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History and Purpose of NABET

This organization is in its thirtieth year of existence. It formerly was known as APUBEF (The Association of Pennsylvania University Business and Economics Faculty). It was founded by a small group of Economics professors of the fourteen state universities comprising the Pennsylvania System of Higher Education. Their goal was to provide a platform for sharing and exploring scholarly work among the business faculty of the fourteen state universities in Pennsylvania. As a result of their efforts, the organization has sponsored an academic conference each year for the past 30 years.

Over the years, the fundamental goal of NABET/APUBEF has been to target the business faculty of the small business colleges in Pennsylvania, and surrounding states. The organization has been successful in achieving this goal for the past several years. In 2006 the Executive Board determined that the APUBEF organization should be renamed as NABET and become regional in scope. As a result, the October 2007 annual meeting presented 87 scholarly and pedagogical papers and workshops over two days. It featured authors from eight states including 53 different colleges and universities.

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

FERTILITY, MONEY HOLDINGS, AND ECONOMIC GROWTH: EVIDENCE FROM UKRAINE

Svitlana Maksymenko, University of Pittsburgh

Winner, Best Faculty Paper

ABSTRACT

This paper addresses the great concerns about the declining fertility trend in Eastern Europe. By synthesizing recent theoretical findings, the paper uniquely identifies the channels through which economy and fertility interact in transition economy. The study directs a comprehensive multi-variable vector autoregression analysis to determine the short- and the long-run responses of fertility to unemployment, money holdings, and output growth disturbances in the economy of Ukraine. We find that in a transition economy labor market conditions and households' money holdings are indeed important determinants of family decisions to bear and rear children. We identify that unemployment disturbances and monetary incentives explain more than a third of fertility variations. The impulse response, variance decomposition, and sensitivity analyses give a foundation to explore a wide range of policy options to address the issue of declining fertility for countries in transition. These observations are crucial in understanding the scope of interactions between fertility and the state of the economy.

INTRODUCTION

Recent economic changes and the demographic transition in developing countries have highlighted the importance of considering demographic characteristics in economic models, calling for a re-exploring the interplay between human capital and economic growth, as well as the integration of family economics with growth theory.

Declining fertility has reached a below-replacement level in many East European economies, and has causes great concerns among politicians and social scientists. According to population pessimists, with a huge outflow of a working age population from transition economies, the declining fertility requires an immediate policymaker attention from both an economic and a social point of view. In contrast to the West-European countries characterized by a similar fertility trend, transition economies are unable to attract a large flow of immigrants, and ultimately will face the repercussions of aging society. However, the neoclassical growth theory proponents argue that the richer is the country, the lower the fertility rates are, and no drastic actions should be taken to change this fertility trend.

The key motivation for this paper builds on the timely debate between population pessimists and neoclassical economists. By synthesizing recent theoretical findings and newly developed econometric techniques, we plan to determine the short- and the long-run relationship between fertility and economic growth in transition economy, and to identify the channels through which they interact. The primary purpose of the paper is to quantify a magnitude of the impact of macroeconomy on fertility, and offer a wide range of policy implications addressing the issue of its declining trend.

Although most economists would probably agree that the macroeconomy and families closely interact, the magnitude of these interactions has not yet been measured. In order to fill the gap, we take an advantage of a newly assembled data set, consisting of monthly information on unemployment, births, money holdings, and growth in one of the low-fertility East European economies (Ukraine) for the period of 1996-2005. To our knowledge, the paper will provide the first systematic empirical evidence on a time frame over which socio-economic events have an impact on fertility and economic growth in transition economy.

In attempting to measure the extent to which macroeconomic conditions affect fertility, we recognize that the population and the economy evolve jointly. It is not only fertility that affects economic performance, but also economic variables that shape the demographic transition. In this paper we demonstrate that families' fertility decisions, labor market conditions, money holdings, and economic growth are indeed endogenous.

Moreover, by employing a multivariable vector autoregression model that captures the interactions between all variables under consideration, we show that in a transition economy labor market conditions and households' money holdings are important determinants of family decisions to bear and rear children. We find that the birth rate sharply increases immediately following a money holdings disturbance. While in a very short run an unemployment shock adversely affects fertility, in a four-month horizon it starts stimulating households towards child bearing. The impact of the unemployment shock and the money holding shock can be traced up to two years, with a slowly neutralizing pattern.

We find that the associations between fertility, labor market, and money holdings are significant both in a statistical and an economic sense. Unemployment disturbances and monetary incentives explain more than a third (13.6% and 20.6%, respectively) of fertility variations in a transition economy. In this paper, we show that in the short run, money holdings cannot be considered neutral with respect to households' childbearing decisions, and correspondingly, a policymaker may employ childcare transfers as an effective mean to address the declining fertility dilemma. It is our understanding that these empirical estimations have never been performed before, and this paper fills a breach in the attempt to measure the impact of the macroeconomy and demographic indexes on each other in transition economies.

The paper is organized as follows. The next section explores the recent studies on the dynamic modeling of the relationship between fertility choice and economic growth, and analyzes the gaps in literature to be covered. Section 3 presents a vector autoregressive model to estimate short-run responses of labor market, fertility, money holdings, and output growth to disturbances in transition economy. The empirical study includes impulse response, variance decomposition, and sensitivity analyses. Sections 4 and 5 conclude by interpreting the results, offering policy implications, and suggesting possible avenues for future research.

Literature Review

The relationship between population change and economic growth remains a subject of passionate debate among economists and demographers. The Malthusian investigation of the relationship between population and economic growth that roots to the eighteenth century has undergone a rebirth of sorts since the 1970s. In an attempt to find an optimal population growth, Razin and Ben-Zion (1975) provide a novel link between population and economic theories by analyzing an intergenerational economic model. Assuming that wage rates and interest rates are parameters to each family and to the whole economy, Becker and Barro (1988) create a core reformulation of the economic theory of fertility by directly connecting fertility rates and a capital accumulation across generations. Recent empirical studies on fertility and economic growth lend support to the Becker and Barro (1988) model and present ample evidence that a decrease in fertility benefits economic growth (Tamura, 2000, Ahituv, 2001, and Doepke, 2004).

With a focus on the channels through which these variables interact, Wang et al (1994) propose that fertility variable should be considered endogenous to the labor market conditions. They admit that an employment shock causes a reallocation of time away from child rearing towards a higher labor effort, thus retarding fertility growth, and stimulating production. By employing a structural vector autoregression methodology, Wang et al (1994) estimate the relationship between the labor effort, fertility, and economic growth process in the post-World War II United States, and validate the endogeneity of fertility hypothesis. In particular, it is shown that employment shocks explain more than a third of the forecast error variance for the fertility rate. In addition, Wang et al (1994) find that fertility changes feed back to the employment and output movements, and originate significant variations in the labor growth and the output growth series.

Recently, neoclassical growth economists have expanded the analysis of channels through which fertility and economic growth interact by introducing their interdependence with wealth and real money holdings. In the Barro and Becker (1989) tradition, Petrucci (2003) assumes that families care both about a number of children and a dynasty wealth, and shows that the demand for children depends on households' real money holdings. Investigating how macroeconomic variables exert an external effect on families' behavior, Petrucci (2003) discovers that a higher money growth rate increases fertility. By reducing real money holdings, money growth diminishes the opportunity cost of a child to be born. In turn, lower opportunity cost stimulates people to increase a number of children, and results in a reduction of capital intensity, per capita output, and consumption**.** With this in mind, Petrucci (2003) concludes that, *ceteris paribus* an increase in money holdings positively affects fertility decisions, (at least) in the short run.

In spite of an increased interest and a vast amount of research on a topic, the modern family and growth economics literature falls short to address several important issues. First, the papers fail to combine both channels, i.e. a labor market, and a monetary side of the economy, in order to provide a broader multi-channel link between fertility and the economic growth process. Second, due to unavailability of high frequency information on fertility, unemployment, money holdings, and economic growth, there are no systematic estimates of output growth and birth rates impulse responses to changes in macroeconomic environment in the developing world. Remarkably little remains known about the impact of financial and labor market conditions on households' fertility decisions in East Europe, where fertility rates have already reached a below-the-replacement level. Finally, the literature is silent about important policy recommendations for a social planner to target economic growth and demographic transition by adjusting labor market regulations or introducing monetary incentives to child-bearing decisions. The objective of our paper is to fill these gaps.

Taking into account main assumptions of the Becker and Barro (1988) and the Petrucci (2003) theoretical models, this paper introduces an empirical study of the relationship between households' labor effort-fertility decisions, real money holdings, and economic growth, and provides a complete characterization of their short–run dynamics in the economy. Following the Wang et al (1994) techniques, we perform a multi-variable vector autoregression analysis to estimate time frames and effects of changes in a socio-economic environment on unemployment, fertility, money holdings, and output growth in transition economy. Based on the empirical results, the paper also offers a wide range of policy implications to address the issue of declining fertility for countries in transition.

EMPIRICAL STUDY

The objective of this section is to construct an empirical model of a development process that allows for dynamic interactions of labor market conditions, household's fertility decisions, money holdings, and GDP growth through the use of a multivariate time series system. This study employs a vector autoregression (VAR) approach to estimate both short- and long-run responses of all endogenous variables to unemployment, fertility, money holdings, and output disturbances.

Methodology

Assuming the endogeneity of four variables, i.e. labor market variable, fertility rate, money holdings, and output growth, the vector autoregression (VAR) model is:

$$B(L)X_t = \varepsilon_t \tag{3.1}$$

where X_t is a (4×1) vector of endogenous variables; *B(L)* is a (4×4) nonsingular matrix polynomial in the lag operator *L*, and ε_t is a (4×1) vector of structural shocks. The exogenous error term ε_t is independently identically distributed and is interpreted as a structural innovation**.** The disturbances in the structural equations are serially uncorrelated and uncorrelated with each other:

$E(\varepsilon_t)=0$ and

$$E(\varepsilon_t\varepsilon'_\tau)=\begin{cases}D, & for\ t=\tau\\ 0, & otherwise\end{cases} \qquad (3.2)$$

where *D* is a diagonal matrix. A conventional assumption is that B_0 is a lower triangular.

A long-run causal ordering of the system is chosen as follows: labor market variable, fertility variable, money holding variable, and output variable. Four structural shocks consequently are: unemployment shock, a preference shift toward higher fertility, monetary shock, and a Harrod-neutral productivity shock. This structure suggests that the output series are affected by contemporaneous innovations in all series, the money holding variable is affected by all except output, etc. A similar causal ordering without the money holding variable has been justified by Wang et al (1994) for the post World War II United States growth model with endogenous fertility. The identifying restrictions on B_0 involve conditions on the long-run comparative static multipliers. That is, responses of labor series to fertility, money growth, and productivity shocks, responses of fertility series to money and output shocks, and responses of money holdings to a technology shock are all approximately zero in the long run. These restrictions are based on the following assumptions: a labor supply curve is vertical in the long run and shifts only by shocks to itself; a permanent change in the rate of inflation has no long-run effect on unemployment (a vertical Phillips curve); fertility choice is unaffected by monetary disturbance and a Harrod-neutral productivity shock, and the evolution of real money does not depend on technological shocks. These assumptions provide a structure for the initial long-run causal ordering of the system.

Since population growth and money holding are expected to play an important role in the relationship with other variables, the sensitivity to the ordering of variables will be assessed. We expect that, if the model is well specified, this reordering will have no qualitative effect on the outcome.

The reduced form of the VAR is found by solving (3.1) for X_t in terms of lagged values of *X* and ε_t:

$$X_t=B_0^{-1}(\varepsilon_t-B_1X_{t-1}-\ldots-B_pX_{t-p}) \qquad (3.3)$$

As long as X_{t-j} is a linear function of ε_{t-j}, $\varepsilon_{t-j-1},\ldots$, each of which is uncorrelated with ε_{t+1} for *j=1, 2…*, and $B_s\to0$ as $s\to\infty$, X_t can be expressed as a convergent sum of the history of ε_t. With the lower triangularity restrictions on B_0, we can estimate the reduced form and create a moving average representation of the form:

$$X_t=B(L)^{-1}\varepsilon_t \qquad (3.4)$$

with the variance-covariance matrix

$$\Omega=B_0{}^{-1}E(\varepsilon_t\varepsilon'_t)(B_0{}^{-1})'=B_0{}^{-1}D(B_0{}^{-1})' \qquad (3.5)$$

The model (3.4) is just identified. A full-information maximum likelihood estimates of *B(L)* and *D* are obtained first by maximizing the likelihood function with respect to the reduced form parameters, and then by using the unique mapping from reduced form parameters the structural parameters are derived. The maximum likelihood parameters are found from ordinary least squares regressions of X_t elements on their lagged values, and the maximum likelihood estimate of Ω is obtained from the variance-covariance matrix of the residuals from these regressions.

DATA DESCRIPTION

This empirical study employs Ukraine's monthly data covering the period from December 1996 to

December 2005. Data on GDP, monetary aggregate M2, and the unemployment rate were obtained from the National Bank of Ukraine (NBU). Data on birth rates were obtained from the State Statistics Committee (SSC) of Ukraine. According to the NBU and SSC, the data comply with the International Monetary Fund's Dissemination Standards Bulletin Board.

GDP in billion Ukrainian hryvna (UAH) is calculated by the income approach. Monthly growth rates of GDP and monetary aggregate M2 are determined as a percentage change compared to the corresponding month of the previous year. The unemployment rate is calculated as a percentage of average annual economically active working age population that is unemployed and registered with the State Employment Service of Ukraine. Following Ehrlich and Lui (1991), this study uses the crude birth rate as a proxy of the fertility variable. Crude birth rate is calculated as the number of live births during a given period per 1,000 of population. Ukrainian statistics on births cover all residents in both urban and rural areas regardless of their legal status or citizenship, except for refugees who are not permanently settled in the country of asylum. Births from the Ukrainian citizens that take place on the territories other than Ukraine are not taken into account.

Preliminary Tests

To implement a VAR estimation, the reduced form VAR process (3.4) must be covariance stationary[1]. In order to check for stationarity of the unemployment rate, crude birth rate, money growth rate, and GDP growth rate and to determine the order of integration of these endogenous variables, the Dickey-Fuller test is applied. We let the data generating process to be

$$\Delta x_t = \gamma x_{t-1} + \varepsilon_t, \qquad (3.6)$$

where x_t is the variable we are testing for stationarity, $\Delta x_t = x_t - x_{t-1}$, and ε_t is the error term. The hypothesis to be tested is: $H_0 : \gamma = 0$ (variable has a unit root), against the alternative H_1 : $\gamma < 0$ (variable is stationary). Unit root test results are in Table 3.1.

Table 3.1. Dickey-Fuller Unit Root Test Results

	Original		***In First Differences***	
Variable	**γ**	**τ-ratio**	**γ**	**τ-ratio**
U	-.004	-1.538	-.305	-4.211
BR	-.002	-0.431	-1.236	-12.289
MG	-.005	-0.549	-.9369	-9.497
GDPG	-.028	-1.389	-.9608	-9.462

At the 5% level of significance, the critical value for the Dickey-Fuller test for the sample size of 100 is -1.95.[2] As long as the absolute values of all test statistics (τ -ratio) are less than the critical value, we cannot reject the null hypothesis of the unit root for all variables. Provided that the VAR analysis requires stationarity of the endogenous variables in X_t, the next step is to difference the series. The right panel of Table 3.1 shows τ –statistics of the Dickey-Fuller test in first differences. Given the same critical value of -1.95 as in the preceding test, we reject the null hypothesis of the unit root in first differences and conclude that all four variables, i.e. the unemployment rate, birth rate, money holdings growth rate, and GDP growth rate are integrated of order one I(1).

[1] The VAR turns out to be covariance stationary if all eigenvalues of $B(L)^{-1}$ lie inside the unit circle

[2] Hamilton (1994), Statistical Table B.6.

In addition to stationarity, a VAR requires that there exist no cointegrating relationships among the differenced contemporaneous variables of a vector X_t [3]. We thus follow Engle and Granger (1987) methodology, and test the null hypothesis that there is no cointegration among the elements of X_t by estimating two regressions. The first one fits the static multivariate model

$$x_{1t} = \beta_1 + \beta' X_{2t} + \varepsilon_t \qquad (3.7)$$

where $X_{2t} = (x_{2t},..., x_{nt})$, and $\beta' = (\beta_2,...\beta_n)$. The second regression is estimated to perform the unit root test:

$$\Delta\hat{\varepsilon}_t = \delta\hat{\varepsilon}_{t-1} + u_t . \qquad (3.8)$$

The results of the Engle-Granger test for pair-wise models are in Table 3.2.

Table 3.2. Results of the Engle-Granger Test for Cointegration

Residuals from the OLS Estimation of a Two-Variable System	***τ-ratio***
Unemployment Rate on Birth Rate	-2.954
Unemployment Rate on GDP Growth	-2.049
Unemployment Rate on Money Holdings Growth	-3.715
Birth Rate on GDP Growth	-3.357
Birth Rate on Money Holdings Growth	-3.299
GDP Growth on Money Holdings Growth	-2.580

According to the Engle and Yoo (1987) tables, at the 1% significance level the critical value is -4.07. Since all τ -ratios in the estimated pair-wise models in Table 3.2 exceed the critical value, the null hypothesis of no cointegration cannot be rejected for all specifications at the 1% level of significance. Based on these findings, the endogenous vector X_t is used in the VAR model in the form of first differences of the unemployment rate, crude birth rate, money holdings growth rate, and output growth rate.

Determination of Lag Length

The number of lags in the VAR model is chosen based on the technique proposed by Sims (1986). It uses the likelihood ratio (LHR) test with the null hypothesis H_0 that p_0 lags are sufficient to describe the dynamics of the model against the alternative hypothesis H_1 that p_1 lags are preferable:

$$LHR = (T_1 - C)(\ln D_0 - \ln D_1), \qquad (3.9)$$

where T_1 is a number of observations for the p_1-lag model, $C = 1 + np_1$ is a correction factor, D_i is the determinant of the covariance matrix of the residuals from the VAR(p_i) system, *i=0,1*, $p_1 > p_0$. The

[3] Engle and Granger (1987) state that if the elements of a vector X_t were cointegrated, then it is not correct to fit a VAR to the differenced data. Based on the differenced data, this conclusion is hard to interpret for a real economy. Namely, the long-run equilibrium relationships among the variables would exist if the variables are cointegrated. To address the problem, Granger (1983) shows that although a VAR in differences is not consistent with a cointegrated system, a VAR in levels could be. However, it would lead to a new error-correcting representation of the model, and would imply additional restrictions on the rank of coefficient matrices. With a lower triangularity restriction on a coefficient matrix being already imposed, Granger justifies the application of the VAR model in differences under a hypothesis that there is no cointegrating relationship between endogenous variables.

magnitude (3.9) is asymptotically χ^2 distributed with $n^2(p_1 - p_0)$ degrees of freedom, where n is the number of variables in the system. As long as a birth of a human being is postponed from the actual time the fertility decision was made by the pregnancy period, only modifications with lags exceeding nine months are considered. Thus, Table 3.3 reports computed LHR for the modifications starting with $p_0 = 10$ and $p_1 = p_0 + 1$.

Table 3.3. Likelihood Ratio Test for Determination of the Lag Length

Lag, months	*T*	*C*	*LogDet*
10	97	45	-6.28678
11	96	49	-7.04792
12	95	53	-8.46210
13	94	57	-9.11953
14	93	61	-9.62384
15	92	65	-10.93628
16	91	69	-11.5818
17	90	73	-12.48869
18	89	77	-13.74220

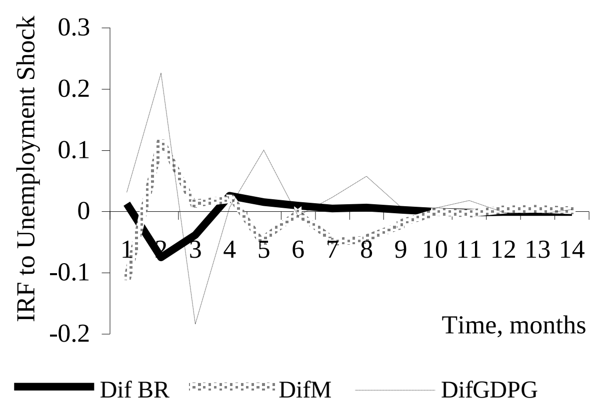
After eliminating modifications with large LHRs, the hypothesis tested is: H_0 : 13 lags are sufficient, against the alternative H_1 : 15 lags will be preferable. The correction factor is 61. According to (3.9), the LHR test statistic is 56.31, which is greater than 44, the critical value at the 5% level of significance for the χ^2 distribution with 32 degrees of freedom. Thus, we reject the null hypothesis that 13 lags are enough to describe the dynamics of the system and choose a 15-lag specification.

Impulse Response Functions

Impulse response functions (IRF) show how selected variables respond over time to each one-standard deviation shock. The functions also present evidence on the endogeneity of the variable, based on its reaction to economic disturbances. Four disturbances are considered: the unemployment disturbance, the birth rate disturbance, the money holdings disturbance, and the technological disturbance. Since the four-variable vector X_t is assumed to be covariance stationary, it is hypothesized that under a well-specified VAR all shocks will gradually die out in a long run, and the variables will approach a long-run steady state. Thus, a conclusion of endogeneity of variables in the system will be primarily based on the impulse responses of variables during a transition process towards the steady state.

Figure 3.1 plots monthly responses of the fertility, real money holding, and output growth series to the unemployment shock.

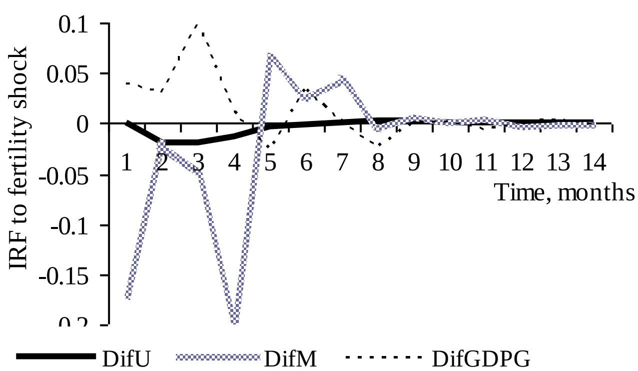
Figure 3.1. Responses to the Unemployment Shock



The unemployment shock negatively affects the birth rate in a very short run. However, in four months this effect becomes positive, which can be explained by the reallocation of time. Namely, a representative agent can divide her time between labor, leisure, and child rearing. If a household member is unemployed, her time dedicated to family and child rearing increases. As the plot indicates, the unemployment phase beyond four months in Ukraine speeds up households' decisions towards fertility. Twelve months after the shock, the difference in birth rate approaches its long run steady path. The money growth variable fluctuates in response to the unemployment shock in a short run. Sequentially, the magnitude of responses decreases, and within a year the effect neutralizes. The sign alteration of the output growth adjustments to the unemployment shock might be explained by two effects working in opposite directions: a negative labor supply effect and a positive substitution effect. As the unemployment shock occurs, the economy still accelerates with positive differences in output growth. However, with time, the unemployment shock decreases the quantity of labor employed, and consequently reduces the growth rate of output. Then, the substitution effect comes into play. Firms start employing more advanced technology in order to compensate for this reduction, and the economy once again accelerates.

Figure 3.2 presents monthly responses of the unemployment, money holdings and output growth series following the fertility shock.

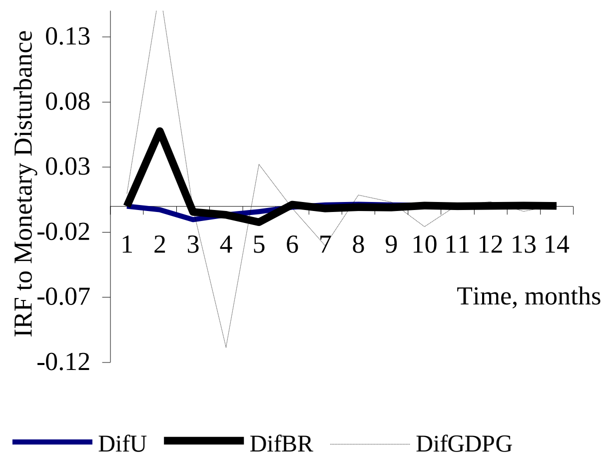
Figure 3.2. Responses to the Birth Rate Shock



The impulse responses of the unemployment series to the fertility shock mimic the responses of the birth rate series to the unemployment shock and support the proposition of the endogeneity of both variables. As theoretically predicted by Petrucci (2003), responses of the money holdings series to the birth rate disturbance are negative up to five months. When a newly born member enters the family, households' expenditures significantly increase affecting the balanced path of money holdings accumulation. The money holdings growth vivifies slightly after the fifth month, but the impact defuses within a year. The output growth response to the fertility shock is similar to Wang et al (1994) findings: in response to a birth rate disturbance, the output growth rate accelerates (up to four months). However, later on, the rising birth rate retards capital accumulation and hinders output growth**.** After fluctuating for a while, the output gradually returns to its steady state growth.

Figure 3.3 reflects monthly responses of the unemployment, fertility, and output growth series to the monetary disturbance.

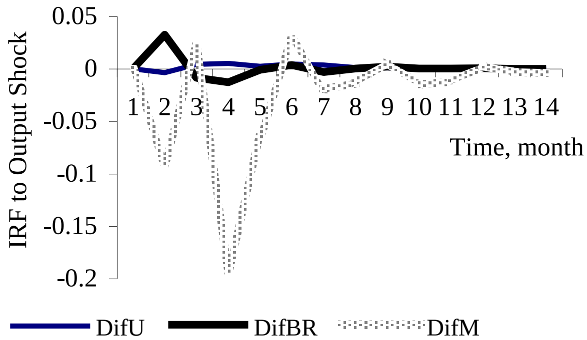
Figure 3. 3. Responses to the Monetary Shock



Although the unemployment series reaction to the monetary shock is minor, the birth rate and the output growth series exhibit significant responses. The difference in birth rate sharply increases immediately following the monetary disturbance. This tendency complies with the Petrucci (2003) conclusion that fertility growth depends positively on the rate of growth of money holdings, and that money holdings are an important determinant of households fertility decisions. The output growth series exhibits responses to shock that are explained in the following way. Initially, a higher money growth speeds up in the output growth. But since real money holdings fall, this, in turn, stimulates fertility and child rearing, and consequently decreases a labor effort. According to a modified golden rule that establishes an inverse relationship between capital stock and population growth, higher fertility will bring reduction in per capita output and consumption. As the differences in growth rate diminish to negative values after the third month following the disturbance, the economy slows down gradually. Figure 3.3 predicts that within a year the effect of the money holdings shock on the output growth series completely neutralizes[4].

Finally, Figure 3.4 illustrates impulse responses of three variables to the technological shock.

Figure 3. 4. Responses to the Technological Shock



With the output disturbance, the unemployment rate responds slightly. This pattern is consistent with the long-run vertical labor supply curve hypothesis. That is, in the long run, labor supply approaches its potential level and the unemployment rate converges to the natural unemployment rate. Responses of the birth rate series to the output shock are positive up to three months; however, they become ambiguous over time. Figure 3.4 shows that the initial positive response of birth rates to the technology shock turns into negative in three months, and after changing signs over a 13-month-horizon sequentially neutralizes. Impulse responses of the money growth series to the technology shock are ambiguous as well. Initially, in response to the shock, the money holdings growth decreases. However, it speeds up in the fourth month. Then, alternating signs in the sixth and the ninth month, it either slightly accelerates or slows down. The effect defuses within a year.

[4] Our findings once again lend support to the concept of money neutrality in the long run.

The impulse response analysis suggests the endogeneity of labor-fertility decisions, income per capita growth, and money holdings. If fertility were exogenous, it would not respond to output, money supply, or labor market disturbances. However, as the IRFs show, the unemployment shock in transition economy slows down the birth rate in the short run, and positively affects it later on. In the short run, fertility accelerates with a monetary disturbance in compliance with Petrucci (2003). On the other hand, impulse responses of fertility to technology shocks are ambiguous, with an initial positive response quickly dissipating.

Variance Decomposition Analysis

The variance decomposition shows how much of the forecast error variance for endogenous variables can be explained by each disturbance. The econometric results for selected periods are in Table 3.4.

Table 3.4. Variance Decomposition of Forecast Errors

Period, months	***S.E.***	***Unemp. Shock***	***Birth Rate Shock***	***Monetary Shock***	***Tech. Shock***
Variance Decomposition for Unemployment Series					
1	0.027	100.00	0.00	0.00	0.00
24	0.059	48.55	21.11	18.12	12.22
Variance Decomposition for Birth Rate Series					
1	0.125	4.16	95.84	0.00	0.00
24	0.240	13.64	51.18	20.63	14.55
Variance Decomposition for Money Holdings Series					
1	1.789	0.81	2.11	97.08	0.00
24	3.240	16.18	13.14	60.53	10.16
Variance Decomposition for Output Series					
1	0.789	17.73	0.80	0.16	81.32
24	1.334	18.90	8.3	21.39	51.41

Over a 24-month horizon, the interplay between the real economy and households fertility decisions is significant both in economic and statistical sense.

Unemployment shocks account for 13.6% in the variation of the birth rate series. At the same time, fertility feeds back into labor market , explaining 21.1% in the variance decomposition of the unemployment series With respect to the money holdings and the output growth variations, fertility shocks amount to 2.1% and 0.8% immediately after the disturbance, and 13.1% and 8.3% 24 months later, respectively. Similar to the impulse response analysis, variance decomposition lends support to the hypothesis that money holdings shocks are important for fertility fluctuations. Within a 24-month period, they explain up to 20.6% in the birth rate variation. Technology shocks account for 12.2%, 14.6%, and 10.2% in the variance decomposition of unemployment, fertility, and money growth series, respectively. Interestingly that in the variance decomposition of the birth rate series, the impact of unemployment, money holdings, and output shocks rises with time, however, the strength of the fertility shock diminishes.

The results of our variance decomposition analysis are consistent with the impulse response analysis. The evidence supports two propositions. First, the birth rate series respond to the variations in unemployment and money holdings, which in turn explain a significant share in the output growth variations. Second, fertility decisions are endogenous to the labor market conditions and the monetary side of the economy.

Sensitivity Analysis

In order to investigate the robustness of our model application to the Ukrainian economy, two alternative time-series specifications are introduced by changing the ordering of variables in the original VAR model. First, an Alternative Model 1 (AM1) is created. It places a fertility time series first in a vector of endogenous variables *X*. By this operation, we allow the birth rate to affect variations in all time series. Second, the trend-stationary fertility variable is moved to the last position in the system, thus creating an Alternative Model 2 (AM2). This makes deviations in fertility outlying from a trend to be affected by all disturbances, and permits testing a hypothesis on the significance of income and money holdings effects in the short-run fertility fluctuations. Table 3.5 reports the results for selected periods.

The results of the sensitivity analysis can be summarized as follows. In general, the differences in the variance decomposition among the original and two alternative specifications of the model, AM1 and AM2, are minor. Impulse response functions and variance decompositions are qualitatively similar under all orderings, i.e. they both assert an identical pattern of the adjustments in the movement of variables toward a steady state. In all cases, the unemployment and the birth rate shocks explain almost equal proportions in the variance decomposition of the unemployment series over a 24-month horizon, and the contribution of the birth rate shock is found to be significant. Although the fertility shock covers a major part of the birth rate variations, the money holdings shock explains a fifth of variations, and is significant at the 2% level in all three specifications. The evidence once again supports a hypothesis on the importance of real money holdings in determining a household's labor-fertility choice. The variance decomposition of the output growth is not sensitive to the ordering of variables, with the birth rate shock explaining between 8.0% and 8.6% of the output growth variation in the original and two modified models.

Policy Implications

The results of our empirical study suggest that over different time frames future population dynamics will have both positive and negative effects on economic growth in countries with demographic and economics conditions similar to Ukraine. In the short run, slower population growth will lead to some increase in economic growth by reducing a need to provide new capital for entrants to the labor force. Recently increased working age population *per se* will give additional hands to produce output. At the same time, transitional economies with falling fertility rates confront a long-horizon dilemma: with high death rates and migration outflows, the society is not able to reproduce itself. Such a society subsequently encounters a problem of a falling fraction of the working age population, and a need to re-allocate resources in support of increasing elderly strata.[5]

Policy issues are complex in the light of this controversy. If a social planner has an incentive to stimulate economic performance in a short run, policies oriented on a reduction or postponement of fertility will be in hand. With respect to the long run, the opposite is true.

In the East European transition economies fertility issue is important from both the long-run production and the household welfare points of view. Because nursing homes are not well-established and pension payments are insufficient to cover needs of the elderly, these societies rely largely on family support. Contrary to China, where the elder son takes the responsibility, in Eastern Europe usually it is the daughter who takes care of the elder parents. From this perspective, having a larger family is beneficial.

Bloom, Canning, and Sevilla (2001) argue that in the absence of a demographic dividend, the region is likely to be best served by focusing on health and welfare in order to reach a long-term demographic stability. Depending on the objectives, these can be family planning programs, social transfers to multi-children families, public investment in education and health, child and maternity labor regulations, and social security programs.

As our empirical investigation confirms, money holdings exert a positive impact on families' fertility decisions. Thus, rising both pensions and child care assistantship, if accompanied by economic growth, can be an effective mean to smooth the hardship of a demo-economic transition. Some changes have already been introduced. For example, a one-time transfer equivalent to $300 is offered for a child birth in Russia, with an additional 18 months child care subsidy of $26 per month. The transfer is supposed to increase to $410 in 2007[6]. The Ukrainian government offers a one-time transfer for a newly-born child in the amount of $1700, and an additional monthly subsidy of $23 for three years.

However, stimulating fertility purely by economic means might not be a good idea, as it might result in a moral hazard. Taking into account the average monthly per capita wage of $196 in Ukraine in mid-2006[7], the above mentioned one-time transfer is financially significant for low-income households. Monetary incentives can become profit motive for poor families. Moreover, some households could spend child allowances on other consumption goods and purposes, rather then child care. To address the issue, the subsidy must take a form of a voucher that can be spent only on child care, health, and education, i.e. the improvement of child quality.

To this end, we stress the importance of taking quality of children into economic considerations. Yet, the assistantship for the improvement of child quality has not become a practice in transition economies. Thus, a policy maker can consider a three-level help to multi-children families, including child care, scholarship, and employment opportunity. Along with a child birth allowance, these subsidies can become essential factors in regulation of a socio-demographic transition.

CONCLUSIONS

Although the modern economic literature is represented by a vast amount of studies exploring the interplay between fertility and economic growth, there are no systematic empirical attempts to investigate the relationship between households' fertility decisions, on the one hand, and labor market conditions, real money balances, and economic growth, on the other, within multivariate time series models. For these purposes, we have empirically explored an existing theoretical framework that partially ties endogenous fertility and economic growth through the wealth element or through the labor market conditions, by introducing a synthesized

[5] Weil (2004)
[6] http://www.izvestia.ru/russia/article3094822

[7] Source: State Statistics Committee of Ukraine

vector autoregressive model on the relationship between all four variables in transition economy.

The model has been tested on Ukraine's monthly data from 1996:12 to 2005:12 through the use of a multivariate time series system. With minor quantitative differences in the variance decomposition in three alternative specifications, that we specify, statistical tests support the hypotheses about significant interactions between unemployment, fertility, money holdings, and output growth series. The impulse response functions show that all the variables respond to each one-standard deviation shock, and that the birth rate is endogenous with regard to these variables.

Furthermore, the paper demonstrates that demand for fertility indeed depends on labor market conditions and households' financial wealth, and is connected with the monetary side of the economy. Firstly, in a four-month horizon, unemployment shock causes a reallocation of time towards child rearing, away from a labor effort, thus inspiring families to increase the number of children, and retarding production. Secondly, a higher money holdings growth rate stimulate fertility since, by reducing real money holdings, it diminishes the opportunity cost of an additional child. This, in turn, induces people to increase the number of children, and hence results in a reduction of per capita consumption and output, and unambiguously lowers the steady state welfare. The variance decomposition analysis confirms that with unemployment disturbances accounting to 13.6%, the monetary incentives explain up to 20.6% of the fertility variations in the transition economy over a two-year horizon.

Our findings have important policy implications. In transition economies, socio-economic policies frequently contradict each other, making it difficult to reach a common goal of sustainable economic growth with a sound socio-demographic effect. Taking into account the interdependence among fertility, labor market, economic growth, and the monetary side of the economy, a social planner has to implement a multifunctional mix of short-run and long-run policies, feasible from the budgetary standpoint. These may include family planning programs, health care policies, compensation, welfare payments, direct subsidies to child birth, labor market regulations, investment in education, and social security. In addition, while stimulating fertility with monetary means, a social planner must take into consideration the possibility of a moral hazard operating in households' decision making.

A realization that in addition to labor market and the monetary side of the economy routes fertility and output growth can interact through other channels offers a wide avenue for further research. As an extension to the VAR model, migration and mortality variables can be incorporated. Another open question is to check whether money neutrality holds under introduction of alternative measures of household's wealth (i.e. capital accumulation, securities accrual etc). In order to determine whether policy actions have economically and statistically significant effect on fertility and growth, calibration and simulation of the economy can be conducted under different policy scenarios. Finally, the model can be empirically tested for a broader range of both East and West European countries with declining fertility.

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TABLE

Table 3.5. Variance Decomposition of Forecast Errors for the AM1 and AM2

Period	***S.E.***	***Unemployment Shock***		***Birth Rate Shock***		***Monetary Shock***		***Technology Shock***	
		AM1	**AM2**	**AM1**	**AM2**	**AM1**	**AM2**	**AM1**	**AM2**
Variance Decomposition for Unemployment Series									
1	0.027	95.84	100.00	4.16	0.00	0.00	0.00	0.00	0.00
24	0.059	45.54	48.55	24.12	23.49	18.12	16.59	12.22	11.37
Variance Decomposition for Birth Rate Series									
1	0.125	0.00	4.16	100.00	93.03	0.00	2.04	0.00	0.78
24	0.240	11.09	13.64	53.72	49.87	20.63	21.91	14.55	14.58
Variance Decomposition for Money Holdings Series									
1	1.789	1.39	0.81	1.53	0.00	97.08	99.19	0.00	0.00
24	3.240	14.86	16.18	14.45	13.99	60.53	59.95	10.16	9.89
Variance Decomposition for Output Series									
1	0.789	15.52	17.73	3.00	0.00	0.16	0.27	81.32	82.00
24	1.334	18.62	18.90	8.58	7.97	21.39	22.28	51.41	50.85

EDUCATING ENTREPRENEURS: LESSONS FROM THE FINE ARTS

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ABSTRACT

For all practical purposes, the debate over whether entrepreneurship can be taught is over. The growth in entrepreneurship courses, programs, majors and centers is well documented. What, then, are the most useful teaching and learning strategies? This paper will describe some interesting analogies gleaned from the fine arts. It is generally accepted that art historians are better at their work if they have been trained in the studio arts – you can better analyze and come to understand a painting if you know from experience what problems the artist confronted and how those problems were solved. Similarly, there is much evidence to demonstrate that famous artists have studied their predecessors. The artists' focus is not on memorizing "artist, title, date" but rather on learning to paint using the expressive styles, the techniques and the materials utilized by that artist. Institutions do not expect undergraduates with degrees in art history to paint like Michelangelo. Neither should we expect undergraduate business students to launch Microsoft or Apple. What we have to decide is whether the entrepreneurial student should study about new ventures or actually undertake new ventures. If we want them to be entrepreneurs, we have to give them the paint, the brushes, and the canvas. At the same time, we have to set expectations. What constitutes clear evidence of progress? This article suggests some answers found in the fine arts.

