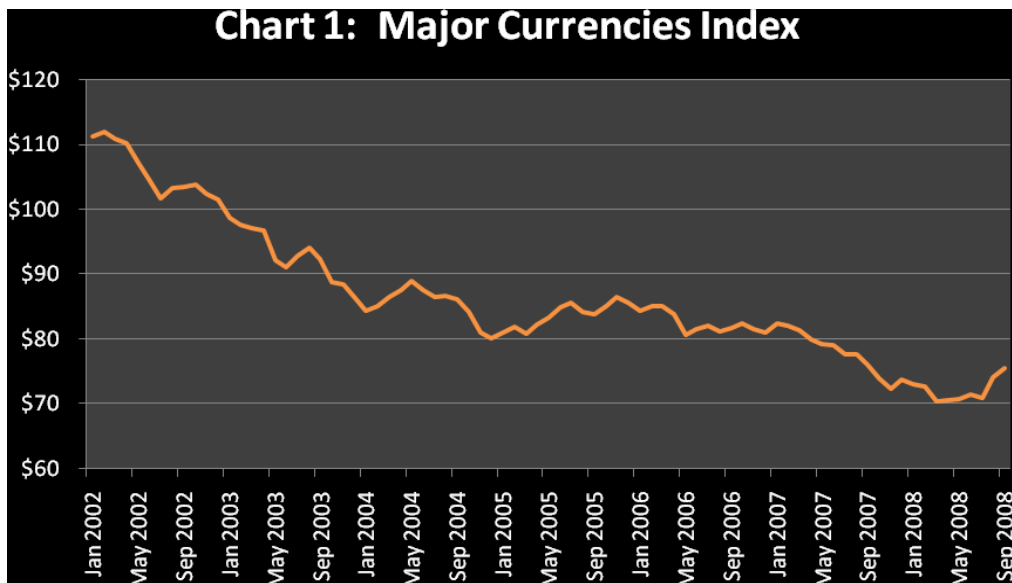
Federal Reserve Release

Sweden, with the addition of other major currencies in developed countries. When looking at the currency exchange rate between the U.S. dollar and the European Union (the Euro), the decline is staggering (Chart 2). As seen from Chart 2, the dollar hit a high in 2002, where one dollar was worth over 1.1 Euros. Since then, the dollar has been on a

steep decline, shedding over 45% of
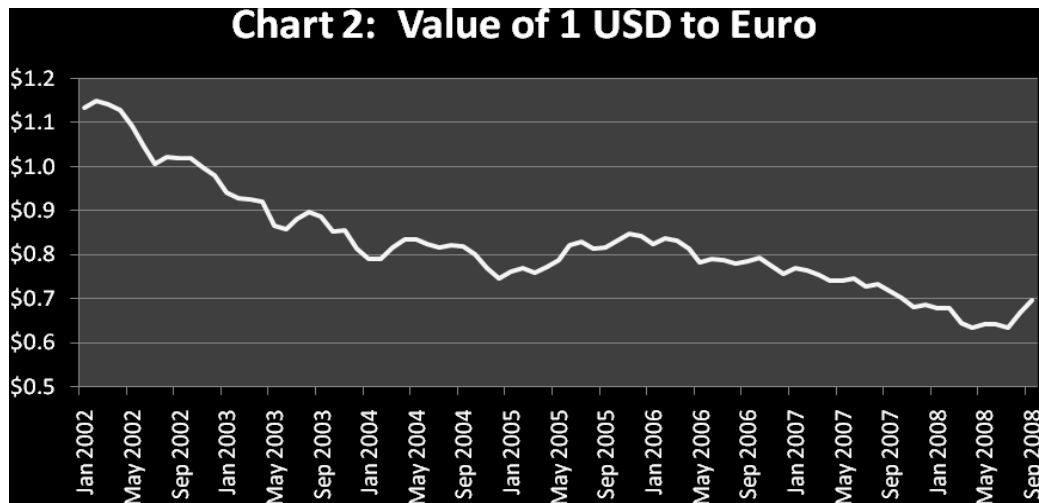
Federal Reserve Release

its value, to the low reached in July 2008 of less than 0.6 Euros. Only recently has the dollar rebounded against world currencies, not due to a change in the fundamentals described below, but due to a change in the global market. Investors are flocking to the U.S. because, currently, they deem us to be one of the best of the worst in the current financial crisis. After the current financial crisis has passed though, there is nothing to keep the dollar from continuing its downward trend against the world's major currencies as demand for the dollar dissipates.

Causes of the Depreciation of the U.S. Dollar

The U.S. Trade Deficit
There are many factors that can be attributed to the relentless devaluation of the U.S. dollar, but the one that is having a profound effect is the trade deficit that continues to plague the U.S. economy. In the current decade the value of the trade-weighted dollar has continued to fall as "the United States has continued to rack up historically unprecedented trade deficits" (Rogoff 2008). As Chart 3 depicts, the deficit has more than doubled since the early 2000's, even as the value of exports has been increasing (Foreign Trade Statistics). The U.S. trade deficit is currently running between 5 and 6 percent of Gross Domestic Product (GDP). With the American consumer's addiction to cheap goods and services and their current ability to spend as they please through endless amounts of debt, the imbalance between the trade deficit and GDP will only get worse. This imbalance has the effect of pouring massive amounts of U.S. dollars into the world, which in turn, pushes down the value of the dollar. Since the products or services exported by the U.S. are not equivalent to the net goods and services imported, countries are left holding dollars which they may either use to rack up currency reserves or to purchase U.S. Debt. Countries, such as those in the Persian Gulf, are finding themselves with huge stockpiles of U.S. dollars due to oil sales. These countries must either stockpile endless reserves of dollars or invest them back into the U.S. through trade, debt, or equity

purchases. With large quantities of the dollar being injected into the world market because of trade discrepancies, investors from foreign countries are demanding increased returns on their investments. They do this by either requiring higher interest rates or through additional purchasing power with their native currency. With the federal government artificially keeping interest rates low (discussed later), investors are left to push down the value of the dollar. This pushing down of the value of the dollar increases their purchasing power when investing in the U.S. or purchasing goods from the U.S. An insufficient inflow of dollars back into the U.S. leads to a further depreciation of the dollar. This depreciation gives foreigners an incentive to purchase goods or services, invest in government or corporate debt, or take equity stakes in U.S. corporations. The dollar will continue this process until its value is low enough to attract needed buyers or investors who are willing to purchase dollars. This will generate inflows of dollars back into the U.S. economy (Mouhammed 2008).

The U.S. Budget Deficit

The U.S. government budget surpluses of the late 1990's, in addition to the recent high of the U.S. dollar in 2002, are now long gone. Since then, the U.S. government has racked up massive amounts of debt in order to finance its budget deficits. The United States' appetite to fund social programs, while at the same time trying to keep taxes low; funding of the war on terror, notably the Iraq and Afghanistan Wars; and more recently, the injection of hundreds of billions of dollars into the financial sector, continue to cause the government to spend far more than it takes in. This imbalance between revenues and spending causes the Federal government to issue bonds that continues to contribute to the U.S. national debt. The national debt level is estimated at over ten trillion dollars and is growing at over three billion per day. This debt is coming at a price. As more and more dollars are dumped on the world economy, the value of the dollar decreases, because every dollar outstanding is diluted, and the market becomes more saturated (Mouhammed 2008).

Tying the deficit and government debt with the need for the global community to embrace the dollar, Ronald McKinnon (2008) writes:

"The sustainability of the huge U.S. current account deficit depends on the continuance of the dollar as the world standard. If the United States as center country maintains a stable price level, countries with trade surpluses are loathe letting their currencies appreciate against the dollar for fear of losing mercantile competitiveness in the short run while risking deflation in the long run. If private inflows are insufficient to fund the U.S. current account, then foreign central banks step in to buy dollar assets to prevent their currencies from appreciating. Thus, the deficit could continue indefinitely with no well-defined upper bound on America's net international indebtedness."

As McKinnon points out, the dollars' reliance on foreign capital pouring into the U.S. to fund its account deficit is helping the dollar value in the short run, but in the long run, it is setting the dollar up for a huge downward correction. Once countries lose faith in the dollar, they may be less willing to invest their funds in the U.S. economy. This point has been proven in the first part of 2008 when most believed that the financial crisis was contained only to the U.S. During this period alone, the dollar fell almost 15% against major currencies. Foreign Investors around the world were dumping dollars for fear of a significant correction due to the financial crisis. They were also hedging their

dollar holdings against commodities that generally move in the opposite direction of the dollar. This is a contributing factor to the commodities bubble that grew at the beginning of 2008 and one of the main reasons the American public was paying over four dollars per gallon for gasoline at that time.

Low Interest Rates

The Federal Governments' deliberate intervention to keep interest rates low in addition to injecting funds into the money supply in the U.S. is also compounding the problem of the devaluation of the dollar. At a time when interest rates should be rising, because foreign investors are in need of additional returns due to of the decline in the value of the dollar, the federal government is keeping rates at artificially low levels. With interest rates low, the rate of return required by foreign investors is not being satisfied. Foreign investors then look to other markets such as the European Union, where interest rates are much higher, and as a result, demand for their currency goes up while the U.S. dollar goes down. This imbalance is causing foreign investors to either flock to European countries for superior returns or drive down the dollar to get additional value out of their native currency.

Financial Globalization

Financial globalization is also a key ingredient that continues to promote the devaluation of the dollar. Many economists argue that the dollar is destined to lose its value and its position as a key currency in the world economy (Danailova-Trainor 2007). They believe that the U.S. cannot continue to maintain the demand needed by the rest of the world to keep new foreign investment pouring into the U.S. Economists argue that the reliance on the U.S. for their own well being is being eroded, because of the emergence of other markets such as the European Union and China. They also believe that as a result of the foreign investment in the U.S., any perceived threat on the U.S. economy, and thus depreciation of the U.S. dollar, is compounded because foreign investors are likely to quickly withdraw their money. Allen Greenspan, former Federal Reserve Chairman, argues that, "foreign accumulation of U.S. assets will slow as dollar-denominated assets occupy a larger share of the world's store of value. As investors refuse to buy U.S. assets, interest rates will rise or the dollar will depreciate" (Danailova-Trainor 2007). This scenario may already be playing out. Because of the high trade deficit and the U.S. budget deficit, the global market is being saturated with U.S. dollars. Foreign investors are feeling pressure to diversify their positions. New global markets, such as China and Europe, have given the dollar a real rival for the first time in over a century, and thus foreign investors have an alternative to the dollar (Bergstein 2008).

The China Syndrome

The emergence of China as the number one exporter of manufactured goods in the world has also contributed to the decreased value of the U.S. dollar. During the short period of the eight years between 2000 and 2008, China has surpassed the United States as the number one exporter of the world. China has turned into a manufacturing "juggernaut," taking a huge global market share away from the U.S. and leaving the U.S. manufacturing base in ruins. The "Made in China" mark on goods has replaced the "Made in America" mark and can be found almost everywhere that consumers spend

their money. This transfer to China has fundamentally changed the way dollars are handled in the world. Before China, U.S. dollars were needed and demanded because the United States was the primary exporter of the world. Dollars kept flowing back into the U.S. by the purchase of goods and services by the consumers in foreign countries. This inflow has now slowed. China has now become the primary exporter in the world, and the U.S. has turned into a huge importer of goods and services from China, only second to Europe (Preeg 2008). This has significantly reduced the inflow of trade dollars back into the U.S. economy. This has also enabled China to accumulate vast amounts of U.S. debt, and China is now number two, behind Japan, as the largest holder of U.S. Treasury securities.