INTRODUCTION

The headline read, "Can entrepreneurship be taught?" And the subtitle hinted at the answer, "Classes for would-be entrepreneurs are a hot trend at America's universities. But can risk taking and originality be learned?" The *Fortune Small Business* article went on to cite a survey by the Ewing Marion Kauffman Foundation that identified 1,992 two- and four-year colleges and universities that offer at least one course in entrepreneurship. This article recounted some aspects of the twenty-year-old debate about teaching entrepreneurship, and it provided some anecdotes about students – their passions and accomplishments. It also mentions the successes of highly visible, but largely irrelevant role models (see Lesson # 1 below) such as Mark Cuban, who sold his Broadcast.com to Yahoo! for $6 billion. And there's the expected listing of program attributes widely recognized as contributors to student successes – driving past the business plan stage, connections, mentoring, access to capital, and team building.

It does seem reasonable to have those attributes in an entrepreneurship program. But if we are to "teach," especially in the setting of a liberal arts college, are there places to look for inspiration? Yes! Look everywhere and look with an entrepreneurial mindset, one that is open to discovery.

Here are five valuable lessons found in the fine arts.

Lesson # 1: Help Dali's find their Vermeer's

Artists look for inspiration from their predecessors. The Surrealists in the early 20th century were challenged when the concepts of space, time and light were being reconsidered in the context of scientific developments in the Theory of Relativity. Salvador Dali, known for his surreal works like *The Persistence of Memory*, (figure 1) could have sought photographers whose cameras convincingly captured time, space and light.

Figure 1

He didn't. Instead he found his inspiration in Vermeer, a Dutch master of the Baroque period. Dali's favorite painting was Vermeer's *The Lacemaker* (figure 2) from the mid-seventeenth century, a rather small, precisely painted work featuring a quiet moment frozen in time with a realistic and believable source of light. Vermeer used a device known as the *camera obscura*. Today he is better known for his *Girl with Pearl Earring* which was recently made into a feature movie.

Figure 2

The lesson is that business professors have and will continue to use some "classic" tools of the trade in courses for student entrepreneurs – case studies, meeting practitioners, internships and mentoring. Maybe the learning can come from studying the less obvious predecessors, not Bill Gates and Steve Jobs, but by helping our young Dali's find their Vermeer's.

Lesson # 2: Forging a masterpiece is a crime

Who are the Teenage Mutant Ninja Turtles? Michelangelo, Leonardo, Raphael, and Donatello. Leonardo da Vinci's *Mona Lisa* circa 1485, is arguably the most recognizable image in western art. Is it any wonder then, that the Dada artist Duchamp chose this icon, mocking the masterpiece by drawing a mustache on a postcard sized replica (figure 3)? The work appeared in the World War I era when artists asked "Why bother to make a masterpiece when in may be destroyed by warfare?"

Figure 3

Replicating the existing – even if it's not a masterpiece – is an unworthy ambition for student entrepreneurs. A student in a 100-level entrepreneurship course once asked, "Can my term project be a business plan to become a franchisee?" NO! We need to avoid the formula solutions and at the very least tweak the known business models. We do not need another pizza shop in Huntingdon! Be the first person to put a mustache on Mona. Forging a masterpiece is a crime!

Lesson # 3: Previewing Picasso's Portfolio

The name Picasso is sure to conjure up abstract images. Pablo Picasso was schooled in the traditional ways of painting and by the time he was a teenager he created some remarkable pieces of representational art. Art historians like to trace the evolution of an artist's style. Even a small sample of Picasso's works between 1890 and 1920 demonstrate dramatic changes as he moved into Cubism (see figures 4 through 7).

Figure 4

Figure 5

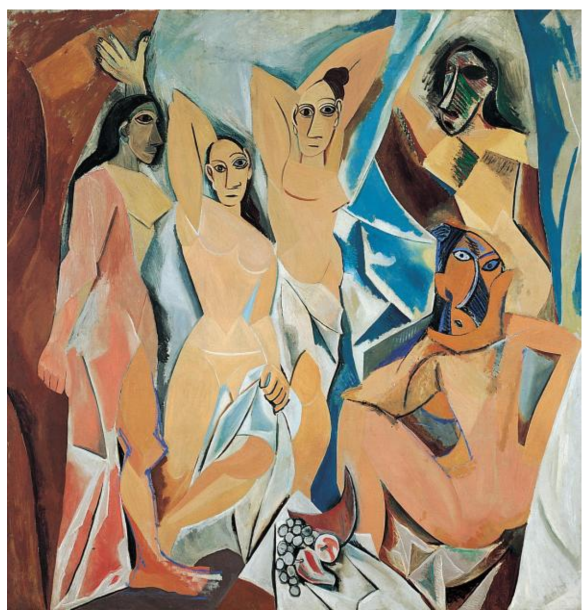

Figure 6

Figure 7

The final sample (figure 8) is mature Cubism and shows Picasso's attempts to capture the 4th dimension, the time-space continuum on a two-dimensional canvas. As Picasso said, "Learning to draw like Raphael was easy. It took a lifetime to learn abstraction."

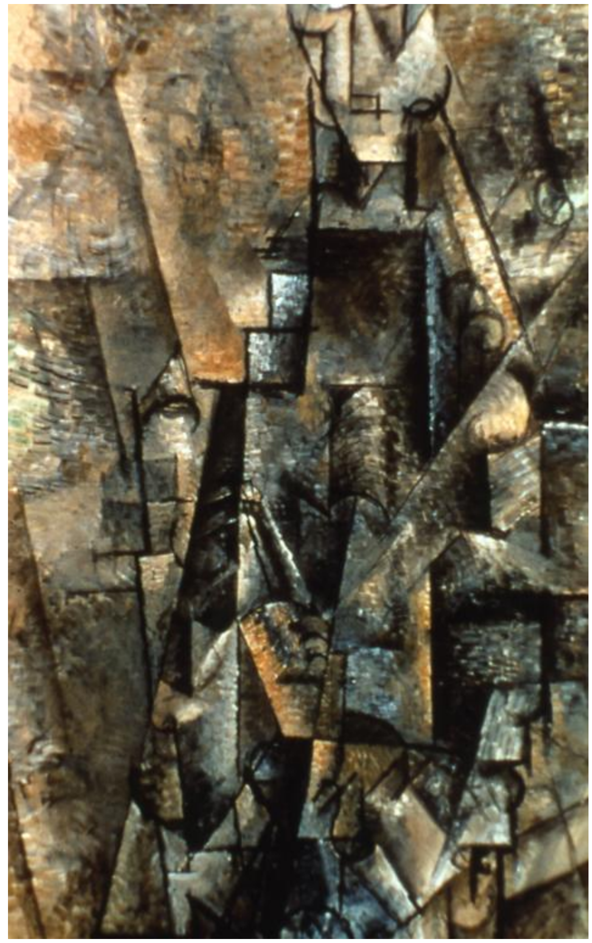

Figure 8

In most business curricula, we want to start all our students at the same point. Indeed, some MBA programs make a point of that, independent of what an individual already knows or has accomplished. Would it not be more appropriate to examine a student entrepreneur's portfolio? In a curriculum where "doing" is the imperative, shouldn't we have an appreciation for the student's evolution and start him from where he is?

Lesson # 4: Progress may be abstract

In 20th Century Art, students confront Mondrian's *Composition in Red, Blue and Yellow* (figure 9), 1930.

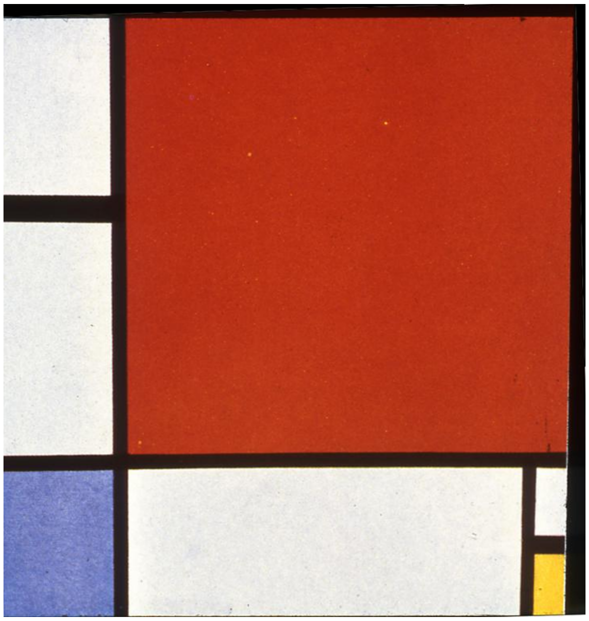

Figure 9

Students initially don't get it. Their common reaction is "I could do that." The fact is, they didn't; but Mondrian did. How did he get there? In the sequence of his works below, examine the transitions – first, nature from a distance (figure 10),

Figure 10

Coming closer (figure 11),

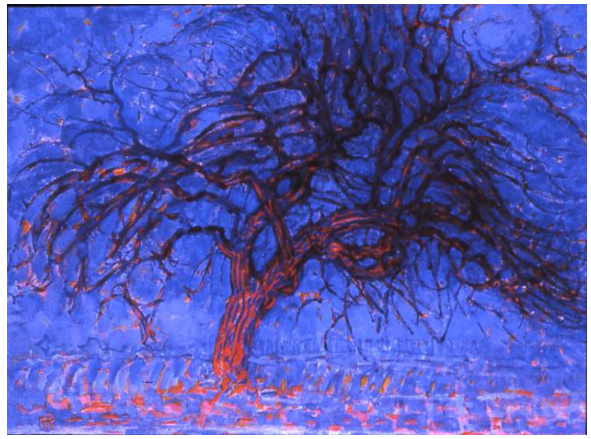

Figure 11

Abstracting the tree (figure 12),

Figure 12

Simplifying the tree (figure 13),

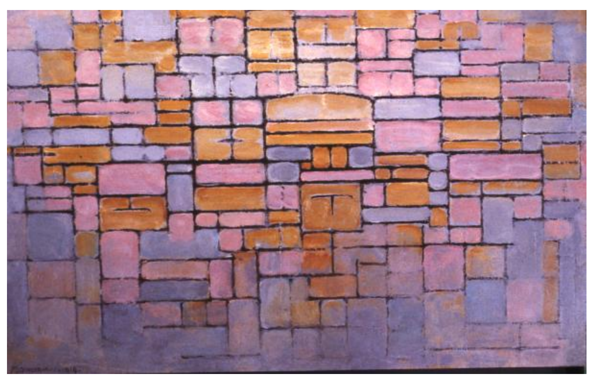

Figure 13

Further simplification (figure 14),

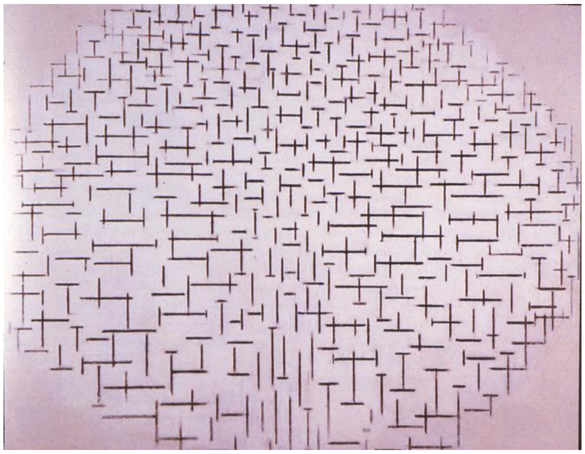

Figure 14

Adding some color and overlapping for an illusion of depth (figure 15),

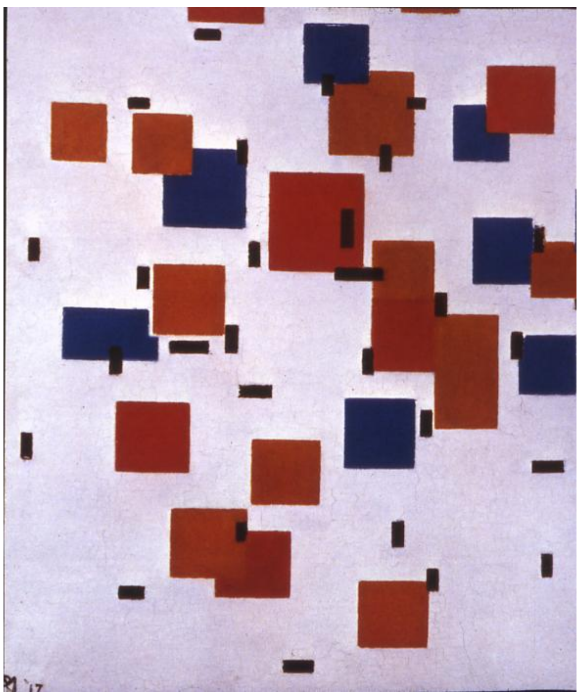

Figure 15

And then finally the *Composition in Red, Blue and Yellow* (figure 16).

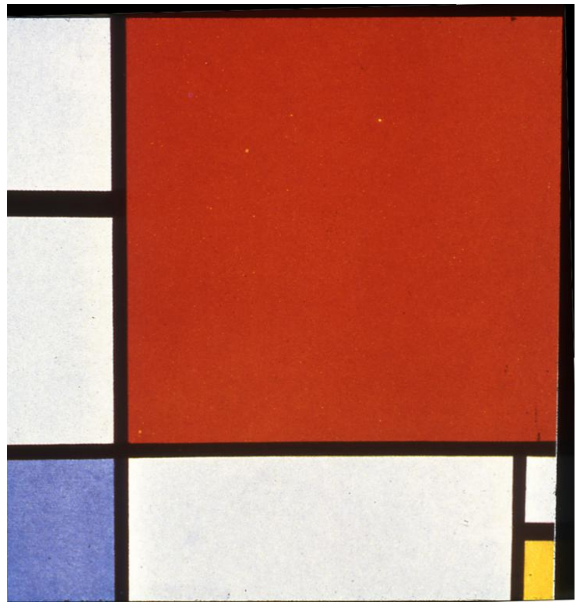

Figure 16

Is it just primary colors, parallel and perpendicular straight lines on a flat canvas? No, it's genius! And no, you couldn't have done it back then! One develops a much better appreciation when progression is laid out so clearly.

Discrete measurement of student progress as entrepreneurs – looking at just one painting (i.e., the business plan) – may not provide the same insight as the appreciation formed from a longer-term perspective that our colleagues in the fine arts see as routine. Progress might be more abstract than we might at first expect.

Lesson # 5: Transcend the canvas

This next work is by the contemporary artist Frank Stella (figure 17). It's one of his earlier pieces. There's a sense of frustration exhibited in this work, reflecting his struggle with the limitations of the two-dimensional canvas.

Figure 17

His struggles forced him to leave the two-dimensional world and expand into three dimensions as shown in this later work below (figure 18). The quote in the corner of the piece states, “The aim of art is to create space in which the subjects can live.” In the fall 2007, Stella was featured on the CBS Sunday Morning news program. His studio now is a huge warehouse, needed to provide the work space for multiple projects underway simultaneously. While his physically huge works leave the canvas behind, the use of color and the grid are very reminiscent of his earlier work.

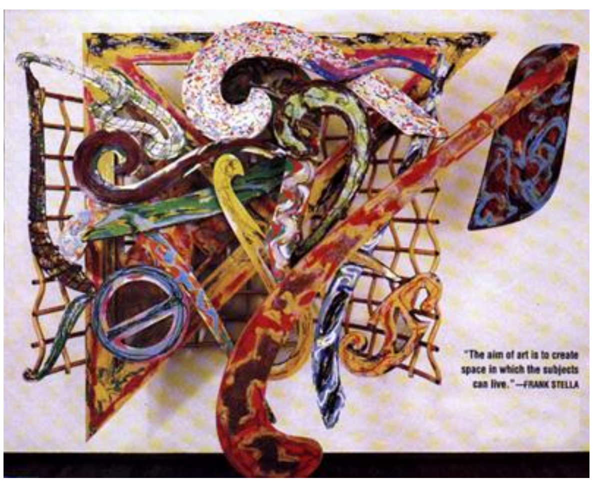

Figure 18

To Frank Stella, the canvas was a constraint from which he had to free himself. He had to transcend the canvas. That’s our challenge in “teaching” entrepreneurs.

Academe is loaded with constraints. First and foremost among constraints is the academic calendar that imposes a rigid 15 week discipline, at the end of which professors must submit grades. Lessons # 3 and # 4 above argue that such timelines are capricious, and possibly even counter-productive.

If a student is lucky enough to enroll in a curriculum that provides a sequence of courses, the professor implementing those courses becomes less of an instructor and more of a project manager. It can become a juggling act far less comfortable than lecturing, class discussions and case studies.

Most professors prefer (even thrive upon) the control afforded by being the expert among the novices. “Never give up the chalk” was a mantra chanted by the early advocates of the case study method. Empowering students to transcend their own canvases asks the professor to relinquish much of the control usually bestowed.

Another constraint can be the quality of students’ ideas. In the first week of an introductory entrepreneurship course, asking student to suggest the kinds of businesses they see themselves opening and running usually results in a list like this.

Web design and web site hosting

Sports bar

Campus services (room cleaning, food delivery, etc.)

Rental properties for students

Coffee shop

Yet another pizza shop in Huntingdon

The most insidious constraints are sometimes imposed by well-meaning administrators. Lurking in the recesses of their minds is the notion that the institution has to be in the position to capitalize on any successes that a student may create. It’s as if administrators expect Bill Gates or some other irrelevant model of success (see Lesson # 1) to enroll. Institutional policies that insure an equity stake in a student's venture ought to be resisted. The educational merits of a program that enables such student accomplishment should reign. Trust the successful entrepreneur to do what's right by his/her *alma mater*.

CONCLUSION

Some lessons from the fine arts help us think differently about what we do as professors of business.

Help each student find the appropriate predecessor, especially if you have a Salvador Dali.

Resist replicating an existing business model; it's not enough.

Determine where each student entrepreneur is along his/her own path. Start him/her from there, not some arbitrary, universal starting point.

Abandon the traditional notions of measuring progress.

Work creatively, even entrepreneurially, within the constraints imposed.

These are just five lessons derived from how colleagues approach their disciplines. There are many more lessons out there waiting to be found. For help, find a colleague in another discipline and explore their world.

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THE NEED FOR HISPANIC-OWNED BUSINESSES TO TARGET NON-HISPANIC CUSTOMERS, VENDORS AND SERVICE PROVIDERS

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ABSTRACT

According to the U.S. Census Bureau, Hispanics account for about half of the growth in the U.S population since 2000. Furthermore, the number of Hispanic-owned businesses has increased 82% between 1997 and 2006. The number of Hispanic-owned businesses is growing faster than the Hispanic population. Recently, Hispanic-owned businesses have experienced a decrease in average gross receipts. A review of the literature suggests that this may be related to the growth rate of Hispanic businesses and the tendency of Hispanic-owned businesses to concentrate in Hispanic communities and rely on Latinos both as employees and customers. Hispanic businesses may need to look outside the community for growth opportunities.

BACKGROUND AND STATEMENT OF THE PROBLEM

Hispanic-owned businesses are growing faster than the general Hispanic population. In addition, sales in Hispanic-owned businesses decreased by 9% from 1997 to 2002 (U.S. Census Bureau, 2002). Hispanic businesses tend to be small, family-owned businesses. Anecdotal evidence suggests that Hispanic businesses source from other Hispanic businesses and generally appeal to Hispanic customers. These facts and anecdotal evidence suggest that Hispanic businesses may be more successful and attract more customers by sourcing outside their community and looking to non-Hispanic customers for growth opportunities.

The number of U.S. Hispanic-owned businesses, along with the U.S. Hispanic population in general, has grown significantly in recent years. As a result, the dynamics of business-to-consumer and business-to-business relations has also changed, providing greater opportunities and new threats to new and existing businesses.

GROWTH RATE OF THE HISPANIC POPULATION

The Hispanic population is 14.2 percent of the total U.S. population; this population is estimated to grow by more than 1.7 million people per year. Hispanics are the largest minority in the United States, with an estimated 2004 population of 41.3 million. Hispanics accounted for 40 percent of the country’s population growth between 1990 and 2000 (U.S. Census, as report by Cohn, 2005). From 2003 to 2004, Hispanics accounted for approximately one-half of the 2.9 million growth rate in national population (U.S. Census, as report by Bernstein, 2005).

In 2003, Hispanics surpassed African-Americans as America's largest minority group. Hispanics have been reliably projected to grow much faster than African-Americans or any other American group (Etzioni, 2006). By 2000, Hispanics surpassed African-Americans to become largest minority group in the United States (Etzioni, 2006). By 2050, Hispanics are projected to be 24.3 percent of the American population.

Despite their geographic concentration, most Latinos live scattered through neighborhoods where they make up a small share of the population. Some 20 million Hispanics, approximately 57% of the total, lived in neighborhoods in which they made up less than half the population at the time of the 2000 census. These Latinos lived in census tracts where, on average, only 7% of residents were Hispanic (Pew, 2005).

GROWTH RATE OF HISPANIC BUSINESSES, SIZE AND ECONOMIC IMPACT

As of 2005, there were more than 25 million businesses in the United States, constituting an average annual growth rate of around 2% over the past ten years. The number of Hispanic-owned companies has grown 82 percent since 1997, making them among the fastest-growing business segments in the nation (U.S. Census Bureau, 2002). In 2004, there were approximately 2 million Hispanic-owned businesses in the country that generated almost $300 billion in annual gross receipts (U.S. Census Bureau, 2002). By 2010, there will be 3.2 million Hispanic firms generating $465 billion. This indicates an increase of 60% in Hispanic-owned businesses from 2004 to 2010 (U.S. Census Bureau, 2002). One out of every 10 small businesses will be Hispanic by the year 2007 (U.S. Census, as reported by Mosher & Hausken, 2006).

Though Hispanic-owned businesses have grown by 82 percent since 1997, there were only 29,168 Hispanic-owned firms with receipts of $1 million or more. These firms accounted for 1.9 percent of the total number of Hispanic-owned businesses and 62.5 percent of their total receipts. Furthermore, while overall Hispanic-owned firms constitute 7.0 percent of all U.S. firms, they only account for 2.8 percent of employees and 2.5 percent of receipts realized by American businesses (U.S. Census Bureau, 2002). This would indicate that most Hispanic-owned firms might be limited in their size of operations.

Additional analysis of Census data is even more revealing. There was a 31% growth rate in the number of Hispanic businesses between 1997 and 2002 and this was three times the national average for all businesses (Survey of Business Owners: Hispanic-Owned Firms: 2002, as reported by Bergman, 2006). However, during that same period, Hispanic-owned business realized only a 19% growth in receipts and an 11% increase in paid employees. Due to the growth in the number of Hispanic-owned businesses, the average gross receipts per firm have gone from $155,242 in 1997 to $141,063 in 2002, a *decrease* of 9% over that time period (U.S. Census Bureau, 2002). Consequently, it is probable that new Hispanic-owned businesses will cannibalize market share from existing Hispanic businesses, inhibiting the growth potential of many of these established businesses.

In general, start-up firms tend to earn less or have negative returns in the first few years of operations. To compound the problem, Hispanic-owned businesses are highly interdependent, generally concentrated in Hispanic communities and reliant on Latinos both as employees and customers (Pew, 2005). This recycling of money back into local economies can generate growth for Hispanic communities; however this “greenhouse” effect can be negative during times that the overall economy is contracting (Pew, 2005). According to Luis Ortiz-Franco, Latinos satiate their entrepreneurial spirit by catering to their own group. He stresses, however, that the Latino link only goes so far. The second part of the equation is having the talent, integrity and work ethic to do a good job and keep winning new clients - both Latino and non-Latino (Sterman, 2006).

For Hispanic-owned businesses to achieve future growth and sophistication, they may need to embrace Ortiz-Franco’s words and look beyond their traditional, ethnocentric business practices, and devise strategies to access the expansive growth opportunities offered by more established, mainstream markets.

BUSINESS LIFE CYCLE, PROLONGED GROWTH AND IMPLICATIONS FOR HISPANIC BUSINESSES

Generally, businesses experience four stages of life: start-up, growth, maturity, and decline. Decline is usually followed by the business closing or being sold. Businesses in the growth phase can often function using their own limited resources. Ideally, during this stage, consumer demand is established and increases. Additional help is often needed in production, manufacturing, general operations, or sales in order to enter the growth phase. The company typically experiences increasing sales and profit margins as the market is penetrated. Mature firms have achieved a certain amount of name recognition. Contacts are well established, sales require less effort, the business produces a reliable stream of cash, and borrowing becomes easier. At this point, intensive marketing may be needed to increase or maintain market position, and little product innovation occurs. Profit margins tend to stabilize. Businesses in the declining phase tend to experience a shrinking market. There is usually no product innovation, costs are cut to preserve profits, and the profits that remain are usually thin. The key to growing a business is to understand the market and recognize what customers are looking for and respond to it by developing customer-driven processes (Johnson, 2006).

A bell shaped curve can depict the typical business life cycle. The key to prolonging a business's successful life is to reshape the bell curve into an S-curve by prolonging the growth stage of the business (Adler, 1997). A key to a business extending its lifecycle is its ability to create new products and market segments that prolong existing growth stages and enable new growth stages to develop.

The critical point for all new businesses occurs as they try to grow from start-up to maturity. Early in this transition, the company must be constantly nurtured, watched, and guarded. During this stage the owner is usually responsible for all business development. There tends to be a feast and famine approach to selling. Most new business owners fail to think strategically, and are uncomfortable selling. They would prefer to act as an employee of the company, working "in" the business on projects, rather than act as an executive of the company working "on" the business. Face-to-face selling, cold calling, and networking are usually the only way companies in this stage can acquire new customers. Staying in your comfort zone and not creating a framework for the future that includes effective selling activities almost always results in failure in this stage (Buhler, 2001). The nature of most Hispanic-owned businesses (and businesses in general) is to remain in their comfort zone and not realize prolonged growth.

At this point, successful businesses look to introduce new potential customers to existing products and services. In some cases, new product or service offerings are presented to existing customers as well. Advertising, promotional and public relation tools also must be added to business development activities to support the sales efforts of these new endeavors. The positioning of the product(s) needs to be communicated to a larger market. Future success of the business becomes dependent on continued growth through diversification, blending new and existing customers, in combination with blending new and existing products and services to create stability as well as growth. More and more customers are obtained by brand awareness, name recognition, and reputation. Reviewing and revising your strategic framework is essential. Most companies that fail do so because they do not adapt to changes in their marketplace (Buhler, 2001). Most companies never make it to the maturity stage of the business life cycle.

Managing and prolonging the business life cycle for Hispanic businesses may include expanding into non-Hispanic markets and looking to non-Hispanic sources of supply.

RECOMMENDATION FOR FUTURE RESEARCH

Research related to the relationship between Hispanic and non-Hispanic markets has focused on how non-Hispanic owned businesses target Hispanic customers and utilize Hispanic service providers. In contrast, summations made regarding how small Hispanic-owned businesses target non-Hispanic customers and utilize non-Hispanic service providers are generally of an anecdotal nature. There is a need for research that investigates the degree to which Hispanic businesses target non-Hispanic customers and utilize non-Hispanic service providers. As research into business life-cycles indicates, businesses need to target new customers with new or existing products and services in order to extend the growth and maturity phase of the business life cycle. If Hispanic businesses continue to grow faster than the growth of the Hispanic population in the U.S., non-Hispanic markets may become a key component in their growth and survival.

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ENTREPRENEURSHIP: BUSINESS'S LIBERAL ART

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ABSTRACT

The phrases, "Business," and, "The Liberal Arts," are seldom uttered in the same breath. Yet, few endeavors challenge the liberally educated mind more fully than Entrepreneurship. To be successful, the entrepreneur must draw upon each of Business's own disciplines—Marketing, Management, Accounting, and Finance. (S)he must then inquire into the Social Sciences for the social, economic, and political settings in which the entrepreneurial venture must operate; into the Natural Sciences for the technologies of that venture, and into the Humanities for the entrepreneur's personal signature upon the venture. Finally, the entrepreneur must synthesize all of those inquiries into a writing—the business plan—that is so comprehensive, yet so concise, that it triumphs from among the millions competing for professional investors. This paper looks at Entrepreneurship and the Liberal Arts historically, compares the goals and teaching methods of each, and asks whether Entrepreneurship has evolved into, "Business's Liberal Art."

INTRODUCTION

This paper traces the relationship between Entrepreneurship and the Liberal Arts. The paper attempts to show not only that Entrepreneurship and the Liberal Arts are complementary, but that Entrepreneurship itself has now evolved into a parallel Liberal Art.

Section I of the paper asks why the relationship should matter. It concludes that, at a time of debate between the relative merits of technically focused Business teaching and broadly focused Liberal Arts teaching, Entrepreneurship can be a unifying forum for the teaching of both disciplines.

Section II provides a brief historical perspective on the development of Entrepreneurship. It particularly examines the ebb and flow of Entrepreneurship through the centuries, until the 1970's Heavy Manufacturing Crisis in America.

Section III provides a parallel historical perspective on the development of the Liberal Arts, tracing it from Ancient Greece, through the Enlightenment, and to the modern American university.

Section IV looks at the changes that have occurred in Entrepreneurship since the 1970's Heavy Manufacturing Crisis. The section concludes that modern-day Entrepreneurship calls for a different type of teaching than its historical predecessors, and that the Liberal Arts can offer valuable assistance to that teaching.

Section V looks at the central tool in Entrepreneurship teaching, the business plan. The section asserts that the business plan must be a multi-disciplinary synthesis, not a mere technical checklist, and that the Liberal Arts must be an indispensable element of that synthesis.

Finally, Section VI asks whether Entrepreneurship is not only complementary to the Liberal Arts, but has itself evolved to become Business's own Liberal Art.

SECTION I: DOES THE RELATIONSHIP MATTER?

The debate between technical teaching and Liberal Arts teaching has been well documented. (Flannery, 1998; Hoskins, 1998). This debate continues today, as the need to quickly provide students with productive skills, in an increasingly technical world, accelerates. Liberal Artists counter that students still need to acquire general skills, such as reflection and critical thinking. Entrepreneurship can be a unifying force in the debate, for both the technical and the Liberal Art are essential to its success.

In Classical times, the forerunners of technical, or vocational, teaching were reserved for slaves. The forerunners of the Liberal Arts were reserved for free men. As the Liberal Arts continued to develop through Medieval and Enlightened Europe, and later through America, the distinction between lower-class teaching and upper-class teaching continued. (Flannery, 1998).

Beginning with the passage of the Morrill Land Grant Acts of 1862 and 1890, technical teaching enjoyed great success in America. Following World War II, the GI Bill and changing social perceptions both opened traditional colleges to millions of working-class Americans. Now that different social classes were attending the same institutions of higher education, the debate between the relative merits of technical and Liberal Arts teaching intensified. (Hoskins, 1998).

Business Departments have often leaned toward using available credit-hours to provide students with as many technical skills as possible. The "get the job done" image of entrepreneurs, in particular, has often led to an assumption that technical, rather than Liberal Arts teaching, was required.

There is little doubt that Entrepreneurship requires all of the technical skills of the traditional Business curriculum, skills like accounting, finance, management, and marketing. Yet, Entrepreneurship itself is far from a mere collection of technical skills. Entrepreneurial success often comes far less from extreme proficiency in any one skill, than from the creativity and balance with which the entrepreneur integrates a wide variety of those skills.

Moreover, unless the entrepreneur understand—and unless Entrepreneurship professors teach—the complex interrelationships among those skills, students will be ill prepared to find that balance and creativity in their entrepreneurial ventures. Fortunately, then, the debate between technical teaching and Liberal Arts teaching can be a short one. Entrepreneurship itself is a most inclusive discipline, providing fertile ground for teaching both technical skills and Liberal Arts reflection.

Entrepreneurship is sometimes viewed as a matrix of skill sets, from which the entrepreneur much choose and synthesize those skills needed for a particular venture. Before (s)he can choose and synthesize the correct skill sets, however, the entrepreneur must understand the strategic whole—and that is where the Liberal Arts approach can help. The relationship between Entrepreneurship and the Liberal Arts does matter: It is key to entrepreneurial success.

Previous authors have argued for the usefulness of the Liberal Arts to Entrepreneurship, and have suggested Liberal Arts courses that budding entrepreneurs might find helpful. (Ray, 1990). In this paper, we take a more systemic approach, asserting that the holistic nature of Entrepreneurship allows Entrepreneurship itself to be viewed as a type of Liberal Art. First, however, we must understand Entrepreneurship.

SECTION II: A BRIEF HISTORY OF ENTREPRENEURSHIP

It is not the purpose of this paper to provide an extensive history of either Entrepreneurship or the Liberal Arts. Yet, part of the relationship between Entrepreneurship and the Liberal Arts can be traced to parallel histories. Let us therefore briefly look at how Entrepreneurship developed.

Entrepreneurship is a recent addition to the world of higher education, gaining most of its current popularity after the 1980's. (Kuratko, 2005). There is a resulting tendency to view Entrepreneurship as a new phenomenon when, in fact, it is the most ancient form of business. If we understand entrepreneurship to mean the vesting of total managerial control of a venture in an individual, or in a small group of individuals, then, from ancient times, every self-employed farmer or craftsman was an entrepreneur. Entrepreneurship is not new; its popularity has just ebbed and flowed through the centuries.

As history progressed, certain individuals sought control over vast numbers of other individuals, and, at times, they were very successful. Yet, even in times of rigid control, such as the Feudalism of the Dark Ages, Entrepreneurship survived. A very few skilled tradesmen were allowed to manage their own ventures. As the Enlightenment arrived to end

Feudalism, Entrepreneurship expanded. (Walker, 1999).

Entrepreneurship would later find a particular stronghold in Colonial America. America was to be the embodiment of the Enlightenment, and nothing so defined the enlightened individual as the freedom to self-manage one's affairs. Most went well for American Entrepreneurship through the Industrial Revolution. Yet, with the monopolies and oligopolies of the early Twentieth Century, it began to lose favor. Hierarchical bureaucracy, also known as "corporate management" became the system of choice.

Given today's connotation of the term, it is hard to remember that bureaucracy has been implemented periodically, throughout history, for efficiency in managing large volumes of repetitive functions. For instance, the Emperor Claudius instituted it in Imperial Rome, and Max Weber advocated it in 19th Century Europe. The corporate bureaucratic system worked quite well through the first three quarters of Twentieth-Century America, until the 1970's Heavy Manufacturing Crisis forced a change in thinking.

Entrepreneurship's current popularity can be traced to that crisis. Prior to the crisis, Big Business had dominated our economy. The goal had been to start entrepreneurially, but, then, as soon as possible, to become corporate. When the economy changed in the 1970's, however, companies could no longer support bloated, sluggish bureaucracies. Entrepreneurship proved to be the best antidote, for entrepreneurial companies could be more innovative and could move more quickly to capture new opportunities.

Initially, the Big Business world viewed Entrepreneurship as a synonym for "small business." Soon, however, that world came to recognize that Entrepreneurship had far less to do with the size of the business, than with its management style. Larger businesses, too, could innovate and move quickly if they vested total control of ventures in a small group of managers, rather than requiring those managers to seek approval from every section of corporate bureaucracy.

We will resume our examination of the development of Entrepreneurship in Part IV, but, first, let us examine the historical development of the Liberal Arts.

SECTION III: A BRIEF HISTORY OF THE LIBERAL ARTS

The seven traditional Liberal Arts trace their history from the Classical education of Ancient Greece, particularly from Aristotle.

The Trivium, the three subjects of Grammar, Rhetoric, and Dialectic (Logic) stood at the core. (Catholic Encyclopedia, 1907). These were the skills of organizing and expressing one's thoughts, and of acquiring the thoughts of others. Authors have characterized these as the verbal arts, noting that language was the skill needed to acquire all others. (Flannery, 1998).

Surrounding the Trivium, was the Quadrivium, the numerical arts. These subjects consisted of Geometry, Arithmetic, Music, and Astronomy. (Flannery, 1998).

Those four subjects were simply the high-tech skills of Aristotle's day. While more technical in nature than the Trivium, the Quadrivium still did not change the basic premise of Classical education. Education was to be unified whole, not simply a series of subjects. Its value was to come as much from understanding the interrelationships among the subjects, as from mastering any one of them.

The truly educated man was then expected to be able solve any problem, in any field, merely by reflecting upon it. While his technical knowledge of that specific field might be limited initially, his reflection would quickly establish his analytical path of solution. Acquiring and applying the technical knowledge needed to complete that path would be relatively simple from there.

Classical education continued to evolve through Imperial Rome, and later survived the rigid orthodoxy of the Dark Ages. It re-emerged during the Enlightenment as the Liberal Arts—the skills that the liberated man would need to prosper in a world suddenly freed of the hierarchies of Medieval Feudalism. Without those hierarchies, man would need to engage in liberal, or free-form, thinking.

Like Entrepreneurship, the Liberal Arts became a natural transplant to Colonial America. One then might ask why Entrepreneurship and the Liberal Arts did not form a closer relationship at that time. The answer was elitism.

Since Aristotle's time, the subjects of what would become the Liberal Arts had been seen as the skills appropriate to the upper class. In fact, Aristotle referred to the Liberal Arts as the Leisure Arts, for it was only those men of leisure—those whose wealth and standing freed them of having to earn a living—who could engage in reflective inquiry. (Flannery, 1998).

Even after the Enlightenment, and even in supposedly class-free America, rank mattered. Education was the province of the upper class, and gentlemen simply did not engage in commerce. They might, and usually did, own the capital of the enterprise, but management was delegated to those of lower standing. Ben Franklin's early years might have been a shining example of Entrepreneurship, but George Washington's approach (ordain the nation, let someone else manage the whiskey making) was the norm.

It was not until the Great Industrialists of the early Twentieth Century, that commerce became a respectable calling for gentlemen. Those industrialists suddenly had far more money than the old upper class. Just as importantly, World War I had hastened the breakup of Europe's ruling aristocracies. That change in social perception carried across the Atlantic, and being upper class became more about wealth, than about lineage.

By that time, however, the Morrill Land Grant Acts of 1862 and 1890 had expanded technical education. (Chamberlain, 1967; Hawkins, 1998). Thus, when the great industrialists endowed universities, and specifically the business schools within those universities, the preference for the technical education was pronounced. By 1947, the time of the first university-level Entrepreneurship course, (Kuratko, 2005), the divide between Business education and Liberal Arts education was well established.

Soon, however, the 1970's Heavy Manufacturing Crisis, the DotCom Boom, and the entrepreneurial shift in America's economy would change the way in which Entrepreneurship needed to be taught. The Liberal Arts would return, not as an adversary, but as a necessary complement.

Moreover, Entrepreneurship itself would evolve into a mirror of the Liberal Arts. The complexity of interrelationships necessary for entrepreneurial understanding and the reflective selection of skills necessary for a given venture, would become the very embodiment of true liberal education.

SECTION IV: MODERN ENTREPRENEURSHIP AND ITS TEACHING NEEDS

Until the 1970's Heavy Manufacturing Crisis, America's economy had marched toward Big Business. Since then, it has shifted back toward Entrepreneurship. By the 1990's, firms with less than 500 employees were producing about half of the nation's Gross Domestic Product, employing over half of its private work force, and creating the vast majority of its net new jobs. (Kuratko, 2005).

Yet, important parts of today's Entrepreneurship are different from its historical predecessors. Entrepreneurship education must recognize those differences if it is to adequately prepare the entrepreneurs of tomorrow.

Part of that difference lies in the current perception of entrepreneurs. For much of the Twentieth Century, they were the second-class citizens of the business world. "Entrepreneur" and, "small businessman" were synonymous. Small businessmen (and they were usually men) were nice to have around, but were seen as being the folks who pumped gas and did dry cleaning for Corporate America. The best and brightest of the business world went into Corporate America. Small business was simply something that one did until one could get big, or if one were not good enough to get big.

The 1990's DotCom Boom changed that perception. We had known for two decades that entrepreneurial firms were creating most of the net new jobs in the country, (Dennis & Philips, 1999). Now, however, with the coming of the DotCom Boom, entrepreneurs were not just providing a nice social service. They were also making fortunes in the process. Not since the Great Industrialists of a century earlier had entrepreneurs held such high standing. The DotCom Bust of the late 1990's did little to dampen that standing.

Yet, the DotCom entrepreneurs were a different breed than their Great Industrialist predecessors. The image of the early 1900's was often that of the uneducated man succeeding through Entrepreneurship. By contrast, some of the best-known entrepreneurs of the 1990's had graduated, or, at least, dropped out, from some of the nation's elite institutions. The technology needed for modern entrepreneurial ventures had become so complex, that at least some education was needed in their entrepreneurs. The problem, for the Liberal Arts, was that the DotCom era's leading entrepreneurs had distinctly technical backgrounds.

This perception, that technical education alone was the face of entrepreneurship, was furthered by another subtle change in the image of DotCom entrepreneurs: Teams!

Earlier entrepreneurs had fostered the image of one man against the world. (Remember Henry Ford's accounting system of lore—cash in one pocket, bills in the other). In the public's mind, an entrepreneur was a single person. If he became successful enough, he retired and hired corporate managers to run the business for him.

With the coming of the DotCom era, however, teams of entrepreneurs increasingly predominated. In part, that team approach was due to the technical complexity of the entrepreneurial ventures themselves. Collaboration was needed, even to get through the prototype stage. The needed collaborators, being well-educated individuals, were not likely to give up their lucrative jobs with established companies, absent a substantial partnership stake in the new entrepreneurial venture.

Another reason was cost. Launching a venture had become so expensive, that few individuals could go it alone. Finally, the comfort of having a partner upon which one could depend had become increasingly attractive.

Today's typical entrepreneurial venture has at least two partners. (Kuratko, 2005). At first, this predominance of partnerships would seem to validate the sufficiency of technical education alone for entrepreneurs. If multiple partners are running a business, then each should be able to focus on his or her own technical area of expertise.

In reality, however, the very complexity of today's entrepreneurial ventures makes the Liberal Arts approach to education all the more valuable. The perceived safety of having partners will be short-lived, unless each of those partners is able to look beyond the vast volumes of data in his or her own technical sector. The more complex that technical sector is, the harder it is to see beyond it.

Bray, McClellan, and Useem all studied the progress of Liberal Arts majors in the business world. Each concluded that Liberal Arts majors advanced as well, if not better, than their non-Liberal-Arts-major counterparts. McClelland, in particular, emphasized the Liberal Artist's ability to think creatively and adapt to new situations. (Management Review, 1984). Perhaps, then, the liberally educated individual's true value to the business world, lies in his or her ability to see the strategic whole, rather than just a collection of its components.

Whether partner or sole proprietor, few entrepreneurs have the luxury of lingering on any one component of their venture. Success usually comes from staying focused on the strategic items—those that can put one out of business—and understanding just what percentage of one's limited time must be devoted to each of the technical functionalities underneath. In

Entrepreneurship, the business plan is the most commonly used tool to keep that strategic focus.

SECTION V: THE BUSINESS PLAN: A SYNTHESIS, NOT A MERE CHECKLIST

The central tool of Entrepreneurship is the business plan. Most entrepreneurs are constantly running between the various functions of their venture. For even the best business minds, it is hard, not to become overwhelmed by the crisis-of-the-day. The business plan ensures that entrepreneurs look at all of the necessary facets of running a business, and that they develop a unified strategy for success.

One of the better business-plan outlines lists over 100 critical factors which the entrepreneur must address. (Entrepreneur's Guide: Starting and Growing a Business in Pennsylvania, 2003). Each item is valid. Unfortunately, far too many completed business plans are heavy on the checklists, but light on the unified strategy.

Part of the reason is historical. Before the Heavy Manufacturing Crisis, entrepreneurial business planning was mostly taught in Small Business Administration-type workshops. That approach has haunted Entrepreneurship's academic credibility to this day, but, for the simpler ventures of that era, the workshop approach worked well. Even for some of today's simpler ventures, computer-assisted, fill-in-the-blank business plans might be sufficient. Yet, the majority of today's entrepreneurial ventures are more complex, and a different approach is required.

Today's best business plans must be models of cross-disciplinary thinking. To be successful, the entrepreneur must draw upon each of Business's own disciplines—Marketing, Management, Accounting, and Finance. (S)he must then inquire into the Social Sciences for the social, economic, and political settings in which the entrepreneurial venture must operate; into the Natural Sciences for the technologies of that venture, and into the Humanities for the entrepreneur's personal signature upon the venture. Finally, the entrepreneur must synthesize all of those inquiries into a writing—the business plan—that is so comprehensive, yet so concise, that it triumphs from among the millions competing for professional investors.

The technical complexity of modern entrepreneurial ventures requires a Liberal Arts approach in the entrepreneur. The sheer volume of data and the sheer number of technical functions needed by modern entrepreneurial ventures, makes the entrepreneur's strategic task all the harder.

Strategy means, "If we get it wrong, we go out of business." Nothing epitomizes strategic choices so much as the entrepreneurial venture. Entrepreneurs are constantly in danger of going out of business, particularly in the early years. The only hope of not going out of business comes from making the correct strategic decisions, almost on a daily basis. In turn, the only hope of staying focused on those strategic decisions, amidst constant distractions from the functional crises-of-the-day, is to understand the venture as a unified network of interrelationships, rather than just as a series of technical functions.

To understand these interrelationships, one must reduce the functions to a strategic three:

Is there a market for what the company wants to sell?

Within that company, are there the right people, and the right product, to capture that market?

Can the company keep the cash flowing long enough to grow?

Financially, those same three questions become simply:

How much revenue can the company generate?

How much cash will the company have to expend to generate that revenue?

Will the company have enough cash left to grow?

Other authors might well choose a different expression of the strategic keys for Entrepreneurship. The important point is that Entrepreneurship requires a multidisciplinary building from those keys. Unless each of the functions on the business plan's 100+-factor checklist furthers a strategic key, then that function detracts from, rather than adds to, the venture's value.

It is, therefore, not nearly enough to complete a 100+-factor checklist. The entrepreneur, busy as (s)he might be, must devote considerable energy to understanding the interrelationships among both the business and non-business factors affecting the success of his or her company. Only then will (s)he be able to best choose from the matrix of functional skills necessary for a given venture.

In essence, the preceding paragraphs have just described the Liberal Arts approach of starting from a central core, emphasizing the interrelationships of the surrounding subjects, and teaching the unified whole. The Liberal Arts approach is clearly complementary to Entrepreneurship. Yet, educators might further consider whether modern Entrepreneurship has now evolved into a parallel Liberal Art.

SECTION VI: ENTREPRENEURSHIP: BUSINESS'S LIBERAL ART

The history of the Liberal Arts has been one of grudging expansion, over millennia. The mere expansion from the Trivium to the Quadrivium was controversial for its day. Professors at one university are said to have spent so much time debating the primacy of the Trivium over the Quadrivium, and fussing about into which they should assign each of the university's course offerings, that the townsfolk labeled the whole argument, "trivial."

Still, the basic tenants of the Liberal Arts education have remained the same: One must teach the cross-disciplinary whole, not just a collection of individual subjects. One must start from a central core, and examine the interrelationships among the more specific subjects surrounding it. Most of all, one must trust that the educated individual, upon rational reflection, will be able to establish his or her own critical path of solution of any problem. That individual can then acquire and synthesize the needed technical skills along the way.

In essence, the foregoing description works equally well for Entrepreneurship. One must teach Entrepreneurship as a strategic whole, not just a collection of technical factors. Ignorance of any one of those technical factors can lead to failure, but entrepreneurs have little time to linger on any one specific factor.

Thus, the entrepreneur must start from a central core—the strategic questions of market, internal people and product, and cash flow. As (s)he expands to the more specific factors surrounding that core, (s)he must understand the interrelationships of those factors, and weigh the strategic value of each to the central strategy.

Most of all, the entrepreneur must trust in his or her ability, upon rational reflection, to establish his or her own critical path of solution to any problem. This trust stands at the very heart of Entrepreneurship, for, if the entrepreneur were intimidated by the unknown, (s)he would never start a venture. Needed technical skills can then be acquired along the way.

It was no accident that Entrepreneurship and the Liberal Arts once emerged from the Dark Ages on parallel paths, and that each found favor through much of American history. As each once emerged to provide individuals with the skills needed to prosper in a world freed of Medieval Feudalism, each should now emerge to provide entrepreneurs with the skills needed to prosper in a world freed of corporate bureaucracy.

As today's Business curriculum struggles to remain focused on the strategic, while conveying vast volumes of technical knowledge, and as today's Liberal Arts struggle to remain relevant in a world obsessed with that technical knowledge, Entrepreneurship can be the answer. Is Entrepreneurship Business's Liberal Art? The author believes so, but others might well debate that claim. In the end, all that matters is that a Liberal Arts approach to teaching Entrepreneurship can produce better entrepreneurs.

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WE ARE WHO WE MEET

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ABSTRACT

Who we are is a function of those around us. Both at work and at play we are influenced by those with whom we interact. People with whom we converse, email, text message, and instant message all play a role in determining who we are. How this influence process takes place is important for us to understand because knowing this can help us control these influence factors in our lives. This paper develops theory and provides empirical support for the role of others in influencing who we are and outlines how we can become more proactive in managing our lives.

Who do you talk to? Who attends that meeting with you? Who is in your cell phone directory? Although you may consider the answers to those questions to be rather unimportant, they may actually shape who you are! Understanding why and how we develop our network of contacts may help us understand the importance of "others" around us.

Our perceptions, moods, attitudes, and behaviors have been shown to be a function of those around us. Research has demonstrated that learning may take place by copying the behavior, emotions, and/or attitude of others. We find evidence of this in social network research and even in neurological research on mirror neurons. Therefore, it is likely that students influence each other in the learning process.

In fact, it has been demonstrated that students in training sessions adopt the attitudes and behaviors of those who are in their class and learn differently than others in a different section but with the same instructor and instruction material. While I am not dismissing the importance of individual teaching behavior, too often classroom dynamics are ignored and instead we focus on the instructor. Everyone who teaches knows that the same class can be different from one semester to another and one section to another depending on who is in the classroom. So, while we may agonize over differences in student grades and teacher ratings, some of it may be out of our control. Blame it on the Registrar's Office!

Let's expand beyond the classroom now. Other interaction partners abound in our lives. Work relationships affect how we think about our job and the technologies that we use and they affect our behavior on the job, including whether or not we quit. Specifically, some of my research found that individuals adopt similar computer attitudes and computer use as those with whom they interact. A separate set of analyses found that individuals who have similar interaction partners similarly decide to stay or leave an organization.

The number of contacts we have also matters in our lives! Individuals who have a greater number of contacts within an organization tend to have greater influence in that organization. At the same time, on-going research (See Table 1) reveals that following a change in technology, the greater the number of contacts an individual has within an organization, the greater the amount of stress experienced by that individual. So, individuals who interact with a lot of others are under a great deal more stress than those who keep to themselves. That should come as no surprise! Stress following a technology change was also found to strongly correlate to job efficacy (negative relationship), power, and motivating potential score. Prior to the technology change, stress was only related to Motivating Potential Score (individuals with more complex job characteristics are the ones who are stressed). But what is interesting in additional analyses (See Table 2) is that there may be some support for the Peter Principle (individuals in an organization rise to their level of incompetence).

Table 1 - Regression Analysis with Stress as the Dependent Variables

Independent Variable	B	t
1. Power	.65	2.10*
2. Job Efficacy	-.53	-2.51**
3. Centrality	4.60	1.65*
4. Motivating Potential Score	.41	1.72*
5. Intercept	-.23	-.11

* prob < .05, 1 tail

** prob < .01, 1 tail

F= 5.96, R^2 = .34, P < .0001

Table 2 - Peter Principle
Means, Standard Deviations & T-Tests for
Time 1 & Time 2
Efficacy by Promotion

	No Promotion (n=35)		Promotion (n=18)	
	M	SD	M	SD
T1 Job Efficacy	5.7	.78	5.73	.84
T2 Job Efficacy	5.78	.56	5.26	1.07
	t= -.64		t= 2.30	
	p= .53		p= <.05, 1 tail	

Specifically, it has been found that those who have been promoted have a significant decrease in job efficacy even one year following promotion. But, a corollary finding (see Table 3), let's call it the Paul and Mary Principle, may be more significant for those considering promotion, namely that those who are promoted experience a significant increase in stress over time. In other words, is that promotion really worth it?

Table 3 - Paul & Mary Principle
Means, Standard Deviations & T-Tests for
Time 1 & Time 2

Stress by Promotion

	No Promotion (n=35)		Promotion (n=18)	
	M	SD	M	SD
T1 Stress	4.42	1.56	3.90	1.45
T2 Stress	4.21	1.40	4.39	1.32
	t = .85		t = .179	
	p = .40		p = <.05, 1 tail	

Not only does the number of contacts within your organization make a difference but the number of external contacts matters as well. Research has demonstrated that the greater the number of external contacts one has, the more innovative a person tends to be. If one simply focuses on internal contacts, there is greater likelihood for the "not invented here syndrome."

While most of the above research examined face to face contacts, some Juniata students and I were interested in the effects of cell phone and instant message contacts. We collected data from sports teams here at the college. Specifically, team members were asked to complete a survey regarding their cell phone use and attitudes and then to identify which team members are listed in their cell phone directory and which team members they instant message (IM). Findings were rather surprising. It appears that individual's use and attitudes toward cell phones are more similar to those of the persons listed in their cell phone directory than those with whom they IM. This finding provides support for the belief that there are specific networks of influence that we attend to depending on the activity or problem at hand.

Do I think that we are always influenced by those around us to the point of little or no introspection when it comes to decision making? The answer is a resounding "NO!" However, there are certain types of individuals, certain times in our lives, and certain external circumstances which may make us more likely to look to those around us to help define our reality. To begin, the type of individual more likely to be influenced by others (all else being equal) is generally someone who does not hold strong convictions, is a high self-monitor, is young, and is female. My father used to say "if you don't stand for something you'll stand for anything." This saying is a great way to demonstrate that those who hold strong conviction are less likely to be influenced by others. A variable which addresses the likelihood of modifying your attitudes or behaviors is self monitoring. Self-monitoring reflects the degree to which an individual uses cues from social interaction to adjust their attitudes and behaviors. A high self-monitor is someone who is more likely to adjust their behavior in response to such social interaction cues. Thus, it is likely that this type of person will adopt attitudes similar to others because in comparison, a low self-monitor either doesn't understand the attitudes of others or, perhaps, doesn't care! Research findings support this conclusion. The saying that "older people are more set in their ways" also finds some support. Younger people are generally more uncertain regarding how they feel about something or how they should react and thus are more likely to adapt to the views and behaviors of those around them. You can actually see some evidence of this if you watch young people dancing when you see them watching and copying the dance techniques of those around them. Women are also more likely to become more similar to those around them. Much of this can be explained by the likelihood of women to be more empathic than men. Of course, many theories abound! Regardless of the reason why some may be more susceptible to social influence than others, the caveat "all else being equal" should be kept in mind. For example, we see that as a woman becomes older, she is less likely to change to become more similar to those around her. So, unless you control for the effects of age, the relationship between gender and social influence may be unnoticeable.

There are also "times in our lives" when we are more easily influenced by others. We already addressed youth. In addition, any time when there is uncertainty in our lives we tend to be more easily influenced. So, when we are "new to a job" or "new to a relationship" we are more likely to adopt the attitudes and behaviors of others. Uncertainty also explains why people adopt the behaviors and attitudes of others following a technological change. On a larger scale, the effects of uncertainty can be seen when people put aside their differences and work together to create a common goal during crises such as a war, environmental disasters, or terrorist threat. All of this is related to our susceptibility to social influence and addresses the fact that in many ways, "You are who you meet."

Knowing that we are a function of those around us has helped people predict whether employees would vote in a union and whether or not new technology is likely to be adopted. Looking at an organization's social network will allow us to increase the probability of diffusing new technology, practices, and culture. By selecting individuals who are more central in an organization as change advocates, we are more likely to influence the outcome of the change process. As an individual, we are more likely ourselves to influence others if we interact with many others or if we have a close friend or associate who interacts with many others. Being someone who is the link between two networks also makes it more likely that you will influence others. So, it may beworthwhile to pay attention to your interaction patterns if you would like to influence others.

It is important to understand the values, moods, and desires of those you spend time with because we have seen that others influence our moods, attitudes, and behaviors both at work and in our personal lives.

Given this fact, we can and perhaps should be proactive in managing our relationships because these in turn may affect who we are. Be careful what clubs you join, what jobs you take, who you list in your cell phone directory, and who you befriend!

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WEAVING STORYTELLING INTO AN ORGANIZATIONAL BEHAVIOR CURRICULUM: BUILDING COMPETENCIES

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ABSTRACT

This paper will discuss how the method of using stories/anecdotes was employed to increase student competencies addressed in the business course, Organizational Behavior, during the Spring 2007 semester. Coming from a twenty-five year experience in the field of career planning and job search techniques, this faculty member thought it might be beneficial to draw upon that experience to illustrate or "bring to life" many of the areas included in the organizational behavior curriculum that focus upon abilities, behaviors, attitudes and knowledge that are needed to be an effective business manager. To assess the impact of storytelling as a form of pedagogy to encourage and increase student competencies, a self-perception post-test on the final class day. The assessment results showed statistically significant increases in the following areas: team competency, across culture competency, change competency, ethics competency, communication competency. The competencies and an example of the storytelling methods and their use in the curriculum will be discussed.

INTRODUCTION

Storytelling has long been used to communicate ideas, relate historical events, and provide a moral compass to guide our lives. Whether it be the parables of the New Testament, or the relaying of some aspect of family history, stories have a way of "sticking" with us and thereby allowing us to remember certain life lessons or particular points or events. A number of academic disciplines have used this method to complement their subject matter. Storytelling is often used in history, philosophy, and education courses, but seemingly not very extensively in business curriculums.

This paper will examine the use of storytelling as an effective form of pedagogy in the subject matter of the course, "Organizational Behavior." A standard in nearly every undergraduate business curriculum, Organizational Behavior is rich in topics such as motivation, leadership, teamwork, communication and ethical decision making (Kreitner & Kinicki, 2007; Hellriegel, D. & Slocum, 2007; Robbins & Judge, 2007). Each of these areas have well documented theories interspersed throughout the curriculum. However, it appears that bringing these theories to life through the use of storytelling might be a method to enhance the teaching capabilities of the instructor and hopefully have a positive impact on the students' abilities to recall, retain, and apply the principles related to these areas.

Using Storytelling as a Teaching Tool

Storytelling is described as a tradition of using narrative to develop knowledge (Banks-Wallace, 1998; Labonte, 1996). For many years educational leaders, columnists, and non-profit organizations have used stories to convey ideas and hopefully have them be retained so the message remains. Educational research has supported the use of storytelling as an excellent teaching method (Jacobsen, 2000; Coulter, 2007; Cullen, 2003). Research has shown that stories can be very powerful. Slater says they have substantial potential to influence behavior. It is difficult to consider another communication genre that can communicate beliefs, model behavior, teach skills, provide behavioral cues, and simulate consequence of behaviors over time in as compelling and involving a fashion (Slater, 2002).

A report from the National Council of Teachers of English (1997) notes the technique of storytelling as an unsurpassed tool for teaching students. Through the use of storytelling, students learn about themselves, about events and information and about the thoughts and feelings of others (Kaufman, 1997). While storytelling might be viewed as generally entertaining, there are far greater complexities at work (Clandinin, 2007).

In addition to the general body of knowledge about storytelling as an effective teaching tool, there has been some research conducted on the use of storytelling in the disciplines of social studies, mathematics and nutrition. Walker Percy, the renowned American novelist, suggested that the use of storytelling in teaching history is a most effective means of organizing historical information in a way that will bring coherence and interest to history instruction (Sanchez & Mills, 2005). Teaching history in a powerful manner through the use of well-told and accurate stories is more than entertainment (Sanchez, 2005). Additional research on the use of storytelling in social studies found that stories may carry important cultural information for the listener (Sanchez & Mills, 2005). This would suggest that stories carry messages beyond merely a factual accounting of historical events.

The method of storytelling as a teaching tool has also been used in the study of mathematics. Storytelling has been recommended as a way to introduce new concepts and to work through the solution of problems in mathematics (Meel, Gyurko, & Gasper, 2006). Moving to a very different discipline, a study of the use of storytelling in teaching nutrition described the benefits of using stories by including a context through which meaning and connections are established. Storytelling was found to have a positive influence on the learning environment (Lordly, 2007).

While one might expect to view storytelling as an effective teaching tool in certain disciplines, it is encouraging to see that it might have potential in the teaching of business courses. The significant role storytelling can play in corporate communication is explored in the newly published book, Made to Stick by Chip and Dan Heath (2007). A professor of Organizational Behavior at Stanford, Chip, and his brother Dan, who works as a consultant for Duke Corporate Education, set out to study why some ideas succeed and while others fail. Their research suggests that businesses need to drastically improve their messages if they want employees to listen, to understand, care about and remember ideas. The Heaths study how effective ideas are constructed and delivered. As a result, they spell out six principles at work when ideas are found to have "stuck". These include: Simplicity, Unexpectedness, Concreteness, Credibility, Emotions and Stories (Heaths, 2007). These are the common traits possessed by ideas that have endured.

One of these traits, effective storytelling, has the potential for ideas to be understood and remembered and have a lasting impact. Storytelling far exceeds the standard PowerPoint presentation as an effective mechanism for getting ideas across and making the ideas stick. By using the standard presentation styles, managers may have shared data, but they haven't created ideas that are useful and lasting. At best, these methods have had minimal impact (Heaths, 2007). The Heaths suggest managers use narratives, rather than charts and graphs, to put knowledge into a framework that is more lifelike, more true to our everyday experience (Heaths, 2007). Effective stories can be very powerful and can provide stimulation and inspiration, encouraging people to act. The Heaths carefully analyze stories and note common themes and plots that are most often used in "effective" stories; stories that "stick" (Heaths, 2007). The goal is to spot the stories that have the potential of having a significant impact on your audience. The importance of this strategy in business is crucial if CEOs & managers want their employees to focus on new strategic directives and initiatives for changing behaviors.

Applying Storytelling to the Organizational Behavior Curriculum

As educators, we want our ideas to be understood and remembered and hopefully to have a lasting impact. We try various methods to convey themes, conflicts and trends, hoping that knowledge is taking place and that it will endure once the class is completed. As a teacher of Organizational Behavior, I have explored ways to draw from my previous experience as a director of career services to enhance my teaching skills and to promote learning among our students. The experience of working with employers as they attempted to fill positions and students as they chose career paths has created a rich “bank” of stories from which to draw upon to enhance the curriculum, and hopefully try to bring the theories and models discussed to life. It is also hoped that these stories will “stick,” and thus improve the students’ retention of topic areas/theories in the Organizational Behavior curriculum.

As topic areas in the curriculum lend themselves to what I viewed as related narratives, I used storytelling as a form of pedagogy to enhance student learning and meet the learning objectives for the course. Storytelling is more than entertainment in this Organizational Behavior class. These are real, true stories about students and graduates who have many characteristics in common. The students relate to the subjects of these stories and vicariously experience the situations and challenges they faced. It is anticipated that these stories provide simulation (knowledge about how to act) and inspiration (motivation to act). The opportunity to vicariously live through someone’s challenge or problem can help us anticipate appropriate responses to future situations. Mental practice alone improves our performance significantly (Heaths, 2007). Stories put knowledge into a framework that is more lifelike and true to our everyday experiences.

A Sample Story from the Organizational Behavior Course

The curriculum of Organizational Behavior is filled with topics that lend themselves well to storytelling. One of the areas that is discussed and studied is ethical decision making. After reviewing the various principles of ethical decision making, using the standard teaching techniques of lecture, questioning and discusson, I have incorporated a story into this topic area. The story follows.

A commuter student and junior finance major at King’s College, Mark, was academically outstanding and also very career minded. In preparation for the summer before his senior year, he worked diligently to secure an internship with a major brokerage firm in New York City. With housing and expenses a major concern, he felt confident he could complete this unpaid internship because he had an aunt who lived in New York City and she had offered to host him for the summer. His outstanding grades and abilities noted during the interview process, “landed” him the internship.

All was well until the week before the internship was to begin when Mark traveled from his home in Pittston, Pennsylvania to confirm his living arrangements. To his surprise, his aunt had only a small efficiency apartment. While his aunt graciously offered Mark the couch, or a small cot, he felt she would have almost no privacy and neither would he. Mark faced a major ethical dilemma. He had given the brokerage firm his word on completing the internship and he was determined not to back out of the commitment. He was aware that the brokerage firm had already enrolled him in their training class. With limited financial means, paying for a hotel or any kind of room arrangement was out of the question.

Putting his cognitive and creative powers to work, Mark figured out a way to fulfill his eight week internship commitment. He lived at home in Pittston, Pennsylvania, awoke at 4:30 a.m. each morning to dress and drive to Scranton, Pennsylvania where he took the 5:20 a.m. bus to New York City so he could make the subway connection and be at work by 8:00 a.m. He did the reverse each night, leaving the city at 4:30 and taking the subway to the bus station and then getting home at around 7:00 p.m. He used his savings to pay for the bus fare, his parents helped to pay for his subway rides, and he worked as a caddy every weekend to make up the difference in what he would have normally earned over the summer. He had “double-bagged” caddied every chance he could to make the most money possible every weekend.

After a very successful internship, Mark was offered a job by the brokerage firm, but ultimately turned it down. Many of the employers with whom he later interviewed asked about how he was able to complete an unpaid internship in New York City. After interviewing Mark, several employers said they wanted to hire “the guy who rode the bus.” He had four offers from which to choose when he graduated. He selected an outstanding company and when I asked him what the deciding factor was in making his selection, he said it was the mission statement and the ethical standards of the company that made him sure that this was the best placement for him.

Rich in detail, and very relatable to the students in this class, the story carries home the message of staying true to one’s word and behaving in an ethical manner. While it pales in comparison to the renown examples of Enron & Tyco, when discussing the importance of ethical behavior, this story speaks volumes about motivation, commitment and fortitude. As the story is told and unfolds during the Organizational Behavior class, the non-verbal behavior of the students hearing the story is very interesting. They are clearly engaged and anticipating the sequence of events. The story is then used to reflect back on the principles of ethics previously discussed. The telling and discussion of this story serves to reinforce ideas that were discussed in the lecture environment earlier. If there was a follow-up three months from now, my thoughts are that the students may not remember the names of the ethical principles, but they will remember the story and hopefully what it was attempting to convey. In other words, it will “stick.”

ASSESSMENT

Method

In an effort to assess the effectiveness of storytelling as a pedagogy, I used a simple form of assessment. At the beginning of the Spring 2007 semester, I gave a short pre-test, a modified version of an experiential exercise on Self-Competency found in Hellriegel & Slocum’s book, Organizational Behavior (2007) to assess students’ self rated core competencies in several areas. I administered the post-test at the end of the semester.

Results

Table 1 reports the results of exploratory factor analysis (using both VARIMAX and OBLIQUE rotations) on the five proposed student foundation competencies scales of: Team Competency, Across Cultures Competency, Change Competency, Ethics Competency and Communication Competency.

TABLE 1
Results of Exploratory Factor Analysis for Student Core Competencies

FACTOR[a]

Items	1	2	3	4	5
Specific Abilities / Behaviors:					
Presents written materials clearly and concisely.	-.004	.071	.117	.116	.892
Listens actively and non-judgmentally.	.306	.042	.089	.391	.782
Consistently avoids pressures from others to engage in unethical conduct.	-.088	.229	.221	.775	.189
Sets clear expectations of ethical behavior and regularly reinforces this expectation with others.	.523	-.243	.027	.776	-.001
Learns from those with different cultural backgrounds.	.250	-.153	.054	.787	.331
Detects and understands others’ values, motives, and emotions.	.468	.024	.261	.746	.301
Encourages and supports creativity in teams.	.207	-.299	.859	.079	.116
Learn, share, and applies new knowledge to improve a team, department, or whole organization.	.073	-.500	.700	-.059	.405
Understands how various organiza-tional designs can be used to bring about successful change.	.204	-.331	.823	.266	.092

Items	1	2	3	4	5
Specific Abilities / Behaviors:					
Knows what cultures have the expectation that individuals are to take care of themselves.	.334	-.866	-.041	.075	-.124
Possess firsthand knowledge that different cultures are risk averse and use rules to minimize trying to deal with uncertainty.	.348	-.842	.353	-.066	.053
Knows how masculinity and femininity in different societies affect interpersonal relationships.	-.090	-.788	.393	-.180	.136
Works effectively with people from different cultures who value unequal distribution of power in society.	.275	-.862	.455	.067	.046
Knows how to diagnose firm's culture.	.180	-.843	.301	.124	-.132
Works effectively in team situations.	.886	-.122	.110	.204	.039
Encourage teams to celebrate accomplishments.	.766	-.148	.409	.404	.308
Observes dynamics when working with groups and raises relevant issues for discussion.	.856	-.344	.033	.113	.007
Promotes teamwork among groups, discourages "we vs. they" thinking.	.936	-.259	.178	.335	.215

Note. Listwise deletion was used to handle missing data, n = 39.

[a] Boldface indicates primary factor loadings; loadings of at least .50 and the difference between cross-loadings greater .2.

Factor Competency Titles are:
1 = Teams; 2 = Across Cultures; 3 = Change; 4 = Ethics; 5 = Communication.

All eighteen items loaded on their a priori hypothesized factors and satisfied the following conditions: Kaiser (1970) criterion of retaining factors with Eigen values greater than one; the scale items had a factor loading of at least .50; the difference between factor cross-loadings was greater than .20; and each factor was represented by at least two items (Ford, MacCallum & Trait, 1986; Van Dyne, Graham & Dienesch, 1994). The items in each dimension were summed and averaged to provide five scores for each of the student competency dimensions. Table 2 shows the results of the pre/post scores for each of the five student foundation competencies.

TABLE 2
Pre-Post Test of Student Core Competencies

	Pre-test		**Post-test**		
Student Competency:	**Mean**	**SD**	**Mean**	**SD**	**t_value**
1. Team Competency	8.01	1.11	8.56	.92	3.74***
2. Across Cultures Competency	6.94	1.27	7.88	.1.22	3.80***
3. Change Competency	7.32	1.63	8.31	1.03	3.46***
4. Ethics Competency	8.27	.89	8.69	.83	3.45**
5. Communication competency	7.62	1.33	8.31	1.00	3.69**

* $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$
n = 39

All five student foundation competencies show statistically significant increases from beginning of semester scores to end of semester scores.

In addition to the pre and post assessments, student feedback was gained through several means. Often students referenced the storytelling examples as they wrote their examination essays throughout the semester. In addition, about half of the students who wrote comments on the "Student Evaluation of Teaching" for the Spring 2007 semester mentioned the positive use of storytelling as a teaching technique. The following comments were taken from the evaluation questionnaire item: "To help your learning, what is one specific thing from the course you think was most helpful, and why?

"The teacher's teaching skills were the **most** helpful part of the course."

"Understanding behavior in industry at a practical level."

"Enjoy the "real life" examples."

"Most helpful-examples."

"The examples given that were related to real life experience."

"I learned a lot through personal stories."

"Great teaching method which helped in learning the material."

"Likes how examples relate to the text."

"Relates material to real life situations."

These comments and evaluations would suggest that the use of storytelling as a teaching technique was well-received by students.

DISCUSSION

The use of storytelling was in part a response to blend career-related experiences gained from a former administrative role with the theoretical constructs in various areas of the course Organizational Behavior. The assessment feedback supports storytelling-as-pedagogy as an effective methodology (Coulter, 2007). Success in enhancing students' skills in (1) Teamwork Competency; (2) Across Cultures Competency; (3) Change Competency; (4) Ethics Competency and (5) Communication Competency. In addition to the pre and post assessment data, the comments made by students and the overall rating of teacher effectiveness seem to support these findings of the usefulness of this teaching technique. By reinforcing the theories and information presented with "real life" accounts, the concepts became more personally relevant to the students. Based upon the insights gained from this assessment, a narrative approach enhanced teacher-effectiveness resulting in increased student competencies in the areas discussed.

While this assessment has proven helpful to the instructor in confirming the value of storytelling in the Organizational Behavior curriculum, there are clear limitations to this study. Other forms of pedagogy are at work in any course and it is difficult to limit the results to an assessment of this method alone. Future research should attempt to determine the increase in student skills in these areas in a classroom environment in which storytelling did not play a role. The Heaths have researched the effectiveness of relying on narrative to make ideas "stick." It would be helpful to assess whether or not these stories and their related concepts "stuck" by conducting follow-up surveys several months after the course was completed.

It might also be interesting to explore how this technique might be used in other areas of business curriculums in higher education. College professors might want to explore the storytelling-as-pedagogy technique to enhance the classroom environment, contribute to the acquisition of student learning and extend beyond the "snooze factor" often associated with PowerPoint presentations.

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A STUDY OF ADVISING RESOURCES PERCEIVED BY FIRST-YEAR STUDENTS AND TRANSFER STUDENTS

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ABSTRACT

A survey was distributed to students in the Foundations of Business Administration course (FBA) over a period of three semesters. The FBA course is the College of Business's core class that is required for all business majors and is the equivalent to many institutions' first-year seminar courses. In an attempt to obtain more accurate information, questionnaires were completed anonymously. Students used a Likert scale to evaluate available resources such as their academic advisor, course instructors, staffs, catalog, friends, parents, and the FBA class.

This paper examines the perceptions of both first-year and transfer students on various academic advising resources, and gives educational implications. The age of the 512 respondents ranges from seventeen to forty. For the purpose of this study, only those who are younger than twenty-four were selected. The final sample sizes were 75 transfer students and 315 first-year students.

It was found that a significantly higher percentage of transfer students had declared a major than first-year students who had declared a major. Interestingly, first-year students, in general, had a more favorable view of advising resources. In addition, the percentage of students who were transfers strongly agreed or agreed that their academic advisor was willing to answer questions was significantly lower than first-year students who responded similarly. Also, this study found that the FBA course was much more effective in advising freshman than transfer students.

INTRODUCTION

Good academic advising is the vital connection between students becoming successful with their academic choices. Students who are not able to have such an experience may not graduate on time or may not have had the chance to make a meaningful learning experience from their college endeavor. Hunter and White (2004) state that "academic advising, well developed and appropriately accessed, is perhaps the only structured campus endeavor that can guarantee students sustained interaction with a caring and concerned adult who can help them shape such an experience" (p. 21).

Hunter and White (2004) believe that providing effective advising information is more relevant and they affirm that "the challenge is to create an academic advising system that students, faculty, and administration view as essential, not peripheral, to the educational experience" (p. 21). Therefore, many universities and colleges have developed programs for their incoming and current students assist with their career goals and the courses needed to reach those goals.

To better advise students, the College of Business (CoB) faculty developed a first-year seminar course, Foundations of Business Administration (FBA). The FBA is a 1-credit interdisciplinary course designed with the following four objectives, which have been organized to benefit the student's development in the course and also to meet the standards of The Association to Advance Collegiate Schools of Business (AACSB):

• to provide students with an opportunity to investigate their goals, interests, skills, and abilities so that they can make informed choices and meet their personal goals through a meaningful university experience.

• to begin the integration process by providing a platform on which to build student understanding of the different functional areas in business, how they work in concert for the benefit of the organization, and how this breadth of knowledge will benefit students in working toward and meeting their goals.

• to provide exposure to a breadth of university experiences, both educational and extracurricular, and to suggest ways in which students can make these experiences work together toward accomplishing their goals.

• to provide exposure for students regarding possible careers in business (Hsu & Bailey, 2007; Marsh & Stone, 2004)

Student preparation of a 4-year study plan is a major requirement for successfully passing the course. This 4-year study plan includes the student's personal goals and outlines major course work, general education requirements, and free electives the student intends to take. Each student works in class with the instructor to develop his or her personalized 4-year study plan before scheduling classes. The student also discusses the study plan with her or his advisor. For successful completion of this course, students rely heavily on the support of faculty advisors (Hsu & Bailey, 2007). Additionally, students are required to attend one business club meetings coordinated by individual majors. These activities give students opportunities to interact with other students and understand the course requirements as well as the potential career path for the particular major.

The FBA course was designed to assist students with a successful transition from high school to college by encouraging them to be actively involved with their academic advisors and to have developed relationships with other students and faculty members. Through the FBA course, students are introduced and encouraged to use various advising resources such as academic advisors, staff members, friends, parents, course instructors, and the university catalog (Hsu & Bailey, 2007). Also, the course transitions freshman students and transfer students to the CoB by orienting them to college norms, required coursework, available resources such as a counseling center, career development, study abroad program along with campus clubs and organizations.

It is essential that students adjust to their college environment and the literature shows that the sooner students become more connected to their university and academic programs, they will have higher rates of succeeding, and lower rates of attrition. (Astin 1993; Pascarella & Terenzini 1991; Tinto 1975, 1993).

In this study, questionnaires were completed anonymously and students used a Likert scale to evaluate their views on academic resources, such as their academic advisor, course instructors, department staff, university catalog, friends, parents, and the FBA course. We obtain the perceptions of transfer students and first-year students on how willing their advisors were to answer questions. Ultimately, we were looking to compare characteristics of these two groups of students and found some interesting findings.

METHOD

A survey was taken in FBA classes during three consecutive semesters: spring 2006, fall 2006, and spring 2007. The questionnaire was designed to assess students' views of several advising resources such as, advisors, course instructors, department staff, friends and parents as well as the university catalog and the FBA course. A total of 99 transfer students and 320 freshmen participated. Out of 99 transfer students, there were 12 freshmen, and several students were older than twenty-three years of age. Because the goal of this study is to investigate the differences in perceived helpfulness by transfer students and freshman concerning several advising resources, the authors believe that students who were older than twenty-three years of age might have a complete different needs and perceptions concerning advising resources and thus were excluded from the study. To avoid double counting, those 12 transferred freshmen were included in the group of freshman. Therefore, a total of 75 transfer students and 315 freshmen were included in this study.

Of the transfer students 36% were sophomore, 62.7% were junior and 1.3% was senior. Also, this group consists of 68% male and 32% female, and 93.3% of them had declared a major. Management was the most popular major for transfer students. Data also showed that 45.9% of transfer students resided on campus, 44.6% lived off campus, and 9.5% lived at home.

For the freshman group 62.9% were male and 37.1% were female. In addition, 78.7% had declared a major and accounting was the most popular major for this group of students. Vast majority of freshmen were required to live on campus. As a result, data indicated 92.2% lived on campus, 2.3% were off campus, and 5.5% lived at home.

RESULTS

Table 1 shows the comparisons of views on various advising resources between transfer students and freshmen. Both groups considered FBA the most helpful advising resource. Transfer students ranked advisor second which were followed by course instructors, friends, catalog, staff and then parents, while freshmen ranked course instructors second followed by friends, catalog, advisor, parents and then staff. Also, the percentages of students who strongly agreed or agreed about the usefulness of these advising resources were generally lower for transfer students than those for freshmen.