The China effect has also been compounded by China by not letting their currency, the yuan, float freely against the U.S. dollar. Letting the yuan float would make Chinese products and services more expensive to the U.S. and to other foreign consumers (Moody 2006). Although letting the yuan float freely in the currency markets would further pull down the U.S. dollar in the short run, it would also enable the U.S. to gain back some of its competitive edge by being able to compete with China on the price of exported and domestically produced goods. With the yuan able to appreciate in relation to the U.S. dollar, the prices for Chinese products and services would increase and the prices for U.S. goods would decrease. This would cause exports to gain significant strength in the U.S., bringing dollars flowing back into the U.S. economy. Although China has recently let their currency appreciate against the dollar by a small increment, the yuan still has a considerable amount to appreciate to put the yuan and dollar in a correct relative position that matches their respective imports and exports (Bergstein 2008).

The Emergence of the European Union

Another significant factor that is contributing to the decline of the dollar is the emergence of the European Union. The integration of countries in Europe has created an economy that is now bigger than that of the U.S., and it has given the world an alternative currency than that of the U.S. dollar. The European Union has also taken demand away from the U.S. in the form of foreign investments and exports, and it has overtaken the U.S. in currency holdings of the world. Up until now, the Euro has provided greater returns than the U.S. dollar when higher interest rates and currency appreciation is factored in. In an article by Fred Bergstein (2008), he warns that:

"…we should expect a steady and sizable portfolio diversification from dollars into euro's as private investors, central banks, and sovereign wealth funds seek to align the currency composition of their assets with the new structure of the world economy and global finance. One result will be steady upward pressure on the euro and downward pressure on the dollar..."

The move to euro's from dollars has already started and is a continuing cause for the decline in the value of the U.S. dollar. In 2006, the "global foreign exchange reserves totaled $4.35 trillion, of which 66.3% were held in U.S. dollars; but, as recently as 2002, the U.S. dollar accounted for over 70% of total foreign exchange reserves. The euro's increasing stature has provided foreign central banks [investors] with an alternative, and the diversification trend is likely to continue" (Moody 2006).

The U.S. Economy

Recent perceived instability in the U.S. economy is also contributing to the depreciation of the dollar. The U.S. dollar has historically been viewed as a "safe" currency in that the risk of default or wild swings in its economy are low, and returns are almost guaranteed. Recently however, the housing crisis, along with huge trade and budget deficits, have soured the confidence that foreign investors have in the U.S. economy. In the past, investors were willing to sacrifice some of their returns by investing in the U.S. because of its reliability and security. Recently though, with confidence eroded investors are demanding higher returns by means of higher interest rates or more purchasing power of their native currency.

Consequences of the Depreciation of the U.S. Dollar

The Dumping of U.S. Dollars

Many consequences arise because of the impact of the depreciation of the U.S. dollar. Each has the potential to deliver a severe shock to the economy of the United States and the world. One such shock would be the dumping of U.S. dollars by foreign investors. The imbalance of dollars pouring out of the U.S. with dollars pouring back in, whether through debt issues or exports, is only minor in comparison to what could happen if foreigners jettisoned their dollar holdings. Ronald McKinnon (2008) adds to his previous remarks regarding this imbalance:

"…, this uneasy equilibrium could be upset if the Federal Reserve loses monetary control by some 'accidental' domestic event, say, pumping too much liquidity into the economy to avoid a cyclical downturn-as might be the case with current subprime mortgage crisis. Alternatively, if U.S. protectionists succeed with bashing China or Japan to force the dollar down, then foreign holders of liquid dollar assets would again become nervous. There could be a tipping point where investors in Asia or the Persian Gulf so fear the loss of the dollar's international purchasing power that they jettison their dollar holdings-despite the short-run pain of letting their own currencies appreciate. Such deep and general dollar devaluation would then cause massive inflation in the United States itself."

As Ronald McKinnon (2008) suggests, there could be a tipping point where foreign investors feel the dollar is destined to continue to depreciate, and rather than continuing to take loses, they may decide to dump their dollar holdings to invest in more secure and stable currencies. Also, "having accumulated such vast quantities, foreigners may, at some point, lose their appetite-particularly for U.S. government debt" (Moody 2006). Without a purchasing base for debt of the U.S., the pipeline of dollars flowing back into the U.S. economy would be cut off, and the funds needed to run the government would not be available.

Currency Diversification

The euro has already surpassed the dollar as the primary reserve currency in the world. The drop in value and the uncertainty in risk has stifled the dollar's ability to provide the returns required by potential investors. Investors have been forced to diversify their holdings among other currencies of the world. As discussed earlier, foreigners have been willing to finance the U.S. trade imbalance by acquiring and

accumulating large quantities of U.S. government debt, and stockpiling vast quantities of U.S. reserves; however, with strong rivals to the dollar, such as the euro and the yuan, the dollar now has competition, and investors have an alternative for investment. Foreign investors can, and are, diversifying their holdings among various currencies. As investors further diversify their holdings, the demand for dollars will further depreciate, and the cycle will keep replicating itself, thus putting the dollar in a steep, downward spiral (Bergstein 2008).

The Rise in Commodities

One of the most visible signs of the depreciation of the dollar, and the consequence it is having on the U.S. consumer, is the rapid rise in the prices of commodities that has taken place during the past few years. When the exchange rate for the dollar falls, commodities, such as oil which is traded in dollars, rise. The sellers of commodities in foreign countries refuse to let their revenues decline because the value to the dollar has gone down, so they demand more dollars. The recent rise in commodity prices has been fed by fear that the U.S. dollar will continue to drop, and investors will take huge losses. Investors started to hedge their positions by purchasing commodities, thus fueling the bubble that recently burst. Even though commodity values have recently come back down to a manageable level, the upward trend continues, and higher prices are still likely in the near future as long as the dollar continues its decline (Mouhammed 2008).

Increased Import Prices

Cheap imports of goods and services, which U.S. consumers have come to expect, are also being hurt by the devaluation of the U.S. dollar. With the dollar losing its value to currencies all across the world, dollars paid for goods and services must be increased so that revenues will not be sacrificed once they have been converted to the importer's native currency. This is especially true for goods and services coming out of Europe. U.S. consumers will eventually see prices rise in the U.S. for foreign goods.

Inflation

Inflation will also increase. The downward spiral of the dollar is increasing the cost of foreign exports entering the U.S. and contributing to the overall inflation of the U.S. economy. As seen in Chart 4, compiled by Timothy McMahon (2008), inflation has been on a six year upward trend, since 2002 when the dollar peaked. At the same time, the U.S. dollar has been on

Chart 4: Annual Inflation Rate
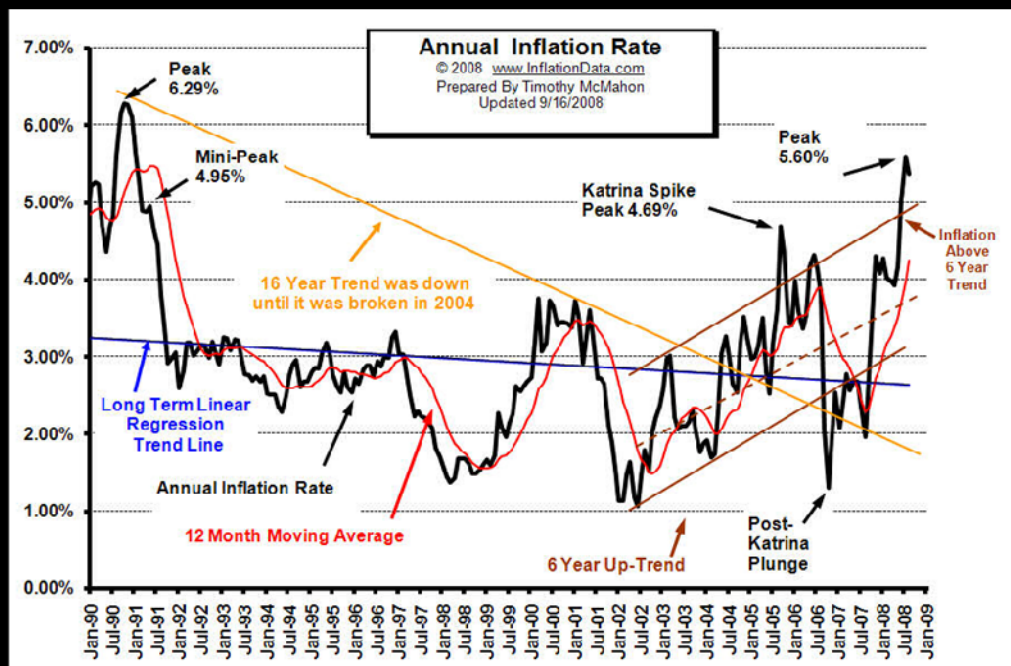
Timothy McMahon (2008)

a six year downward trend. This shows a correlation between the decline in the value of the U.S. dollar and the rise of inflation in the U.S. economy. Foreign investors are requiring higher and higher prices in terms of dollars for the goods and services they export to the U.S. This pushes up the costs of goods and services entering the U.S., which leads to a rise in inflation. Amid the depreciation of the dollar, inflation will continue. Consumers have already started to curtail their spending which is leading to a slowdown of the U.S. economy.

Cheap U.S. Goods

With the help of the weak U.S. dollar, U.S.-made products have become more competitive in the world arena, leading to a short term increase in U.S. exports. In Addition, U.S. goods and services are essentially on sale to the rest of the world. This effect can be seen on Chart 3, presented earlier in this paper, where the account deficit has taken a breather from its rapid increase and has leveled off for 2007. But the increased exports by the U.S. and the strengthening of foreign currencies, in contrast to the U.S. dollar, are also hurting foreign countries who rely heavily on their exports as a significant portion of their GDP. Such countries as Germany, Japan and South Korea are finding their completive edge evaporate as the U.S. dollar declines and their goods and services are becoming more expensive to their crucial customers in the U.S. (Roubini

2008). This increases the possibility of potential dispute between the United States and some European countries. Seeing their currencies appreciating against the dollar, along with their higher rates of interest, many of the countries' economies will be affected. This will lead to a contraction of export industries, causing their unemployment to rise, and their GDP to fall. In this regard, Mouhammed (2008) offers the example that, "Airbus received a $40 billion contract from the U.S. Air Force in order to grease its economic wheels [of European countries] at the expense of the American workers."

Conclusions

With the prosperity of the U.S. at stake, action must be taken to strengthen the U.S. dollar and reverse the direction it has taken over the past six years. Action must be implemented to combat the depreciation of the dollar. One such action would be to restore the trade balance in the world by letting all currencies float freely in the exchanges, thereby letting the market dictate the price of currencies. Although this would hurt the U.S. dollar in the short run, in the long run the U.S. would gain back some of its competitive edge and be better able to compete in the global market place. Exports, in addition to the flow of dollars back into the U.S., would increase. This action would require a willingness by other countries, such as China, not to artificially manipulate their currencies.

Secondly, the U.S. government must reduce its spending and get rid of the budget deficits it has been plagued with. By reducing excess government spending, the need to increase the money supply in the U.S. would be reduced. This would cause interest rates to rise and lead to a strengthening of the dollar. This would also correct the imbalance of interest rates by allowing them to rise to a realistic level that will prevent significant inflation and increase the return on capital needed by foreign investors. To do this, the U.S. government would need to be willing to curb spending and refrain from capping interest rates at very low levels.

Implications for Future Research

Implications for further research include presenting the global needs of the U.S. as a world consumer of goods and services. Additional research could also be devoted to the implications to foreign countries which refuse to give "credit" to the U.S. Further research could also be done concerning the belief that the dollar has recently been over-valued, and its recent downward trend is simply a correction to a more realistic value in comparison to other currencies of the world.