Table 1: Percentages of Students Strong Agree or Agree That These Advising Resources Are Useful

	FBA	Staffs	Instructors	Friends
Transfer Students	79.7	60.0	76.0	70.7
Freshmen	93.0	54.6	90.1	78.7
	Advisor	Catalog	Parents	
Transfer Students	76.0	69.3	50.7	
Freshmen	77.5	78.1	58.7	

Freshmen had more positive views about advising resources except staff. A significantly higher percentage of freshman than transfer students felt that the study plan in the FBA course is helpful. In addition, course instructors had significantly stronger influences on freshman than they did for transfer students. Freshmen also placed friends and parents as more important advising resources than their counterparts. A higher percentage of freshman students, in comparison to transfer students, strongly agreed or agreed that the University catalog was helpful.

When asked about the willingness of the advisors to discuss the study plan, 71.6% of the transfer students strongly agreed or agreed, 79.6% of the freshman held the same opinion. Furthermore, 77% of the transfer students feel that their advisors were willing to answer questions, while 84.1% of the freshmen felt the same way. Regarding the study plan, 94% of the freshmen and 85.3% of the transfer students strongly agreed or agreed that it was helpful.

Data based on t-tests suggested that gender affects student's view on the helpfulness of some advising resources such as advisor, catalog, and study plan for the freshman group. Male students felt the University catalog and study plan were more helpful while female students felt that their advisor was more helpful than their counterparts in this group. However, gender played no significant role on transfer student's perceptions of advising resources.

CONCLUSION

In this study we surveyed students' views on the usefulness of academic resources provided by their academic advisor, course instructors, department staff, university catalog, friends, parents, and the FBA course. It was found that a significantly higher percentage of transfer students (93.3%) had declared a major than first-year students (78.7%) who had declared a major. Interestingly, first-year students, in general, had a more favorable view of advising resources. In addition, the percentage of students who were transfers strongly agreed or agreed that their academic advisor was willing to answer questions were significantly lower than first-year students who responded similarly. First-year students (94%) stated that the 4-year curriculum plan was helpful compared to (85.3%) of the transfer students. Also, gender is a factor on students' perceptions on advisor, catalog and study plan for freshmen but not for transfer students. In addition, this study found that the FBA course was much more effective in advising freshman than transfer students. Finally, more than 50% of students in both groups felt all of the advising resources considered were helpful.

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DO YOU SEE WHAT I SEE? DESIRED LEARNING OUTCOMES AND ACHIEVED LEARNING OUTCOMES IN INTERNATIONAL STRATEGIC ALLIANCE

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ABSTRACT

A large number of American firms currently entering International Joint Ventures (IJVs) in China are pursuing long-term strategic success that requires a successful organizational learning from both sides to achieve the goals for each partner of IJVs. This study investigated learning goals with two levels: desired level and achieved level and hypothesized that Chinese and American partners in Sino-American IJVs have different learning goal priorities and evaluations of the success of their learning goal achievement. This study also measured learning success for each partner of the IJV with a two level model.

INTRODUCTION

Because of substantial potential benefits, Sino-American International Joint Ventures (IJVs) are an attractive option. However, views regarding the success of Sino-American IJVs are diverse. For example, some suggest that dissatisfaction with IJV economic performance has made many American partners lose patience with IJV formation and operation in the People's Republic of China (e.g., Beamish, 1993, Si & Hitt, 2004). Yet, official Chinese statistics show slightly continuous growth in Sino-American JVs after China becomes a member of World Trade Organization (WTO). Chinese governments also report that majority of Fortune 500 U.S multinational companies has invested in China, and the U.S. still is the leading foreign investor in the Chinese market (Si & Bruton, 2005). This suggests that, despite problems, U.S. firms continue to see vast potential in the Sino-American IJV. Given this potential, deeper understanding the underpinnings of the success and failure of Sino-American IJVs may be crucial.

A number of researchers suggest that knowledge learning objectives play a central role in IJV formation (e.g., Hamel 1991; Kogut 1988; Lyles & Salk 1996; Inkpen & Beamish 1997; Si & Bruton, 2005). Among the numerous other advantages, IJV's provide an excellent means for organizational learning. Firms in IJVs expand and acquire knowledge bases through exposure and access to their partner's knowledge and society adoption process (Si & Bruton, 1999). Though profuse and rich, the organizational learning literature has not greatly addressed issues of success in learning efforts of Sino-American IJVs. Likewise, the equally profuse and rich IJV literature offers very limited understanding of Sino-American IJV success and the achievement of the IJV objectives based on IJV learning perspectives. Thus, important questions fitting the case of Sino-American IJVs on more specific but crucial dimensions such as Sino-American IJVs' learning success remains unanswered.

In this research we investigate the important and achievement dimensions of organizational learning in Sino-American IJVs. Specifically, to enhance our understanding of organizational learning performance, we explore differences in how Chinese and U.S. IJV partners prioritize learning objectives. We also explore how they differ in their evaluations of the achievement of learning objectives.

LITERATURE REVIEW AND HYPOTHESES

Researchers and theorists suggest numerous motivations for IJV formation. For example, Harrigan (1985) suggested reasons such as uncertainty reduction; resource acquisition under conditions of market failure; information exchange; competitor preemption; defensive action; synergy exploitation; technology transfer; and diversification. Similarly, Contractor & Lorange (1988) indicated that IJV formation can generate a variety of benefits through achieving at least seven overlapping objectives. These objectives are: 1) risk reduction; 2) economies of scale and/or rationalization; 3) technology exchanges; 4) co-opting or blocking competition; 5) overcoming government-mandated trade or investment barriers; 6) facilitating initial international expansion of inexperienced firms; and 7) vertical quasi-integration advantages of linking the complementary contributions of the partners in a value chain. Although there are numerous reasons for forming IJVs, organizational learning is a key objective identified consistently in the literature (e.g., Lyles 1996; Makino & Delios 1996). For instance, Kogut (1988) summarized the motivations for forming a joint venture under three considerations: transaction costs reduction (cost economizing); strategic behavior (competitive positioning); and organizational learning (knowledge transfer).

Organizational learning is the development of insights, knowledge, and associations between past actions, the effectiveness of those action, and future actions (Fiol and Lyles 1985). Organizational learning differs from individual learning. In contrast to individual learning, organizational learning entails learning at a collective level. Organizational learning begins with the individuals who make up the collective (Dodgson, 1993). However, to become organizational, knowledge acquired by individuals is transformed to a property of the collective (Spender, 1996). The knowledge must be shared and become stored in the organizational through institutionalization in the organization's culture or more formal storage systems (e.g., SOPs). Teagarden (1990) noted that China is currently undergoing what may be the most radical social experiment of our time, a gargantuan modernization program of renewal and reform. If new knowledge is a source of unique resources and sustainable competitive advantage, then knowledge of a potential vast market such as China's is attractive to many U.S. firms. Similarly, after becoming a member of WTO, Chinese firms are now facing a new situation that they need to more directly compete worldwide with modern technology, management practices, and acquisition of new knowledge becomes a more important goal for many Chinese firms. Therefore, both partners of a Sino-American IJV have many opportunities and motivation to learn in this emerging business environment.

Learning in IJVs can involve migratory knowledge or embedded knowledge. Migratory knowledge consists of explicit knowledge specific to a task, procedure, or information base (e.g., Badaracco, 1991). Embedded knowledge is more tacit and less directly observable. It involves knowledge of managerial, administrative, operating procedures. Companies in IJVs acquire migratory knowledge from grafting, a learning process whereby a link with another company provides a firm access to the knowledge not previously available within the company (Huber 1991). Since embedded knowledge is more difficult to observe from outside of a firm, IJVs provide companies opportunities to learn tacit knowledge. Working with other companies, firms learn by doing, observing, and generally becoming emerged in other firms' practices and operational and administrative procedures (e.g., Huber 1991; Miner and Mezias 1996).

For our purposes, the IJV learning could involve either type of learning process. Our research questions involve the performance of the IJV on the dimension of organizational learning. We need not make a distinction in the type of knowledge or knowledge acquisition processes. Our focus on the accomplishment of learning objectives as defined by the firms themselves. Thus, a company may seek both embedded and migratory knowledge.

Definition of Learning Success

How to define learning success? Daft (1995) reported that the mission of an organization is to pursue and achieve goals. The articulated goals are important to knowledge acquisition in shared management IJV (Lyles & Salk 1996). In the current study, we define learning success as the degree that one organization achieved its' goal (Si & Bruton, 2005). We also noticed that IJV learning success is often reflected in a set of goals rather than any single goal. For instance, Anderson (1990) reported that IJV learning could be predicted by following five learning goals: (1) understanding a new market; (2) learning a new technology; (3) developing new management techniques; (4) developing innovative technologies; (5) and generating other potential opportunities. Dymsza (1988) argued that an IJV's learning success must be assessed through the fulfillment of a number of diverse goals from each of the partners. Thus, as with most strategic objectives (Connolly, Conlon and Deutsch 1980), there is no single indicator of successful learning. Consistent with this view, our interviews with managers in the preliminary states of this research, found that IJV partners often had different objectives regarding learning in the IJV. Regarding the reasons leading to the different sets of goal priorities, we argue that the fundamental differences in the Chinese and American national contexts may be a key influence in the partners' prioritization of IJV learning goals because the national context represents the immediate environment where each firm competes (Porter, 1990). Damiels, Krug and Nigh (1985) surveyed American partners and indicated that Chinese companies have chosen IJV as opposed to other forms of business operations for two main reasons: better access to technology and better access to foreign market. In addition, Mead (1994) stated that these IJV partners' goals are largely determined by their parent firms' specific mission or purpose and desired future state. Thus, since no two parent firms are the same, each IJV goal can be reasonably hypothesized as having different weights with each partner of the Sino-American IJVs. Hence:

Hypothesis 1: Chinese and American partners in Sino-American IJVs have different learning goal priorities based on a variety of existing differences between two countries.

In addition, our interviews with managers in the preliminary states of this research reveal some differences of each partner's criteria to evaluate the achievement of the IJV learning goals. Such difference may stem from differences in the economic factors, cultural factors and many aspects of organization. For example, the Chinese IJV partner is more likely to be satisfied with the partial fulfillment of its goal of gaining new technology (Li, 1994). Thus it is possible that each partner in Sino-American IJVs may has different evaluations of the successful learning goal achievement. Again, indeed, the assessment of goal achievement is quite subjectively associated with the separate evaluation level for goal achievement and perceptions of learning success of each partner. Hence:

Hypothesis 2: Chinese and American partners in Sino-American IJVs have different evaluations of the success of their learning goal achievement.

METHODOLOGY

To explore goals defining learning success and to provide a basis for its measurement, the current study devoted much effort to generating a list of measurable goals for IJV learning success. Two major steps were employed as described in the following sections.

Generation of Learning Goals

The first step was to generate as many learning success goals as possible from a review of the relevant literature and the relevant empirical study results. Both Western sources (Dymsza, 1988; Anderson, 1990; Lyles, 1988; Daniels, Krug & Nigh, 1985; Beamish, 1993; Davidson, 1987; Teagarden & Von Glinow, 1990; Shenkar, 1990; Yan & Gray, 1994; Tan & Litschert, 1994; Luthans, Rubach & Marsnik, 1995), and the writings of Chinese IJV experts (i.e., Hu, 1989; Wu, 1992; Pan & Wilfried, 1993; Li, 1994; Osland & Cavusgil, 1996) were reviewed. Nineteen learning goals emerged from this review.

Refinement of Learning Goals

To refine these goals and reduce the number of goals to a smaller, more manageable set, a total of 38 experts (21 Chinese and 17 American) of Sino-American IJVs were interviewed. These experts included 21 business faculties and 17 consultants, they all have at least years' experience with Sino-American IJVs. These personal interviews were respectively conducted in June of 1997 and in March of 1998 in Shanghai China and in the California and Washington State of America by the authors of this paper. In addition to more generally discussions concerning learning goals, each interviewee was asked to evaluate the set of goals developed from the literature review and to rate them on an eight-point scale, where 1=least important and 8=most important. Based on the interviews and survey information, we reduced our set of goals and listed them in order of importance to the following: 1) learning more about the partner firm's national culture; 2) gaining knowledge of market characteristics; 3) learning government policies, rules and relevant laws; 4) learning the negotiation styles of the partner; 5) gaining labor resources; 6) gaining capital resources; 7) learning new technologies; 8) gaining knowledge of new managerial types and styles; 9) understanding the partner's political and economic systems.

Data and Sample

In the current study, 110 IJVs were randomly selected from a total of 547 Sino-American IJVs in the Shanghai area as of 1996 (Directory of Information in Shanghai Foreign Investment Enterprises edited by Shanghai Government, 1996). Because prior researchers found that performance may vary with age and size of an IJV (Anderson, 1990; Zeira and Shenkar, 1990). We moved IJVs less than two years old and with fewer than 50 employees. This reduced the sample to 98. Most IJVs in the final sample were established by well-known and large-sized Chinese and U.S. companies. The IJVs represented diverse industries. The companies participating in the study were promised confidentiality.

Data were collected through a mail survey to 98 Sino-American IJVs. The original mailing contained two copies of the questionnaire, one version in Chinese and one in English. Each was accompanied by personalized cover letters and directions for completion. A request was made to ask high-level Chinese managers and high-level American managers to fill out the questionnaire. Five days after initial mailing of questionnaire packets, a follow-up card was sent to all IJVs emphasizing the importance of a timely reply and expressing appreciation. This data collection method was suggested by Dillman (1978).

Individual high-level managers of IJVs were targeted as the best qualified key informants. The results indicated that about 18% of the respondents were presidents or vice presidents, another 60% were senior managers, and remaining 22% were middle-level managers. The final sample consisted of 148 respondents, including 74 American managers and 74 Chinese managers. The response rate was about 76%. Returned questionnaires did not have serious missing data problems. Only about 13 questionnaires did not respond to all questions. When data were missing, average values for the item replaced the missing response. This treatment of missing data was suggested by Cohen and Cohen (1983). In general, the current study met traditional requirements regarding the data quality and sample size and representiveness. It include a suitable sample size of qualified respondents and a high response rate, both of which make it likely to produce valid and reliable results (Lockhart and Russo, 1994) for IJVs in the Shanghai economy.

Measures

To derive the measure of learning success, the current study utilized recent research that examines performance from the member's perspective (Parkhe, 1993; Olk, 1996). In this study, responding companies were asked to weight various performance achievements in terms of their own goal criteria and to evaluate the joint venture on these criteria. The weighted values were summed to derive a single measure of performance.

In the current study, the participants were asked to rate on an eight point scale (1=least important; 8=most important) for evaluating the importance to the company of each of the nine learning goals in the Sino-American IJVs in the Shanghai. The current study also asked the participants to rate the extent of goal achievement in each of these same nine learning goals on the eight point scale. To compute the variable for weighted learning success, each rating of goal importance was multiplied by each goal achievement. The total was then summed for an overall measure of learning success weighted by each company's individual learning preferences. This method differs from the method of simply summing goal achievement to obtain a single-scale result. It provides weights on the relationship between a learning goal importance and its priority for a more unique way to measure the weighted learning success of Sino-American IJVs.

All scales in the current questionnaire were reviewed by two nationally recognized scholars who have done widespread study in the area of Sino-American comparative management.

Questionnaire Design

Questionnaire in the current study measured the importance and achievement of the learning goals in the Sino-American IJVs. The alpha for the importance scale was .68 and for the achievement scale was .75. The two sections included the nine primary learning success goals. The main purpose in designing the two sections was to test the different learning goal priorities in the Sino-American IJVs. The English-version draft questionnaire was sent to three nationally recognized American scholars who have done extensive studies and consultation in the area of Sino-American IJVs. Based on feedback from these Sino-American experts, the questionnaire was revised several times to better fit current Sino-American IJV realities and to remain reasonably consistent with instruments designed by other researchers who conducted similar studies.

The questionnaire included English and Chinese versions. To minimize potential bias caused by cultural and linguistic differences, the Chinese version was back-translated into English by different bilingual scholars and vice versa. This technique is standard in cross-cultural studies (e.g., Werner & Campbell, 1970; Si & Cullen, 1998).

Findings and Discussions

The means and standard deviations for the study's nine learning goals are presented. The results in these tables revealed that the means ranged from 3.75 to 6.00 and the standard deviations ranged from .57 to 3.98 pertaining to the importance of learning goals. The results also revealed that the means ranged from 4.21 to 5.14 and standard deviations ranged from .06 to 2.95 pertaining to the achievement of learning goals.

TABLE 1

Means, SD of Learning Goals Importance in the IJVs

Learning Goals	Mean	S.D.	Rank
Gaining labor resources	4.33	3.69	5
Gaining capital resources	3.88	3.61	8
Learning new technologies	4.14	3.98	7
Gaining knowledge of new managerial types and styles	4.30	2.88	6
Gaining knowledge of market characteristics	5.65	2.06	2
Learning government policies, rules & relevant laws	4.60	2.95	3
Learning more about the partner firm’s national culture	6.00	.57	1
Understanding the partner’s economic systems	3.75	1.63	9
Learning the negotiation styles of the partner	4.49	1.82	4

* A eight-point scale was used in the survey with the following anchors:

1=least important; 8=most important

* The rank was based on the item’s mean

TABLE 2

Means, SD of Learning Goals Achievement in the IJVs

Learning Goals	Mean	S.D.	Rank
Gaining labor resources	4.21	2.95	9
Gaining capital resources	5.01	2.74	4
Learning new technologies	5.31	2.51	1
Gaining knowledge of new managerial types and styles	4.44	.06	7
Gaining knowledge of market characteristics	5.14	.09	2
Learning government policies, rules & relevant laws	4.65	1.17	6
Learning more about the partner firm's national culture	4.95	.47	5
Understanding the partner's economic systems	5.10	1.47	3
Learning the negotiation styles of the partner	4.28	1.28	2

* A eight-point scale was used in the survey with the following anchors:

1=least important; 8=most important

* The rank was based on the item's mean

The above findings indicated that only small differences existed among means when large differences existed among standard deviations regarding the importance and achievement of these learning goals in the Sino-American IJVs.

In contrast, the comparative results between China and US samples regarding the importance/achievement of the learning goals revealed significant differences.

TABLE 3

Means of Learning Goals Importance

	Means of Importance		
Learning Goals	China	USA	p-values
Gaining labor resources	1.81	6.84 ^{P}	**
Gaining capital resources	6.71^{P}	1.05	**
Learning new technologies	7.24 ^{P}	1.03	**
Gaining knowledge of new managerial types and styles	5.71 ^{P}	2.89	**
Gaining knowledge of market characteristics	4.91	6.39 ^{P}	**
Learning government policies, rules & relevant laws	3.14	6.06 ^{P}	**
Learning more about the partner firm's national culture	5.99 ^{P}	6.01^{P}	n.s.
Understanding the partner's economic systems	2.39	5.11	**
Learning the negotiation styles of the partner	3.01	5.97	**

* $p < .05$

** $p < .01$

^{P}: Priority

TABLE 4

Means of Learning Goals Achievement

Learning Goals	Means of Achievement: China	USA	t-values
Gaining labor resources	3.44	4.97	**
Gaining capital resources	5.68	4.34	**
Learning new technologies	5.35	4.28	**
Gaining knowledge of new managerial types and styles	4.45	4.43	n.s.
Gaining knowledge of market characteristics	5.25	5.03	n.s.
Learning government policies, rules & relevant laws	4.56	4.75	n.s.
Learning more about the partner firm's national culture	4.89	5.01	n.s.
Understanding the partner's economic systems	3.77	5.43	**
Learning the negotiation styles of the partner	3.62	4.94	**

* p < .05

** p < .01

Clearly, the findings presented in Table 3 and 4 strongly supported hypotheses 1 and 2. The findings in Table 3 and 4 also indicated that Chinese IJV managers prioritize the learning goals 2,3,4,and 7 when American IJV managers prioritize the learning goals 1,5,6, and 7. Again, the findings revealed that, in general, both Chinese and American IJV partners are relatively unsuccessful in achieving their higher-priority learning goals. Ironically, the success at achieving most learning goals can be attributed almost wholly to the lowest priority learning goals.

In addition, the finding that goal priorities of IJV partners differed not only provided support for Hypothesis 1 but, also, offered information for a possible in-depth analysis of the relationship between learning goals and learning success in Sino-American IJVs. Specifically, for instance, prior studies reported that the main task the Chinese firm joining with foreign companies was to obtain capital resources from those companies (Ike & Chen, 1987; Pomfret, 1991; Thoburn, Chan & Tang, 1990). The initial tentative conclusion roughly accorded with the following statement: since the communism or former communism country economic system was in terrible economic disarray, the IJVs on the Chinese side ought to have treated capital resources as a first priority. However, the results of this study revealed that the Chinese IJV partners seemed reasonably satisfied with the partial fulfillment of their learning goal of gaining capital resources, especially when compared with their other prioritized learning goals. While this finding might surprise some Americans, it can perhaps be better understood by examining the larger picture. In terms of sheer capital investment, Hong Kong and Taiwan were by far the largest investors in the Chinese market (The Bulletin of the Ministry of Foreign Trade and Economic Cooperation of the People's Republic of China, 1996; The Bulletin of the State Bureau of Business Administration of the People's Republic of China, 1996, Joint Venture Section). Their supply of capital resources made China fundamentally different from the other developing countries, whether capitalist, socialist, communist, or former-communist.

In regard to the evaluation differences in Hypothesis 2, it might stem from differences in parent firms' goals, organizational structures, cultural factors, and many other aspects of organization. Fuller exploration of such differences might well lead to innovative IJV management models: for instance, how can IJV management models best combine the strengths of American individualism and Chinese collectivism? Such differences have always faced Sino-American IJVs on a daily basis. It may be possible to find ways to make the differences work for the benefit of IJV operations.

In conclusion, this study investigated learning goals and measured learning success through the methodology of evaluating the relationship between the learning goals' importance and learning goals' achievement. Among the most readily meaningful findings of this study were: (1) the isolation and definition of a set of Sino-American IJV learning goals; (2) an innovative measurement of learning success for the Sino-American IJVs. The further studies will expand sample size and the number of IJV locations, and do further cross-checking results through the use of multiple methodologies for further clarification of the issue of strategic learning success in the Sino-American IJVs.

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A COMPARISON OF THREE ASSESSMENT TOOLS FOR BUSINESS SCHOOLS

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ABSTRACT

This paper examines the forces that drive the assessment of academic programs, with a focus on business programs. After examining the literature, it compares three commercially available tests along the dimensions of Target Audience, Areas of Testing, Skills, Knowledge Base, Application, Value Added, Ownership of Results, When Administered, and Costs.

INTRODUCTION

The issue of assessment of student learning has leapt to the foreground this past year with the publication of *A Test of Leadership: Charting the Future of U.S. Higher Education* published by the U.S. Department of Education's Commission on the Future of Higher Education (commonly referred to as the Spellings Commission after U.S. Department of Education Secretary Margaret Spellings). While tackling issues as diverse as financial aid and access, a major thrust of the report concerned itself with student learning. The Commission was disturbed by the lack of emphasis that Colleges and Universities have placed on student learning:

As other nations rapidly improve their higher education systems, we are disturbed by evidence that the quality of student learning at U.S. colleges and universities is inadequate and, in some cases, declining. A number of recent studies highlight the shortcomings of postsecondary institutions in everything from graduation rates and time to degree to learning outcomes and even core literacy skills. According to the most recent National Assessment of Adult Literacy, for instance, the percentage of college graduates deemed proficient in prose literacy has actually declined from 40 to 31 percent in the past decade. (Commission Appointed by Secretary of education Margaret Spellings, 2006)

Merging with this thrust is the historical effort to increase attention on assessment that focuses on student learning rather than teaching, per se. Professional educators have responded to faculty concerns that students are not demonstrating competencies that one would expect of college graduates – especially in the soft skills such as effective communications, team building, critical thinking etc. Also, business educators recognize that employers are often not satisfied with the ability of graduates to exhibit professional competencies as well.

In addition, regional accreditation agencies such as The Middle States Commission on Higher Education (Middle-States) (2005) require in their standards that assessment be conducted by their member institutions:

Effective assessment processes are useful, cost-effective, reasonably accurate and truthful, carefully planned, and organized, systematic, and sustainable.

1. ***Useful*** assessment processes help faculty and staff make appropriate decisions about improving programs and services, developing goals and plans, and making resource allocations. Because institutions, their students, and their environments are continually evolving, effective assessments cannot be static; they must be reviewed periodically and adapted in order to remain useful.

2. ***Cost-effective*** assessment processes yield dividends that justify the institution's investment in

them, particularly in terms of faculty and staff time. To this end, institutions may begin by considering assessment measures, indicators, "flags," and "scorecards" already in place, such as retention, graduation, transfer, and placement rates, financial ratios, and surveys. New or refined measures may then be added for those goals for which evidence of achievement is not already available, concentrating on the institution's most important goals. Effective assessments are simple rather than elaborate, and they may focus on just a few key goals in each program, unit, and curriculum.

3. ***Reasonably accurate and truthful*** assessment processes yield results that can be used with confidence to make appropriate decisions. Because there is no one perfectly accurate assessment tool or strategy, institutions should use multiple kinds of measures to assess goal achievement. Assessments may be quantitative or qualitative and developed locally or by an external organization. All assessment tools and strategies should clearly relate to the goals they are assessing and should be developed with care; they should neither be merely anecdotal information nor a collection of information that happens to have been already collected. Strategies to assess student learning should include direct—clear, visible, and convincing—evidence, rather than solely indirect evidence of student learning such as surveys and focus groups

Professional accreditation societies (e. g., ABET and AACSB International) are in the forefront of requiring accredited member institutions to meet assessment outcomes. So, it is clear that there is pressure from a variety of stakeholders demanding that educators demonstrate that students have acquired the knowledge and skill sets that are deemed important. As the Spellings Commission (2005) wrote:

Despite increased attention to student learning results by colleges and universities and accreditation agencies, parents and students have no solid evidence, comparable across institutions, of how much students learn in colleges or whether they learn more at one college than another. Similarly, policymakers need more comprehensive data to help them decide whether the national investment in higher education is paying off and how taxpayer dollars could be used more effectively.

Accountability is here. Three major assessment measures are compared and contrasted to ascertain the viability of the three in assessing business students so that faculty and administrators in business can make informed decision as to the measures efficacy in their particular circumstance. The three measures are: The ETS Major Field Test, ETS MAPP^{tm} (Measure of Academic Progress and Proficiency), and CLA (Collegiate Learning Assessment).

AACSB ACCREDITATION ASSESSMENT

The Association to Advance Collegiate School of Business (AACSB), the premiere accreditation institution for Colleges of Business, adopted accreditation standards in 2003 that require business schools to provide an assurance of learning (Black & Duhon, 2003). The standards describe an institutional effectiveness framework that examines program accountability with a focus on results and improvements particularly in terms of student achievement and development (Black & Duhon). The curriculum component of the standards asks for evidence of learning outcome rather than intent (Black & Duhon).

The AACSB standards require assessment activities that focus on a degree program rather than the majors within a degree (AACSB, 2007). Students must demonstrate their knowledge or skill through direct, measurements (AACSB). The primary focus is on the knowledge, skills, and competencies that the graduate of a specific degree program possesses (AACSB). Faculty members are responsible for developing learning goals and objectives that clearly state the observable outcomes expected from students. The outcomes must be broken down into specific characteristics or traits that can be measured (AACSB). Once the measurement is established, faculty members discuss the results and use the results to improve student learning (AACSB). Evaluating the results and implementing appropriate modifications in the curriculum is a key part of the assessment process and plays a crucial role in a school's accreditation or reaccreditation (AACSB).

ASSESSMENT IMPLEMENTATION ISSUES

Colleges and universities require the ability to address many imperatives – efficiency, accessibility, and diversity - to name a few. And, the AACSB, along with other accrediting organizations, require evidence that the curriculum produces the desired results (Tagg, 2007).

Achieving or maintaining AACSB accreditations, schools must have an assessment plan that addresses issues set forth in the Assurance of Learning (AoL) Standards (White, 2007). A strategic approach to the assessment process facilitates continuous improvement through identification of goals followed with assessment to determine whether the process fulfilled the mission (Green, Stark, & Haley, 2007). Progress has been made in meeting the new AoL Standards, but many schools fall short in the use of assessment data to tie assessment results with curriculum improvement. The linking of results with improvements is commonly referred to as "closing the loop" (Martell, 2007).

Schools are not required to develop original assessment instruments. An effective AoL program can focus on simplistic methods as long as it produces useful data (Beyer & Gillmore, 2007). Measurement is difficult because it is an attempt to understand the complex and diverse undergraduate experience (Beyer & Gillmore). Assessments should measure what students learn in college and yield information which faculty can use to improve learning or instruction (Beyer & Gillmore). Beyer and Gillmore (2007) report that a student's major profoundly affects both the content and skills learned in a degree problem. This phenomenon must be considered in planning and implementing efforts to close the loop on the assessment process.

Martell & Calderdon (2005) report that most schools have not developed a strong assessment program to meet AACSB's standards and are still struggling with a trial-and-error process. There are concerns that indirect methods such as job placement rates and surveys of alumni's employers provide valuable information that may lead to the creation of learning objectives that meet job market requirements but are not considered in the assessment process. AACSB's focus on direct measures in assessment, if taken literally, may direct a school to ignore key aspects of its external environment.

Time requirements for assessment may take resources away from educating students. Two separate assessment programs may be necessary at a school. An assessment program focused on a specific degree and one separate assessment for each major within a degree. Assessment is valuable if it leads to meaningful improvements in the educational process.

MEASUREMENTS

Direct measurements required in the assessment process may take several forms: standardized tests, course embedded measurements approaches, applied projects, and standardized achievement tests. There is no single correct approach and AACSB is open to the use of a variety of methods to relate AoL (Bycio & Allen, 2004). Each approach has its own set of advantages and disadvantages. Issues to consider include whether the results may enable the institution to compare scores with other schools. The assessment process may be labor intensive to administer. The design of the instrument requires the availability of subject-matter experts. Assessment should provide evidence to support the correlation between scores and actual business knowledge realizing that it is very difficult to design a process that adequately reflects the business curriculum across a degree program.

STANDARDIZED TESTS

Standardized tests can be an effective tool for assessing student achievement. The initial construction of the tests as well as conditions for administration and scoring have a uniform procedure which enables the consistent interpretation of scores from one administration to the next. Tests may be developed internally or acquired from testing organizations. Local instruments require considerable resources for creating, scoring, reporting, and improving. An internal test may be tailored to a specific program with the intent that the scores accurately reflect the extent which learning objectives are met but do not provide data for comparison with other schools. Expertise may not be available locally to verify the reliability and validity of the test properties.

Standardized tests offered by testing organizations are a popular vehicle for determining whether learning objectives are met. Schools using these tests for evaluation and decision making should determine that the scores are reliable and valid. Reliable tests provide stable rank-order results through unambiguous questions. Test are considered valid when scores reflect achievement on the dimensions that the school wishes to evaluate and are used appropriately for evaluation and decision making. Content validity exists when the test questions are consistent with the curriculum. Context validity addresses the extent to which scores are correlated logically with other variables expected to be associated with student achievement, for example, grade point averages (GPAs) (Bycio & Allen, 2007). These expectations are formed by the school's previous experience in assessing student performance. Scores on standardized tests can be a basis for curriculum development in the modification of existing courses or the addition of new courses.

THE CHALLENGE

The AACSB guidelines require considerable time and resources to implement. AACSB suggests a five year process including translation of goals into specific objectives, and the alignment of curriculum with the goals. Measurements are complete in the third year, and the final feedback occurs by the fifth year (AACSB, 2007). Colleges of Business respond to the assessment through a variety of methods which are time consuming, experience faculty resistance, provide ambiguous results, and are inconsistent across institutions (Pringle & Michel, 2007). Some standardized testing is available from specialized testing organizations, but colleges question the appropriateness of using the results of just one measurement and often couple indirect measurements with test results in assessment reports (Pringle & Michel). Research is needed into the development of an assessment procedure that can provide a consistent assessment of student learning and provides quality information for improving educational delivery.

According to the AACSB Standards of 2003 Assurance of Learning Seeks evidence of learning outcomes, not intent. The focus is on the degree program, not on majors within a degree (e.g., on the BSBA degree, not on Accounting or Marketing). Focus is on knowledge, skills, and competencies expected of a business school graduate. Faculty must set learning goals and measurable objectives, which must be measured DIRECTLY. Schools must "close the loop", meaning they must do the assessments, then demonstrate that they are using the assessment results to make related changes to their programs of study.

Direct assessment measures can be course embedded, applied projects, or standardized achievement tests. Such tests can be internally (school) generated or externally (outside agency) generated. The focus of this paper is on three externally generated tests: ETS/MFT, ETS.MAPP™, and the CLA.

The remainder of the paper provides brief descriptions of the tests and a table that can be used for quick comparison of the tests along the following nine dimensions:

Target Audience

Areas of Testing

Skills

Knowledge Base

Application

Value Added

Ownership of Results

When Administered

Costs

ETS/MFT

The ETS/MFT is created by the Educational Testing Service. It consists of a number of Major Field Tests for undergraduate and MBA students. It provides testing for majors in various disciplines, not just business. The goal of this test is to go beyond factual knowledge. Students are required to analyze and solve problems, to understand relationships, and to interpret material. This test can be given during a capstone course.

ETS/MAPP™

The ETS/MAPP™ is also created by the Educational Testing Service. It is a measure of academic proficiency and progress. It is a general education test, integrating critical thinking, reading, writing and mathematics. It can be compared across institutions.

CLA

The Collegiate Learning Assessment is created by the Council for Aid to Education. This test asks students to analyze complex material and provide written responses to questions arising from that material. It is designed to be administered cross-sectionally, usually testing first semester freshmen then last semester seniors. The CLA focuses on critical thinking, analytic reasoning, written communication, and problem solving. It uses two types of testing instruments:

Performance Tasks - in which students must complete a "real-life" activity (such as preparing a memo or policy recommendation) by using a series of documents that must be reviewed and evaluated.

Analytic Writing Tasks - which evaluate students' ability to articulate complex ideas, examine claims and evidence, support ideas with relevant reasons and examples, sustain a coherent discussion, and use standard written English.

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TABLE 1: Comparisons of Three Externally Generated Assessment Tests

	ETS/MFT	MAPP™	CLA
Target Audience	Business Graduates and several other majors	General Education Students	General Education Students
Areas of Testing (numbers in parenthesis indicate the approximate number of questions for each area)	Accounting (18) Economics (16) Management (18) Quantitative Business Analysis (13) Information Systems (12) Finance (16) Marketing (16) Legal and Social Environment (12) International Issues (embedded into about 12% of the test)	Critical Thinking Reading Writing Mathematics	Critical Thinking Analytic Reasoning Written Communication Problem Solving
Skills	Analyze and solve problems Understand relationships Interpret material	Measurement of all four general education skills (critical thinking, reading, writing and mathematics) with one integrated test.	Critical thinking Reasoning Communication skills
Knowledge Base	Business Core – Detailed	General Education Core – Abstract	General Education Core - Abstract
Application	N/A	N/A	Process Oriented

	ETS/MFT	MAPP™	CLA
Value Added Value Added (cont'd.)	Meeting External Requirements: Accreditation, strategic planning and performance-based funding. Benchmarking and Trend Analysis: Document student achievement and program effectiveness, and demonstrate program improvement over time. Developing and Improving Curricula: A variety of score reports allow for detailed curriculum development, review and evaluation. Assessing Student Achievement: Can assess the level of student achievement within a field of study compared to that of other students in their program and to the national comparative data.	Meeting External Requirements: Accreditation, strategic planning and performance-based funding. Benchmarking and Trend Analysis: Document student achievement and program effectiveness, and demonstrate program improvement over time. Developing and improving curricula Meaningful comparisons with other institutions that have administered the MAPP™ test. Up to 50 multiple-choice questions can be added. Equates to the former Academic Profile assessment, allowing for longitudinal or cross-sectional studies.	Institution: Focus is on how the institution as a whole contributes to student development. Value Added: Focuses on the value added provided by colleges and universities by comparing what students know when they start college with what they know when they finish Comparisons: This approach also allows for inter-institutional comparisons of overall value added.
Ownership of Results	Business Faculty and Individual Student	Institution	Institution

	ETS/MFT	MAPP™	CLA
When Administered	Senior year (maybe in Capstone course)	Freshmen, Sophomores or Upperclassmen	Administered Twice: Lower Division, then Upper Division Students (Can be administered every year)
Costs	$26 per undergraduate $30 per graduate	$15.50 per test plus $5.50 for an optional essay	Minimum $6500 for the institution + $30.00 per exam (minimum 100 students)

$15.50 per test plus $5.50 for an optional essay

PATENTED TAX LOOPHOLES-POLICY AND PRACTICAL CONSIDERATIONS

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ABSTRACT

Recently, patents for tax reduction strategies have drawn attention from tax practitioners, taxpayers, Congress and the media. This article addresses the impact that patented tax strategies will have on tax policy, the tax profession, and on the integrity, fairness and administration of the tax system. It will discuss some of the recent litigation involving tax strategy patents. Possible solutions will be discussed such as changing the tax code, restricting the issuance of patents for tax strategies and changing the laws concerning patents.

INTRODUCTION

Over the last few years, tax professionals have become increasingly concerned about patented tax strategies. Although much of this concern is due to a suit filed at the beginning of 2006 concerning the infringement of a patented estate planning technique, tax strategy patents are not limited to estate planning. Tax strategy patents cover a number of areas of tax practice including financial products, charitable giving, employee benefits and stock options. The consequences of infringing a patent can be substantial. The remedies for patent infringement include injunctive relief and money damages against an infringing party. Money damages can be tripled in cases of willful infringement and attorney's fees can be awarded in some cases.

Patents granted for tax strategies are categorized by the United States Patent and Trademark Office as business method patents. Business method patents have flourished since the 1998 landmark case of State Street Bank and Trust where the Federal Circuit held that business methods are patentable. Following State Street, business method patents, often involving financial transactions and computer software, quickly became the fastest growing area of patent applications. Since the State Street decision, 60 tax strategy patents have been granted and another 86 are pending. Many of these tax strategy patents deal with planning techniques that are commonly used by tax practitioners in delivering tax services to their clients.

Recently, many associations of tax professionals have expressed their views concerning the patenting of tax strategies. The American Institute of Certified Public Accountants, the American Bar Association Section of Taxation and many state bar and accounting associations have all publicly opposed the patenting of tax strategies. They claim that tax patents preempt Congress's legislative control over tax policy; deny taxpayers equal and unfettered access to the provisions of the Internal Revenue Code and its interpretations; make it difficult for tax advisers to render advice to clients; might increase the cost of tax advice to clients, and may mislead taxpayers into thinking that a patented tax strategy is valid in the eyes of the Internal Revenue Service.

BACKGROUND OF PATENT LAW

A patent is a right granted by the federal government to an inventor giving him the exclusive right to make, sell, use or license his invention for a period of twenty years. The power of the federal government to enact patent legislation is enumerated in Article I Section 8 of the United States Constitution which states that Congress shall have the power "to promote the Progress of Science and useful Arts, by securing for limited Times to Authors and Inventors the exclusive Right to their respective Writings and Discoveries.

The statutory authority is found in 35 United States Code, Section 101, which states that "Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefore, subject to the conditions and requirements of this title."

A person who engages in any of the actions that are within the rights of the patent holder has committed infringement. In such a situation, the patent holder has the right to bring an action in civil court against those who infringe or induce others to infringe the rights granted by the patent. The patent enjoys a presumption of validity in the lawsuit, though an accused infringer may assert that the patent is invalid or unenforceable on a number of grounds. The patent holder may seek injunctive relief as well as money damages in an amount up to a reasonable royalty for the uses covered by the patent claim. The money damages that may be claimed are "no less than a reasonable royalty." A patent holder may claim lost profits if he can show that, but for the infringement, he would have made the additional profits and the infringement is the proximate cause of the lost profits. The question whether a patent holder must in some circumstances permit use of the invention by another and accept money damages has been the subject of litigation.

Throughout the last two centuries there has been significant legislation over the issue of what constitutes patentable subject matter. In the last twenty-five years, however, the U.S. Supreme Court and the Court of Appeals for the Federal Circuit have issued a number of opinions that have radically expanded the scope of what constitutes patentable subject matter.

REQUIREMENTS FOR PATENTABILITY

Inventors can obtain patents on processes, machines, manufactures, and compositions of matter that are novel, have utility and are non-obvious. Under U.S. patent law only the first inventor is entitled to a patent. An inventor must file a patent application with the U.S. Patent and Trademark Office (USPTO) that completely describes the invention. The application must disclose the proprietary interest asserted by the inventor.

Patentable Subject Matter

The Patent Act provides that "whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefore, subject to the conditions and requirements of this title." The categories, processes, machine, manufacture, or composition of matter are considered to be patentable subject matter. Courts have held that patentable subject matter does not include abstract ideas (i.e. mathematical algorithms), laws of nature, or natural phenomena, due to a concern for pre-emption if any person were entitled to claim an exclusive right to these.

In the past, some courts have held that methods of doing business were not patentable subject matter because they were not novel or non-obvious. However, in 1998 the Federal Circuit held that a business method was patentable subject matter as long as it involved a process or machine within the meaning of the patent law.

Although there has been authority that patentable subject matter must involve a machine or other technological application such as a computer, recent Patent Office interim guidelines for examination of patentable subject matter allow the issuance of a patent without such a requirement. The Patent Office has requested public comment on these guidelines.

Novelty

The novelty requirement is met unless the invention was known or used by others in this country, or was previously patented or described in a printed publication in this or a foreign country. The prior knowledge or use that can preclude patentability is often referred to as prior art.

Obviousness

To be considered non-obvious, the invention must not be obvious to someone who is skilled and knowledgeable in the subject matter of the patent. One common question is whether the invention would have been obvious to someone skilled in the field to combine elements of prior art to create a claimed invention

Utility

The term useful is not defined in the patent statute and the standard for utility is very broad. Some courts have noted that the utility standard is not high. One commonly used definition is that an invention is useful if it is minimally operable towards some practical purpose or is capable of providing some identifiable benefit.

First Inventor

Patents are only granted to the first person to invent an item. This may not necessarily be the first person to file the patent application. A first inventor must both have conceived of the invention and placed it in service. A first inventor can lose the right to obtain a patent if he has abandoned, suppressed, or concealed his invention. Thus difficult questions of fact may arise regarding when a first inventor is entitled to claim the rights to a patent even though another person may have filed an earlier patent application.

EXAMPLES OF TAX STRATEGY PATENTS

Tax strategy patents have been granted covering a wide variety of tax planning areas including estate planning, financial products and insurance, charitable giving, employee benefits and stock options. Some patents rely primarily on the tax structure itself while others focus on the use of a computer as an essential element of the business method. Some patents relate to tax planning only indirectly.

Patent applications that focused on the use of computers or other mechanical functions were favored by the Patent Office until recently. This meant that to obtain a patent for a tax technique or tax strategy, it had to be performed using a computer. For this reason, it was not always clear whether a tax or other business method patent based on the computerization of a particular planning technique might also grant rights to the underlying strategy separate from the computer application.

The following are some examples of patents that have been issued for tax strategies. Some of the examples are of computer based patents, some of the patents are based on the structure itself and some are related to tax planning only indirectly.

Split Dollar Life Insurance

An example of a computer-based tax patent is one that involves the use of split dollar life insurance. Specifically, the patent employs a method for the computerized administration of leveraged split dollar life insurance coverage. A split dollar life insurance arrangement involves a method of paying for insurance where the premiums and proceeds are split between the employer and employee. In a leveraged split dollar plan, the employer borrows against the cash value of the life insurance policy to partly cover the cost of the insurance premiums.

The patented business method includes storing parameters of insurance policies and loan agreements in a computer memory, over ranges of possible death benefits, cash values, loan principals, and incremental payments over a span of years. Employee factors are quantified and input into the computer processor, which is programmed to integrate the employee factors with the insurance and loan terms to select an integrated loan/insurance arrangement to schedule payments to meet maximum contributions and retirement and life expectancy expectations. The processor adjusts incremental payments for the employer and the employee to ensure sufficient collateral and to comply with tax regulations that are unfavorable to certain front-loaded payment schedules.

Estate Planning

An example of a structure-based tax patent that does not rely primarily on the use of computers is the so-called SOGRAT patent. The SOGRAT patent was granted in 2003 to facilitate estate planning. The patent was designed to minimize estate and gift tax liability through the use of a grantor retained annuity trust (“GRAT”) funded with nonqualified stock options.

In a GRAT, the grantor creates an irrevocable trust and retains the right to receive, for a specified term; an annuity based on a specified sum or fixed percentage of the value of the assets transferred to the trust. GRATs are frequently used in estate planning to transfer assets to family members at reduced values. The rules governing the valuation of a retained interest in a GRAT are found in sections 2702(a)(2)(B) and 2702(b) of the Internal Revenue Code. In this patent, however, the actual invention was the use of nonqualified stock options to fund the GRAT.

The SOGRAT patent had been the subject of litigation in federal court based on alleged infringement (Wealth Transfer Group v. Rowe, No. 06CV00024, D. Conn., filed Jan. 6, 2006). The parties to the lawsuit entered into a settlement at the beginning of 2007.

Tax Free Exchanges of Real Estate

A patent was granted for a specific method, which uses investment instruments to facilitate Section 1031 like-kind exchanges of real estate. It was modeled after a publicly issued Internal Revenue Service Procedure concerning such exchanges.

Deferred Compensation

A patent on hedging liabilities associated with a deferred-compensation plan was granted and assigned to a major brokerage firm. The patent purports to provide a mechanism to hedge the compensation expense liabilities of an employer providing deferred compensation to one or more employees.

Roth IRA Conversions

A patent has been granted to evaluate the financial consequences of converting a traditional IRA to a Roth IRA. It describes a computer-implemented process for computing the tax consequences of converting to a Roth IRA and various options for funding the taxes, such as term insurance to fund the Federal tax liability of an early withdrawal for premature death, calculating the entire rollover amount and financing the tax and insurance premium.

TAX POLICY CONSIDERATIONS

The purpose of granting patents is to encourage innovation. Patents provide holders with a 20-year monopoly over their inventions in exchange for the complete disclosure of their invention, which others can use after the monopoly expires. Patent protection should only be introduced into an industry when inventions in that industry are below optimal levels and other incentives for innovation are insufficient.

Many tax practitioners believe that granting patents on tax strategies is inconsistent with the purpose of the patent laws. They point to the fact that many tax strategies have been created without patent protection and that the federal government has no reason to create additional incentives to reduce federal tax revenues. They argue that existing economic incentives are sufficient for the development, promotion, and implementation of tax planning strategies.

Tax practitioners further believe that tax strategy patents will do significant harm to the tax system and to its key participants, including taxpayers, Congress, the Internal Revenue Service and tax practitioners. They believe that the public harm to the tax system and its participants will far outweigh any public benefit derived from tax strategy patents.

Since the first hearings held on the subject of patented tax strategies in July of 2006 by a Congressional House Ways and Means Subcommittee, many national associations of tax professionals have taken a negative view of patented tax strategies. Many of these organizations including the Internal Revenue Service, The American Institute of Certified Public Accountants and the American Bar Association have made patented tax strategies a primary focus of task forces and committees of their members. A summary of their arguments include the following that patented tax strategies:

* Limit taxpayers' ability to use fully tax law interpretations intended by Congress;
* May cause some taxpayers to pay more tax than Congress intended or more than others similarly situated;

* Complicate the provision of tax advice by professionals;
* Hinder compliance by taxpayers;
* Mislead taxpayers into believing that a patented tax strategy is valid under the tax law
* Preclude tax professionals from challenging the validity of a patented tax strategy (Hoops, 2007).

These organizations are concerned about patents for methods that taxpayers use in arranging their affairs to minimize tax obligations. They believe that patented tax strategies may limit taxpayers' ability to use fully interpretations of law intended by Congress. As a result, they thwart Congressional intent and, thus, undermine the integrity of, and the public's confidence in, the tax system. They further believe that patented tax strategies also unfairly cause some taxpayers to pay more tax than was intended by Congress or by others similarly situated. They believe that the conflict with Congressional intent highlights a serious policy reason against allowing patent protection. Allowing a patent on a strategy for complying with a law or regulation is not sound public policy because it creates exclusivity in interpreting the law.

Many of these organizations are also concerned with tax law simplicity and administration and argue that patented tax strategies complicate tax advice and compliance. Tax law is already quite complex. They believe that the addition of rapidly proliferating patents on tax-planning techniques and concepts will render tax compliance much more difficult.

Because patented tax strategies are granted by the Federal government, they are concerned that they pose a significant risk to taxpayers. Taxpayers may be misled into believing that a patented tax strategy bears the approval of other government agencies such as the Internal Revenue Service and, thus, is a valid and viable technique under the tax law which is not the case. The USPTO does not consider the viability of a strategy under the tax law. The USPTO is authorized only to apply the criteria for patent approval as enacted by Congress and as interpreted by the courts. The Internal Revenue Service is not involved in the USPTO's consideration of a tax strategy patent application.

These organizations are concerned that tax professionals also may be unable, as a practical matter, to challenge the validity of patented tax strategies as being obvious or lacking novelty, due to their professional obligations of client confidentiality. Tax professionals may also find it difficult to defend patent-infringement lawsuits due to client confidentiality. The USPTO will also find it difficult, if not impossible, to determine whether proposed tax strategies meet the statutory requirements for patentability because tax advice is generally provided on a confidential basis.

IMPACT ON THE TAX PROFESSION

Tax practitioners are concerned that tax strategy patents could have a dramatic effect on the tax profession. They are concerned about their potential legal liability for using tax strategies that were once available to all practitioners but are now being claimed to be the exclusive right of their patent holders. They feel that such patents hinder their ability to provide tax advice and make it difficult for their client’s to comply with the tax laws. At the same time, they are faced with the ethical responsibilities imposed on tax professionals that may involve another and possibly conflicting set of pressures.

Keeping abreast of the constantly changing and extremely complex tax code is, by far, one of the greatest challenges that tax professionals face in providing high-quality tax services to their clients. Now, in addition to being current in their field, practitioners must also determine whether their advice is actually theirs or another party's exclusive property. While this may seem absurd, practitioners must now contend with other practitioners and private companies seeking patents to protect their exclusive right to use various tax planning ideas they claim to have developed. They may be surprised to find that strategies that they have routinely used in their practices are now patented and unavailable for use without the patent holder's permission. The trend of patenting tax strategies is on the rise and the USPTO continues to issue patents for tax strategies.

Because of the potential liabilities associated with patented tax strategies, practitioners may now want to consider whether they should retain patent counsel or other expert advice when they are dealing with a potential patented strategy. Practitioners have an ethical duty to their clients and owe their clients due diligence. They have a duty to disclose to their clients any relevant tax strategy patents and the possibility of licensing the patent. They are also required to disclose to the client whether they are a holder of a license to the patent.

Much of the concern over the patenting of tax strategies is the direct result of a suit filed in January of 2006 alleging the infringement of an estate planning technique in which non-qualified stock options were used to fund a grantor retained annuity trust. U.S. Patent No. 6,567,7910 (commonly referred to as the "SOGRAT"patent) describes an estate planning method for minimizing transfer taxes in connection with the transfer of nonqualified stock options to a family member. The method uses a uses grantor retained annuity trust (GRAT), a technique for transferring property to younger generations of the member's family at a discounted value.

Most estate planners and other tax practitioners are familiar with the use of GRATs in estate planning and many routinely use them as a tax planning strategy. Therefore, many practitioners were surprised to learn that the technique of placing nonqualified stock options into a GRAT had been patented. This surprise grew into concern when the patent holder instituted an infringement suit against a taxpayer who implemented the technique without its permission.

POSSIBLE SOLUTIONS

There a number of possible legislative and administrative solutions to the problems created by patented tax strategies. Two of the more realistic options include the outright prohibition on patenting tax strategies and providing immunity for practitioners who use such strategies.

Prohibiting Patentability

Many of the large and powerful associations of tax professionals would like to see legislation enacted that would prohibit the patenting of tax strategies. There is precedent for taking such action. Under Title 42 of the United States Code, no patent can be issued for "any invention or discovery which is useful solely in the utilization of special nuclear material or atomic energy in an atomic weapon."

In early 2007, Senators Levin, Coleman and Obama proposed an analogous prohibition for tax strategy patents. The Stop Tax Haven Abuse Act includes a provision to amend the patent law to prohibit patents for any invention "designed to minimize, avoid, defer, or otherwise affect the liability for Federal, State, local or foreign tax." Shortly thereafter, Chairman Senator Max Baucus of Montana and ranking minority member Senator Chuck Grassley of Iowa, joined in by introducing S. 2369 which would halt the granting of tax strategy patents by the USPTO. Many of the large associations of tax professionals were behind the implementation of this legislation.

Practitioner Immunity

Instead of completely prohibiting patents on tax strategies, one alternative is to provide for immunity from liability to practitioners for infringing or inducing infringement. A current provision of patent law, sometimes referred to as the Physicians Immunity Statute, prevents patent holders from obtaining damages against medical practitioners for infringing patents on medical procedures. Congress enacted the Physicians Immunity Statute, in response to a controversial lawsuit in which one physician sued another for infringing a patent claiming a method of performing surgery. Under this statute, the patent holder generally cannot obtain damages or injunctive relief against a licensed medical practitioner with respect to the performance of a medical activity that would otherwise qualify as patent infringement.

It appears that Congress could enact a similar statute to shield those employing tax strategies from patent infringement liability. An important advantage of this approach includes the fact that the patent system policy of disclosure of novel ideas is, to some extent, furthered.

CONCLUSION

Patents for tax strategies present unique concerns for practitioners, taxpayers and politicians. The United States Patent and Trademark Office will continue to issue patents for new tax strategies until laws are enacted to prevent them from doing so. In the meantime, professional tax organizations should continue to take a proactive role against the patenting of tax strategies.

Although the prospect of legislation to address the issues created by tax strategy patents seems likely, until such legislation is enacted, practitioners should attempt to minimize potential liability by reviewing tax patents as they are issued and consulting with legal counsel whenever there is a potential for infringement. Practitioners may want to consider obtaining a license for the patent or abandoning the strategy completely.

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THE ASSOCIATION BETWEEN CORPORATE GOVERNANCE AND AUDIT FEES

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ABSTRACT

The Sarbanes-Oxley Act of 2002 ("SOX") established not only corporate governance reform but also legislated significant changes to the practice of auditing publicly held corporations. Rules implemented by the Securities and Exchange Commission ("SEC") further reinforced stronger corporate governance standards. The effect of these reforms on the cost of public audits is indisputable: the initial rise in audit fees was dramatic as corporations complied with the new provisions. This paper examines the relationship between corporate governance characteristics and audit fees for a random sample of 100 publicly traded corporations drawn from the 2005 Fortune 500 list. The data is obtained from SEC proxy statements and annual report filings for the 2005 fiscal year. The study examines characteristics of the audit committee and board of directors, while controlling for several financial measures generally associated with higher audit fees. The corporate governance attributes include two measures of expertise (the number of audit committee financial experts and the average number of outside directorships held by board members) and two measures of diligence (meeting frequency of audit committee and board of directors). The results indicate a positive, significant relationship between both measures of expertise and audit fees. In addition, greater frequency of board of directors meetings is also significantly related to higher audit fees, while audit meeting frequency is not. This outcome suggests that higher quality corporate governance as measured by fiduciaries' expertise and board diligence is associated with higher audit costs.

INTRODUCTION

The role of corporate governance has increased in magnitude since the passage of Sarbanes Oxley in 2002 ("SOX") and new regulatory requirements of the Securities and Exchange Commission ("SEC"). The legislated changes to the composition and expanded role of both the boards of directors of public companies and their audit committees stem from the "series of corporate scandals that raised concerns over the effectiveness of existing corporate governance standards" (White & Case). The goals of the new rules are to enhance transparency, accountability and objectivity in the oversight by boards of directors and board committees. The hope is that achievement of these accountability goals will promote increased investor confidence in the financial markets for public companies' securities.

SOX mandated that the SEC issue rules to implement expanded disclosures about the internal controls of public companies. Corporations subject to the expansive reporting and attestation provisions of Section 404 of SOX have as a consequence experienced skyrocketing audit fees. In addition, SOX has clearly set up a different environment in which boards operate. It has made board meetings more compliance-focused than in the past, requiring directors to delve "deeper than ever before into what it takes to fulfill their role as fiduciaries. Expectations of the board continue to grow and evolve, with the added pressure that directors must increasingly focus on their potential liabilities" (Eckbo, 2006). Likewise, the role and practices of the audit committee are experiencing a shift. Increased time and effort is now required of audit committee members to communicate with key organization personnel, monitor the internal audit function, oversee conflicts of interest, and ensure auditor independence (Lipman, 2006).

Debate persists about whether the dramatic rise in audit fees is a onetime increase in the costs of compliance with Section 404 or whether there has been a permanent shift as a consequence of SOX that will create an ongoing environment of higher audit fees.

In this study, I examine the relation between corporate governance and audit fees for Fortune 500 companies since the implementation of SOX, including its Section 404. All of the companies comprising the sample engaged a Big 4 auditor, so that there is no difference in the level of audit quality provided by the external auditors. The purpose of the study is to discern to what extent audit fees in the post-SOX environment can be linked to measures of both board and audit committee expertise and diligence. Prior research supports the notion that a board that is more diligent and expert "may demand differentially higher audit quality (which requires more audit work)" than would normally be demanded in order to protect the board's self interest. (Carcello, 2002)

The number of board meetings that occurred during the year is used as a proxy for board diligence. Board expertise is measured using the average number of other director positions held by a company's board of directors. Audit Committee expertise is captured by the number of financial experts serving on the committee. There is a significant, positive relationship between board diligence, board expertise, and audit committee financial expertise and audit fees. However, unlike prior research findings, in which audit committee variables were not significant in the presence of board variables (Carcello, 2002), this study notes a significant, positive relationship between the number of audit committee financial experts and audit fees. This outcome is important because it indicates the growing impact of financial experts on the cost of audits. In addition, it is noteworthy that when audit committee meeting frequency rather than board meeting frequency is utilized as a measure of diligence, it is not statistically significant. This outcome differs from previous findings (Abbott, 2003), and suggests the increasing role of the board and the positive association between its meeting frequency and audit fees.

PRIOR RESEARCH STUDIES AND BACKGROUND

Several research papers document the observed relationship between audit fees and measures of corporate governance. The characteristics of the board of directors can influence audit costs because in executing its monitoring duties the board seeks "to protect its reputational capital, to avoid legal liability and to promote shareholder interest by purchasing differentially higher audit quality" (Carcello, 2002). In addition, the auditor may provide higher quality assurance services if it is understood that the board (i.e. the client) is "particularly high quality and demanding". (Carcello, 2002). In their study *Board Characteristics and Audit Fees*, Carcello et al examined the relationship between audit fees and measures of board independence (percentage of outside directors on the board), board diligence (number of board meetings) and board expertise (average number of other director positions held by non-management directors). Using sample data for fiscal years ending between April 1992 and March 1993 for "Big 6"- audited Fortune 1000 companies, all three board measures were found to have a significant, positive relationship with audit fees.

Further, the study examined separately the impact of comparable variables for the audit committee on audit fees, given its critical role of interacting directly with the external auditor. Audit committee independence and expertise both had a significant, positive relation with audit fees, but audit committee diligence (i.e. number of meetings) was not significant. Interestingly, when the three measures of independence, diligence and expertise for both the board and the audit committee were included in their regression model, all three board measures persisted in having significant, positive association with audit fees but none of the audit committee variables were significant.

In *The Association between Audit Committee Characteristics and Audit Fees*, researchers noted that "audit committees seeking a higher level of audit assurance could demand a greater level of audit coverage resulting in higher audit fees" (Abbott, 2003). They tested the relation between audit fees and attributes of the audit committee using more recent 2001 sample data of "Big 5"- audited companies. Both audit committee independence (composed entirely of outside, independent directors) and audit committee financial expertise (at least one member with financial expertise) had significant, positive associations with audit fees, while audit meeting frequency (meeting at least four times annually) was not significant. (Abbott, 2003) These results were different from those of Carcello et al, because these audit committee quality measures were significant in conjunction with board variables included as control variables. Board meeting frequency and board independence were also statistically significant in positively affecting audit fees, although board expertise was not. Thus, the findings of Abbott et al expanded those of Carcello, suggesting that audit committee attributes can also have an impact on audit costs.

These studies contributed to the examination of corporate governance measures and their influence on audit fees in a pre-SOX environment. However, the impact of SOX on the role and functions of both the board and the audit committee in the 21st century renders the results of these studies outdated. Empirical studies prior to SOX focused on the relationship between audit fees and audit committee characteristics (independence of committee members and financial expertise of committee members) that were recommended as "best practices" but were not required. These recommendations stemmed largely from the report of the Blue Ribbon Committee on Improving the Effectiveness of Corporate Audit Committees, sponsored by the New York Stock Exchange and the National Association of Securities Dealers. Since SOX, many of these recommendations have been legislated, and public companies have reacted to the need to "restructure the board of directors and the audit committee to effectively undertake the new responsibilities assigned by the Sarbanes-Oxley Act" (The Sarbanes-Oxley Act and Evolution of Corporate governance, CPA Journal, March 2004).

Several significant changes legislated by SOX and the SEC affect corporate governance. The first relates to independence: there are more stringent standards for defining independence and it is now mandated that all audit committee members be independent and a majority (2/3) of the board of directors must be independent. In addition, the audit committee also must have not only members who are all "financially literate" but also at least one member who is a "financial expert", and the criteria for satisfying that role is more clearly delineated. Finally, both the board and the audit committee are much more empowered entities than they were previously. The authority and responsibilities of the audit committee have been augmented. Among other things, the audit committee now determines the appointment of and compensation for the company's independent auditors (previously administered by the board), and also must pre-approve all audit and non-audit services provided by the independent auditors. As well, the board is now required to establish and disclose its corporate governance guidelines; it must also establish a nominating/corporate governance committee and a compensation committee, in each case composed entirely of independent directors. Further, the chief executive officer is required to certify annually that he or she is not aware of any violation by the company of the NYSE's corporate governance listing standards.

HYPOTHESES

The monitoring of the financial reporting process is of critical importance in the post-SOX time period, in which board members and their audit committees are being held to increased standards of performance. Given these conditions, it is fitting to examine the connection between audit fees and corporate governance characteristics in the context of this new reporting and disclosure environment. Four hypotheses are set forth below related to audit fees and the attributes of the board and its audit committee.

Board of Directors Expertise

Directors have a fiduciary responsibility to exercise care in monitoring management and to act judiciously in establishing and carrying out corporate strategy to maximize shareholder wealth. Directors who are involved in a greater number of boards are likely to possess an increased level of expertise in achieving these goals. Furthermore, through service on multiple boards, they have invested significant time and effort into developing reputational capital, and will seek to sustain their professional standing. More experienced directors want to avoid legal liability and do not want to be associated with corporate failures or fraud, and therefore will support the purchase of higher than normal audit services to insure appropriate financial reporting and disclosure.

Board expertise is measured by the average number of additional directorships held by the directors of the board. Firms with stronger corporate governance through greater board expertise will seek higher quality financial reporting, which leads to higher audit fees and this hypothesis:

> *H_1: There is a positive association between audit fees and board of directors' expertise*

Board of Directors Diligence

Meeting frequency is an indication of and a proxy for board of directors' conscientiousness. A board that meets more frequently can increase the effectiveness of its oversight role by being more aware and knowledgeable of important corporate, strategic and financial reporting issues and concerns. SOX has added to the board's plate the need to address SOX compliance issues, such that directors find "they are spending so much time with the audit committee and issues related to legal and ethical considerations" (Eckbo). As a result, boards that meet more often can interact with the audit committee, and thus may influence audit activity and coverage during various stages of the audit, leading to this hypothesis:

> *H_2: There is a positive association between audit fees and board of directors' meeting frequency*

Audit Committee Financial Expert

The audit committee is a subgroup of the corporation's board of directors. Under SOX, the audit committee selects the independent audit firm for ratification by the stockholders, sets the external auditor's fees, and reviews the scope of the auditor's services. All audit committee members of publicly held firms are required to possess financial literacy, and must now include at least one financial expert. An "audit committee financial expert" possesses the appropriate educational background, prior experience as a chief financial officer and/or chief executive officer, understanding of generally accepted accounting principles and financial statements, and may also have membership on various audit committees. Audit committee members who are financial experts "provide additional support for the external auditors when discussing or negotiating auditing issues and/or audit scope with management. Such expertise allows audit committee members to better understand the auditing issues, risks, and the audit procedures proposed to address these issues and risks." (Abbott, 2003) Thus, an audit committee with more financial experts can enhance the competence of the committee and the quality of its role in the financial reporting process. In turn, an audit committee with more financial experts will affect its execution of responsibilities to seek a higher quality audit from its auditors, which leads to higher audit fees, leading to this hypothesis:

> *H_3: There is a positive association between audit fees and the number of audit committee financial experts*

Audit Committee Diligence

Meeting frequency is an indication of and a proxy for audit committee diligence. A committee that meets more frequently will be more aware and knowledgeable of significant accounting, reporting and auditing concerns. With the passage of SOX, "the workload is more detailed, demanding and increasingly somber" such that "audit committee members must be willing to attend more frequent and longer meetings." (Sweeney, 2002) Thus, audit committees that have more meetings per year can influence audit activity and coverage during various stages of the audit, leading to this hypothesis:

> *H_4: There is a positive association between audit fees and audit committee meeting frequency*

REGRESSION MODELS

Two empirical models are used to test the hypotheses. The first model tests the association between audit fees and board of directors' diligence, board of directors' diligence, and audit committee financial experts.

MODEL 1:

$$LNAF05 = \beta_0 + \beta_1 BODMTG + \beta_2 AVGOSDIR + \beta_3 FINEX + \beta_4 ARPERC + \beta_5 INVPERC + \beta_6 LEVERAGE + \beta_7 SUBSID - \beta_8 SUBSID^2 + \beta_9 TA - \beta_{10} TA^2$$

LNAF05 =

The dependent and independent variables are defined as follows:

LNAF05: Consistent with many previous studies on audit fees, the dependent variable is the natural log of 2005 audit fees (expressed in millions of dollars).

BODMTG: Board of directors' diligence is measured as the number of meetings of the board held during the year as disclosed in the proxy statement.

AVGOSDIR: Board of directors' expertise is measured as the average number of outside directorships held by directors.

FINEX: Audit Committee expertise is measured as the number of financial experts who serve on the committee.

In addition to these test variables, a variety of control measures are used that have been found in prior literature to typically have a positive effect on audit fees. These control variables include: (1) the complexity of the audit, as measured by several factors: the proportion of total accounts receivable relative to total assets *(ARPERC)*, the proportion of total inventory relative to total assets (*INVPERC*) and the number of subsidiaries *(SUBSID);* (2) the size of the client, as measured by total assets *(TA);* and (3) the risk of the client, as measured by total debt divided by total assets *(LEVERAGE)*. The *SUBSID* and *TA* variables are also squared (*SUBSID2* and *TA2)*, given the expectation that audit fees will increase with the number of subsidiaries and total assets, respectively, but at a decreasing rate.

The second empirical model includes the same measures of board and audit committee expertise, but substitutes audit committee diligence (*AUDMTG*) for board of director diligence to test its association with audit fees. *AUDMTG* is measured as the number of meetings of the audit committee held during the year as disclosed in the proxy statement.

MODEL 2:

$$LNAF05 = \beta_0 + \beta_1 AUDMTG + \beta_2 AVGOSDIR + \beta_3 FINEX + \beta_4 ARPERC + \beta_5 INVPERC + \beta_6 LEVERAGE + \beta_7 SUBSID - \beta_8 SUBSID^2 + \beta_9 TA - \beta_{10} TA^2$$

SAMPLE SELECTION

A random sample of 100 companies was selected from the Fortune 500 listing for the year 2005. Fortune magazine compiles and publishes the list annually, which is a ranking of the top 500 United States public corporations as measured by gross revenue, although eligible companies are any for which revenues are publicly available. Only firms which were audited by the Big Four were included in the sample since prior research indicates that services provided by large audit firms have different price structures; that is, clients who engage larger firms tend to pay higher fees than those which obtain audit services from regional auditing firms. A distribution of the sample, by industry, is presented in Table 1, (all tables are included in the appendix at the end of the article) and reflects that nearly half of the companies in the sample operate in the manufacturing sector.

DESCRIPTIVE STATISTICS

Descriptive statistics of the variables used in the regression models are presented in Table 2. The average 2005 audit fee for the sample companies was \$8.02 million. The average decline in audit fees from 2004 was 8% with 68% of firms in the sample experiencing a decline in audit fees while 38% experienced an audit fee increase (not reported in Table 2). The average number of outside directorships held by board members was 1.98 (minimum of .14 and maximum of 5.22) while the average number of financial experts was 2.24 (minimum of 1 and maximum of 6). Board of director meetings averaged 8.56 (minimum of 4 and maximum of 26) while the average number of audit committee meetings was 9.47 (minimum of 4 and maximum of 22).

A correlation matrix of the dependent and independent variables is presented in Table 3. Three of the test variables are correlated with the natural log of 2005 audit fees (*LNAF05*) with the average number of outside directorships held by board members (*AVGDIROS*) exhibiting the largest correlation at .40 (*p-value <.0001*). Among the control variables, total assets (*TA*) and number of subsidiaries (*SUBSID*) reflect the largest correlation with *LNAF05* at .52 (*p-value <.0001*) and .25 (*p-value <.0108*), respectively. Inventory as a percentage of total assets (*INVPERC*) indicates a surprising correlation with *LNAF05* of -.49. Among the explanatory variables, the two largest correlations are (1) .34 (*p-value <.0005*) between the number of audit meetings (*AUDMTG*) and number of board of director meetings (*BODMTG*) and (2) .32 (*p-value <.001*) between total assets (*TA*) and the average number of outside directorships held by board members (*AVGDIROS*).

REGRESSION RESULTS

Table 4 summarizes the results from three audit fee regressions. The Control Model regresses *LNAF05* on only the seven control variables included in the empirical models. Model 1 regresses *LNAF05* on the control variables and the three test variables related to board meeting frequency, board of director expertise, audit committee financial experts (*BODMTG*, *AVGDIROS*, and *FINEX*). Model 2 regresses *LNAF05* on the same variables as Model 1 except it substitutes audit committee meeting frequency (*AUDMTG*) for board meeting frequency (*BODMTG*).

The Control Model, which regresses *LNAF05* on control variables reflects an adjusted R^2 of .497. All of the control variables are significantly associated with audit fees in the predicted direction, with two exceptions. *LEVERAGE* is positively related as expected, but not statistically significant. This result is likely because the firms comprising this sample, despite their varying degrees of debt, are large, stable corporations; in addition, the incremental costs of auditing contractual debt obligations is not dramatically affected by the magnitude of the debt. In contrast, *INVPERC* is negatively associated with audit fees and statistically significant. This outcome is contrary to expectations and cannot readily be explained. This peculiar result differs from that noted in prior studies cited in this paper, in which a comparable variable was either statistically insignificant or had a positive, significant association with audit fees.

Model 1, which regresses *LNAF05* on the control variables and the three test variables related to board of director meeting frequency (*BODMTG*), board of director expertise (*AVGOSDIR*) and audit committee financial experts (*FINEX*) has an adjusted R^2 of .53. All three attributes reflect a significant, positive association with audit fees, thereby providing support for Hypotheses 1, 2 and 3. In terms of the degree of impact these explanatory variables have on audit fees, holding one additional board meeting results in a 3% increase in audit fees, while increasing average outside directorships by one results in a 14% increase in audit fees. Using the average audit fees for 2005 of $8.02 million, these effects are equivalent to a $240,000 and $1.04 million increase, respectively, in audit fees. The presence of one additional financial expert on the audit committee raises audit fees by 8 percent, equivalent to a $642,000 increase. Thus, these effects are of consequence. The coefficients and significance for the control variables are consistent with those indicated in the Control Model.

Model 2 regresses *LNAF05* on the same variables as Model 1, but substitutes audit committee meeting frequency (*AUDMTG*) for board of director meeting frequency (*BODMTG*) as the measure of diligence. This regression results in an adjusted R^2 of .52, negligibly lower than Model 1. Both variables measuring expertise (*AVGDIROS* and *FINEX*) reflect a positive, significant association with audit fees; their coefficients are consistent with those in Model 1 as are the observed results for the control variables.

However, although audit meeting frequency (*AUDMTG*) has the expected positive relationship with audit fees, it is not statistically significant. Model 2 thus supports Hypotheses 1 and 3, but not Hypothesis 4. Substitution of audit committee meeting frequency for board meeting frequency in Model 2 sheds an interesting light on the greater relative impact of the board as a whole versus the audit committee on audit fees.

CONCLUSION

This study is an initial effort to examine the relationship between various board and audit committee characteristics and audit fees in the post-SOX corporate reporting environment. Although there is a limited amount of literature which focuses on the relationship between audit fees and corporate governance prior to the implementation of SOX, it was chiefly focused on only board of directors' characteristics. This empirical study examines the impact of both board and audit committee factors on audit fees, using more current audit fee data and reporting disclosures, which reflect the impact of the SOX requirements and SEC regulations of the early 21st century.

The results support the theory that higher quality corporate governance as measured by board diligence and expertise as well as audit committee financial expertise is associated with higher audit costs. Consistent with prior studies, it reflects audit committee meeting frequency is not associated with audit fees. Of particular note, the results differ from pre-SOX studies because they reveal the influence of both financial experts and board expertise on audit fees, when both board and audit committee variables are included in the empirical model. This signifies a shift toward the increasing influence of experts on external audit costs in the post-SOX environment.

This paper is subject to a number of limitations. First, the sample represents only very large public companies so the results may not apply to corporations of smaller sizes. Second, there may be other corporate governance factors not captured in this study which correlate with audit fees. However, the analysis uses more recent financial information, examines audit fees after the implementation of SOX, and finds a concurrent link between audit fees and board and audit committee variables (board diligence, board expertise, and audit committee expertise). Thus, this study adds to the growing body of literature that finds a connection between several facets of corporate governance and the fees paid for financial reporting and auditing.

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TABLE 1

Sample Industry Distribution (*n*=100)

SIC Code	*Industry*	*Number of Observations*
1000-1999	Mining, Construction	5
2000-2999	Manufacturing-Food, textiles, lumber, chemicals	26
3000-3999	Manufacturing-Rubber, metal, machinery, equipment	23
4000-4999	Transportation, Communication, Utilities	17
5000-5999	Wholesale, Retail	17
6000-6999	Finance, Insurance, And Real Estate	5
7000-9999	Services	7
Total		100

TABLE 2

Descriptive Statistics (*n*=100)

Variable	Mean	Standard Deviation	Minimum	Maximum
AF05	8.02	6.67	0.89	33.77
lnAF05	1.74	0.87	-0.12	3.52
arperc	12.42	10.65	0.00	61.23
invperc	13.65	17.65	0.00	80.38
leverage	59.54	19.53	15.61	125.07
Subsid	167.02	238.70	1.00	1,469.00
TA	25,656.00	36,404.00	1,313.00	208,335.00
FinEx	2.24	1.44	1.00	6.00
AudMtg	9.47	3.77	4.00	22.00
AvgDirOS	1.98	0.95	0.14	5.22
BODMtg	8.56	3.62	4.00	26.00

Notes:

AF05	2005 audit fee in millions of dollars
lnAF05	natural log of 2005 audit fee in millions of dollars
arperc	total accounts receivable as a percentage of total assets
invperc	total inventory as a percentage of total assets
leverage	total debt as a percentage of total assets
Subsid	number of subsidiaries
TA	total assets in millions of dollars
FinEx	number of financial experts
AudMtg	number of audit committee meetings
AvgDirOS	average number of outside directorships held by directors
BODMtg	number of board of director meetings

TABLE 3

CORRELATION MATRIX (*n*=100)

(p-values in italics)

	arperc	invperc	leverage	Subsid	TA	FinEx	AudMtg	AvgDirOS	BODMtg
lnAF05	**0.11**	**-0.49**	**0.08**	**0.25**	**0.52**	**0.19**	**0.10**	**0.40**	**0.20**
	0.288	*<.0001*	*0.4326*	*0.0108*	*<.0001*	*0.0586*	*0.3416*	*<.0001*	*0.0432*
arperc		**-0.11**	**0.08**	**0.05**	**-0.24**	**-0.01**	**0.02**	**-0.03**	**-0.10**
		0.2781	*0.4221*	*0.6207*	*0.018*	*0.9142*	*0.8685*	*0.8002*	*0.3179*
invperc			**-0.10**	**-0.10**	**-0.28**	**-0.07**	**-0.10**	**-0.28**	**-0.19**
			0.3413	*0.3346*	*0.0043*	*0.4929*	*0.3381*	*0.0046*	*0.0543*
leverage				**0.07**	**0.01**	**-0.06**	**0.08**	**0.08**	**0.14**
				0.4825	*0.9581*	*0.575*	*0.4395*	*0.4163*	*0.1672*
Subsid					**0.19**	**-0.02**	**-0.07**	**0.12**	**-0.01**
					0.0575	*0.8264*	*0.4702*	*0.2183*	*0.8871*
TA						**0.16**	**0.04**	**0.32**	**0.18**
						0.1107	*0.6881*	*0.001*	*0.0814*
FinEx							**-0.02**	**-0.05**	**0.02**
							0.8362	*0.6448*	*0.8254*
AudMtg								**-0.17**	**0.34**
								0.0845	*0.0005*
AvgDirOS									**0.00**
									0.9728

TABLE 4

Audit Fee regression results (*n*=100) *significant at 5%

(Dependent variable = LNAF05) **significant at 10%

	Control Model:				**Model 1:**				**Model 2:**			
Variable	**Coefficient**	***t*-statistic**	***p*-value**		**Coefficient**	***t*-statistic**	***p*-value**		**Coefficient**	***t*-statistic**	***p*-value**	
Intercept	0.91187	3.43	0.0009	*	0.20745	0.61	0.5450		0.28984	0.82	0.4143	
AudMtg									0.01955	1.16	0.2473	
BODMtg					0.03181	1.82	0.0724	**				
FinEx					0.08460	1.98	0.0510	*	0.08592	1.98	0.0503	*
AvgDirOS					0.14389	2.00	0.0481	*	0.15310	2.06	0.0421	*
Arperc	0.02030	3.17	0.0021	*	0.02086	3.35	0.0012	*	0.01927	3.08	0.0027	*
Invperc	-0.01342	-3.44	0.0009	*	-0.01074	-2.77	0.0067	*	-0.01155	-2.98	0.0037	*
leverage	0.00168	0.52	0.6064		0.00091	0.29	0.7748		0.00136	0.43	0.6698	
Subsid	0.00145	2.14	0.0352	*	0.00159	2.42	0.0175	*	0.00153	2.31	0.0231	*
Subsid2	0.00000	-1.94	0.0556	*	-0.000001	-2.18	0.0317	*	0.00000	-2.04	0.0440	*
TA	0.00003	5.26	<.0001	*	0.000026	4.77	<.0001	*	0.00003	4.56	<.0001	*
TA2	0.00000	-3.57	0.0006	*	0.000000	-3.51	0.0007	*	0.00000	-3.27	0.0015	*

NOTE: Diagnostics on these regressions revealed that multicollinearity is not a problem.