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Examining Monetary Rules by Spreadsheet Simulations

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Abstract

Running simulations using Microsoft's Excel or other spreadsheet programs is an excellent method for examining the time series effects of macroeconomic phenomena. As students commonly have this tool available to them, it becomes an easy means to get students actively involved in running policy simulations, both in and outside of the classroom. In this paper, various monetary policy models and rules are simulated in Excel to show impulse response functions, the time path differences in: changes in rules, changes in model parameters, changes in aggregate models of the economy, and AD versus AS shocks. Notably, Tinbergen's policy constraint, Friedman's monetary rule, Taylor's monetary rule, Blinder's monetary prescription, and zero-bound policy are examined under varying simulated economic conditions. A comparison of the paper's spreadsheet process to the MoPoS simulation game and to Weber's OCT is made. Although the models and processes here are relatively simple, students are able to get a first-hand look and feel for complex monetary policy implications and limitations.

Introduction

Several years ago Gerald Dwyer, current Vice President of the FRB of Atlanta, published a very interesting article entitled "Rules and Discretion in Monetary Policy" (Dwyer, 1993) in which he demonstrated using monetary aggregates how various monetary rules perform when subjected to exogenous shocks. By exposing a rather simple dynamic economic model to exogenous shocks he was able to show the economic impacts under various monetary policy rules, to show shock persistence, and to show that the type of feedback policy used, that is, how "the reactions taken depend on the state of the economy," is instrumental in determining the final economic outcome. In that paper Dwyer never ultimately came to a definitive conclusion as to whether monetary authorities should follow rules or use their discretion as the economy changes, but in an earlier paper (Dwyer, 1992) he had already made the case for caution against the de-stabilizing effects of steadfast rules under feedback. Nevertheless, rules such as Taylor's (Taylor, 1993) and McCallum's (McCallum, 1994a, 1994b) have since become part of the monetary authority's playbook.

Below we expand Dwyer's monetary aggregate model to examine the newer interest rate approach to monetary rules. Other extensions of his analysis are to show both aggregate demand and supply shocks and determine the different responses under feedback, and to include inflation targeting as an additional policy objective. Last, and perhaps best, because these models are fairly simple and we now have nearly ubiquitous access to spreadsheets, these simulations can now be readily available to undergraduate students of money and banking or macroeconomics to provide rather profound insight into policy processes.

Friedman's Constant Monetary Growth Rule; No Feedback

Following Dwyer we posit a simple economy that exhibits GDP rate of growth, y_t, a growth constant, α, growth momentum, βy_{t-1}, a monetary policy component, γm_t, and a shock term, ε_t. This equation is essentially the same as Dwyer's equation (1) with the monetary policy variable implying monetary aggregate changes, and the error variable representing an unspecified sector shock.

$$(1) \qquad y_t = \alpha + \beta y_{t-1} + \gamma m_t + \varepsilon_t$$

Friedman's well-known monetary growth rule (Friedman, 1953) is interesting because there is no macroeconomic policy response whatsoever to changes in the economy. This monetary rule is simplest and is easily modeled as

$$(2) \qquad m_t^* = \bar{m},$$

representing the targeted monetary growth rate equal to some constant targeted rate.

Friedman's monetary rule simulation example

To simulate Friedman's monetary growth rule we assume the following parameters, the only stipulation of which is that when shocks are zero, y_t is at the targeted level. Of course, other parameter values may be used.

$$(3) \qquad y_t = 0.2 + 0.6 y_{t-1} + 0.2 m_t + \varepsilon_t.$$

We use 10 periods (quarters), and introduce a negative shock (- 2%) at period 2. The results are shown graphically in the top diagram of Figure 1. Note that within 8 quarters the growth rate is almost back to the targeted level. The nature of the model is for it to only asymptotically approach that level. This simulation, of course, mirrors Dwyer's result.

Blinder's 'Prescription' (Monetary Under-adjustment to Feedback)

After leaving the Fed former Fed Vice-Chairman Alan Blinder wrote a short monograph on being a central banker (Blinder, 1998). In it Blinder reminds the reader of Tinbergen's policy constraint, but also of the possible necessity to target several different objectives. How to attempt this while facing Tinbergen's constraint is the main theme of his book. Blinder ultimately offers the following advice: treat the targeting as a dynamic programming problem; that is, perform some policy action and wait to see what happens, then continue to under-adjust the policy to the continual feedback received by the initial action. This is, in effect, not a complete rule but is, instead, a means to conduct discretionary monetary policy, which he advocates.

We may extend Friedman's model above by modifying the monetary rule to incorporate a feedback mechanism and to under-adjust by using a fractional response coefficient. We posit here, for instance,

$$(4) \qquad m_t^* = 5.0 + 0.9(3 - y_{t-1}),$$

as an adaptive monetary rule, which we call here Blinder's prescription, that responds quickly to a GDP growth output gap. Under this scenario we simulate and find

that the response is, indeed, quicker than the Friedman rule (see the bottom diagram of Figure 1).

Taylor's Rule

Dwyer never explicitly considered interest rate rules so we must modify his model a bit to incorporate this process. Continuing for the moment to follow Dwyer, in equation (5) below we use almost the same simple macroeconomic model as above, which again incorporates GDP growth, y_t, a growth constant, α, growth momentum, βy_{t-1}, a monetary policy component, γm_t; however, the monetary policy variable now implies interest rate rather than monetary aggregate changes (note the negative relation now), and his unspecified error variable is now specified as either an aggregate demand or supply shock, ε_{AD_t} or ε_{AS_t}.

(5) $$y_t = \alpha + \beta y_{t-1} - \gamma m_t + \varepsilon_{AD_t} - 0.5(\varepsilon_{AS_t})$$

Extending Dwyer we posit a simple inflation, p_t, dynamic equation that incorporates properties similar to equation (1), namely, an inflation constant, δ, inflation momentum, θp_{t-1}, a monetary policy component, φm_t, but again, the monetary component is now in interest rate form and (1) is modified so that shocks are explicitly specified as aggregate demand or supply shocks, ε_{AD_t} or ε_{AS_t}.

(6) $$p_t = \delta + \theta p_{t-1} - \varphi m_t + 0.5(\varepsilon_{AD_t}) + \varepsilon_{AS_t}$$

And finally, extending Dwyer's model further we introduce a simple version of the well-known Taylor rule,

(7) $$m_t^* = 2.0 + p_t + 0.5(p_t - 2.0) + 0.5(y_t - 3.0)$$

where the variables are as have been defined and simple integer assumptions have been used for the real interest rate, 2.0, the targeted rate of inflation, 2.0, and the targeted rate of growth, 3.0. Further, the monetary policy component is now the targeted federal funds rate. These parameters are essentially classical and are not based on more current views of the parameters. For instance a recent paper (Carlstrom and Fuerst, 2008) uses $m_t^* = 2.32 + 1.44(p_t - 2.0) + 0.15(y_t - 3.0)$, with unspecified targets.

Taylor's rule simulation example for AD shock

Due to longer persistence in the following simulations, we extend here to 14 quarters and assume the following parameter specifications to the recursive system of three equations introduced above, i.e. equations (5) through (7), and introduce a negative AD shock at period 3:

(8) $$y_t = 1.4 + 0.8y_{t-1} - 0.2m_t + \varepsilon_{AD_t} - 0.5(\varepsilon_{AS_t})$$

(9) $$p_t = 0.8 + 0.8p_{t-1} - 0.1m_t + 0.5(\varepsilon_{AD_t}) + \varepsilon_{AS_t}$$

(10) $$m *_t = 2.0 + p_t + 0.5(p_t - 2.0) + 0.5(y_t - 3.0)$$

The results are shown in Figure 2. In Figure 2 a negative AD shock (- 2%) immediately sends both the GDP rate of growth and inflation down to 1% in the 3rd period, but both almost fully recover by period 10, seven periods after the shock. Making some comparisons, although admittedly under different parameter assumptions, GDP growth is at 2.94% after six periods of recovery using the Taylor rule, GDP growth rate is

at 2.91% after six periods of recovery using Friedman's constant monetary growth rule, and in Blinder's feedback model the growth rate is essentially already at 3%, at 2.99%.

Taylor's rule simulation example for AS shock

Using the same recursive model as equations (8) – (10) above, we now introduce a negative AS shock to the model, such as a sudden oil price increase, at period three. As seen in Figure 3, an AS shock in the third period immediately sends inflation up by 2% and begins to drive the GDP growth rate downward, reaching bottom in the 5th period at 1.69%. Taylor's rule responds to the initial surge of inflation by increasing the interest rate, which has a negative effect on output growth. Two and a half years later after the AS shock, at period 14, the GDP growth rate is still slowly climbing and has reached 2.75%, while inflation has nearly fully recovered by period 14 but still stands slightly above target at 2.09%. Thus it is shown that AS shocks are much more difficult for Taylor's rule (or for that matter, any AD policy stimulus) to correct than AD shocks.

Taylor's rule as an Example of Tinbergen's Policy Constraint

In his classic booklet, *On the Theory of Economic Policy* (Tinbergen, 1952), Tinbergen showed that for each objective to be reached there must be a separate tool to achieve it. For instance, if there are four objectives such as price stability, unemployment stability, optimal GDP growth, and financial institution stability, then there must be at least four separate tools to simultaneously achieve each of the goals. Of course, as it turns out, the Fed has but one main tool, monetary policy (although, as we have recently seen, they have the ability to put in place new facilities and new regulations). Thus with Friedman's rule or Blinder's prescription the one objective can be achieved relatively quickly, although the other variables are left to wander as they will. With Taylor's rule, because there are two objectives, growth and price stability, but only one tool, the federal funds rate, the result is more of containment rather than a quick, precise movement toward the goal. Much like what happens when you "watch" two children, if full attention is placed on one child, the other child may wander away. Only partial attention can be attained for both and, at best, both children never fully controlled but both are somewhat contained.

By comparing Figure 3, which shows Taylor rule (i.e., two objectives – one tool) responses to an AS shock, to the graphs in Figure 4, which show separate one objective – one tool responses to an AS shock, one gets a direct observation of Tinbergen's policy constraint.

Impact of a Zero bound

As we have recently seen, using an interest rate tool can be constraining for policy makers because there is a zero bound limit on how low interest rates can go. What does this do to policy effectiveness? To examine the impact we use the Taylor rule model as shown above but increase the shock so that interest rates will be driven below zero when the mathematical model is not logically bound. In Figure 5 we see the impact of an AD shock of -10%, a large shock which is chosen simply to ensure that the targeted interest rate will be driven below zero when using the Taylor Rule formula. The top panel shows the impacts on GDP growth and inflation when interest rates are, by modeling, unable to

go below zero. On the bottom panel we see the same variables' impacts when the lower bound of zero interest rate is not imposed.

In this example we find that the zero lower bound stifles growth initially in comparison to the growth rates without a zero bound (growth rates are initially -7.0% in the 3rd period compared to -7.0%, -4.2% in the 4th period compared to -4.0%, and -2.16% in the 5th period compared to -2.05%), but not by much. Looking closely at Figure 5 we find the GDP growth rates are lower at every time period, but they differ only by 0.2% at most and asymptotically close the gap quickly such that by period 10 the zero-bound growth is 1.306% while the non-zero bound growth is 1.316%.

MoPoS

At the turn of this century, the University of Basel produced a monetary simulation package and made it available online as a game. A few years later, Yvan Lengwiler, the author of the simulation, published a paper about the game and its role as a learning tool (Lengwiler, 2004). The model used for the Monetary Policy Simulation Game (MoPoS) is quite a bit more complex than the model developed here. The foundation of the MoPoS model is an IS curve and Phillips relation couple with a stochastically driven real output function. These three equations drive GDP and inflation sans impacts from monetary policy. More components are added to the model including inflation expectations, a stationary but stochastically driven real interest rate, stochastically driven velocity, and finally a Taylor's rule, which is the default ("autopilot") setting for the game. Students can be the exogenous interest rate setter, i.e., use discretionary monetary policy, or can allow Taylor's rule to determine the targeted interest rate. The game is in continuous mode so that a player adjusts monetary real time and watches the results evolve from that point on. A player may make occasional adjustments or make nearly continuing adjustments as the game progresses.

Clearly, the model is interesting and exciting, it even includes a face in the corner that smiles or frowns to reflect how things are going. But the complexity of the model is also a pedagogical weakness. Making interest rate adjustments for stochastic shocks to GDP and/or real interest rates may give a feel for the difficulty monetary authorities have in attempting to stabilize an economy, but it does not easily foster a connection between theory and practice. Theory, as presented in textbooks and classrooms, is always ceteris paribus. Textbook and in-class examples are almost always one-shift so as to clearly delineate impacts.

There are other sub-optimal aspects of MoPoS. For instance, because the MoPoS simulation stochastically determines output growth as well as inflation, there is no real feel for the differences between AD and AS shocks, which occur only by stochastic happenstance in MoPoS. Here we can easily model the difference directly and directly relate those differences to textbook AD/AS models. Viewing one-shock, ceteris paribus impacts is a cleaner presentation to students (and to everyone else); moreover, it allows for the tweaking of rule parameters to examine model and/or rule sensitivity.

Weber's Optimal Control Theory (OCT) using Microsoft Excel Solver

Another dynamic hands-on model that attempts to engage "undergraduate" economics students has been put forward by Ernst Juerg Weber (Weber, 2007). This model, however, is quite mathematically sophisticated for undergraduates and requires knowledge of both differential and integral calculus. Because few undergraduate students have that type of background, this model is probably best used as a resource for fourth-year undergraduates or first year graduate students in economics, rather than a sophomore/junior money and banking class.

Conclusions

Excel spreadsheet simulations are a complement to both text/lecture and more complex simulations such as MoPoS or Weber's OCT. The proper use of this simple but powerful and available tool is shown here to reinforce relatively sophisticated monetary theories such as Friedman's rule, Taylor's rule, Blinder's prescription, Tinbergen's constraint, and to reinforce monetary policies actions and results stemming from different AD/AS shocks. The beauty of this approach is the simplicity, which is truly accessible to undergraduate students. Spreadsheet simulations also allow students to test different parameters, and hence attempt sensitivity analysis, for any of the theoretical ideas above, as well as to learn just a few more secrets of this surprisingly powerful and engaging tool for analysis.

Models such as MoPoS and Weber's OCT, if they are to be used at all, are recommended as the next step after simpler, one-shock, simulations are thoroughly examined. The model above allows for exactly that. And there is another important aspect of producing the model in spreadsheet form: students are able to take the spreadsheet and explore new approaches as they attempt their own models. They become more familiar with a remarkably robust and ubiquitously available tool and can expand on what they have learned from this exercise to attempt modeling of any other aspects of economics such as supply and demand, EOQ inventory adjustments, fiscal policy, etc.

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Figure 1: GDP growth rate response to a negative 2% *AD shock* introduced in period 2 under Friedman's constant monetary growth rule on the left, here assumed to be 5%, using

$$y_t = 0.2 + 0.6y_{t-1} + 0.2m_t + \varepsilon_{AD_t}.$$
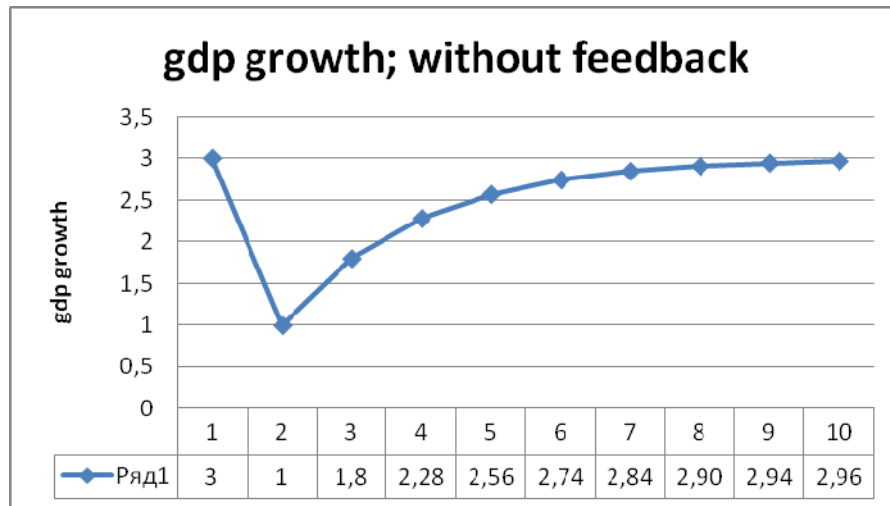
Next is Blinder's approach using the same model but with feedback in the form, $m_t^* = 5.0 + 0.9(3 - y_{t-1})$. Inflation was not modeled.
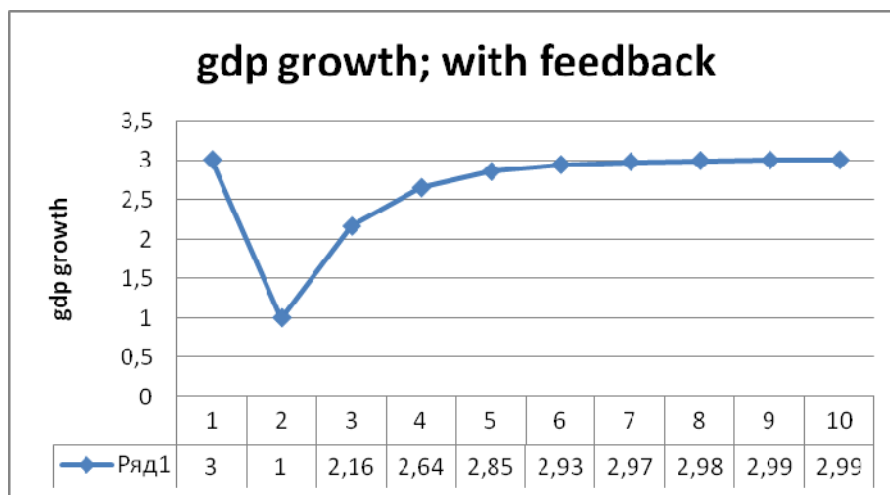
Figure 2: GDP growth rate and inflation responses to a negative 2% *AD shock* introduced in period 3 under Taylor's interest rate rule and where the three-equation model is

$$y_t = 1.4 + 0.8y_{t-1} - 0.2m_t + \varepsilon_{AD_t} - 0.5(\varepsilon_{AS_t})$$
$$p_t = 0.8 + 0.8p_{t-1} - 0.1m_t + 0.5(\varepsilon_{AD_t}) + \varepsilon_{AS_t}$$
$$m*_t = 2.0 + p_t + 0.5(p_t - 2.0) + 0.5(y_t - 3.0)$$

AD shock Taylor Rule

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
Ряд1	3	3	1	1,9	2,4	2,6	2,8	2,9	2,9	2,9	2,9	2,9	2,9	3
Ряд2	2	2	1	1,4	1,7	1,8	1,9	1,9	1,9	1,9	1,9	2	2	2
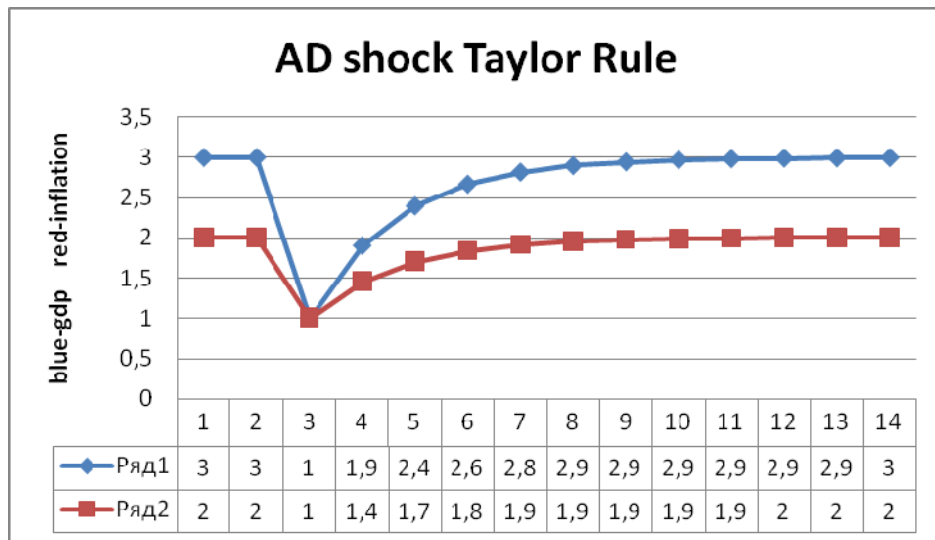
Figure 3: GDP growth rate response to a negative 2% *AS shock* in period 3 under Taylor's interest rate rule and where

$$y_t = 1.4 + 0.8y_{t-1} - 0.2m_t + \varepsilon_{AD_t} - 0.5(\varepsilon_{AS_t})$$
$$p_t = 0.8 + 0.8p_{t-1} - 0.1m_t + 0.5(\varepsilon_{AD_t}) + \varepsilon_{AS_t}$$
$$m*_t = 2.0 + p_t + 0.5(p_t - 2.0) + 0.5(y_t - 3.0)$$

AS shock Taylor Rule

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
Ряд1	3	3	2	1,7	1,6	1,8	1,9	2,1	2,2	2,4	2,5	2,6	2,6	2,7
Ряд2	2	2	4	3,3	2,9	2,6	2,5	2,3	2,2	2,2	2,1	2,1	2,1	2,0
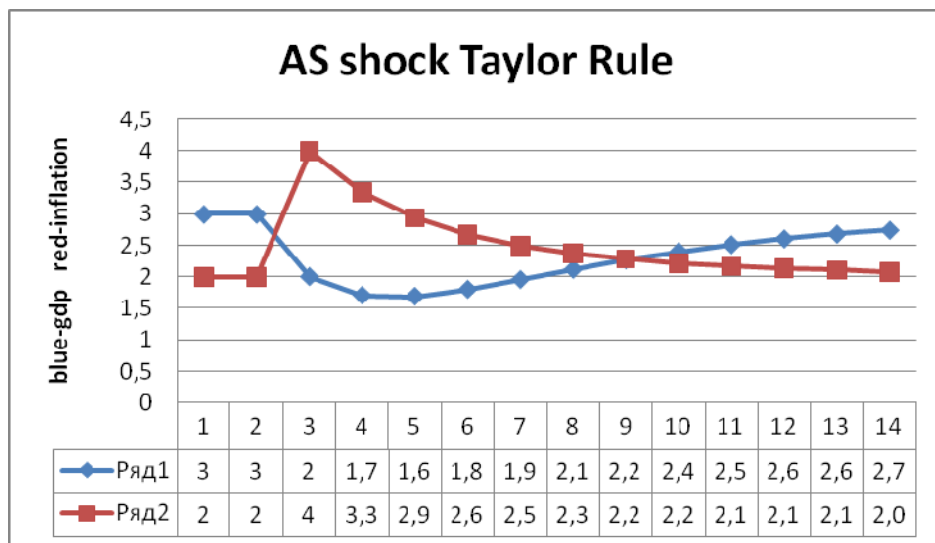
Figure 4: Impact of an interest rate rule with inflation as the only targeted objective. Inflation and GDP growth rate response to a negative 2% *AS shock* in period 3 under the interest rate rules $m*_t = 2.0 + p_t + 1.0(p_t - 2.0)$ and $m*_t = 2.0 + p_t + 1.0(y_t - 3.0)$ respectively and where

$$y_t = 1.4 + 0.8y_{t-1} - 0.2m_t + \varepsilon_{AD_t} - 0.5(\varepsilon_{AS_t})$$
$$p_t = 0.8 + 0.8p_{t-1} - 0.1m_t + 0.5(\varepsilon_{AD_t}) + \varepsilon_{AS_t}$$