HORSES, REAL ESTATE AND THE HOBBY LOSS DEBATE

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ABSTRACT

The taxation of many businesses in the United States comes within the scrutiny of the Internal Revenue Service looking at whether the business was entered into with a profit motive. The scrutiny arises from activities which many times contain an element of pleasure for the taxpayer or a member of the taxpayers' family. When dealing with the horse industry, the Internal Revenue Service will focus upon the possibility of a profit occurring in the business and the intent of the taxpayer for entering the activity. This paper will explore the background of hobby losses and the use of profitability from the underlying assets in the horse breeding and training industries and how these assets may be able to satisfy the tests for the activity to be classified as a for profit business and the allowance of tax losses on a taxpayers tax return.

INTRODUCTION

The collection of tax in the United States is accomplished through a process of self reporting using an annual reporting period. This self reporting process creates a scenario where taxpayers must interpret an ever complex set of laws which are continually evolving over time. The starting point for the tax law comes through Bills enacted by Congress and the cumulative enactments have been codified into the Internal Revenue Code of 1986 (hereinafter referred to as the "Code") (CCH 2007). The complexities that have developed over time have been explained through Administrative pronouncements, such as Regulations and Revenue Rulings, and through Court decisions.

The starting point for the collection of tax is through the determination of income. I. R. C. §62(a) (CCH 2007) defines the term "income" broadly to include all income, clearly realized from whatever source derived. While the definition of income has been subject to much litigation, the concept of realization has been deemed to require an exchange of property from which the gain proceeding from the ownership of the property is to be separated from the ownership of the property (*Eisner*, 1920). The mere change in market values proceeding from the ownership of property does not impact the current taxable income of a taxpayer.

The realization concept presents a scenario where reporting different types of income from a business undertaking can occur in multiple tax years. An example of this concept occurs for virtually every business where sales which occur in the ordinary course of its trade or business are reported annually while the change in value of the underlying assets used to produce the sales are reported only upon the sale or exchange of these assets. While this seems to run contrary to the annual reporting period concept, the annual reporting of income and matching deductions is necessary for the smooth collection of tax over time.

While the Code provides a broad definition of income, the allowance of deductions is much more restrictive. Deductions are permitted under I. R. C. § 162 for the ordinary, necessary and reasonable expenses of carrying on a trade or business of the taxpayer and under I. R. C. § 212 for the expenses incurred in connection with activities engaged in for the production or collection of income or for the management, conservation, or maintenance of property held for the production of income (CCH 2007). The Code makes it clear that any deduction associated with a trade or business not entered into for profit shall not be deductible against the gross income of the trade or business but as it would be treated if it were a personal deduction of the taxpayer, generally an itemized deduction, and the total deductions would be limited to the income of the trade or business (I. R. C. §183 CCH 2007).

The determination of whether a trade or business is entered into for profit or whether it will be treated as not entered into for profit (referred to as a "Hobby") is to be made by reference to all of the facts and circumstances of each case. Although part of the facts and circumstances requires a reasonable expectation of profit, a profit reported on the tax return of the taxpayer is not required. The facts and circumstances must indicate that the taxpayer entered into the activity, or continued the activity, with the objective of making a profit. In making the determining of whether or not such an objective exists, it may be sufficient that there is a small chance of making a large profit (26 CFR § 1.183-2(a)).

ACTIVITIES NOT ENTERED INTO FOR PROFIT

I. R. C. § 183 (CCH 2007) defines an activity not engaged in for profit as one for which a deduction is not allowed under either I. R. C. §§ 162 or 212 paragraphs 1 or 2 (CCH 2007). I. R. C. § 183 (d) (CCH 2007) creates a reputable presumption that an activity is for profit if it can show that the gross income of the business for three or more tax years out of five consecutive years exceeds the deductions attributable to the gross income. This presumption is expanded to two years out of seven for any activity that has a major part of the breeding, training, showing or racing of horses.

When evaluating a trade or business for the purposes of determining a profit motive, the Internal Revenue Service does not look exclusively at profits and losses but at a list of enumerated factors. The factors are:

(1) The manner in which the taxpayer carries on the activity;

(2) The expertise of the taxpayer or his advisers;

(3) The time and effort expended by the taxpayer in carrying on the activity;

(4) The expectation that the assets used in the activity may appreciate in value;

(5) The success of the taxpayer in carrying on other similar or dissimilar activities;

(6) The taxpayer's history of income or losses with respect to the activity;

(7) The amount of occasional profits, if any, that are earned;

(8) The financial status of the taxpayer; and

(9) The elements of personal pleasure or recreation involved in the activity (26 CFR § 1.183-1(b)).

While some taxpayers focus upon these factors, they are not the only ones the Internal Revenue Service (hereinafter referred to as the "Service") will focus upon. The Service has an extensive list of questions that are asked through the initial interview with the taxpayer or their representative which can provide data in making an initial determination by the Service of whether the activity may be either for profit or not for profit. (MSSP, 2001) Since no one factor has been determinative in making an assessment of for profit status, previous studies of Court decisions have found that conducting a trade or business in a business like manner was "of primary importance" (Hereth p. 52). While this is not the only factor that must be considered, many of the factors in proving a business like manner can be controlled by the taxpayer, such as creating business plans and in the use of business specialists to reduce expenses or increase revenues.

The Service looks extensively at the first factor, the manner in which the taxpayer carries on the activity, in their Market Segment Specialization guide (MSSP, 2001). In this guide the Service specifies that the Internal Revenue Service Agent (hereinafter referred to as "Agent") look to the books and records of the activity, business plan, methods of operation, and efficiency of operation during the course of an audit of the taxpayers tax return (MSSP, 2001). In the guide the Service also gives an example of when conflicting results occur and advises Agents to be mindful of a form over substance circumstance. In one specific example, the Service discusses a taxpayer who is depreciating show horses while at the same time "contended that these same show horses are being held for resale" (MSSP, 2001). In this case a taxpayer would be trying to use the first factor to show that the business is being conducted in a business like manner through the depreciation being taken on the assets while at the same time trying to show that the expectation that the assets used in the activity may appreciate in value, therein meeting the fourth enumerated factor.

The Courts have looked at the development of the enumerated factors by the Service and the taxpayers in establishing an expectation that a business was entered into for profit. In looking at the factors the Courts did not count the factors with the majority winning, but evaluated them and made a judgment based upon a totality of the facts and circumstances of an individual case (*Dunn*, 1978). In *Engdahl v. Commissioner*, the Court looked at all the factors and found in favor of the taxpayer citing the fact that the taxpayer had put personal labor into the venture by working on the ranch operation personally, gained no personal pleasure activities from the operation, kept complete books and records of the operation, and had relied upon advise from competent professionals in the conducting the business of the ranch's horse breeding activities (Engdahl, 1979).

In two cases, *Golanty v. Commissioner and Dunn v. Commissioner*, the Courts recognizing all the factors also focused upon the intention of the taxpayer to make a profit. The Court in *Dunn* found the "manifestations of a business" to be unconvincing and found that the taxpayers long time interest in horses and the active involvement with them in other ways to be a strong indicator of a hobby rather than a for profit business. The Court in *Golanty* found the record of losses extending beyond the formative years of the business and the "unlikelihood of achieving a profitable operation" to be a true bearing of the intention of the taxpayer to have entered into a business for profit (*Golanty*, 1979 and *Dunn*, 1978).

In both the *Golanty* and *Dunn* cases, the Courts took into consideration all the enumerated factors from the regulations while evaluating the following factors together: #6 The taxpayer's history of income or losses with respect to the activity; #7 The amount of occasional profits, if any, that are earned; #8 The financial status of the taxpayer; and #9 The elements of personal pleasure or recreation involved in the activity. In these discussions the fact that the taxpayers' accumulated losses from the operations would exceed the future net earnings of the businesses was also an issue. In neither of these cases did the taxpayers raise the issue of the underlying value of the assets, factor #4, being a specific factor supporting the increase in the future net income of the business to a point where future profitability could show an overall profit motive (*Golanty*, 1979 and *Dunn*, 1978).

The fourth factor, the expectation that the assets used in the activity may appreciate in value, involves looking at the intent of the taxpayer at the time of acquisition of the property and during the holding of the property. The issue is the determination of how many business activities the taxpayer is actually involved in with the land. The activities can be both the holding of the land for investment and a horse farm operation or only a horse farm operation of which the land is considered an integral part thereof. When the land is acquired with the primary intent of profiting from the increase in market value of the property and the taxpayer also uses it for a farming operation and the ownership is considered two activities, special rules are enumerated. The special rule states that the farming operation and the holding of the land will only be considered a single operation when the income from the farming operation exceeds the deductions directly associated with the farming operations with the excess reducing the net costs of holding the land for appreciation purposes (26 CFR § 1.183-1(d)(1)).

To illustrate the ascertainment of an activities status where several activities could be treated as separate activities or one activity, Table I presents two situations. If the intent of the taxpayer is shown to be the acquisition of land for appreciation purposes, the special classification rule in the Regulations controls. Consequently, in situation 1, the cost of holding the land for appreciation would be considered a part of a single activity due to the income from farming exceeding the direct deductions attributable to it. In situation 2, however, there would be two separate activities since the farming operation does produce an excess of revenue over deductions and consequently does not assist with the offsetting of the lands deductions. Situation 2 presents the taxpayer with the issue of demonstrating a business purpose without using the increase in value of the underlying asset to offset any loss that may exist.

Table I
Ascertainment of Activity (26 CFR § 1.183-1(d)(1))

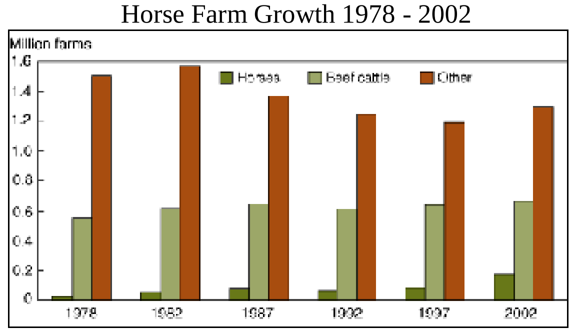
	Situation 1	Situation 2
Farm Income	$10,000	$5,000
Farm Deductions	$7,000	$7,000
Surplus (Deficit)	$3,000	($2,000)
Land Deductions	$5,000	$5,000

HORSE OPERATIONS

"There is more to horse racing than a fast horse" (Hereth 51). When it comes to reporting the income and deductions from the breeding, training, showing or racing of horses this statement is very true. The ability to construct a business model for a horse related activity that will meet the form and substance necessary to withstand the scrutiny of the Service becomes of primary importance if the deductions related to the income is to become "above the line" deductions and any losses are to be deductible against other forms of income. Business models constructed in this manner can be referred to as horse shelters since tax savings are a motivating factor for into the transaction or activity and the savings also represent a key component in the positive cash flow of the plan (MSSP, 2001).

The business plan developed should address each of the criteria utilized by the Service as enumerated in the Regulations. In developing a business plan the taxpayer should be prepared by a competent professional with experience in developing business plans. The plan should also address the need for the underlying assets, such as land, to be used in making the horse operation a success. Including the use of the underlying asset in the plan can be used to overcome the intent of the taxpayer to be interpreted as buying the underlying asset for investment purposes. The Court in *Myrick* found that an expectation that land purchases for a horse operation may increase in value would not preclude the taxpayer from utilizing the appreciation as income for purposes of determining a business purpose. This decision was reached because the taxpayers showed that the land would be used in horse boarding/riding/training activities and the increase in value was a safeguard in case the horse operation may not have been successful (*Myrick*, 1990).

Table 2
Horse Farm Growth 1978 - 2002



(Offutt, 2006)

The increase in the number of horse farms, shown in Table 2, is attributable to the growth in participatory horse activities including horse shows. This increase in horse farms is coming at the same time that the horse racing industry has declined over the same time (Offutt, 2006). While there has been an increase in horse farms, the increase is coming from the same areas of horse activity that have a component of personal pleasure that the Service has shown an interest in investigating for not for profit status. When evaluating the increase in value of farmlands and the level of interest in horse farms, the use of the underlying value of the assets to justify an activities loss as being for profit becomes more attractive for use by taxpayers. This also means that the value of the farm land becomes important in times of inflation and deflation in real estate prices.

Table 3 Farm Real Estate Values, By Farm Production Region, January 1 For Selected Years							
Region	1982	1987	2000	2001	2002	2003	2004
$/acre							
Northeast	1,367	1,491	2,660	2,830	3,000	3,200	3,400
Lake States	1,234	707	1,560	1,700	1,870	2,010	2,220
Corn Belt	1,642	900	1,890	1,950	2,030	2,130	2,300
Northern Plains	547	331	535	556	576	594	632
Appalachian	1,083	1,004	1,990	2,120	2,250	2,370	2,500
Southeast	1,095	1,055	1,920	2,030	2,140	2,270	2,420
Delta States	1,135	757	1,270	1,330	1,390	1,490	1,550
Southern Plains	576	532	672	715	755	788	832
Mountain	325	257	448	471	500	523	550
Pacific	1,346	1,084	2,000	2,120	2,240	2,350	2,480
48 States	823	599	1,090	1,150	1,210	1,270	1,360
Source: National Agricultural Statistics Service, USDA. Table 1.2.1 (Wiebe, 2006)							

When considering the value of farmland, Table 3 illustrates that farmland values increased rapidly during the decade of the 1970's and continued into the early 1980's. This boom period for farmland values was followed by a sharp decline during 1982 to 1987 time period. The trend then turned upward with the average farmland values in the Nation increasing 127 percent, from $599 per acre to $1,360 in January 2004. Adjusted for inflation this amounts to a 53-percent inflation adjusted gain. 2004 marked the 17th consecutive increase since 1987 in the national average value of agricultural real estate. Of significance in looking to farmland values, over the previous 4 years (2000 to 2003) in particular, farm real estate values had increased substantially in all U.S. regions (Wiebe, 2006).

The period of farmland ownership through 2004 was a boom period for those looking to divest themselves of the land and realize a gain as well as for those looking to utilize these gains to offset losses from the operation of a horse or other type farm. This level of increase could be used effectively, along with a bona fide business plan, to create a one activity farm operation where the losses from the operations of the farm could be offset by the appreciation in real estate in creating a for profit business model.

FURTHER STUDY

Farmland values continued to rise in 2006 by approximately 13.3 percent and there is anticipation that in 2007 the increase will approach 13.7 percent. Of concern for those utilizing these projected increases in value are the slowly rising interest rates compounded by a crisis in the mortgage market. Non-farming demand for farmlands to be used for recreation and/or non-farm development may offset the concerns and continue to create upward pressure on farmland values. The relatively low mortgage interest rates and strong demand for housing in the recent past have helped support growth in the residential construction sector creating the demand for the conversion of farmland into residential property. However, the demand for new home construction is decreasing based upon data reported in late 2006 and in spring 2007. Since new housing starts are one of the indicators of the economic conditions in the United States, this may also dampen the increases in value of farmland (Farm Assets, 2007).

The changes in the market value create a concern for those utilizing the expectation that the assets used in an activity may appreciate in value. These taxpayers are faced with a possible decline in the income offset of deductions and the possible interpretation of this being that the business was not entered into for profit. A further review of farmland prices and the demand for real estate can be completed as a means of projecting the impact upon the hobby loss determination. In addition, a further analysis of Court decisions involving the use of the underlying asset values needs to be accomplished.

The focus of the further study would be to develop strategies and changes in the existing system of determining hobby losses. The current system provides an elaborate and complex set of rules from statutory, legislative and judicial sources. The solution could focus upon the same set of recommendations that George K. Yin, Chief of Staff of the Joint Committee on Taxation, made when testifying before Congress. His testimony outlined five principles to follow in crafting a solution through legislative means.

1. Simplify the tax code;
2. Rely on objective, third party verification;
3. Avoid having tax consequences depend upon difficult factual determinations;
4. Treat income and deductions consistently; and
5. Supplement technical rules with standards. (Testimony of Joint, 2005)

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ALTERNATIVE ENERGY HYBRID AUTOMOBILE TAX SUBSIDIES: AN ANALYSIS OF COSTS AND BENEFITS TO THE TAXPAYER AND PUBLIC

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ABSTRACT

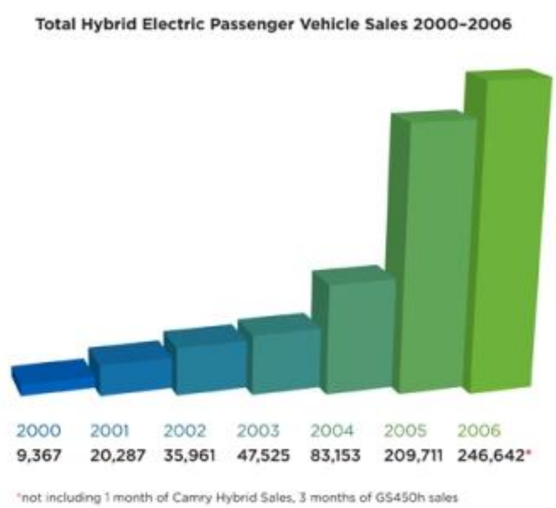
The 2005 Energy Act was the first major energy bill in many years. In it, there were several tax incentives for the adoption of alternative energy items that would reduce the national dependence upon fossil fuels such as the purchase of solar power systems, fuel cell systems, hybrid automobiles, etc. This paper focuses upon the hybrid automobile tax subsidy. It examines the magnitude of tax subsidy that would be required to encourage the adoption of hybrid automobiles. The paper will also attempt to identify public benefits of the use of hybrid automobiles and calculate the anticipated public costs and benefits. The emphasis of the paper is on public policy recommendations for tax policy.

INTRODUCTION

Domestic dependence on foreign oil imports has been a significant social and political concern for several years. The Energy Tax Incentives Act of 2005 was one public policy attempt to reduce oil consumption. One part of the law was the provision of tax credits for those who purchased hybrid vehicles. This paper will examine individual costs and benefits of switching to a gas-electric hybrid vehicle from the traditional gasoline version. It will also calculate the magnitude of government subsidy in the form of a tax credit that will be necessary to equate the costs and benefits. The paper will also examine the costs and benefits to the public.

The tax credits for purchasing hybrid gas-electric vehicles allowed under the Energy Tax Incentives Act of 2005 ranged from a maximum of $3150 for the Toyota Prius to $650 for the Honda Accord. The magnitude of the tax credit was computed by the government based upon the improvement in gasoline mileage by converting to a hybrid. The tax credit was reduced by 50% the quarter after the total hybrid-electric sales from a manufacturer exceeded 60,000 vehicles. Toyota was the first manufacturer to exceed the 60,000 sales barrier during the summer of 2006. Thus, beginning October 1, the tax credits on all Toyota gas-electric hybrids were reduced by 50%. The law further states that the credit will be reduced to 25% of its original level after two more quarters. The tax credit will be eliminated two quarters beyond that. Thus, for all Toyota products, their tax credits ended completely on October 1, 2007.

Hybrid vehicle sales have been steadily growing over the past several years. However, the most significant growth has occurred since the passage of the Energy Tax Incentives Act of 2005 as can be seen in the graphic below:[1]



[1] http://www.hybridcar.com/index.php?option=com_content&task=view&id=66&Itemid=45&limit=1&limitstart=3

While automobile sales in through September 2007 were generally weak, hybrid sales exceeded the 2006 total with sales through September 2007 of 263,536. Through 2007, hybrid vehicle sales had grown to 2.2% of all vehicle sales.[2]

2007 Sales

	Share	Hybrid	All Vehicle
April	2.12%	28,330	1,338,836
May	3.01%	47,096	1,564,170
June	2.40%	34,885	1,455,649
July	2.21%	28,895	1,308,946
August	1.72%	25,384	1,478,604
September	1.75%	22,973	1,315,357
Average	2.20%	31,261	1,410,260

ANALYSIS OF NECESSARY ASSUMPTIONS

For this analysis, several simplifying assumptions were necessary. In this section, each assumption will be examined. To the extent possible, the impact of relaxing the assumption will be suggested.

First, the miles driven per year is assumed to be 15,000.[3] This average miles driven per year may be an underestimate. Because the gasoline mileage from the hybrid is likely to be significantly greater than other cars in the household, there may be a tendency to substitute the hybrid vehicle for another in the household that has poorer mileage. Another factor that might suggest that the average for hybrids exceeds 15,000 miles per year is that because the fuel expense is probably lower, there may be a greater tendency to drive an extra amount.

Second, because monthly data on sales for 2005 was unavailable, the annual sales were assumed to be level throughout the year. Normally automobile sales traditionally fall off in the fall (September, October, and November). The impact of this assumption is likely to be underestimating the number of gallons saved and thereby underestimating the value to the public of possibly lower prices as a result of a reduction in demand from the gasoline saving.

Third, the profit margin on a hybrid-electric vehicle and that of the standard gasoline-only version is assumed to be the same. Data on the real manufacturers cost to the dealers was not available and would have been suspect if it was available. The real dealer cost is obscured by dealer rebates and profit sharing programs. It is hard to theorize how the profit margins might differ. If the market segment that purchases hybrids is willing to pay a premium for a more ecologically friendly vehicle, hybrid cars might prove more profitable. On the other hand, manufacturers may be willing to sell the hybrid-electric vehicles at a profit discount for public relations reasons or for improvement of its fleet mileage rating.

It is also assumed that the price of gasoline will continue to rise at about a 10% annual rate over the ten year expected life of the automobile. Further, it is assumed that the battery life will also be ten years. The battery assumption is based upon the battery life of the Honda Insight—the first hybrid to be sold. As of 2007, very few of the battery packs from then Insights from the year 2000 have needed replacement because of battery failure. Also battery life seems to relate less to the miles driven and perhaps more to the number of years in operation.

The hybrid-electric purchaser cost-of-capital is assumed to be 10% to reflect the historic average return on stock market investments. According to research from J.D. Powell, hybrid buyers tend to be older and have higher incomes than other car

[2] http://www.hybridcars.com/market-dashboard/sep07-us-sales.html
[3] From the 2001 National Household Travel Survey http://www1.eere.energy.gov/vehiclesandfuels/facts/2004/fcvt_fotw328.html

purchasers.[4] Consequently, a 10% cost of capital seems reasonable.

Costs and Benefits of Hybrid-electric Ownership

The purchaser of a hybrid vehicle pays a premium for the hybrid technology. Excluded from this analysis are the Toyota Prius and the Honda Insight. These vehicles do not have a gasoline-only model. Below is a table listing the hybrid premium:[5]

	Gas-Only	Hybrid	Premium
Civic	20145	23235	3090
Accord	22300	25695	3395
Prius	16990	20950	3960
Camry	21240	25200	3960
Highlander	27300	33700	6400
RX400h	39915	43345	3430
GS450h	44915	55655	10740
Escape	19770	25265	5495
Mariner	20730	25765	5035

The major advantage of a hybrid-electric technology is, of course, the gas savings. Below is a chart of the expected number of gallons saved annually assuming the car is driven 15,000 miles in a year.[6]

Hybrid Gas Savings

Vehicle	Gallons
Civic	153.04
Accord	48.49
Escape	182.20
Lexus GS	153.11
Lexus RX	200.64
Mariner	135.93
Camry	220.95
Highlander	120.63
Prius	250.83
Insight	189.64

Next, the present value of the gasoline savings was calculated using a 10% cost-of-capital, a first year gasoline price of $2.83 per gallon, and a ten year useful life. The table below shows the hybrid premium, the present value of the gasoline savings, and the current federal tax credit for each of the vehicles still in production. The Honda Insight was excluded because it ceased production in the summer of 2006. The Toyota Prius Hybrid has no direct gasoline-only model. To determine the hybrid premium, it was compared with the Toyota Matrix, a vehicle similar in size and design.

	Hybrid Premium	NPV Gas Savings	2008 Model Credit[7]
Civic	3090	$3,584	1050
Accord	3395	$1,135	N/A
Camry	3960	$5,691	0
Prius	3960	$5,400	0
Highlander	6400	$3,107	0
RX400h	3430	$3,944	2200
GS450h	10740	$5,168	1550
Escape	5495	$4,267	2600
Mariner	5035	$3,501	1950

[4] In 2004, J.D. Powell reports that the average income of a hybrid purchaser is $15,000 a year more. The average age of a hybrid purchaser was ten years older. The income results were confirmed in a 2007 study by the Topline Strategy Group that reported that 71% of the Prius purchasers had annual incomes of greater than $100,000. See http://www.hybridcars.com/hybrid-drivers/profile-of-hybrid-drivers.html.

[5] The prices used in calculating the hybrid premium came from the manufacturer's web sites. They reflect the 2007 prices except for the Honda Accord model which used 2006 prices.

[6] The gasoline savings was calculated by using the average city/highway (combined) for the hybrid model and the gas-only model. The number of gallons needed to drive 15,000 miles was computed for each version. The difference was the number of gallons saved by using hybrid-electric.

[7] As of October 1, 2007 the tax credit for Honda Hybrids has been reduced to $1050 for the hybrid-electric Civic. Beginning April 1, 2008, the credit will be reduce to $525. The credit will cease on October 1, 2008. If sales continue at the current pace for Ford, their tax credits should continue until sometime in 2010. Lexus tax credits should continue in full until December 31, 2010.

Examining the table above, the expected gasoline savings is sufficient to pay for the hybrid premium for the Honda Civic, the Toyota Prius and Camry without the tax credit benefit. In the case of the Ford Escape, the Mercury Mariner, and the Lexus RX400h, the current tax credit with the present value of the gasoline savings is sufficient to pay for the hybrid premium. Gasoline savings and tax credits for the Toyota Highlander and the Lexus GS450h are not sufficient to pay for the hybrid premium.

This study only examined the economic benefits of the gasoline savings and the tax credit. It did not examine the value of state credits.[8] There are other benefits of hybrid technology that might influence their purchase. Research has indicated that the desire to be "green" was a greater motivator in the purchase of hybrids.[9] Another unaccounted benefit for hybrid purchasers in some markets is free parking (hybrid owners are exempt from putting money in parking meters in some areas) and/or quicker commuting (in the Washington DC area, hybrid drivers are allowed in some of the HOV lanes without having to have additional people in the vehicle.) Another benefit for hybrid drivers is the time savings from having less trips to the gasoline station. A Civic driver, for example, saves about 15 trips to the gas station each year. Also, because of the extended range of a hybrid vehicle, the owner is more able to take advantage of gasoline price savings. Another savings is an increased reliability and lowered maintenance. In the latest *Consumer Reports* the Toyota Prius was listed at the most reliable family car.[10] Hybrids with regenerative braking systems have much less wear on their brake pads since the back electromotive force slows the vehicle as it recharges the batteries.

[8] For example, Pennsylvania allows a $500 payment for purchasers of hybrid vehicles.
[9] See http://www.hybridcars.com/hybrid-drivers/prius-popularity-vanity.html
[10] http://www.hybridcars.com/news2/toyota-reliability-slips-hybrid-shines.html

Costs and Benefits of the Federal Tax Credit

The cost to the government of the tax credit is limited to the years 2005 and 2006 for this analysis. The tax credit continues until December 31, 2010. In the analysis of the benefits of the tax credit, only those cars qualifying for the 2005 and 2006 tax years are examined.

In computing the costs to the government, it is assumed that all purchasers took their tax credit. (It is possible that there were some purchasers who did not pay income taxes and chose not to file for a refund or who did not know they were eligible for a tax credit.. To the extent this may have happened, the cost may be overestimated.) Below is a table that summarizes the tax credits paid by vehicle.

Vehicle	2005 in dollars	2006 in dollars
Civic	43,968,800	65,631,300
Accord	10,936,900	7,277,400
Escape	42,763,175	43,743,700
Lexus GS	-	1,382,600
Lexus RX	22,741,400	22,177,100
Mariner	1,946,100	6,581,250
Camry	-	71,073,600
Highlander	46,771,400	81,861,000
Prius	69,937,775	294,838,819
Insight	965,700	1,046,900

Adding the above tax credits, the following were the total costs to the government:

2005 $340,031,250

2006 $595,613,669

The public benefits of these tax credits are theoretically numerous but generally difficult to quantify. The increased fuel efficiency and cleaner burning hybrid-electric engine significantly reduce air pollution. It is difficult to compute the financial public benefit of the reduced vehicle emissions from using a hybrid-electric vehicle rather than the equivalent gasoline only vehicle. These benefits have a more significant economic value in urban areas where poorer air quality imposes significant burdens on the health care delivery systems. It is possible, however to quantify the quantity of the reduction in air pollution. Below is a chart showing the reduction in air pollution per car for each of the four best selling hybrids over their corresponding gasoline only model.[11]

Annual Carbon Footprint Reduction

	Carbon Dioxide (pounds)	Carbon Monoxide (pounds)	Nitrogen Oxide (pounds)
Civic	2717	66	3
Prius	4915	66	3
Camry	3124	66	3
Highlander	4246	53	5

Complicating the economic analysis of the public benefit of reducing pollution is complicated by the location where the vehicle is driven. The value of the reduction in pollution would likely be far greater in a heavily populated region like Los Angles than in relatively smaller area like New Haven, Connecticut. Also, while it is intellectually clear that reduced pollution would lower health care expenses; the science necessary for the calculation is not very well developed. Further, the negative impacts of pollution may well be longitudinal and cumulative and difficulty to detect as they were with cigarette smoking.

Another public benefit of the gasoline savings is a reduction of the dependence upon foreign oil imports. This benefit is equally difficulty to compute. A case can be made that if foreign oil imports were eliminated conflict in the Middle East would be reduced and the United States could significantly reduce its military spending.

Economic theory suggests that if the demand for a product is reduced, the price of that product will fall.

[11] The information in this chart was obtained by using the Gas Mileage Impact Calculator found at: http://www.hybridcars.com/calculator/

It is possible to compute an economic value of that savings. In this study, the public benefit in the form of a lowered gasoline price is computed. First, the number of gallons of fuel that was saved (the reduction in demand) from the hybrid cars purchased in 2005 and 2006 was calculated. Further the number of gallons saved was computed for the next nine years of the ten year economic life of the vehicle.

Next, the average price per gallon of gasoline per month was regressed against the number of gallons of gasoline that was sold per day for each month from January 1993 until July 2007. The coefficient was then used to determine how much the price per gallon was reduced by the drop in demand. An analysis of variance of the regression equation yielded the following results:

Regression Statistics	
Multiple R	0.644069852
R Square	0.414825974
Adjusted R Square	0.4114238
Standard Error	0.3829028
Observations	174

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	17.9	17.9	121.9	9.10E-22
Residual	172	25.2	0.15		
Total	173	43.1			

The calculation of the public benefit of the tax credit yielded the following:

	Credits Paid	Public Benefit of Gasoline Savings
2005	$340,031,250	$133,126,698
2006	$595,613,669	$357,093,277

CONCLUSIONS

As gasoline prices continue to climb, the economic case for the purchase of hybrid-electric technology becomes generally more evident. Already at current prices, four hybrid-electric vehicles have enough gasoline savings to offset the premium necessary to purchase the hybrid model without a tax subsidy in the form of a tax credit. The choice of one of the smaller hybrids such as the Prius, Civic, or Camry is even more obvious in a commuting urban environment.

It is hard to justify tax credits for the purchasers of hybrid-electric cars based solely on the reduction in gasoline prices to the general public resulting from a drop in demand for hybrid owners. However, the cost-benefit of the tax credit may be significantly understated by this research methodology. A hidden assumption behind this methodology is that the purchaser of the hybrid electric first decided to choose between the gasoline only option and the hybrid option. It may well be that the purchaser of the hybrid car is exchanging a vehicle with much poorer mileage for the hybrid model, The gallons saved and the corresponding benefit to the pubic would be significantly greater. For example, exchanging a Buick LaSabre for a Honda Civic would result in a much greater mileage benefit.

It is also possible if the environmental benefits could successfully be quantified in dollar terms, the public health benefits may be enough to significantly lower the gap between the costs and benefits.

Finally if it was possible to economically quantify the military cost savings from a reduced dependence on foreign oil imports, the gap could be eliminated.

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DOES THE SALE OF SUBDIVIDED LAND CREATE CAPITAL GAIN OR ORDINARY INCOME?

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ABSTRACT

Section 1221 of the Internal Revenue Code classifies the sale of subdivided land as the sale of real property held primarily for sale to customers in the ordinary course of business. Therefore, the general rule for the sale of subdivided land is that any gain is treated as ordinary income. However, Section 1237 contains a special rule that allows taxpayers to sell subdivided land and avoid ordinary income treatment of the gain.

Real estate and tax professionals should be aware of the requirements that must be met in order to qualify for Section 1237 capital gains treatment. Even when the requirements are met, a part of the gain will be treated as ordinary income if six or more lots are sold from the subdivision. This paper explains the requirements that satisfy capital gains treatment under Section 1237, and the implications of ordinary income treatment when six or more lots are sold.

INTRODUCTION

Investors are generally aware of the income tax benefits of long-term capital gain treatment. In general, if a capital asset that has been held for more than one year is sold for a gain, then that gain is taxed at a rate of 15 percent for any taxpayer in the 25 percent or higher tax bracket. If a taxpayer is in the 10 percent or 15 percent tax bracket then they pay only 5 percent tax on long-term capital gains. Long-term capital gains tax treatment has the potential to generate huge tax savings, and is available on the sale of any capital asset.

The definition of a capital asset under Internal Revenue Code (IRC) Section 1221 is one of exception. Section 1221 defines a capital asset as all classes of property not specifically excluded. The general items that are commonly understood to be excluded from the capital asset category are those related to a trade or business. Specifically, buildings and equipment used in a trade or business (except as allowed under IRC Section 1231), inventory held for sale in a trade or business, and receivables are not considered capital assets. Most all other assets, including stocks, bonds, and other assets held for investment purposes, are capital assets.

When a capital asset that has been held longer than one year is sold for a gain, the federal income tax savings can approach 60 percent for those in the top tax bracket. If a taxpayer in the highest tax bracket sells a long-term capital asset and recognizes a $10,000 gain, they will pay only $1,500 in federal income tax instead of the $3,500 that would have been paid had the capital gains income been ordinary income. That $2,000 savings on a $3,500 tax represents a more than 57 percent decrease in tax.

THE TAX TRAP OF LAND SUBDIVISION

Without prior warning investors may be inclined to believe that the sale of subdivided land held long-term will afford them the same capital gains benefits as would the sale of any other capital asset. This belief is understandable due to the fact that the sale of single parcel of undivided land held long-term will result in the desirable capital gains treatment. However, one of the exclusions listed in Section 1221 is subdivided land; therefore it is not treated as a capital asset. Since it is not a capital asset it will receive ordinary income tax treatment.

In Section 1221 the Internal Revenue Service (IRS) takes the position that the sale of subdivided land falls under the category of real property held primarily for sale to customers in the ordinary course of business. This position makes subdivided land comparable to inventory, and the sale of inventory results in ordinary income treatment instead of the more beneficial capital gains treatment.

POTENTIAL TAX RELIEF

Section 1237 of the Internal Revenue Code provides potential tax relief for those selling subdivided land. Section 1237 states that to receive capital gains treatment, taxpayers must first meet the following four conditions:

1. The taxpayer cannot be a dealer in real estate.
2. The taxpayer cannot be a corporation.
3. The taxpayer cannot make substantial improvements to the lots.
4. The taxpayer must hold the property for five years before selling the lots.

A few elaborations on the above list are necessary. First of all, filling, draining, clearing and leveling are not typically considered to be substantial improvements. Substantial improvements typically involve the installation of roads, utilities, or some other major addition to the land. Secondly, if property is inherited then the five year holding requirement does not need to be met.

Even if these conditions are met, strict capital gain treatment will cease in the year that the sixth lot is sold. In the year that the sixth lot is sold and for every year after that, five percent of the *sales price* of the lot will be treated as ordinary income. However, any costs of selling the property incurred in that year are used first to reduce the ordinary income. Any remaining income from the sale receives long-term capital gains treatment.

EXAMPLES

Following are comparative examples of possible income tax treatment from selling subdivided land under varying circumstances.

Example 1 – Sale of Subdivided Land that does not Qualify under Section 1237

If subdivided land does not qualify under Section 1237, then all gains are treated as ordinary income. For example, with sales proceeds of $100,000 a cost basis of $60,000 and real estate commissions of $5,000 paid to sell the property, all lots sold will result in ordinary income totaling $35,000.

Example 2 – Sale of Subdivided Land That Qualifies under Section 1237: Complete Relief

If subdivided land does qualify under Section 1237, then it is possible to have all income treated as long-term capital gain. For example, with sales proceeds of $100,000 a cost basis of $60,000 and real estate commissions of $5,000 paid to sell the property, all lots sold will result in long-term capital gains treatment totaling $35,000. Even starting with the year the sixth lot is sold, five percent of the sales price, or $5,000 in ordinary income will be offset with the $5,000 cost of sales.

Example 3 – Sale of Subdivided Land That Qualifies under Section 1237: Partial Relief

If subdivided land does qualify under Section 1237, then it is possible to have some income treated as long-term capital gain. For example, with sales proceeds of $100,000 a cost basis of $60,000 and real estate commissions of $3,000 paid to sell the property, all lots sold will result in long-term capital gains treatment totaling $33,000 and ordinary income of $2,000. Starting with the year the sixth lot is sold, five percent of the sales price, or $5,000 in ordinary income will be partially offset with the $3,000 cost of sales, leaving $2,000 in ordinary income.

Example 4 – Sale of Subdivided Land That Qualifies under Section 1237: No Relief

If subdivided land does qualify under Section 1237, then it is possible to have none of the income treated as long-term capital gain. For example, with sales proceeds of $100,000 a cost basis of $95,000 and no real estate commissions paid to sell the property, all lots sold will result in ordinary income totaling $5,000. If the sixth lot is sold in the first year, five percent of the sales price or $5,000 will be treated as ordinary income.

In the above examples, if six or more lots are not sold in the first year, then all lots sold until the sixth lot is sold will receive long-term capital gains treatment. The ordinary income treatment begins only once the sixth lot is sold.

CONCLUSIONS

Income tax professionals, investors, and real estate professionals need to be aware of the potential income consequences of selling subdivided land. With proper planning, most importantly adhering to the five year holding period and the avoidance of substantial improvements, the non-corporate, non-real estate dealer taxpayer can still benefit from the advantageous long-term capital treatment of much of the gain.

For real estate dealers, corporations, those who wish to or need to sell earlier than the five year holding period, and those that wish to make substantial improvements to the subdivided land, it is imperative that allowances be made for the fact that some or all of the gain may be treated as ordinary.

REFERENCES

26CFR1.1221-1 General Rules for Determining Capital Gains and Losses – Meaning of terms. Internal Revenue Service, Department of the Treasury.

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A BINARY CHOICE MODEL FOR PREDICTING BANK ACQUISITIONS

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ABSTRACT

While banking may be a mundane business, decades of deregulation and rampant merger and consolidation activity have made the banking industry a very interesting industry to study. The subject of bank mergers is sure to attract the attention of any group of bank executives. Some banks are seeking merger candidates, some are seeking to be acquired, and some are attempting to position themselves to avoid being acquired.

This paper presents three binary choice models – linear probability, probit, and logit – which can be used to quantify the likelihood of a bank's acquisition. The models use readily available financial data as predictors. As is the custom, the models are tested to determine their predictive capacity.

The data set used is for mergers that occurred in 2004. *Ex post*, the models successfully "predict" over 70 percent of the mergers that actually occurred. Further, the models successfully predict mergers that occurred in 2006 and 2007. Finally, the models are used to identify candidate banks for mergers that have not yet occurred.