AS shock; inflation sole objective

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
Ряд1	3	3	2	1,4	1,2	1,3	1,4	1,6	1,8	2,0	2,2	2,3	2,4	2,5
Ряд2	2	2	4	3,2	2,7	2,4	2,2	2,1	2,0	2,0	2,0	2,0	2,0	2,0

AS shock; gdp growth sole objective

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
Ряд1	3	3	2	2	2,1	2,2	2,3	2,4	2,5	2,6	2,7	2,7	2,8	2,8
Ряд2	2	2	4	3,5	3,1	2,9	2,7	2,5	2,4	2,3	2,2	2,2	2,1	2,1
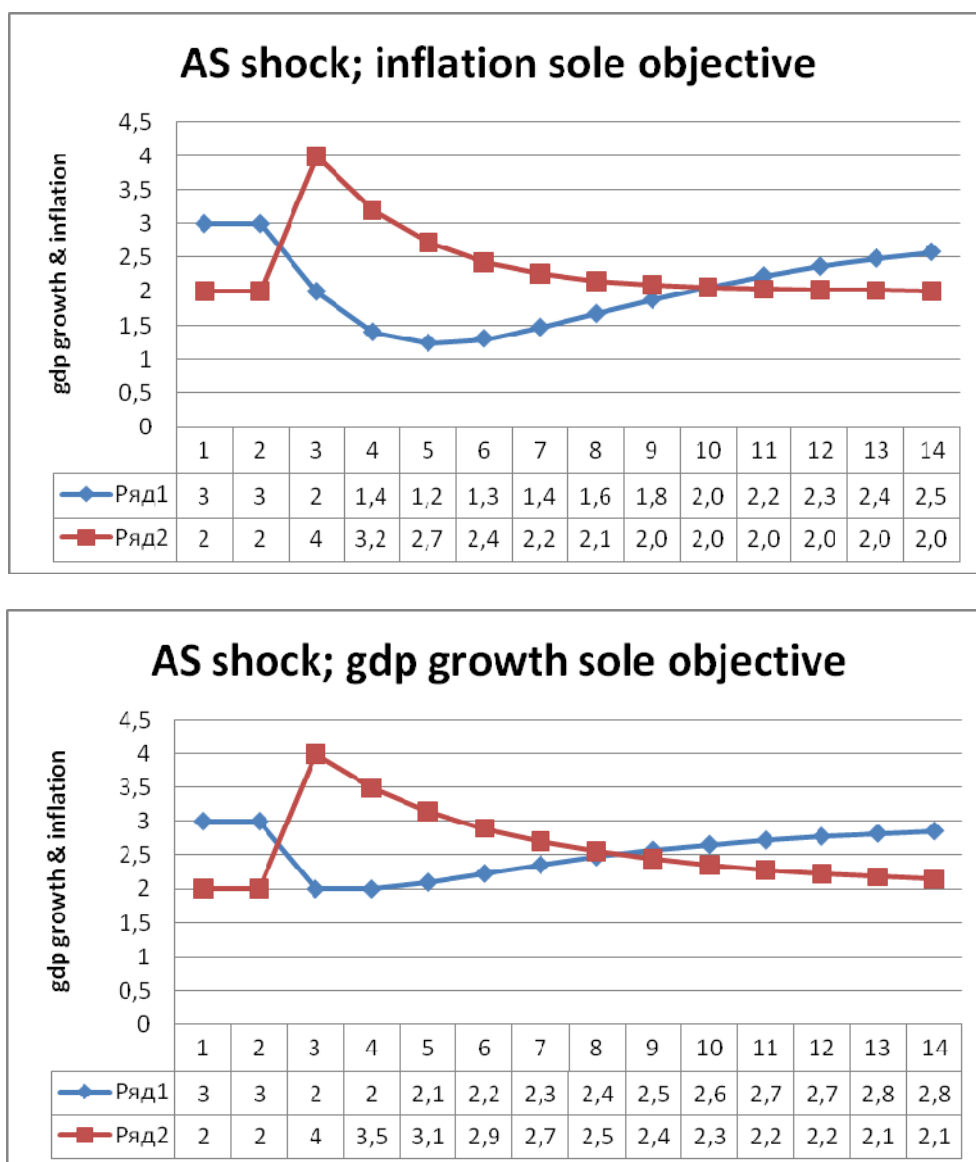
Figure 5: Impact of an interest rate policy with and without a lower bound of zero. GDP growth rate and inflation response to a negative 10% *AD shock* in period 3 under Taylor's interest rate rule and where

$$y_t = 1.4 + 0.8y_{t-1} - 0.2m_t + \varepsilon_{AD_t} - 0.5(\varepsilon_{AS_t})$$

$$p_t = 0.8 + 0.8p_{t-1} - 0.1m_t + 0.5(\varepsilon_{AD_t}) + \varepsilon_{AS_t}$$

$$m*_t = 2.0 + p_t + 0.5(p_t - 2.0) + 0.5(y_t - 3.0)$$

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AD shock; Taylor rule with zero lower bound

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
Ряд1	3	3	-7	-4,	-2,	-0,	0,1	0,8	1,3	1,6	1,9	2,1	2,3	2,4
Ряд2	2	2	2	2,4	2,6	2,6	2,6	2,5	2,4	2,3	2,3	2,2	2,2	2,1

AD shock; Taylor rule with no zero bound

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
Ряд1	3	3	-7	-4,	-2,	-0,	0,1	0,8	1,3	1,6	1,9	2,1	2,3	2,4
Ряд2	2	2	2	2,5	2,6	2,6	2,6	2,5	2,4	2,3	2,3	2,2	2,2	2,1
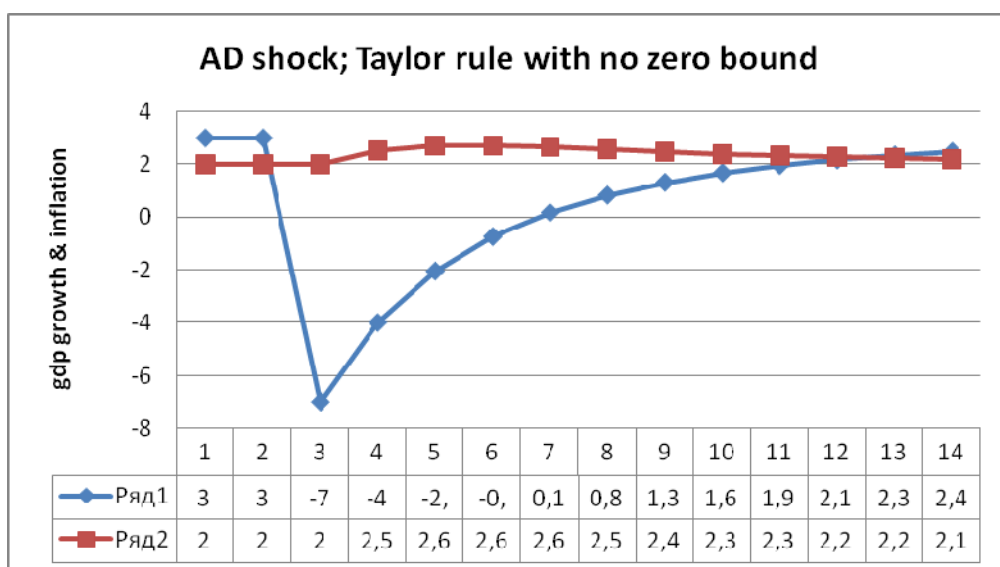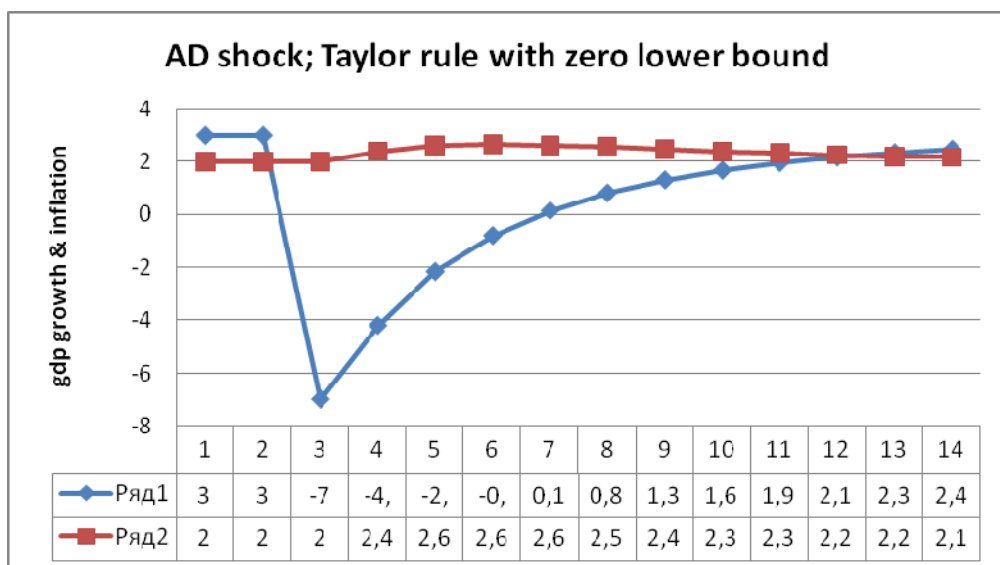
Predictors of accounting salaries: A comparison of bachelor degree graduate salaries with associate degree graduate salaries

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Abstract

This paper reports on an investigation comparing the predictors of employment salary of bachelor degree accounting graduates with associate degree accounting graduates two years post-graduation. Using hierarchical regression analyses, this study shows the predictive strength of participants' academic qualifications, age, gender, grade-point-average (GPA), professional qualifications, field of employment, and type of employment, on salary. Findings reveal that participants with a bachelor degree in accounting earn approximately 30% more income than those with an associate degree in accounting and that academic qualification, age, professional qualification and field of employment are significant predictors of salary. Educational implications emanating from these findings are discussed.

Introduction

Relationships between educational qualifications and employment profile are well documented (see Baum & Payea, 2004; Stokes & Wright, 2008). Employment profiles (i.e., employment rate, length of time unemployed, salary, & job satisfaction) of college graduates are regarded as important criteria for evaluating the returns from higher education. Individuals have used employment profile information to make career-planning decisions as to whether to pursue further education and into which degree program to enrol (Ainley & McKenzie, 1999). Educationalists and human capital theorists (Larkins, 2002; Quiggin, 1995) have used employment profile as a criterion to evaluate the rate of return from an investment in higher education for both individuals and society. Larkins calculates that, for those holding bachelor degrees, there is a private return of 15% and a social return of 10% from obtaining a bachelor degree.

Dusseldorp Skills Forum (1999) research indicates that people without post-high school qualifications are facing increasing disadvantages in the labor market. The paradox is that the earlier a person enters the labor-force, the weaker are their long-term employment prospects.

Investigations into predictors of employment profile typically distinguish between background (e.g., ethnic origin, socio-economic status) variables (Tiggemann & Winefield, 1989), personality and attitudinal measures (Banks & Jackson, 1982), and academic performance (Roth & Clarke, 1998). However, findings from a large range of variables can have limited value when assessing the impact of specific educational qualifications on employment profile. Furthermore, there are several ways to measure returns on employment. With this in mind, this investigation focuses on salary as the employment outcome. This is supported by Clark (1998) who argues that salary is more

easily measured than variables relating to other employment outcomes (e.g., job security, job contentment, and interpersonal relationships). Moreover, salary has a linear pattern.

As noted, a review of the literature into the employment outcomes of bachelor degree holders reveals an extensive literature base. However, there is a paucity of literature into the employment outcomes of associate degree graduates. Furthermore, there is limited research comparing the variables impacting on salary levels for bachelor degree holders versus associate degree holders of accounting graduates. Also, broad-based statistics reported by organizations have limited value when assessing the effect of specific educational qualifications as well as methodological issues not enabling them to be applied to specific occupations in specific geographic locations.

Given that salary is an easily quantifiable outcome of employment, and that it is recognized to have a linear pattern, the present investigation focuses on the impact certain variables have on salary. More specifically, this investigation is directed at graduates with an accounting major. The research question of this investigation is: What independent variables affect the salaries of accounting bachelor degree holders and/or accounting associate degree holders? To answer this research question, the present investigator undertook a study into the employment outcomes of two distinct cohorts of students who had graduated with an accounting degree in the same year within the same geographic area (i.e., Melbourne, Australia).

This paper is organised as follows. The first section provides a background to the pathway to a bachelor degree in accounting and an associate degree in accounting in Australia. The second section reviews the literature relevant to determinants of salary. An explanation of the research method undertaken follows as the third section. The fourth section outlines the results from data analysis. This section is followed by a discussion of the findings and the conclusion. Educational policy implications emanating from the findings are proposed in the conclusion.

Background to obtaining an accounting degree in Australia

All universities in Australia offer bachelor degrees in accounting. In this nation, a bachelors degree, with an accounting major, encompasses approximately 72 credit hours of coursework that typically takes three years (i.e., six semesters) of full-time study) to complete. Having completed this degree, graduates are qualified to sit the professional accounting bodies' exams (i.e., with *CPA Australia* or the *Institute of Chartered Accountants of Australia*).

Most TAFE (Technical and Further Education) Institutes in Australia offer associate degrees in business (accounting). These programs require two years (i.e., four semesters of full time study) to complete. It is possible for an associate degree holder to continue their study to obtain a bachelor degree, however the process of securing a place can be problematic and is dependant upon the university to which an applicant applies. Notably, an associate degree holder is not eligible to sit the accounting profession's exams.

Literature Review

Research relating to variables that predict salary tend to focus on participants academic qualifications, age, gender, grade-point-average, professional qualifications, field of employment and type of employment (see Roth & Clarke, 1998). This section is organized along those seven variables. Directional hypotheses arising from the literature are proposed.

Academic qualifications: Studies (see Gilbreath & Powers, 2006) show that those holding a bachelors degree earn 30% more than those with an associate degree and 60% more than those without educational qualifications. This phenomenon appears to be true for all age groups and for both genders. Also, the trend suggests the gap is widening. Long, McKenzie, and Sturman (1996) undertook a longitudinal study into the salary outcomes of participating in educational programs. For their cohort aged 25 years, Long et al. found that, when compared to those with no educational qualifications, workers who had completed Year 12 only were paid 5.8% higher incomes, versus 6.9% for apprenticeship qualifications, versus 11.7% higher for associate degree qualifications, and 23.7% more for those with bachelor degrees. Further findings of Long et al. (1996) indicate that bachelor degree holders' earnings increase with age at a faster rate than that of other groups. Furthermore, Long et al. found that 41.5% of fulltime workers in the highest 10% of income-earners held bachelor degrees while only 3.3% of fulltime workers in the lowest 10% of income-earners did so. Accordingly, it is hypothesised that:

H1: Level of academic qualifications is associated positively and significantly with salary.

Age: Research (see Ainley & McKenzie, 1999) found age to be a significant predictor of salary. That is, average salaries increase with age about 10% for every five years, presumably reflecting the effect of previous work experience. More recently, PayScale.com (PayScale.com) shows median salary for those holding a bachelor in accounting for less than one year to be $44,594, increasing to $86,198 for those holding that qualification for more than 20 years. Consequently, it is hypothesised that:

H2: Level of salary is positively and significantly associated with age.

Gender: It has been over thirty years since "equal pay for equal work" legislation was enacted in Australia. Yet, despite this passage of time, the issue of pay-parity is still topical as females, as a group, are presently being paid less than their male counterparts (see ABC, 2008). Statistics released by the NCVER (2001) show that male TAFE graduates are paid an average of 15% more than their female peers ($23,000) while male university graduates average 10% more than their female peers ($33,000). These findings are supported by recent statistics (see GCCA, 2008) showing that starting salaries in accounting for female university graduates are 93.3% of starting salaries for male university graduates. Therefore, there is evidence that, even in the same field of employment (e.g., accounting), males earn more than females. Accordingly, it is hypothesised that:

H3: Level of salary is significantly associated with gender.

Grade-point-average (GPA): Academia and business have long debated the usefulness of academic grades for predicting occupational outcomes. Business argues that grades are an important predictor of job performance because they reflect cognitive ability, motivation, and other useful skills that applicants bring to a job. Personnel managers appear to respond more favourably to resumes documenting high GPA (Roth & Clarke, 1998). Interviewers often use an applicant's GPA when making hiring decisions

as they believe that high grades are associated with high probability of success in employment fields such as accounting and engineering. Additionally, individuals with high grades might be able to gain entrance into graduate school to prepare themselves for highly paid professional occupations. However, academics (see Roth & Clarke, 1998) argue that grades do not take into account a number of important skills (e.g., interpersonal skills) that lead to job success, citing meta-analytic studies which show that grades have limited value in predicting outcomes such as job performance, salary, and promotion. Roth and Clarke show that relationships between grades and starting salary to be modest at $r = .13$, moderate for current salary at $r = .18$, and negligible for salary growth at $r = .05$. Thus, the following hypothesis is proposed:

H4: Grade-point-average is positively and significantly associated with level of salary.

Professional qualifications: As noted, research shows that degree qualifications are positively and significantly associated with higher salaries. Moreover, evidence suggests that professional qualifications are also positively associated with salaries (Andrew, 1998). Subsequently, it is hypothesised that:

H5: Professional accounting qualifications are associated positively and significantly with salary.

Field of employment: Salary is also likely to be largely affected by field of employment, denoting the skills and the responsibility required of that role. Within the field of accounting, there are a wide range of occupations. Payscale.com (2008) shows the following average annual salaries for jobs within the accounting field; bookkeeper, $28,000; accounting clerk, $28,500; payroll administrator, $32,500; accountant, $42,000, and senior accountant, $48,000. Furthermore, the website notes that those who become a Chief Financial Officer earn $112,508 per year. Thus, the following is hypothesised:

H6: Field of employment is significantly associated with salary.

Employer type: Employer type refers to the ownership structure of the organization within which the accountant is working; that is, government (federal, state, local), company (public or private), non-profit, or private practice. Statistics from Payscale.com (2008) show an interesting trend. Presently, accountants employed by the federal government earn the highest salaries ($82,000); considerably more than those working for a private practice firm ($55,121), a company ($63,116), a non-profit organization ($61,037), and state/local government ($42,952). This trend is possible evidence of the growing professionalism of the federal government (see Carlin, 2005). Thus, the following hypothesis is proposed:

H7: Employer type is significantly associated with salary.

Research Method

To answer the research question noted earlier, the present investigator surveyed two groups of graduates; namely, those who had graduated from two universities in Melbourne, Australia with a bachelor degree in accounting, and those who had graduated from a TAFE Institute in Melbourne, Australia with an associate degree in accounting. Note that participants were excluded if they were not working full-time (as part-time earnings would distort income levels).

For the bachelor degree cohort (n = 162), ages range between 22 and 27 years with a mean of 25 years (SD = 1.39 years). Notably, mean age when commencing their degree is 18 years. Other demographic statistics show 64% to be male, 90% are Australian-born, and 96% have English as their first language. 73% work as accountants, 17% in accounting-related positions, 4% in office-related positions and 6% not in office-related jobs. Notably, of this cohort, 46 participants (28%) had completed professional accounting qualifications with 78% completing CPA exams (with CPA Australia) and 22% completing exams with the Institute of Chartered Accountants (ICAA). Of the 36 participants holding CPA qualifications, eight are employed in public accounting firms, 24 in private industry, and three in state government. Meanwhile, the 11 holders of ICAA qualifications are all employed in public accounting firms.

The associate degree cohort comprised 78 respondents who indicate their mean age to be 27 years (*SD* = 7.80 years) ranging between 21 and 50 years. Females comprise 55%. Of all participants in this group, 69% were born in Australia and English is the first language for 67%. Mean age when commencing this degree was 24 years (ranging between 18 & 48 years; *SD* = 8.07 years). 62% work as assistant accountants, 28% in accounting-related positions, 16% in office-related positions and 4% not in office-related jobs. None had completed professional accounting exams.

The survey instrument, *Employment and Further Education Questionnaire* (EFEQ), was developed by the present investigator. The section of the EFEQ that relates to employment outcomes is adapted from a Graduate Careers Council of Australia questionnaire (GCCA, 2000) and focuses on graduates' type of employment (e.g., accountant, accounting-related, office-related), current industry sector in which they are employed (e.g., public accounting, government), and their present gross salary (in $10,000 bands: e.g., $30,000-$39,999).

The EFEQ was mailed to participants approximately two years after they had graduated. In line with Tiggeman (1989), the two-year period was chosen by the present investigator to provide time for graduates to secure full-time employment in their chosen field. Participants were asked to complete and return the questionnaire within two weeks of receiving it. One month after the EFEQ was mailed, reminder letters, with the same questionnaire and another reply-paid envelope attached, were sent to participants who had not responded to the first mailing. No further follow-up was undertaken beyond the first reminder mail-out. The response rate for the bachelor degree graduates is 30% whilst the response rate for the associate degree graduates is 28%. Data is analysed using SPSS.

Results

Descriptive statistics regarding salary levels per cohort are reported in Table 1. They reveal that the bachelor degree cohort is paid a 28% higher salary than their associate degree counterparts ($35,000 vs. $27,300). However, there appears to be no significant differences, according to gender, in the salaries paid. In fact, female bachelor degree holders report their salaries to be 1.5% higher than their male peers, while female associate degree holders indicate their annual salary to be less than 3% that of the male grouping. Also, salaries exceeding $60,000 per annum are paid to 8.5% of bachelor degree holders yet to none of the associate degree holders. Thus, findings reported in Table 1 support the overall proposition that the higher the qualification then the higher

the salary, but does not support any significant disparity of salary according to gender. Accordingly, *H1* is supported while *H3* is not.

To investigate the impact of the other independent variables (e.g., age, GPA, professional qualifications) upon salary, a three-step hierarchical multiple regression analysis was employed for each cohort to determine predictors of salary. Variables were entered in three blocks (see Table 2). Background variables (i.e., gender, current age) were entered as Block 1. Educational variables (i.e., GPA, professional qualifications) were entered as Block 2. The third block of variables entered included type of employment (i.e., accountant, accounting-related, office-related).

Following Tabachnik and Fidell (1996), Tables 3 and 4 display correlations between variables; unstandardised regression coefficients (B) and intercept; standardised regression coefficients (β); semipartial correlations (sr_i^2); and multiple R, R^2, and adjusted R^2, after entry of all independent variables.