Since the mathematical nature of binary choice models makes interpretation of the coefficients difficult, an index called the WRC Index is proposed. This Index, which is bounded by –3 and +3, indicates the likelihood of acquisition and can be used by banks to identify acquisition targets and by banks wishing to increase or decrease their attractiveness to potential suitors.

INTRODUCTION

Binary choice models are used to model events which have two outcomes, in our case the acquisition or non-acquisition of a bank. The output of the models is the probability of a bank's acquisition.

We examined three binary choice models: the linear probability model, the probit model, and the logit model. The binary choice model is estimated using the familiar ordinary least squares (OLS) method. The coefficients of the model are the change in the dependent variable per unit change in each independent variable and are thus easy to interpret. However, the binary choice model can give output values that lie outside of the meaningful zero-to-one range and therefore cannot be precisely interpreted as probabilities.

The probit model is estimated using the maximum likelihood methodology. The coefficients of the model are the change in the natural log of the odds ratio per unit change in each independent variable and are somewhat difficult to interpret. Unlike the linear probability model, the output probabilities of the model are constrained to the zero-to-one range. The probit model is based upon the standard normal distribution:

$$\phi(x) = \frac{1}{\sqrt{2\pi}} e^{-x^2/2}$$

The logit model is also estimated using the maximum likelihood methodology. The coefficients of the model again are the change in the natural log of the odds ratio per unit change in each independent variable and are somewhat difficult to interpret. The output probabilities of the model are also constrained to the zero-to-one range. The logit model is based upon the logistical distribution:

$$\lambda(x) = \frac{e^{x}}{\left(1 + e^{x}\right)^{2}}$$

As an example of the nature of the probit and logit model coefficients, suppose that the probability of precipitation is 80 percent. Then the odds of precipitation are 0.80/(1–0.80) = 4 and the natural logarithm of 4 is 1.39. Since probabilities are bounded by zero and one, probit and logit models produce outputs which are roughly bounded by –3 and +3. These predicted values can be readily converted to probabilities by individual calculation, by using a spreadsheet, or most statistical software capable of maximum likelihood can convert outputs into probabilities, but the problem of interpreting the coefficients remains.

LITERATURE REVIEW

Mergers in general

Palepu (1986) is a thorough discussion of the six frequently cited merger target characteristics hypotheses: inefficient management, growth-resource imbalance, industry disturbance, firm size, asset undervaluation (represented by the market value to book value ratio), and price-earnings ratio. Using 163 acquired firms and 256 randomly selected non-acquired firms from 1971 through 1979, an acquisition model was estimated. Palepu was interested in testing previous claims that such models could predict acquisitions more accurately than financial markets did. However, he concluded that investing in predicted targets did not yield statistically significant excess returns.

Hasbrouck (1985) uses a sample of 86 target firms, 172 size-matched firms, and 172 industry-matched firms to identify common characteristics of target firms. The sample is taken from mergers that occurred between 1976 and 1981. Statistical significance is found for *q assets* (market value of liabilities + market value of equity)/(replacement value of assets) and *q equity* (market value of equity)/(replacement value of assets – market value of liabilities).

Mergers in banking

Egger and Hahn (2006) examine the effects of mergers on bank efficiency and profitability in Austria. The Austrian banking system had long been highly fragmented not only by region but by function as there existed commercial banks, mortgage banks, savings banks, and cooperative banks. In a country of just eight million people, there were some 1,200 banks and 4,500 branches. Egger and Hahn discuss the expected benefits of consolidation in terms of economies of scale and economies of scope. Changes in bank regulations resulted in a wave of mergers during the 1996 to 2002 period of their study. They modeled efficiency effects by examining the cost-to-income ratio and return on employee (operating revenue per employee). Profitability effects were examined through the “net revenue ratio” (net revenue divided by equity) and return on equity. While similar studies of U.S. banks have failed to identify efficiency or profitability gains, Egger and Hahn do find such gains and identify a size effect. Small, regional banks exhibit both efficiency and profitability gains in both the short and long run. Larger, national banks only exhibit gains in the long run. Egger and Hahn attribute the difference to the market power gained by merging within a relatively small region.

Hannan and Pilloff (2006) examine mergers which occurred in the United States following passage of the Riegle-Neal Act of 1994 which relaxed the restrictions on interstate acquisitions. They identify differences between in-region and out-of-region acquisitions and between rural and urban acquisitions as well as a size effect. Much discussion is devoted to the distinction between a merger and an acquisition, and to “hybrid” circumstances such as merging banks which are both owned by the same bank holding company and “changes of control” where ownership changes but the bank continues to operate independently. Previous studies are cited, such as Hadlock, Houston, and Ryngaert which attributed acquisitions to seizing favorable opportunities ahead of the competition, and Moore who attributed acquisitions to the target’s (low) profitability and (low) capital-asset ratios. Egger and Hahn use the competing risk proportional hazard model, a type of multinomial logit model previously used by Wheelock and Wilson, and data from *SNL Financial* for the 1996 through 2003 timeframe. They were able show the statistically significant effects of return on assets and efficiency on the likelihood of a bank being acquired and further demonstrated that in-region acquirers where better able to identify inefficient targets.

Koetter, Bos, Heid, Kool, Kolari and Porath (2005) studied the consolidation of the German banking industry where the number of banks decreased from 3,785 to 2,911 between 1995 and 2000. Their study investigates five possible consolidation events that include, distressed and non-distressed targets (banks being bought), distressed and non-distressed acquirers (banks buying other banks), and banks subject to regulatory intervention. Their study also predicts the probability of becoming a distressed target, a distressed acquirer, or a bank that experiences intervention but continues to function. The main financial variables utilized are capital adequacy, asset quality, management quality, earnings record, liquidity position (the CAMEL variables), size, holding company, branching status, and age. Using the competing risk proportional hazard model they find several indicators of target attractiveness including that decreasing cost and profit efficiency leads to higher probabilities of becoming involved in a distressed event and becoming a target.

Akhigbe, Madura, and Whyte (2004) used a sample of 254 bank mergers between 1987 and 2001 to find that acquisitions of underperforming banks are anticipated by the equity markets. They find that target banks' stock value increases in the year preceding acquisition. Thus, prior studies, which focused on the change in stock value following the acquisition announcement, missed much of the effect. Indicators of attractiveness include bank size (large is better), low return on assets, high equity/assets, and a high core deposits ratio.

Wheelock and Wilson (2000) focused on the role of managerial inefficiency in the failure or acquisition of banks. Banks that are poorly managed are commonly thought to be prone to failure, and, if the cost of reorganizing the bank is low, prone to acquisition as well. Noting that since 1984 the number of acquisitions of banks has been roughly four times the number of failures, Wheelock and Wilson used competing risks proportional hazard models to examine the determinants of bank failures and acquisitions within the United States. They studied the effects of capital, assets, earnings, liquidity, and miscellaneous factors such as branching on the failure or acquisition of banks. However, their studies primarily focused on the role of managerial inefficiency in the failure or acquisition of banks. There are two traditional ways of measuring efficiency: the production approach and the intermediation approach. In the production approach, bank production is measured in terms of the numbers of loans and deposit accounts serviced, and thus only includes operating costs. In the intermediation approach, output is measured in terms of dollar amounts of loans and deposits and thus includes both costs and technical expenses. Failing banks were more cost inefficient than surviving banks. However, acquired banks were less cost inefficient than surviving banks, and often the differences in cost inefficiency between acquired and surviving banks were statistically significant.

Hughes, Lang, Mester and Moon (1999) observe that in the 14-year period beginning in 1980 there were 6,347 bank mergers and that 43% of all banks were involved in a merger either as an acquirer or as an acquired. Motivation for mergers include increases in expected profit, increases in efficiency, and decreases in insolvency risk. Indicators of attractive target banks are asset size, number of branches, deposit dispersion, and the number of states in which the target is located.

DeLong (2001) uses standard event study methodology to examine the wealth effect of bank mergers by classifying bank mergers as focusing or diversifying. Both focusing and diversifying are assigned two dimensions, activity and geography. Mergers that focus both activity and geography are found to generate abnormal returns of approximately 3 percent upon announcement. The abnormal returns are found to be directly related to target size relative to bidder size. Other types of bank mergers do not exhibit these effects.

A study by Amel and Rhoades (1989) dates from a time of very different banking industry regulation, 1978 to 1983. Nevertheless, they found 1,724 bank mergers to examine. In addition to studying a different time and regulatory period, Amel and Rhoades give equal attention to the nature of acquirer and acquired utilizing multinomial logit and cross-sectional analysis. Before ultimately concluding that no single motive drove the high levels of mergers seen during the period of 1978-1983, they include such variables in their study as asset growth rate and market share. Their evidence does suggest that large banks and small banks are less likely to be acquired than medium-sized banks.

Logit models applied to mergers

Adelaja, Nayga, and Faroq (1999) focus on mergers in the food industry and create two logit models, one to represent target behavior and another to represent bidder behavior. Data was available for 28 merged firms and 77 control sample firms for the period January 1985 through December 1994. Their target model involves 16 variables, only five of which are statistically significant. Of the five statistically significant variables, only three had the expected signs. The bidder model could not be reliably estimated due to non-convergence attributed to small sample size.

Gonzalez, Vasconcellos, and Kish (1998) examine cross-border mergers using a sample of 292 mergers from the 1981-1990 timeframe. The motivation for their study was the observation that during that period of time the number of foreign acquisitions of American firms exceeded the number of American acquisitions of foreign firms, thus reversing the previous pattern. Using logit analysis they were able to demonstrate a number of characteristics which made a target attractive, such as undervaluation and managerial inefficiency.

The Kim and Arbel (1998) study focuses on the hospitality industry and 161 mergers which occurred between 1980 and 1992. Nine characteristics were studied and four found to be statistically significant including managerial inefficiency. Financial leverage and target attractiveness were found to be directly related but not statistically significantly so.

Dietrich and Sorensen (1984) used data from four industries (food and beverages, chemicals, electronics, and transportation) and a sample size of 90 consisting of 30 merged firms and 60 randomly chosen non-merged firms from the period from 1969 to 1973. By standardizing descriptive variables within industries, they were able to identify five statistically significant merger predictors including leverage and assets turnover, which was their proxy for efficiency.

The sample sizes in these studies is important. Binary choice models are often characterized as "large" sample models with exact specification of what constitutes "large" left unspecified. All three of the above studies utilize samples which are either smaller that ours or comparably sized.

METHOLOGY AND RESULTS

Our models were estimated using financial data from the last six months of 2004. That date was chosen so as to provide an opportunity to test the predictive capacity of the model using financial data from 2005 and 2006 and mergers that were known to have occurred in that timeframe. The data was obtained from *SNL Financial*. Its database was searched for mergers that occurred during the second half of 2004 and 150 mergers were identified. We also selected a random sample of 150 non-merged banks from that same timeframe. The sampling process produced 16 duplicates so our sample consisted of the 150 merged and 134 non-merged banks.

Several combinations of predictive variables were tested. The combination which resulted in the best fit across the three models was: the deposits to total assets ratio, the noninterest income to total assets ratio, the efficiency ratio, return on average assets (ROA), and return on average equity (ROE). The efficiency ratio is defined as:

$$\text{Efficiency} = \frac{\text{Noninterest Expenses}}{\text{Revenue}}$$

and, in banking, revenue equals net interest income plus non-interest income.

Tables 1, 2, and 3 below show the results obtained for the three models. The coefficients' signs are consistent across the models and the p-values are remarkably good. Table 4 summarizes the coefficients from the three models.

Table 1
Linear Probability Model

	Deposits / Assets	Non-interest Income	Efficiency	ROA	ROE
Coefficient	0.83	–0.18	0.70	0.27	–0.16
Standard Error	0.28	0.03	0.23	0.08	0.01
t–Statistic	2.92	–5.31	3.06	3.46	–2.80
p Value	0.0037	0.0000	0.0024	0.0006	0.0054

Table 2
Probit Model

	Deposits / Assets	Non-interest Income	Efficiency	ROA	ROE
Coefficient	2.29	–0.75	2.05	0.75	–0.04
Standard Error	0.85	0.16	0.72	0.24	0.17
z–Statistic	2.70	–4.84	2.84	3.07	–2.30
p Value	0.0068	0.0000	0.0045	0.0021	0.0216

Table 3
Logit Model

	Deposits / Assets	Non-interest Income	Efficiency	ROA	ROE
Coefficient	4.07	–1.36	4.92	1.48	–0.08
Standard Error	1.61	0.28	1.46	0.43	0.02
z–Statistic	2.54	–4.78	3.37	3.42	–2.68
p Value	0.0112	0.0000	0.0008	0.0006	0.0073

Table 4
Summary of Model Coefficients

	Deposits / Assets	Non-interest Income	Efficiency	ROA	ROE
Linear Probability	0.83	–0.18	0.70	0.27	–0.16
Probit	2.29	–0.75	2.05	0.75	–0.04
Logit	4.07	–1.36	4.92	1.48	–0.08

The regression coefficient signs are consistent with our *a priori* expectations except for the ROE coefficient. A positive sign on the deposits to assets ratio indicates that a higher proportion of deposits favors acquisition. The positive sign on the efficiency variable indicates that inefficiency favors acquisition. The positive sign on the ROA variable indicates that a high ROA favors acquisition and the negative sign on the ROE coefficient indicates that a low ROE favors acquisition.

The negative sign on the noninterest income variable (which is actually noninterest income as a proportion of assets) indicates lower noninterest income favors acquisition. Based on our research and discussion with bankers, we believe that a positive or negative sign could be explained. The majority of most banks' revenue comes from net interest income, which is sensitive to changes in interest rates. Specifically, when the yield curve becomes flatter, banks' spreads and margins come under pressure. Therefore, banks look to noninterest income – both fee income and other noninterest income – to not only contribute to revenue, but also to serve as a hedge. Noninterest income, such as financial planning services and safe deposit box fees, tends to be less interest-rate sensitive. Looking at it from this angle, a bank with a healthy portfolio of noninterest income might be considered an attractive target. Thus, one would expect a positive sign for noninterest income in our models.

On the other hand, anecdotally we learned from a bank CEO, who was directly involved in M&A activity after his bank was acquired, that banks sometimes shy away from acquiring other banks that have a lot of noninterest income. The reasoning is that many of the noninterest income businesses, such as travel agencies, insurance companies, and others, contribute not just revenue, but sometime a disproportionate amount of overhead. An acquiring bank often has made different decisions about what noninterest income businesses are optimal and complementary to its core business of net interest income. That leaves them in the position where they take ownership of costly noninterest income businesses that need to be trimmed or eliminated after an acquisition. This can be costly and/or detrimental to moral, post acquisition. From this perspective, a negative sign on the noninterest income variable would seem logical.

Since ROA and ROE generally vary directly, one might expect their signs to agree. Return on assets and return on equity are related through the equity multiplier, assets divided by equity:

$$\text{ROE} = \text{ROA} \cdot \frac{\text{Assets}}{\text{Equity}}$$

Thus, the regression coefficient signs are indicating that acquisition is favored in low equity multiplier circumstances, where equity is a high proportion of assets, i.e., an under-levered bank. Our model identifies attractive targets as those which are inefficient and under-levered, two circumstances that would likely be readily remediable by an acquirer.

Since the traditional goodness of fit measure, the coefficient of determination R^2, does not apply to binary choice models, it is customary to use the proportion of correct predictions in the original data set as a measure of goodness of fit. Each of our models successfully predicted more than 70 percent of the acquisitions in the 2004 data set:

- Linear Probability: 73.94%
- Probit: 73.94%
- Logit: 75.00%

Given the slightly better goodness of fit and the fact that logit models are more robust to potential non-normality in the data than probit models, we used the logit result for predicting mergers that might occur after 2004.

The WRC Index

Since the dependent variable in a logit model is difficult to interpret as are the model coefficients, we propose the WRC Index to indicate the likelihood of a bank being an acquisition target. The WRC Index is bounded by –3 and +3, where –3 is very unlikely, zero is neutral, and +3 is very likely. The coefficients of the logit model are now changes in the WRC Index. In its effort to maximize shareholder wealth, a bank seeking acquisition targets can use the logit model and the WRC Index to identify suitable candidates. Similarly, a bank wishing to become more or less attractive as an acquisition target, can concentrate its efforts on the characteristics that will have the most impact on its attractiveness.

Using 2005 financial data and our logit model, we identified the following acquisition candidates:

Table 5
Predicted Merger Candidates from 2005 Data

Name	WRC Index	Probability
Towne Bancorp, Inc.	1.41	80%
Golden State Business Bank	0.51	62%
Diablo Valley Bank	0.40	60%
Summit Bank	0.27	57%
Clover Leaf Financial Corp.	0.27	57%
Globe Bancorp, Inc.	0.24	56%

A search through the banking industry news section of the *SNL Financial* database produced the following three announcements:

Thrift – Mergers and Acquisitions

Clover Leaf deal gives First Federal opportunity to deploy excess capital

March 15, 2006 5:49 PM ET

By Diana Finkel

As a way to deploy excess capital from its 2004 initial public offering, First Federal Financial Services Inc. (MHC) sought an acquisition and found a willing, suitable and convenient merger candidate just around the corner in a fellow Edwardsville, Ill.-based thrift, Clover Leaf Financial Corp., according to a Form S-4 filed March 14.

Bank & Thrift – Mergers and Acquisitions

Deal Profile: New Orleans investor group enters into letter of intent to acquire **Globe Bancorp**

February 14, 2007 4:48 PM ET

By Thomas Orgren

Globe Bancorp Inc. said Feb. 14 that it entered into a letter of intent in which a New Orleans investor group will acquire the company and unit Globe Homestead Savings Bank for a cash price to be determined.

Bank – Mergers and Acquisitions

Diablo Valley Bank shareholders approve sale to Heritage Commerce

June 14, 2007 4:41 PM ET

By Mike Layfield

Shareholders of Danville, Calif.-based Diablo Valley Bank ($254.6 million) approved the company's acquisition by San Jose, Calif.-based Heritage Commerce Corp. ($1.07 billion), the companies said June 14.

The transaction has received all necessary regulatory approvals and is expected to close by the end of June.

Thus, as of this writing in October 2007, three of the six predicted acquisitions have been announced.

Using 2006 financial data and our logit model, we identified the acquisition candidates in Table 6. As of this writing in October 2007, none of these acquisitions has occurred.

Table 6
Predicted Merger Candidates from 2006 Data

Name	WRC Index	Probability
Pacific West Bank	2.69	94%
Noble Community Bank	0.97	72%
Pacific Valley Bank	0.62	65%
Pan Pacific Bank	0.31	58%
California Business Bank	0.29	57%

CONCLUSIONS AND IDEAS FOR FUTURE RESEARCH

It is clear from the number of acquisition candidates that our model is predicting compared to the total number of acquisitions that we are identifying only one type of acquisition, that of the inefficient, under-levered target. Further work is need to expand the scope of our predictive capability. Multinomial logit and cross-sectional analysis, as used by Amel and Rhoades, can extend our predictive capability and identify changes over time in the predictors. Further, a multivariate logit model offers the possibility of matching potential acquirers and targets.

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DOES YEAREND PORTFOLIO RESTRUCTURING BY COMMUNITY BANKS BOOST SHAREHOLDER RETURNS?

John S. Walker, Kutztown University of Pennsylvania
Henry F. Check, Jr., Kutztown University of Pennsylvania

ABSTRACT

Despite decades of deregulation and rampant merger and consolidation activity, a significant portion of our economy's banking services is provided by community banks. Like all banks, community banks have faced increasing pressure on their ability to operate profitably. A common practice among banks to increase net interest income is increasing the duration of their investment portfolio, a practice referred to as "riding the yield curve."

However, for approximately the last three years, the U.S. Treasury yield curve has become remarkably flat, thus providing no additional yield for the increase in maturity risk borne by the bondholder. Nevertheless, some banks have announced restructurings of their investment portfolios in an apparently vain attempt to increase profits and the value of their stock.

This paper examines a sample of community banks which announced such restructurings in the last three years. The stock returns of the sample are found to have decreased from their pre-restructuring levels by a statistically significant amount. Further, the post-restructuring returns are found to be statistically significantly negative.

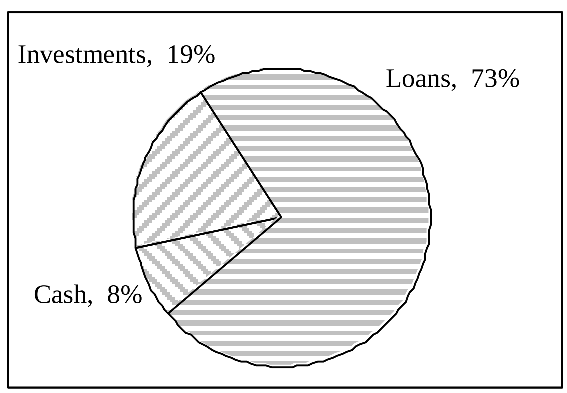
The sample of restructuring banks is compared to the NASDAQ Bank Index, to the America's Community Bankers' Index, and to two control samples chosen randomly from the same population of community banks. The two control samples had statistically significant negative returns over the period, and the negative returns of the two control samples were larger (more negative) than the restructuring banks.

The conclusion reached is that the restructurings were beneficial to the stockholders of the community banks despite the flat yield curve.

INTRODUCTION

Figure 1 shows the broad asset allocation between loans, investments and cash for community banks with less than $5 billion in total assets. In this study we define community banks as those with total assets of less than $5 billion. The interest income that a bank earns from its loan and investment portfolios is vital to its profitability as an ongoing concern. Generally, in the event that management is dissatisfied with performance, a bank's investment portfolio can be restructured far more easily than its loan portfolio, as investments are relatively liquid and can be sold in the secondary market within a short time frame. Banks can also sell loans, but the securitization process is slow and many loans are nonconforming and not very liquid. If a bank's loan portfolio is performing below expectations, desired changes to structure and rates take months if not years to fully achieve. In contrast, a bank's investment portfolio can be restructured expeditiously if necessary.

Figure 1
Asset Allocation for Community Banks (2006)



Source: SNL Financial

Banks will sometimes elect to restructure their investment portfolio at yearend in order to lay the groundwork for stronger earnings in the upcoming year. Usually, this decision is made because the portfolio contains a block of investments that are below market yields. When these securities are sold, the bank reports the losses in the current year. Often the funds are reinvested into higher-yielding securities that serve to increase interest income and earnings. There is an identifiable cost and benefit to portfolio restructuring, so is there a net benefit? Our research looks at whether these restructurings are effective at improving shareholder returns.

LITERATURE REVIEW

As this appears to be a new area of research, we conducted a very thorough literature review. Further, we felt it important to differentiate between the literature targeted at bank managers and that written primarily for academic researchers.

Practitioners Literature

Pickering and Kalishek (1993) discuss the securities transaction documentation needed in order to avoid regulatory scrutiny. This should include: 1) a rationale for the transaction; 2) a description of the securities involved; and 3) an analysis of the transaction's consequences. They believe that portfolio restructuring can be justified when it serves to reduce interest rate risk, to improve yields, or to liquidate nonperforming securities. Pickering is a securities broker who typically publishes his articles in trade publications. Therefore, he cannot be considered an objective observer of the securities market. Nevertheless, his writings give us a glimpse into the information sent to bankers that could influence their decisions.

In our research, we are looking at banks that restructure in order to improve yields or to strengthen their margin by eliminating assets and liabilities that are generating a negative spread. It is also possible that these restructuring transactions reduce a bank's interest rate risk. On the surface, reducing risk sounds like a constructive measure to take. Yet, banks are in the business to take risk; thus, it would only make sense to reduce risk if the bank was not receiving sufficient compensation from the risk or had exceeded its risk limit, as outlined in policy.

Frieder and Hedges (1994) discuss portfolio restructuring in a holistic context, from a strategic planner's perspective. They give a list of "seven key areas" [of capabilities] that management teams need in order to build value for their banks, such as expertise in executing value-enhancing mergers and acquisitions. One specific piece of advice offered for bank management is that in order to "increase market approval, they should view portfolio restructuring as possibly the quickest and most substantive way to strengthen profitability." In practice the securities portfolio can be restructured much more quickly than the loan portfolio. One of the banks that announced a 4Q06 restructuring, Yardville National Bank, later announced in the 2Q07 its acquisition by PNC. This is an example of a bank that might have used portfolio restructuring as one tactic for positioning itself for acquisition.

De Meo (1995) recounts the restructuring done by Barnett Bank in the mid 1990s to lower its interest rate risk. When *Statement of Financial Accounting Standards No. 115* (SFAS 115) was implemented, banks began to carefully monitor the duration of the available-for-sale (AFS) investment portfolio because changes in portfolio value were marked to market and recorded on their balance sheets. By limiting the duration of the AFS portfolio, this constrained the potential volatility of the banks' equity account. In the case of Barnett Bank, not only did the bank reduce its portfolio duration, but it also shrank the portfolio as it used the cash flow to supplement its shortfall in deposit funding. Since the implementation of SFAS 115, banks have become more comfortable with using the AFS classification. In fact, the allocation between AFS and held-to-maturity (HTM) accounts tends to be heavily tilted toward AFS, with infrequent shifts of any significance. There is no indication that the restructurings that we analyzed in our research were motivated by SFAS 115 considerations.

Pickering (2001) explains that banks tend to take "bond swap losses" at yearend "if the year promises to be exceptionally profitable or exceptionally unprofitable." The title of the article is "Cleaning house: Year-end 2001 is a great time to restructure your bank's portfolio." This article, which is published in his organization's trade magazine *Independent Banker*, provides insight into the tactics used by investment professionals to generate activity (i.e., commissions) with their bank clients. Mr. Pickering manages ICBA Securities, a broker/dealer that targets community banks. This article was published in October of 2001, so the intent was to alert bankers to the opportunity to restructure before yearend.

One recommendation Pickering makes is to restructure the portfolio when the bank's year is shaping up to be "exceptionally profitable." This implies that that bank is exceeding budget. The logic is that the restructuring enables a bank to take losses in the current year and to reinvest into higher-yielding securities to improve earnings for the following year and beyond. If a bank is ahead of budget, it can use the surplus to offset the securities losses, enabling the bank to still meet budget, which management often treats as the main objective for the year.

There are at least two possible fallacies to this logic. First, it assumes that exceeding budget does not benefit shareholders without taking action to capture the surplus and that bond swaps are one of the best ways to lock in the benefit. A second potential fallacy is that the bank's value will be enhanced by this restructuring. If this is true, then this should be reflected in improved returns to shareholders. In our research methodology, we examine shareholder returns before and after restructuring in search of evidence that restructuring does indeed produce a material improvement to shareholder returns.

The second scenario that Pickering believes is conducive to restructuring is when the bank is having a poor year, in this case termed "exceptionally unprofitable." The losses incurred from restructuring are seen as "piling on" to the other bad news. In this scenario, the logic is that the bank is already having a poor year, which is likely reflected in the stock price and investor sentiment. By taking losses prior to yearend to increase the portfolio yield, this shifts additional income to future years. The stock market is valuing companies based on current and future earnings prospects. Therefore, there is some appeal to this argument of taking your lumps today for improved earnings in the future. However, it ignores the responsibility to the shareholders who might need to liquidate their shares in the short term. Shifting short-term performance to the future implicitly assumes that current shareholders will remain invested in the bank long enough to benefit from a higher valuation sometime in the future.

DeMasi (2006) writes about the interest-rate and operating environment that characterizes the period during which the restructuring activity that this research examines has occurred. For example, he reports that between December 2002 and June 2006 the net interest margin for all insured banks (data from the Federal Deposit Insurance Corporation) fell by 51 basis points. As with Pickering, DeMasi is an investment professional who serves the community bank sector and is likely compensated from commission-based business. He gives several basic guidelines that a bank should adhere to when they restructure the portfolio, such as setting a loss constraint. He defines a well-structured strategy as one that has a break-even period that is shorter than the average life of the bonds being sold. He states that if this is accomplished, "the restructuring should provide a clear economic advantage to the bank versus continuing to hold the current positions until they roll off of the portfolio." One aspect of fixed-income investing that seems to be ignored in DeMasi's article is that bonds that are underwater will trend toward par value as time till maturity diminishes. Thus, the paper losses that appear at a point in time will not be realized if the bonds are held to maturity, barring the unlikely occurrence of a default.

Academic Literature

Banz (1981) finds that the capital asset pricing model is misspecified because there is a "size effect." This effect, which is not linear, is seen with very small firms, but much less so with average to large firms. In our research, we are dealing with small firms, as the data set includes all community banks with assets less than $5 billion. Banz found that smaller firms have higher risk adjusted returns than larger firms, although he did not give a breakdown on asset size. Our guess is that our dataset falls well within the small firm category. Banks are continually expanding their asset base, as they collect new deposits and write new loans. However, the time period used in our research is so brief that it is unlikely that any of the banks changes size by a sufficient amount to affect returns because of a size effect. Our research methodology did not incorporate any adjustment for size, although we did test for a size effect. If our analysis had looked at post returns over a much longer time frame, then perhaps we would have needed to control for size.

Banz and Breen (1986) study the "look-ahead bias" and an "ex-post-selection bias" that can occur when using the COMPUSTAT database or some other price/dividends/earnings (PDE) database. For example, they found that portfolios and portfolio returns were different depending on whether they assembled portfolios using current or historical data from COMPUSTAT. Our research utilizes SNL Financial's bank and thrift database. While this, obviously, is not COMPUSTAT, it falls into the broader category of a PDE database. Each database is subject to its own set of potential biases. One possibility of a bias in our research is that we analyzed those banks that showed a fourth quarter realized loss in their securities portfolios that also had a restructuring announcement that was captured by SNL. We are assuming that SNL is even-handed when it captures all announcements and that they are not introducing a potential bias pertaining to which restructuring announcements are in their archives.

Neuberger (1992) examines how the composition of bank asset portfolios can alter the risk of a bank and, thus, the returns. This is relevant to our research because restructuring will change the asset portfolio, specifically the composition of the investment portfolio. It can also change the liability portfolio, because the funds from the sale of securities can be used to prepay borrowings. He observes that the asset and liability characteristics of financial intermediaries would seem to make them likely candidates for significant sensitivity to interest rate changes. Neuberger reports that the evidence on the interest rate sensitivity of financial intermediaries is mixed. He cites two studies, one by Chance and Lane and another by Sweeney and Warga, that have found that financial institutions tended not to have consistent or significant sensitivity to changes in interest rates.

In contrast, Neuberger also reports that other researchers, citing Martin and Keown, Lloyd and Schick, Lynge and Zumwalt, Beebe, Flannery and James, Booth and Officer, Kane and Unal, and Neuberger, have found significant interest rate sensitivity at banks and thrifts. Researchers have looked at bank operations, portfolio composition, and other market conditions to help explain the link between the market and interest rate sensitivity and bank stock returns. Specifically, Dietrich (also cited in Neuberger, 1992) uses a two-index approach to explain the risk sensitivity of bank stocks as a function of bank balance sheet composition. Studies find some evidence that individual bank characteristics affect the risk of bank stock returns.

Neuberger states that, "Each asset in banks' portfolios may be considered to have its own associated market beta value. Thus, there may exist a 'beta' for making residential mortgage loans or a similar measure for holding government securities." As we know from portfolio theory, the aggregate beta that a bank exhibits will depend on the institution's overall beta, which is a weighted average of the individual betas associated with the different assets in its portfolio. As the asset mix changes, so will the bank's market risk. Under a restructuring scenario, it is possible that a bank's weighted average beta rises, falls or remains steady, depending on the betas of the assets and liabilities bought and sold during the restructuring. In our analysis, we do not look at the banks' betas before and after restructuring nor do we know whether the restructured balance sheets for the banks studied are riskier or less risky than the pre-restructured balance sheets.

Allen and Saunders (1992) found evidence of a systematic upward window dressing adjustment on the last day of each quarter. They examined data between 1978 and 1986 and 75 percent of banks were found to be "upward" window dressing. Banks were also found to be "downward" window dressing, but a percentage of how many are engaged in that action was not reported. One incentive for bank management to overstate bank asset size (upward window dressing) is to "increase their consumption of size related perquisites." From a shareholder's perspective, there can be incentives to shrink the balance sheet at quarter's end (downward window dressing) in order to reduce regulatory taxes.

In our research, we asked ourselves the question: Is portfolio restructuring a form of window dressing? The definition of window dressing includes the words "deceptive practice of using accounting tricks to make a company's balance sheet and income statement appear better than they really are" (see Investorwords.com). The banks that were used in our study publicly announced that they were restructuring their portfolios, so in that regard they were not deceptive. However, many other banks have taken large securities losses without always announcing their actions; so perhaps some can be viewed as window dressing.

Allen and Saunders looked at the degree of reversibility, because window dressing by definition implies reversibility after a certain date. Indeed, there was a high degree of negative reversibility, in that actions that were taken were undone after quarter's end. While portfolio restructuring does not meet the classic definition of window dressing—i.e., deceptive and reversed after a certain date—it does seem that one has to question whether it's done "for show." From a present value standpoint, the losses taken on securities represent the difference between the yields on the securities sold and market yields. As a bank moves forward with a new set of higher-yielding securities, the loss that was realized seems to be forgotten. Our research looks at the resulting stockholder returns to see if the market rewards them for management's actions.

Beaver et al. (1992) believe that dysfunctional behavior "such as gains trading [by banks] appears to be a by-product of the information asymmetry problem." The announcements that we found through our research that were released to shareholders and market observers reflect the asymmetry in information that exists. For example, consider the 11/22/2006 release from Ameriana Bancorp that details its restructuring:

The Company took this step in an effort to improve its interest rate risk position, using the proceeds from the sale of the fixed-rate securities to repay certain short-term, variable-rate advances. In addition to de-leveraging the Company's balance sheet, this action is expected to improve net interest margin and increase net interest income in future periods, enabling the Company to recover the loss on sale through increased earnings over the next two years.

A shareholder is left with more questions than answers by this announcement. The bank wants to improve its interest rate risk position, yet it doesn't explain why it needs to be improved. It states that it will "repay certain short-term variable-rate advances," but what prepayment penalty will be incurred? Whenever a bank de-leverages its balance sheet, capital, as a percentage of assets, rises. What are the bank's intentions for the extra capital…will it pay a special dividend? Suffice it to say that there are plenty of "asymmetric" information problems that exist when management takes actions such as portfolio restructuring. Thus, a statistical analysis to measure impact to shareholder returns is appropriate.

Prior to the recent portfolio restructuring that we've seen in the banking industry, there was potential for significant restructuring in the mid 1990s as a result of SFAS 115. Papiernik (1997) examined whether the adoption of the SFAS 115 led banks to restructure their portfolios. Using a portfolio restructuring model and employing logit regression analysis, she concluded that "portfolio restructuring did not occur or was minimal upon SFAS 115 adoption. SFAS 115 was issued by the Financial Accounting Standards Board in May 1993. There has been no event in banking since then that would have potentially triggered widespread restructuring, other than the recent restructuring considered in our research.

Initially, it was thought that banks adopting SFAS 115 would realize security gains and losses for several reasons, including capital maintenance, income smoothing and tax related incentives. The restructuring that has occurred over the last few years has, of course, been well after the adoption of SFAS 115. That is not to say, however, that SFAS 115 considerations are not influencing bank management's decisions. Banks engaged in recent, yearend restructuring are probably looking to boost stock performance. Because stock valuations are tied to earnings performance, we can infer that the restructuring falls under the heading of income management, if not income smoothing.

Papiernik et al. (2005) report that early adopters [of SFAS 115] balanced investments between AFS and HTM to reduce interest rate risk and to increase financial flexibility. Moreover, it was those banks that characteristically maintained portfolios that exposed the bank to higher interest-rate risk that shifted the portfolio to a somewhat lower-risk position. These same researchers cite Beatty as having examined bank holding companies and suggesting that those banks that maintained portfolios with longer maturities were more likely to shift the maturity structure of the portfolio upon SFAS 115 adoption. Although we did not look at the portfolio structure of the banks in our study, it would follow that the investments sold were longer-term securities with fixed interest rates.

In earlier research, Papiernik et al. (2003) looked at the effects on bank capital, securities classification and portfolio spreads from SFAS 115. They report that economic effects of SFAS 115 adoption appeared to have resulted in significantly lower portfolio spreads and portfolio yields for all banks. They explain that while this may reduce interest-rate risk, decreased portfolio spreads and yields represent an economic cost to the bank. In our study, we believe that banks were searching for higher yields to mitigate the earnings impact from the flat yield curve. Thus, if this assumption is correct, then there would have been a trend from lower to higher yielding securities during recent restructuring, opposite from the general trend observed during the adoption of SFAS 115 during the mid 1990s.

In the next section we discuss a bank's sources of revenue and the importance of interest income from the investment portfolio. Ostensibly, one reason for restructuring is to help a bank's future interest income. Barth et al. (1995) segregated the interest revenue component from other bank earnings and found a strong link to a bank's yearend share price. Our research not only considered returns at yearend, but also monthly returns following the restructuring.

UNDERSTANDING A COMMUNITY BANK'S SOURCE OF REVENUES

As a frame-of-reference, the revenue stream for a typical business selling one or more products is a summation of the revenue generated for all products sold. Each product's revenue is simply the retail price of the product times the quantity sold, which can be annotated as:

$$\text{Total revenue} = \sum_{i=1}^{n} P_i Q_i$$

where i = ith product, n = total number of products sold by the firm.

However, in the case of a bank, the revenue equation is distinctly different; it is comprised of two primary terms: net interest income and noninterest income. For banks with assets of $5 billion or less, the median split between net interest income and noninterest income for 2006 was 84 percent/16 percent.

Although net interest income is the dominate revenue source, there has been much attention on community banks' ability to grow noninterest income over the last 10 years, such as by offering securities and insurance services. In 1999, Congress passed the Financial Services Modernization Act; this served to catalyze the pursuit of fee income. This act, also known as the Gramm-Leach-Bliley Act, enabled banks to merge with one another and to purchase financial service firms, with less likelihood that particular businesses would have to be divested.

Madura (2006) compares the growth in banks' noninterest income from 1984 to 2003 for small, medium, large and money center banks. There is an obvious degree of volatility in the trend lines, but in all cases the general trend is upward sloping. For example, the trend for small banks (defined as banks with total assets less than $300 million) shows noninterest income (as a percentage of total assets) rising from approximately 0.7 percent in 1984 to over 1.2 percent in 2003. Note that income from loan sales is one component of noninterest income that can be sensitive to the interest-rate environment and can produce volatility. Nevertheless, one reason that banks pursue noninterest income is that these sources of income are usually less sensitive to changes in interest rates compared to net interest income. Recently, banks have been challenged by a flat yield curve that tends to squeeze their margins. This has put added pressure on noninterest income growth.

Despite the growth in noninterest income in the banking industry, net interest income is still by far the dominate source of revenue. While some might see bank mergers as a way to extend a bank's product and service offering, they also are occurring because some banks are struggling with growing net interest income organically. Net interest income is sensitive to changes in interest rates, growth or decline of bank assets, credit deterioration and other factors. While the margin from a bank's loan portfolio is the largest component of net interest income, the margin on investments is also significant. It is likely that competitive forces will push banks to work hard at squeezing as many profits from the investment portfolio as possible. It is this quest of incremental returns that has prompted portfolio restructurings.