Bachelor degree graduates. After Step 1, with *current age* in the equation, $R^2 = .04$, $F_{inc}(1, 109) = 4.41$, $p < .05$. After Step 2, with *professional qualifications* in the equation, $R^2 = .17$, $F_{inc}(2, 108) = 10.83$, $p < .001$. Step 3 introduced *accounting related employment* into the equation, $R^2 = .25$, $F_{inc}(3, 107) = 11.67$, $p < .0001$. With all independent variables entered into the equation Adjusted $R^2 = .23$, $F_{inc}(3, 107) = 11.67$, $p < .0001$ (see Table 3). Thus, higher salaries are paid to older employees holding professional accounting qualifications and working in accounting-type positions (e.g., manager), rather than as accountants.

Associate degree graduates. At Step 1, with *current age* in the equation, $R^2 = .05$, $F_{inc}(1, 96) = 4.70$, $p < .05$. Step 2 did not add any variables to the equation. At Step 3, two variables were added; *Accounting related position*, $R^2 = .10$, $F_{inc}(2, 95) = 5.67$, $p < .01$; and *Accountant*, $R^2 = .14$, $F_{inc}(3, 94) = 5.23$, $p < .01$. With all independent variables entered into the equation Adjusted $R^2 = .12$, $F_{inc}(3, 94) = 5.24$, $p < .01$ (see Table 4). Thus, for this cohort, higher salaries are paid to older employees working in accounting or accounting-related positions.

It is apparent from regression analyses that current age and working in accounting related employment is a significant predictor of salary level for all participants. Additionally, a significant predictor of salary for bachelor degree graduates is holding professional qualifications, while for associate degree graduates it is working as an accountant. Notably, gender and GPA are non-significant predictors of salary. Thus, *H2, H5,* and *H6* are supported by the findings whereas *H4* and *H7* are not.

Discussion

Findings support *H1*. That is, bachelor degree graduates report having significantly higher salaries than their associate degree peers. These findings are in line with an extensive body of literature showing that holders of bachelor degrees are advantaged when seeking employment, especially in fields requiring high skill-levels (e.g., accounting).

Overall, findings resulting from hierarchical regression analyses support *H2, H5* and *H6*. That is age, professional qualifications, and field of employment are positively associated with higher salaries. For bachelor degree participants, higher salaries are

associated significantly with being older. Furthermore, for this cohort, holding a professional qualification is significantly associated with higher salary levels. Meanwhile, associate degree graduates employed in accounting related positions are paid significantly higher salaries than those working in non-accounting-related positions. However, findings do not support *H2*, *H4,* and *H7*. That is gender, GPA, nor employer-type influence salary.

Conclusion

Clearly, students holding a bachelor degree in accounting earn higher salaries than do students with an associate degree in accounting. It is for this reason that obtaining a bachelor degree is increasingly sought. It is anticipated that the distinct advantage in the employment market held by bachelor degree graduates will encourage further growth in university enrolments. This labour-market advantage is even more pronounced for young adults wanting to pursue a career in accounting for, as previously noted, entry into the accounting profession (e.g., CPA, CA, CMA) is dependent upon, firstly, completing a bachelors degree in accounting. Hence, students holding only an associate degree in accounting will only be able to work as paraprofessional accountants instead of professional accountants.

The educational implications of these findings suggest that universities in Australia should provide a place for applicants who have completed an associate degree. To not provide an offer to these students can deny them the opportunity to fulfil their career ambitions. Although it is satisfying to see universities accepting higher proportions of associate degree applicants, it is apparent that not all capable students are provided with a university place (see StudentWeb, 2008). Hence, it is suggested by the present investigator that government policy should stipulate that all associate degree graduates applying to complete a bachelor degree should be offered a university place, thereby providing them with an opportunity to forge a career as a professional accountant rather than a paraprofessional accountant.

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Regional Institutions, Entrepreneurship, and Economic Development: The Case of *'The Trident Initiative'*

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Abstract

This paper provides the case study of a comprehensive, regional institution and its efforts to secure external funding in order to support its relatively nascent program in small business/entrepreneurship. The origin of the Trident Initiative at Frostburg State University, the underpinning administrative and educational impetus for its establishment, opportunities, challenges, achievements, and limitations are discussed with a view to sharing its experiences with other institutions. This study recognizes that institutional efforts with plans for program expansion in entrepreneurship, cross-campus outreach, and community involvement are not unique to Frostburg State but are becoming increasingly common among regional institutions that are seeking to enhance their contribution to the economic development of their broadly-defined region. As a result, the area of economic development and regional engagement is now subsumed in the self-defined mission of educational institutions across several institutions throughout the United States, a phenomenon that inspires increasing optimism about the relevance of educational institutions to the their surrounding milieu.

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What Do Business Students Expect From An "Ideal Job"? A Preliminary Investigation of Perceptions Regarding Organizational Structure and Risk Aversion

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K. W. VanVuren, University of Tennessee – Martin

Abstract

This paper describes a study examining two key issues concerning students' expectations of an "ideal job". One issue examined was students' preferences regarding organizational structure, i.e., autocratic versus participative. The other issue examined was students' preferences concerning risk tolerance versus risk aversion. To establish a business context for the study, students from two mid-sized public universities in the mid-south, USA, were given a survey asking them to evaluate two business scenarios involving these issues of organizational structure (autocratic versus participative) and risk acceptance (tolerant versus averse). Results indicate that students clearly prefer a participative approach to organizational structure rather than an autocratic approach, and also, that students are pre-dominantly risk averse versus being risk tolerant. However, the advance presented by this paper is that both of these results are affected by the gender of the student. Evidence is also presented that indicates that these two pre-dominate preferences are also affected by the perspective adopted by the student, i.e., whether they address the issue from the perspective of being a manager of the firm versus addressing the issue as an individual employee of the firm.

The Measurement and Analysis of the Ethical Reasoning Skills of Accounting Students

Nina Goza, Arkansas Tech University
Tracy Cole, Arkansas Tech University
Loretta Cochran, Arkansas Tech University
Kim Troyboy, Arkansas Tech University
David Roach, Arkansas Tech University

Abstract

This study investigates the measurement of ethical reasoning in accounting students and analyzes the implications of the results. Ethics is important to accounting education to maintain the public confidence and trust in the profession. Ethical behavior cannot be measured; therefore, we will measure ethical awareness and reasoning skills. Ethical awareness and reasoning skills may influence ethical behavior. The current approach to teaching ethics is to include cases and problems across the business curriculum rather than require a separate ethics course. All business students can take a course in business ethics as an elective. Accounting students get additional exposure to ethics in an accounting context in the auditing class. Therefore we expect accounting students to score higher in ethical reasoning than other students. Accounting students are also expected to show improvement in ethical reasoning after having taken the advanced accounting courses including auditing. Ethical reasoning is being measured in two ways. The Defining Issues Test (DIT-2) is used as an overall measure of moral judgment development. The DIT-2 is an instrument for which reliability and validity have been established in numerous studies. In addition, a case is being used that is more context-specific for business entitled Gilbane Gold. Students' written responses to this case should allow insight into their decision processes. Data is still being collected and analyzed. Preliminary results suggest that accounting students are not showing improvement after the senior level courses. However, business students including accounting majors do show improvement. Also there is no significant difference between business majors. Knowledge gained from this study will help accounting educators design their courses to better prepare students to better recognize and work through the consequences of an ethical dilemma.

The Impact of Self-efficacy on Business Student Performance in Accounting Courses

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Nina Goza, Arkansas Tech University
Sherman Alexander, Arkansas Tech University

Abstract

Self-efficacy , the degree to which an individual has confidence in their ability to perform a particular task, affects both whether or not an individual will engage in a particular type of task and the level of effort they will put forth once started, especially when early attempts are unsuccessful (Bandura, 1977, 1986, 1997). A body of research suggests that females tend to have lower self-efficacy than males across a variety of tasks, especially quantitative tasks. In this study, we examine the relationship between gender and both student self-efficacy and actual student performance. Students reported two levels of confidence: their level of confidence just one week prior to an exam and their expected level of confidence on the exam date. Contrary to expectations, females were more confident than males one week before the exam. By contrast, there were no differences in actual exam performance or in expected confidence levels expressed for the actual time of the exam. We also examine self-efficacy in introductory and advanced accounting classes. Business students enrolled in a sophomore-level introductory class were more confident than business majors enrolled in the junior-level accounting courses. This (over)-confidence occurred both in the level expressed one week prior to the exam and in the expected level at the time of the exam. We then discuss the implications of gender differences and self-efficacy in the context of teaching accounting to undergraduate students.

How Unexpected Changes in the CPI and the PPI Affect Expected Inflation and Forward Rates

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Abstract

The financial press often reports that announced changes in the consumer price index (CPI) and the producer price index (PPI) have implications for future inflation. If the CPI is different than expected, then analysts will revise their future expectations regarding inflation. When unexpected changes in an index is accompanied by substantial change in interest rates, stock prices, or commodity prices, the changes are often attributed to changes in inflation expectations arising from the CPI or PPI announcements. Accordingly, these two indicators are used by both financial analysts and academics as leading indicators of future inflation. This paper tests the extent to which the CPI and PPI affect market perception of future inflation. Unexpected changes in the consumer price index (CPI) and the producer price index (PPI) are used to explain changes in the term structure of interest rates and changes in the implied forward rates.

The expected levels of the CPI and PPI are taken from surveys of economists that were compiled on the Friday of the week before the actual monthly announcement. The consensus estimates are published in the Wall Street Journal on the Monday of the week that the index is announced. The unexpected changes in the indices are estimated by subtracting the expected level of the CPI and the PPI from the actual reported level. This study uses monthly CPI and PPI announcements over the 21-year period from March 1988 through February 2009.

Bond yields were drawn from the Federal Reserve's H.15 statistical release. The H.15 release contains the yields for 1 year, 2 year, 3 year, 5 year, 10 year, and 20 year maturity Treasury bonds. The yields are based on composite quotes reported by U.S. Government securities dealers to the Federal Reserve Bank of New York.

The impact of unexpected changes in the PPI and the CPI are measured using the regression models [1] and [2] for each maturity strata.

$$\Delta R = \alpha + \beta\, U\Delta PPI + \gamma\, EPPI + e \qquad\qquad (1)$$

$$\Delta R = \alpha + \beta\, U\Delta CPI + \gamma\, ECPI + e \qquad\qquad (2)$$

In the above regressions, ΔR is the change in the yield quote from the previous day, $U\Delta CPI$ is the unexpected change in the consumer price Index , $U\Delta PPI$ is the unexpected change in the producer price index and ECPI and EPPI are the expected changes in the consumer price index and the consumer price index. Notice that the equations in [1] and [2] separate the actual change in the indices into two parts - the expected change and the unexpected change.

None of the coefficients for regression (1) involving the PPI are significant at any maturity level.   Similarly, the F statistics for regression 1 are not significant. For regression (2) the coefficients α and γ are not significant (as expected), but the

coefficient β is significant for bond maturities up to 10 years. The F statistic is significant for all of the regressions with bond maturities up to 10 years.

The forward rates implied in the bond yields were calculated using the following general formula for the implied forward rates from time n-1 to time n.

$$_{n-1}f_n = \left(\frac{(1 +_0 r_n)^n}{(1 +_0 r_{n-1})^{n-1}} \right) - 1 \qquad [5]$$

Where $_{n-1}f_n$ is the forward rate from time n-1 to time n, and $_0r_n$ is the spot rate from time 0 to time n. The paper argues that forward rates will be affected by changes in inflationary expectations. By disaggregating the forward rates out of the spot rates we can see if the forward rates are affected by the unexpected changes in the PPI and the CPI. Thus, we can determine how far into the future unexpected changes in the PPI and CPI affect inflation expectations.

Regressions (1) and (2) are estimated with the change in the forward rates as the dependent variable. As with the bond yields, the PPI does not have any impact on the forward rates. The CPI however has a significant impact on forward rates as far as seven years into the future.

Conclusions

Surprise changes in the PPI have no significant impact on either the spot rates or forward rates. These results are contrary to earlier studies that find that unexpected changes in the PPI affect bond prices and/or spot rates. The earlier studies examine much shorter time periods than this study and many are clustered in the late 1980's and early 1990's. All of the earlier studies examined periods of 5 years or less. This study examine a 21 year period.

The paper shows that unexpected changes in the CPI cause significant changes in spot rates at least ten years into the future. Additionally, unexpected changes in the CPI affect forward rates as far as seven years into the future. This indicates that recent unexpected changes in the CPI affect inflation expectations as far as seven years into the future.

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An Analysis of the Makeup of Academic Accounting

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Abstract

In recent years, females comprise a larger portion of faculty entering the academic accounting profession than in the past. This study provides demographic information on rank, experience, and doctoral training of the men and women who currently comprise the accounting professorate, as well as a perspective on demographic changes in the last decade for which data are available. While over forty percent of the recent accounting doctorates are granted to women, they comprise only 30 percent of the total U.S. accounting faculties.

A Framework for Assessment of Students' Critical-Thinking Skills

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Kim Troboy, Arkansas Tech University
David Roach, Arkansas Tech University
Nina Goza, Arkansas Tech University

Abstract

One overarching goal for a university education is to instill critical-thinking and problem-solving skills in students. For this ongoing study, a group of business faculty at a small state university in the south developed a multi-dimensional framework for assessing students' critical-thinking skills in business contexts. During the 2006-07 academic year, approximately 200 sophomore and senior business students completed a short critical-thinking multiple-choice instrument based on exam questions supplied by faculty members. About 150 sophomores and seniors students also completed an open-ended critical-thinking essay exam based on one of two hypothetical business situations. Three faculty members rated these essays on several dimensions of critical thinking using an eight-point rubric. Discriminant and convergent validity among the raters was established. The scores for both the multiple-choice and essay exams showed that seniors scored significantly higher than sophomores, which suggests that students' critical-thinking skills improve as they progress through the business curriculum. Because the convergent validity among the essay raters was not as high as discriminant validity, however, the researchers revised the rubric during the 2008-09 academic year to achieve greater clarity of the dimensions of critical thinking to be assessed. During the fall semester, approximately 230 undergraduate business students completed another critical-thinking essay exam based on a third hypothetical business problem. A team of faculty members and trained upper-division students rated these essays using the revised rubric to assess the students' skills with regard to identification of conclusions, analysis of information and data, consideration of multiple perspectives, and analysis of reasoning. Results of this study will be used to identify strengths and weaknesses in students' critical-thinking processes and to improve the curriculum and teaching methods in ways that will enhance business students' skills in this vital area.

Developing a Comprehensive Assessment of Students' Communication Skills

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Kim Troboy, Arkansas Tech University
David Roach, Arkansas Tech University
Linda Bean, Arkansas Tech University

Abstract

Because communication skills are crucial to the success of business professionals, faculty members need an effective way to assess business students' communication skills. The authors of this study, who are business faculty members at a small state university in the south, devised a multi-faceted assessment of their undergraduate students' oral and written communication skills. To assess oral communication skills, the faculty members have collected videos of approximately 100 students' presentations, including the PowerPoint slides used in these presentations, in three upper-division business courses. Using an eight-point scale, the faculty members will rate these presentations on both content and delivery. The content of each presentation will be rated on the presenter's introduction, thesis statement, connection to audience, subject knowledge, and organization. The students' delivery of the presentations will be rated on their eye contact, movement, voice, fluency, and professional attire. To assess written communication skills, the faculty members have collected 150 research papers from students in three upper-division business courses and 464 open-ended critical-thinking essay exams from students in both upper- and lower-division business courses. The research papers will be rated on an eight-point scale for the following indictors of effective scholarly writing: critical thinking, organization, language, convention, and references. The essay exams will be rated by a team of faculty members and trained upper-division students based on writing skills as evidenced by grammar, spelling, fluency, and organization. The authors plan to use the results of this study to identify students' strengths and weaknesses in oral and written communications. Because the essay exams include both upper- and lower-division students, the results of this portion of the assessment will also provide information as to whether students achieve significant improvement in written communication skills as they progress through the business degree program. Using this information, the authors hope to make changes in both course content and teaching methods that will enhance students' communication skills as they enter the professional world.

Optimal Portfolio Variance Volatility:
A Solver Application

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Abstract

The purpose of this paper is threefold. The primary purpose of the paper is to explore the effect of the volatility of, i.e. the differences between the variances of arbitrary-selected portfolios and the variances of the optimal portfolio, as characterized by the minimally obtainable portfolio variance as determined by Excel's Solver. A second objective is to obtain a sense of the extent to which Solver is able to optimize arbitrarily selected portfolios without an appreciable reduction in the expected portfolio return. The third, but certainly not the least, objective is to illustrate the usefulness of Solver as a pedagogical instrument. The data utilized in these attempts to achieve these objectives are arbitrarily selected portfolios composed of the historical yields of Intermediate-Term Government Bonds and Long-Term Corporate Bonds as published in Ibbotson's SBBI 2008 Classic Yearbook (2008).* Two two-asset portfolios were constructed utilizing these data in ten-year increments. The optimal proportions of the assets and minimum portfolio variances are ascertained via Excel's Solver. As part of the anatomy of the optimizing process, the statistical significance of the differences between the covariances, the means, and the variances are examined for both the arbitrarily-formed portfolios as well as differences between the arbitrarily-formed portfolios and the Solver-formed portfolios.

Citation
*Harrington, J. P., Senior Editor, *2008 Ibbotson's® Classic Yearbook*, (Morningstar, Inc. 2008) Chicago, Illinois, ISBN 978-0-9792402-2-5
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Materialism of Mature Consumers in China and USA: A Cross-Cultural Study

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Abstract

The mature consumer segment is growing in number and income level in both China and the US. It is therefore increasingly important for global marketers to develop an understanding of the consumer behavior of this segment as well as any cross-cultural differences in this behavior. This paper focuses on the materialism of mature consumers in China and the US and examines this in terms of cognitive age, life satisfaction, and physical health status. A total of 283 respondents were surveyed from both countries. Based on the socio-emotional selectivity theory we hypothesized that Chinese mature consumers would have higher cognitive age perceptions, lower life satisfaction levels, lower levels of physical health status than their American counterparts, and hence higher levels of materialism. Our results supported the prediction that cross-cultural differences exist in all four variables, cognitive age, physical health status, life satisfaction and materialism between Chinese and American mature consumers. The results showed significant support for the following contentions: cognitive age in mature consumers is positively related to materialism, and life satisfaction and physical health status are negatively related. Chinese mature consumers have higher cognitive age perceptions, lower life satisfaction levels, and lower levels of physical health status than their American counterparts. Overall, Chinese mature consumers are more materialistic than their American counterparts. The results also indicated that cognitive age is a more reliable variable than chronological age to study age-related differences in consumer behavior. Implications for global marketers are that, in targeting mature consumers, they should not only use income and chronological age as variables, but also cognitive age, life satisfaction and physical health status. Chinese mature consumers are also more likely to respond to ads and product branding emphasizing status and materialism. This study therefore provides a theoretical basis and practical insights for global companies in both China and the US on the mature consumer segment, as well as a foundation for future research. Future research should bear in mind that most of the variables used here are related to life experiences that mature consumers have gone through during their lifetime, and as the economy of China develops and changes, the life experiences of future mature consumers are likely to be very different. Tracking these changes over time would therefore prove very helpful for global marketers.

Student Success in Online Sections vs. In-class Sections of a Management Information Systems Course

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Abstract

Management Information Systems is a business core course required of all Delta State University business majors. Each semester, two sections are offered: a 100% Online section and a "hybrid" section taught in a classroom. Students from both sections take identical tests using the BlackBoard Learning System's assessment feature. Statistical analysis of student success as measured by test average and final semester grade is summarized. Other variables such as age, gender, and GPA are also considered.

Corporate Environmental Sustainability:
Its Inclusion in Business Curricula

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Abstract

Today, organizations are beginning to view environmental issues a priority in making strategic decisions. They are shifting away from their adversarial stance toward environmental concerns and starting to incorporate more environmentally sustainable practices, both as a hedge against future costs and as a means of creating competitive advantage. Whether or not this focus has made it into business schools to the same extent is unclear. This paper focuses on the extent to which undergraduate business programs have included environmental issues in its curricula and how those inclusions are valued.

Just as innovative organizations are developing proactive strategies to address environmental issues, the leading business schools are beginning to integrate environmental stewardship into their curricula, at least at the MBA level (Meglio 2009). Overall attention to this important area of business decision-making is growing and schools are using a wide variety of approaches to inclusion. However, research is mixed on how well business schools overall are responding to these pressures, and there has been little review to date of the state of inclusion in undergraduate curricula. Several studies have indicated that only a very small segment of the overall population reported some environmental content in their required courses (Aspen Institute 2007).

At best, it seems that environmental issues are slow to be incorporated into the core business curriculum. Past research has examined faculty knowledge and attitudes towards environmental issues as a reason behind this dynamic. A study comparing the environmental knowledge and attitudes of business and liberal arts faculty indicated that business faculty had less knowledge and were less environmentally-oriented than liberal arts faculty (Benton 1994). However, the survey used in this study was very broad in scope and measured lifestyle and behavioral intentions such as "I would never join a group or club that is concerned solely with ecological problems" and "I would be willing to ride a bicycle or take the bus to work in order to reduce air pollution." Questions dealing with perceptions about discipline-specific environmental issues and business education were not addressed.

The objective of this paper is to build upon this research by assessing curriculum coordinators' (e.g., department chairs or program administrators) perceptions of the level of inclusion of environmental issues at the level of specific programs and majors. The findings suggest that there is a perceived deficiency in the degree of integration of this important issue into their respective disciplines. Conclusions from these findings, both within separate disciplines and collectively, are discussed with emphasis on implications for curricular design and oversight.

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Social Marketing Implications of Health Beliefs about Pain Treatment for a Terminal Illness with Potentially Addictive Drugs[1]

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Abstract

Health beliefs about pain are little understood despite documented high United States prevalence rates for acute and chronic pain and previous studies that have concluded that reactions to pain and willingness to accept treatment are related to cultural orientations. This study investigates the influence of pain beliefs on the acceptance of pain treatment for a terminal illness using potentially addictive drugs. Specifically, the study examines and notes significant differences in health beliefs about pain between respondents who would use potentially addictive drugs and those who would elect not to accept such treatment. Data on 633 respondents were abstracted from the 2004 Southern Pain Prevalence Study. Findings have implications for social marketing programs related to ameliorating resistance to accepted medical treatments for chronic pain.

Business Student Opinions towards Use of Spreadsheets as an Instructional Tool

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Abstract

Does the use of spreadsheets in applied business instruction promote conceptual understanding of course material by students? To understand this issue we survey accounting students of an institute of higher learning based in Mississippi. Results from the survey using a Kolmogorov-Smirnov test indicate that there is a preference among students for use of spreadsheets in classrooms as a teaching aide. However, due to the learning curve involved in the use of spreadsheet software itself, we recommend a customized approach.

Keywords: Spreadsheets, Applied Business Instruction, Classroom teaching

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