FUNCTION OF THE INVESTMENT PORTFOLIO

After the loan portfolio, the investment portfolio is the second largest earning asset class on the balance sheets of community banks. While banks manage their loan portfolios with profit maximization in mind, this is not always the case for the investment portfolio. This does not mean that a bank would manage its portfolio to be unprofitable; rather, there are competing roles for the portfolio. Walker et al. (2004) list the roles and objectives for a community bank's portfolio:

- Generate interest income,
- Assist in the management of liquidity,
- Help manage interest rate and credit risk,
- Satisfy pledging requirements for certain liabilities, and
- Assist with management of tax liabilities.

The priority of the above goals and objectives depends on other aspects of the bank's operation, such as the loan portfolio. For example, when a bank has a large allocation to commercial loans, it might decide to limit credit risk in the investment portfolio to balance the risk in the loan portfolio. Even more limiting, potentially, a need for liquidity can curtail both the credit premium and duration permitted for investments, which reduces yield and expected return. Ultimately, the portfolio objectives pursued correlate to expected return on the portfolio.

Bank regulators require institutions to create an investment policy that outlines the practices and procedures that will be followed by management. Policy contains guidelines and constraints, such as the permissible asset classes and allocation targets. As Strong (2006) states, investment policy is "a long-term concept." In contrast, investment strategy "deals with short-term activities that are consistent with established policy and that will contribute positively toward obtaining the objective of the portfolio."

Given the competing goals and objectives listed above, it should come as no surprise that some banks are more focused on producing income from their portfolios than others. It is those banks that are more likely to restructure their portfolios in order to increase the return from their investments. This is not to say that banks with less emphasis on income won't restructure. In fact, some banks might use restructuring as a way to reduce interest rate risk if greater interest rate volatility is expected or to increase liquidity when loan demand increases. Our research attempts to examine restructuring when the bank is trying to improve earnings quality and shareholder returns. However, it is not always evident from public statements as to why the portfolio has been restructured and/or losses taken.

USING THE NPV FRAMEWORK TO ANALYZE THE RESTRUCTURING DECISION

It might be helpful to analyze the restructuring of a portfolio like a traditional net present value (NPV) investment decision where a company makes a capital outlay today for a project that is expected to boost cash flow in the future. In the case of a portfolio restructuring decision, a bank might decide to incur a loss on its investment portfolio to attempt to improve its future cash flow by selling securities with below market yields and purchasing higher-yielding investments. The bank has at least two choices. It can simply reinvest the proceeds from the sale of securities, or it can decide to reinvest the proceeds plus an amount that makes up for the total loss. This decision has cash flow implications. From a cash flow standpoint, the loss itself is not a negative cash flow. If a bank simply turns around and reinvests the proceeds from the sold securities into higher-yielding securities, the bank might attempt to increase its future cash flow without a net cash outlay. This differs from the scenario where a company makes an investment, such as purchasing a piece of equipment or building a plant, to improve cash flow. However, if the bank wants to increase the level of investment to the initial amount to offset the loss, then the bank *would* incur a cash outlay that equals the net loss.

For example, suppose a bank is going to restructure a block of securities that originally cost $20 million. Further, suppose it expects to sell the investments for, let's say, $19.75 million. This would generate a positive cash flow of $19.75 million, plus a tax benefit from the loss. The loss would be recorded on the income statement. For accounting reasons, banks are not supposed to sell securities with held-to-maturity designation; thus, our example assumes that the securities are categorized in the available-for-sale category and can be sold. Ignoring the tax benefit for the reinvestment, the bank would have a subsequent outflow of $19.75 million when it purchases new securities for the portfolio, for a net upfront cash flow of $0. If, however, the bank wanted to reestablish the full $20 million initial investment, then it would need to add another $250,000 to the cash outlay to offset the loss on the sale. The resulting income stream from the new investments would, of course, reflect the bank's decision to reinvest the $19.75 million or to make up the difference and invest the full $20 million.

A bank that elects to reinvest only the $19.75 million needs to compare the new cash flow resulting from the new securities to the cash flow prior to the sale. The "bought income," as bankers sometimes term it, will be the new yield on the $19.75 million investment, while the "sold income" will be the old yield on the sold securities in the amount of $20 million. Although the prior market value on the investments had dropped to $19.75 million, the principal and coupon income before the sale was based on the original $20 million investment. The upfront cash flows cancel out, as the $19.75 million received from the sale is fully reinvested. In contrast, if the bank decides to reestablish the original $20 million investment, there will be a $250,000 cash outflow at the time of restructuring. That incremental investment will produce incremental yield income. Obviously, a total investment of $20 million can be expected to generate a higher yield income than a reinvestment of $19.75 million.

From a NPV standpoint, it appears that if the bank simply reinvests the $19.75 million from the proceeds of the sold securities, there is no net outflow. If the resultant cash inflow from the new securities exceeds the foregone inflow from the sold securities, then the decision made sense, right? What cannot be forgotten is that the "underwater" block of securities that were sold would have approached par value as it trended toward maturity. Thus, there is a smaller maturity cash flow that will occur after a $19.75 million reinvestment than if the original $20 million had been allowed to reach full maturity. A rigorous cash flow analysis would need to account for the entire impact that restructuring would have on the cash flows. However, that would be difficult to assess, as securities would be maturing at different times and coupon payments would differ between securities. Nevertheless, a thorough NPV analysis—something that community banks rarely do—would need to account for all changes to interest and principal cash flow payments in order to justify restructuring from a NPV standpoint.

PRESSURE ON PROFITS AND THE INCENTIVE TO RESTRUCTURE

Put simply, banking is a "spread business." Banks borrow money through the retail market from depositors and the wholesale market from other financial institutions. The wholesale market is extremely competitive and charges more for funds than the retail market. Banks that are able to obtain most of their funding from the retail market have a distinct cost advantage and tend to see higher buyout premiums if the bank is sold. There can be a wide range of rates paid within the block of deposit funding, as demand deposits are least expensive, while longer-term CDs offer rates that are similar to the rates found in the wholesale market.

Banks primarily use these borrowed funds to underwrite loans—typically, real estate, consumer and commercial loans. Again, like the wholesale funding market, the pricing on loans is usually very competitive. In addition to loans, a bank normally has a significant investment portfolio that can represent as much as 50 percent or more of the bank's assets. Loans and investments generate the lion's share of the bank's interest income; the cash-equivalents and nonearning assets on the balance sheet provide very little to the bank's bottom line.

Net interest income before provisioning for loan losses is the largest component of the bank's revenue as mentioned in an earlier section of this article. Net interest income is measured in units of dollars, yet there are two ratios that are commonly used to measure a bank's net interest income performance: net interest margin and net interest spread. These ratios track the difference between the average yield on earning assets and cost of funds. All else equal, profits increase as a bank's spread and margin widen.

Assets and liabilities are priced off the Treasury yield curve and the LIBOR swap curve. Banks tend to use shorter duration funding and longer duration assets in order to maximize their margins and spreads at any point in time. Therefore, the slope of the yield curve reflects banks' incremental margins and spreads at any point in time. Fabozzi (2007) reports that some market participants use the difference between the 2-year and 30-year Treasury yields to measure slope, while others use the 3-month yield instead of the 2-year yield as the short rate. If there is a steep slope, then there is a lot of spread. If the yield curve is flat, there is no spread. There can be quite a variation in the steepness of the yield curve, which means that there can be a lot of variation in banks' incremental spreads over time. For example, Fabozzi reports that the difference between the 2-year and 30-year Treasury was 348 basis points in September and October 1992. Eight years later, in 2000, the yield curve slope was minus 65 basis points.

The impetus for restructuring a bank's investment portfolio ties back to what happened to the yield curve starting around April 2004 when the slope started to decline. Table 1 shows the slope in the yield curve at the end of 2003, 2004, 2005 and 2006. By the end of 2006 the slope was less than one basis point, down from a generous 325.4 basis points just three years earlier.

Table 1
U.S. Treasury Yield Curve Data

End of:	30-Year Yield (%)	2-Year Yield (%)	Yield Curve Slope (bp)	Basis Point Change
2003	5.073	1.819	325.4	N/A
2004	4.826	3.065	176.1	-149.3
2005	4.535	4.400	13.5	-162.6
2006	4.810	4.808	0.2	-13.3

In order to generate a spread, a bank tries to position its liabilities at the short end of the yield curve (1-5 years) and its assets in the intermediate (5-10 years) and long end (greater than 10 years) of the yield curve. This mismatch in maturities usually produces a positive spread and is the reward for assuming interest-rate risk. The data in Table 1 show that the reward for assuming interest-rate risk evaporated in three years, after having been very generous.

When the yield curve is flat, a bank can still make a spread, but it is harder. First, banks are able to obtain "core" deposits—DDAs, savings, MMDAs, and CDs with small denominations. Banks have historically paid rates that are lower than true money market rates, although consumers are becoming wiser as they "shop" for high rates, sometimes using the Internet in their search. This has forced banks to be more competitive with their rates. Nevertheless, there continues to be money sitting in DDA and savings accounts with very low interest rates, helping banks make a spread. The second way to make a spread is to take credit risk on the asset side. The more credit risk, the greater the spread relative to the risk-free rates depicted by the Treasury curve. Again, though, credit spreads have narrowed concurrently with yield curve spreads, compounding the difficulty of turning a profit from net interest income.

Many banks have struggled to grow earnings in line with budgets over the last couple of years. Recently, there was an April 12, 2007 press release through SNL Financial by Jonathan Flax where he reported that "AG Edwards expects small and mid-cap banks to report year-over-year EPS growth of only 1.3 percent, owing largely to margin pressure and decreasing loan and deposit volume." These sorts of news stories are ubiquitous. These economic conditions have forced bank management to cut costs and to do anything possible to eke out another basis point or two in their spreads. If the bank holds investments in the available-for-sale account that are producing a below market yield, the temptation has been to "restructure" the portfolio by selling securities that are "underwater" and replacing them with higher-yielding securities. From a forward looking perspective, this will enhance a bank's spread.

When banks elect to restructure, an asset swap is not always the course of action taken. Sometimes a bank decides to "deleverage" the balance sheet. The justification is to use the proceeds from the sale of securities to prepay the funding that is costing them a rate of interest that exceeds the yield on the securities sold. From a pure spread standpoint, this makes sense. For example, a bank can sell securities that yield 4 percent and eliminate borrowings that are costing 5 percent. The incremental spread is minus 1 percent in this example, a losing asset/liability combination. What is often ignored is the loss on the securities and the prepayment penalty levied on the borrowings. The press release below from First Mariner Bancorp is representative of the announcements made by some banks when they restructured:

Press Release

First Mariner Announces Balance Sheet Restructuring, Provides Additional Quarterly Updates

Company Release - 12/22/2006 16:30

BALTIMORE, Dec. 22 /PRNewswire-FirstCall/ -- First Mariner Bancorp (Nasdaq: FMAR), parent company of First Mariner Bank and Finance Maryland, announced today that it has completed a balance sheet restructuring through the sale of investment securities and the repayment of borrowings. The restructuring will significantly enhance future financial performance by reducing the level of lower yielding securities and decreasing the level of higher cost wholesale funding.

METHOLOGY AND RESULTS

Sources of Data

The data used for this research was obtained from SNL Financial. The SNL database was screened for banks with assets less than $5 billion in order to focus on community banks and thrifts. There is no clear definition of a "community bank." Christine Walika, Director of American Bankers Association's Community Bank Council, is quoted as saying, "We don't even have a definition" (Giegerich, 2005). The key fields of data obtained were bank name and location, gain/loss, and the size of the securities portfolio. In addition, we decided to create a ratio that shows the relative size of the loss, found by dividing the gain/loss on sales of securities by total investment securities.

We decided that it was more relevant to rank each bank by the relative size of the loss rather than the absolute size. This changes the ranking. For example, in the 4Q06, the bank with the largest loss from the sales of securities was Oriental Financial Group, with a loss of $19.8 million. As a percentage of investments, this loss was 0.66 percent. The second largest loss was realized by Yardville National Bancorp at $6.5 million. As a percentage of investments, this loss was 1.31 percent, nearly double the percentage loss recorded by Oriental Financial Group.

SNL Financial also has a repository of press releases for financial institutions listed on an exchange or pink sheet. However, accurate information about Pink Sheet stocks can be difficult to obtain because many do not file financial reports with the SEC. We searched for and reviewed press releases for banks that took sizable losses to see if we could uncover an explicit restructuring announcement. Often, firms will alert the market to actions that will significantly impact earnings. Indeed, in some instances where large losses were taken, a press release was found. In other cases, there was no mention of the loss.

The methodology was to identify banks that restructured their portfolios by (1) finding a significant loss taken in the fourth quarter of the year and (2) confirming the restructuring by a press release. Then, we analyzed the bank's stock performance by comparing its prior and post performance relative to the announcement. We considered the stock performance from the end of the quarter in which the restructuring occurred. Ideally, we felt that a two-year look-back versus a two-year look-forward comparison should be used. However, most of the restructuring has occurred within the last two years in 4Q05 and 4Q06, so our look-forward data is limited.

The Restructuring Sample

We searched through the SNL database and found 21 banks which had announced investment portfolio restructurings in the last three years. The banks, their ticker symbols, and restructuring quarter can be found in Table A in the Appendix.

We obtained monthly stock prices for the restructuring sample banks for the period from January 2000 through June 2007 from *Yahoo! Finance* and calculated the monthly total returns (dividends reinvested) for each bank. We then calculated the average monthly returns before the restructuring and the average monthly returns after the restructuring. These data can be found in Table A in the Appendix.

Since our stock price data comes from the Internet source *Yahoo! Finance*, we were heartened by recent research, Clayton, Jahera, and Schmidt (2006), showing that such on-line sources are as reliable as data from the traditional source the Center for Research on Security Prices (CRSP).

To determine if the mean change in the monthly stock returns was statistically negative we conducted a dependent sample test of mean differences as described below.

Hypotheses:

$H_0 : \mu_D \geq 0 \qquad H_a : \mu_D < 0$

Test Statistic:

$$t = \frac{\bar{x}_D - \mu_D}{s_D / \sqrt{n_D}} \qquad \bar{x}_D = \frac{\sum x_{iD}}{n_D}$$

$$s_D = \sqrt{\frac{\sum (x_{iD} - \bar{x}_D)^2}{n_D - 1}}$$

where:

μ_D is the hypothesized population mean difference in returns, for this study this is zero,

x_{iD} is the difference in returns for the *i*th bank,

$\bar{x}_D$ is the mean of the sample differences,

s_D is the standard deviation of the sample differences, and

n_D is the sample size.

The results of the hypothesis test are shown in the restructuring sample column of Table 2 below. The restructuring sample banks suffered a mean loss in stock returns of 1.80 percent or 180 basis points per month.

Table 2
Hypothesis Test Results

	Restructuring Sample	Control Sample One	Control Sample Two
Sample Mean	-1.80%	-2.55%	-2.61%
Standard Error	0.48%	0.77%	0.50%
t-Statistic	-3.7881	-3.3101	-5.2630
p-Value	0.0006	0.0017	0.0000

However, the last three years have not be kind in general to the holders of bank stocks. We obtained two indices of bank stock performance, a NASDAQ bank index and the America's Community Bankers' index covering the January 2000 to June 2007 time frame from the NASDAQ.com website, and calculated average monthly total returns for the same time intervals observed in our restructuring sample. These data are also shown in Table A. It can be observed that both indices are down for the relevant periods.

The Control Samples

For comparison to the restructuring sample, we randomly selected a control sample. This was done using the same SNL database of banks in which the restructuring sample banks were found and using a table of random numbers to select banks based upon their key identifier numbers in the database. The banks were selected from reporting years in the same proportion as the announcement years of the restructuring banks. We then followed the same process as before: calculate monthly stock prices, monthly total returns, mean returns before and after "restructuring," and hypothesis tests of the mean differences. The somewhat surprising results are presented above in Table 2: the *control sample banks had larger stock return losses than the restructuring banks*.

For thoroughness, a second control sample was selected using a slightly different random-selection technique and the above process was repeated a third time. Those results, again contained in Table 2 above, are consistent with the first control sample.

Testing the Samples for Significance

Having found that the restructuring sample outperformed the two control samples by 75 basis points per month and 81 basis points per month, respectively, we tested to determine if the differences were statistically significant.

Hypotheses:

$H_0 : \mu_1 - \mu_2 = 0$ $\qquad$ $H_a : \mu_1 - \mu_2 \neq 0$

Test Statistic:

$$t = \frac{(\bar{x}_1 - \bar{x}_2) - (\mu_1 - \mu_2)}{\sqrt{\frac{s_1^2}{n_1} + \frac{s_2^2}{n_2}}}$$

where:

$\mu_1 - \mu_2$ is the hypothesized difference in populations' mean returns, and $\bar{x}_i$, s_i, and n_i are the sample mean returns, the standard deviations of the sample mean returns, and the sample sizes for the restructuring and control samples, respectively.

The results of these hypothesis tests are shown in Table 3 below.

Table 3
Hypothesis Test Results

	Restructuring Sample versus Control Sample One	Restructuring Sample versus Control Sample Two
Difference of Means	0.75%	0.81%
Standard Error	0.90%	0.69%
t-Statistic	0.8290	1.1780
p-Value	0.4169	0.2526

The differences in monthly returns are not statistically significant and it cannot be claimed that the benefits of the restructurings were not merely due to chance.

A Possible Size Effect

There are suggestions in the practitioner literature that investment portfolio returns might be directly related to bank size. For example, using the loan loss provision as the proxy, Papiernik (1997) drew the conclusion that "earnings management was a concern more so for the small size banks." If this effect is adequately large in our samples, a two-way analysis of variance might detect the size effect and show that the return differences are statistically significant when corrected for size.

For our two-way ANOVA the *block* variable is each bank's total assets, and the *treatment* variable is whether or not the portfolio was restructured. Total assets for each bank were obtained from the SNL database and the differences in returns were sorted by increasing total assets for each sample. Thus, banks of similar size are paired in the two-way ANOVA. This technique tests two pairs of hypotheses simultaneously:

H_0 : the block means (size) are equal

H_a : the block means (size) are unequal

H_0 : the treatment means (restructuring) are equal
H_a : the treatment means (restructuring) are unequal

We used Excel's two factor Anova function to perform the analysis and the ANOVA results are presented in Table 4 below. As can be seen in the table, neither the size nor the restructuring effect is statistically significant.

Table 4
Analysis of Variance

Restructured versus Control One Sample Banks					
Source of Variation	**SS**	**df**	**MS**	**F**	**p-Value**
Difference in Total Assets	0.0182	20	0.0009	1.1218	0.3998
Difference in Pre- and Post-Returns	0.0006	1	0.0006	0.7236	0.4050
Error	0.0162	20	0.0008		
Total	0.0350	41			

Restructured versus Control Two Sample Banks					
Source of Variation	**SS**	**df**	**MS**	**F**	**p-Value**
Difference in Total Assets	0.0080	20	0.0004	0.9834	0.5147
Difference in Pre- and Post-Returns	0.0000	1	0.0000	0.0000	0.9982
Error	0.0081	20	0.0004		
Total	0.0161	41			

CONCLUSIONS AND IDEAS FOR FUTURE RESEARCH

This research originated with one author's (Walker) experience in the bank advisory industry and the observation that bankers were being advised to restructure investment portfolios that were returning below-market yields. Superficially it would be difficult to justify this practice on the basis of a rapid improvement in the bank's stock. One might be easily convinced that taking the accompanying losses would further depress the bank's stock.

However, our results do not indicate that such a restructuring lowers stockholder returns relative to bank industry returns as a whole, and our research hints that shareholders may in fact benefit from such restructurings.

We looked at 21 instances where community banks restructured their investment portfolios during the fourth quarter of 2004, 2005 or 2006. We identified those banks by screening for banks showing a portfolio loss in the fourth quarter and then finding a public announcement from management that restructuring in fact did occur. We found many banks that took securities losses, but few of these banks made a public announcement that they had restructured.

The flattening of the yield curve that began during 2004 has created a difficult interest-rate environment for banks to operate. Traditionally, banks mismatch their assets and liabilities to earn a spread. With the flattening yield curve, this has made it tougher for banks to maintain their spreads. It appears that banks restructured their portfolios in a vain attempt to increase profits and the value of their stock.

Our research looked at whether or not restructuring benefited those banks. We found that there was an economic gain from restructuring, as monthly bank returns were 75 basis points to 81 basis points higher for those banks that restructured relative to two control samples that we tested. However, we could not show that the gain was statistically significant, so our results are inconclusive. Our sample size of 21 banks is small; thus, further research could look at a larger sample size. We selected banks that had a separate restructuring announcement. It is conceivable that banks discuss their restructuring in their annual reports, without making a formal announcement to the markets.

There is research that suggests that larger banks behave differently than smaller banks in regards to financial management decisions. In order to test for a size effect, we conducted a two-way analysis of variance that used size as the block variable and whether or not a bank restructured as the treatment variable. Neither the size nor the restructuring effect was found to be statistically significant.

As this paper is being written, the U.S. Treasury yield curve is assuming the more standard positive slope. We plan to revisit these issues in a year or two with the expectation that "riding the yield curve" under those circumstances can indeed be shown to be beneficial.

The data is limited post restructuring, particularly for those banks that did their restructuring in the fourth quarter of 2006. Future research can attempt to identify and analyze more banks that restructured and to analyze results over a longer time frame. Based on our study, we cannot provide statistical evidence that restructuring is beneficial to shareholders in terms of monthly stock returns. Although the economic benefit appears compelling.

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Table A
Restructuring Sample and Comparison Indices

Bank	Ticker Symbol	Restructuring Quarter	Stock Return		NASDAQ Bank Index Return		ACB Index Return	
			Before	After	Before	After	Before	After
Ameriana Bancorp	ASBI	4Q 2006	0.65%	-2.95%	0.92%	-0.23%	0.65%	-0.77%
CoBiz Inc.	COBZ	4Q 2006	1.99%	-2.78%	0.92%	-0.23%	0.65%	-0.77%
First Ipswich Bancorp	FIWC	4Q 2006	-1.74%	2.00%	0.92%	-0.23%	0.65%	-0.77%
First Litchfield Financial Corporation	FLFL	4Q 2006	0.92%	-1.62%	0.92%	-0.23%	0.65%	-0.77%
First Mariner Bancorp	FMAR	4Q 2006	1.71%	-4.75%	0.92%	-0.23%	0.65%	-0.77%
Lakeland Bancorp, Inc.	LBAI	4Q 2006	1.31%	-0.80%	0.92%	-0.23%	0.65%	-0.77%
Legacy Bancorp, Inc.	LEGC	4Q 2006	1.27%	-0.79%	0.92%	-0.23%	0.65%	-0.77%
Oriental Financial Group Inc.	OFG	4Q 2006	0.93%	-0.70%	0.92%	-0.23%	0.65%	-0.77%
Rurban Financial Corp.	RBNF	4Q 2006	0.08%	2.76%	0.92%	-0.23%	0.65%	-0.77%
Security Bank Corporation	SBKC	4Q 2006	1.70%	-1.59%	0.92%	-0.23%	0.65%	-0.77%
Yardville National Bancorp	YANB	4Q 2006	2.01%	-0.78%	0.92%	-0.23%	0.65%	-0.77%
Banner Corporation	BANR	4Q 2005	1.95%	1.10%	1.01%	0.18%	0.82%	0.03%
ESB Financial Corporation	ESBF	4Q 2005	1.36%	0.25%	1.01%	0.18%	0.82%	0.03%
First Charter Corporation	FCTR	4Q 2005	1.31%	-0.09%	1.01%	0.18%	0.82%	0.03%
First Financial Bancorp.	FFBC	4Q 2005	0.41%	-0.48%	1.01%	0.18%	0.82%	0.03%
MainSource Financial Group, Inc.	MSFG	4Q 2005	1.40%	0.39%	1.01%	0.18%	0.82%	0.03%
Northway Financial, Inc.	NWFI	4Q 2005	0.96%	0.42%	1.01%	0.18%	0.82%	0.03%
Peoples Community Bancorp, Inc.	PCBI	4Q 2005	1.33%	-1.01%	1.01%	0.18%	0.82%	0.03%
Capitol Bancorp Ltd.	CBC	4Q 2004	2.60%	-0.17%	1.25%	0.03%	4.16%*	0.01%
Hilltop Community Bancorp, Inc.	HTBC	4Q 2004	0.87%	-0.61%	1.25%	0.03%	4.16%*	0.01%
Midwest Banc Holdings, Inc.	MBHI	4Q 2004	1.92%	-0.67%	1.25%	0.03%	4.16%*	0.01%

* The America's Community Bankers' Index originates in December 2003 but is only publicly available beginning in August 2004. Thus, these returns are for four months from August 2004 through December 2004.

Table B
Control Sample One

Bank	Ticker Symbol	"Restructuring Quarter"	Stock Return	
			Before	After
Bridge Bancorp, Inc.	BDGE	4Q 2006	1.11%	0.44%
Crazy Woman Creek Bancorp Incorporated	CRZY	4Q 2006	1.37%	0.12%
Dearborn Bancorp, Inc.	DEAR	4Q 2006	-3.69%	2.06%
Ephrata National Bank	EPNB	4Q 2006	0.61%	2.09%
First Financial Bancorp.	FFBC	4Q 2006	0.39%	-1.71%
First National Lincoln Corporation	FNLC	4Q 2006	1.80%	-0.39%
Main Street Trust, Inc.	MSTI	4Q 2006	0.91%	-1.89%
Preferred Bank	PFBC	4Q 2006	2.47%	-0.14%
Premier Valley Bank	PVLY	4Q 2006	2.85%	-0.24%
S.Y. Bancorp, Inc.	SYBT	4Q 2006	1.51%	-2.09%
Security Bank of California	SBOC	4Q 2006	0.62%	-3.17%
Arrow Financial Corporation	AROW	4Q 2005	1.53%	-0.37%
County Bank Corp	CBNC	4Q 2005	0.62%	-1.42%
Diablo Valley Bank	DBVB	4Q 2005	2.95%	-0.19%
HF Financial Corp.	HFFC	4Q 2005	1.44%	0.38%
Highlands Bankshares, Inc.	HBKA	4Q 2005	1.30%	-0.01%
Sonoma Valley Bancorp	SBNK	4Q 2005	1.26%	1.85%
Team Financial, Inc.	TFIN	4Q 2005	1.03%	0.48%
Cascade Bancorp	CACB	4Q 2004	3.14%	1.52%
Center Bancorp, Inc.	CNBC	4Q 2004	2.39%	0.97%
Northeast Bancorp	NBN	4Q 2004	16.06%	-0.70%

Table C
Control Sample Two

Bank	Ticker Symbol	"Restructuring Quarter"	Stock Return	
			Before	After
Bay National Corporation	BAYN	4Q 2006	1.73%	-2.42%
Cadence Financial Corporation	CADE	4Q 2006	0.67%	-1.37%
Capitol Bancorp Ltd.	CBC	4Q 2006	2.11%	-7.35%
Central Pacific Financial Corp.	CPF	4Q 2006	1.85%	-1.63%
First Busey Corporation	BUSE	4Q 2006	0.77%	-1.57%
First Franklin Corporation	FFHS	4Q 2006	0.83%	0.93%
Home Financial Bancorp	HWEN	4Q 2006	1.55%	-1.63%
Independent Bank Corp.	INDB	4Q 2006	1.91%	-2.21%
Renasant Corporation	RNST	4Q 2006	1.59%	-3.01%
SCBT Financial Corporation	SCBT	4Q 2006	1.44%	-1.25%
Sterling Banks, Inc.	STBK	4Q 2006	1.53%	-4.22%
American River Bankshares	AMRB	4Q 2005	1.93%	1.04%
Delhi Bank Corp.	DWNX	4Q 2005	-1.14%	-0.59%
First Community Bancshares, Inc.	FCBC	4Q 2005	1.59%	0.36%
German American Bancorp, Inc.	GABC	4Q 2005	0.51%	0.61%
Glacier Bancorp, Inc.	GBCI	4Q 2005	2.45%	0.70%
Lexington B&L Financial Corp.	LXMO	4Q 2005	1.34%	0.45%
River Valley Bancorp	RIVR	4Q 2005	2.10%	0.06%
Alaska Pacific Bancshares, Inc.	AKPB	4Q 2004	1.67%	0.65%
CBT Financial Corporation	CBTC	4Q 2004	1.59%	-1.00%
Texas Capital Bancshares, Inc.	TCBI	4Q 2004	3.91%	0.47%

THE INFLUENCE OF U.S. PRESIDENTIAL ELECTIONS ON EXCHANGE RATES

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ABSTRACT

U.S. Presidential elections have been responsible for many changes in the economy. Previous work has studied the impact of these elections on the Gross Domestic Product, interest rates, unemployment rates, exchange rates in other countries, etc. This study investigates the relationship between U.S. Presidential elections and Exchange Rate movement. We examine the exchange rates between the U.S. Dollar and the Euro, British Pound and the Yen. We seek to find a pattern in growth of the exchange rates during the presidential cycle. Results show the presence of a difference in growth of these exchange rates during the presidential cycle.

INTRODUCTION

Research in foreign markets indicate that political events such as presidential and parliamentary elections "create panic among foreign investor" (Chiu, Chen, and Tang, 2005). Small economies may be affected more than the larger U.S. economy and therefore the reaction could be negligible or not at all. Efficient market theory tells us that most of the changes are already in the prices and that not much deviation will take place on or around the actual time a final change occurs. Current monetary policy has a large effect on exchange rate. Politicians working on re-election may try to influence exchange rates in election years by cutting taxes and increasing “spending and wait to devalue exchange rates until after elections” (Ghezzi, Stein, and Streb, 2001). Sibley investigating Latin America elections indicates that there can be a “negative impact on nominal currency values” when a new president is elected (2001).

The stock market analysts continually try to judge the causes of market movement. A stock market analyst, Taulli noticed a change in investor psychology just after the November 2004 presidential elections. This was a positive reaction that took place for a few days immediately following the election. This was noted as a relief rally among investors (Wall Street’s Bush doctrine, 2004). Our questions concern the influence on the exchange rates prior to the election, in other words leading up to the election and then for a few time periods after the election.

Exchange rates are influenced by the law of supply and demand. Other theories include purchasing power parity, the balance of payments, the monetary approach, and portfolio balance approach. Purchasing power parity compares prices in countries of similar goods. Balance of payments focuses on the balance of payments on the current account and long term capital. The monetary approach uses the theory of supply and demand, supply being controlled by the country and demand being influenced by the interest rate for borrowers. The portfolio balance approach expands the monetary approach to include bonds and foreign debt. Although these look at specific pieces “no unified theory exists (Cross, 1998).

Little literature exists on the topic. The literature found deals mainly with foreign market exchange rate fluctuations and trade flows (Dell'Ariccia, 1999), political risk and foreign exchange rates (Cosset & de la Rianderie, 1985) and foreign political cycle influence (Ghezzi, Stein, and Streb, 2001; Sibley, 2001). This study helps to extend the research in the area of political cycles and their economic influence as it pertains to the U.S.

METHODOLOGY

Before we begin a discussion of the data, we will briefly discuss the presidential cycle. This timeline is based on a four-year cycle beginning with year of the inauguration, and ending with the presidential election in the fourth year. In year 1, the inauguration typically occurs in week 3 and we will refer to this first year as the adjustment period, which stretches into early year 2. Toward the end of year 2, some individuals will announce the intentions for candidacy, but this typically happens in early- to mid-year 3. By the middle of the third year in this presidential cycle, most of the presidential candidates have been identified. Primary elections are held in early- to mid- year 4 (with many of them occurring in February or March, depending on the state). Democratic and Republican conventions are also held in year 4, in late August to early September. The final event in this cycle is the actual U.S. presidential election date, which occurs in year 4, week 46. For illustration, Figure 1 depicts this presidential cycle on a time line. Figures 2, 3 and 4 show the daily movement of the USD → EUR, USD → GBP and USD → YEN exchange rates, respectively, over the most recent presidential cycle, 2001-2004.

The data are exchange rate data from the European Union (EUR), England (GBP), and Japan (JPY) as compared to the United States of America (USD). The data is from the years 1987-2006. For the Euro, the only years available are between 1999 and the present. We begin our analysis by calculating quarterly (weekly) averages for each of the exchange rates. We then calculate the percentage change in these average quarterly (weekly) exchange rates. All of the tests and comparisons conducted are based on these percentage changes.

We investigate two types of hypotheses: 1) to verify the consistency of the data: we test the null hypothesis that all quarters (and weeks) within election years are no different by using a series of one-way analysis of variance tests. We also test the null hypothesis that no election year is different that any other election year (by quarters and weeks), and conversely that no non-election year is any different than any other non-election year. 2) To investigate the impact of the presidential cycle: we test the null hypothesis that a particular quarter (or week) in one year is no different than that particular quarter (or week) in any other year (or combination of years), we perform a series of two-tailed t-tests.

RESULTS

At first glance, the trend in quarterly averages shows a pattern: the average percentage change or growth in the exchange rate appears to have increased in the quarter preceding the election quarter of election years. In other words, the 3rd quarter of election years appears to see higher growth in the exchange rates in than in non-election years. Table 1 shows the growth in average quarterly exchange rates for the time period studied. Figures 5, 6 and 7 show the quarterly averages in growth for the exchange rates between the United States Dollar and the Euro, the Pound and the Yen, respectively.

However, these observed differences in growth, quarter to quarter, are not significant. See Table 2 for hypothesis testing results. This means that all quarters are essentially the same in terms of growth for all three exchange rates studied (in both election years and non-election years; see tests 1-2 in Table 2). We also found that differences in growth by quarter in election years are no different from non-election years for each quarter for the USD → EUR and USD → JPY exchanges. For the USD → GBP exchange, the earlier mentioned trend ($Qtr3_{EY} > Qtr3_{nEY}$) is significant at the 0.05 level. This was verified with a one-tailed t-test, with significance at the 0.01 level. See tests 7-10 in Table 2. Other tests performed verify that election years are no different from one another (tests 3-4) and non-election years are no different from one another (tests 5-6) except for the USD → EUR exchange. 2001 and 2003 report different average quarterly growth in exchange rates.

Detecting a pattern in week-to-week changes in growth is more difficult. See Figures 8, 9 and 10 for weekly average growth patterns for the Euro, the Pound and the Yen exchanges, respectively. In general, exchange rate growth fluctuates throughout the year between ± 0.10% for each of the three exchange rates studied. There is a slightly higher level of variability observed in election years. For the USD → EUR exchange, this variability is even more pronounced, although there are only two election years available to study. As with the quarterly observations, tests were performed to verify that the weeks within election years (and non-election years) are no different from one another (tests 1-2 in Table 3). We also verify that across the time period studied, there are no differences year to year in weekly growth of the exchange rate (tests 3-6 in Table 3). The results show that there are no differences for the comparisons mentioned above for each exchange rate, except for the USD → EUR exchange. For this data series, there are only two election years available and this has a strong impact on the results of the test.

The next set of comparisons involves comparing weeks in presidential cycle to other weeks the presidential cycle. Table 4 outlines the activities in the presidential cycle and their corresponding weeks. Table 5 in the Appendix shows the average weekly growth for the weeks in which there is a larger difference in growth between years of interest for the time period studied. Larger growth indicates a change in growth ≥ 0.15%. The only weeks considered are those identified in Table 4. This table also indicates the level of significance of the difference between election years and non-election years.

The results show that the primary election period could have an impact on the USD → EUR and USD → GBP exchanges. However, various states hold these elections at different times, so the overall impact of the primary elections cannot be estimated. The Democratic and Republican National Conventions and the Inauguration could also have an impact on the USD → GBP exchange. The national conventions typically span 4-5 weeks, with actual dates changing every election year, so the overall impact cannot be estimated.

CONCLUSIONS

U.S. Presidential elections have been responsible for many changes in the economy. Previous work has studied the impact of these elections on other variables, but rarely have exchange rates been studied. In this study, we examined the significance of the impact of time of the year and other activities in the presidential cycle on the exchange rates between the United States and the European Union, England, and Japan.

There appears to be an increase in the quarterly exchange rate just before election time. However, these quarter-to-quarter differences in the exchange rates are insignificant, except for the USD → GBP exchange. Differences were reported for the USD → EUR exchange, however, there are only two election years available to study, and this sample size is too low for meaningful results. The USD → GBP exchange rate seems to respond to the U.S. presidential cycle more so than the USD → EUR or USD → JPY exchange rates.

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Table 1. Average Quarterly Percentage Changes in Exchange Rates

	USD →EUR (1999-2006)		**USD →GBP** (1987-2006)		**USD →JPY** (1987-2006)	
	nEY average	EY average	nEY average	EY average	nEY average	EY average
Qtr1	0.03%	0.04%	0.01%	0.02%	0.01%	0.04%
Qtr2	-0.01%	0.01%	0.00%	0.01%	-0.02%	-0.01%
Qtr3	-0.02%	0.03%	-0.02%	0.03%	-0.01%	0.00%
Qtr4	-0.01%	-0.09%	-0.02%	-0.02%	-0.01%	0.07%

Where nEY denotes non-election years and EY denotes election years.

Table 2. Hypothesis Testing Results for Average Quarterly Percentage Changes

	USD →EUR (1999-2006)	**USD →GBP** (1987-2006)	**USD →JPY** (1987-2006)
Test descriptor			
1. Null: $\mu_{Q1} = \mu_{Q2} = \mu_{Q3} = \mu_{Q4}$ *EYs only*	0.088*	0.815	0.802
2. Null: $\mu_{Q1} = \mu_{Q2} = \mu_{Q3} = \mu_{Q4}$ *nEYs only*	0.384	0.109	0.736
3. Null: $\mu_{2000} = \mu_{2004}$ *EYs only*	0.418^{+}	NA	NA
4. Null: $\mu_{1988} = \ldots = \mu_{2004}$ *EYs only*	NA	0.442	0.669
5. Null: $\mu_{1999} = \mu_{2006}$ *nEYs only*	0.052*	NA	NA
6. Null: $\mu_{1987} = \ldots = \mu_{2006}$ *nEYs only*	NA	0.127	0.682
7. Null: $\mu_{Q1} = \mu_{Q1}$ *EY vs. nEY*	0.827	0.970	0.606
8. Null: $\mu_{Q2} = \mu_{Q2}$ *EY vs. nEY*	0.684	0.672	0.283
9. Null: $\mu_{Q3} = \mu_{Q3}$ *EY vs. nEY*	0.174	0.009**$^{++}$	0.625
10. Null: $\mu_{Q4} = \mu_{Q4}$ *EY vs. nEY*	0.146	0.982	0.786

The values shown are p-values calculated at the 0.10 significance level

* indicates significance at the 0.10 significance level

** indicates significance at the 0.05 significance level

$^{+}$ the test performed was actually a two-tailed t-test

$^{++}$ a one-tailed t-test was also performed, p-value = 0.005

Where nEY denotes non-election years and EY denotes election years.

Table 3. Hypothesis Testing Results for Average Weekly Percentage Changes

	USD →EUR (1999-2006)	**USD →GBP** (1987-2006)	**USD →JPY** (1987-2006)
Test descriptor			
1. Null: $\mu_{w1} = \ldots = \mu_{w53}$ *EYs only*	0.006**	0.300	0.496
2. Null: $\mu_{w1} = \ldots = \mu_{w53}$ *nEYs only*	0.666	0.253	0.211
3. Null: $\mu_{2000} = \mu_{2004}$ *EYs only*	0.006**	NA	NA
4. Null: $\mu_{1988} = \ldots = \mu_{2004}$ *EYs only*	NA	0.775	0.771
5. Null: $\mu_{1999} = \mu_{2006}$ *nEYs only*	0.428	NA	NA
6. Null: $\mu_{1987} = \ldots = \mu_{2006}$ *nEYs only*	NA	0.648	0.945

The values shown are p-values calculated at the 0.10 significance level

* indicates significance at the 0.10 significance level

** indicates significance at the 0.05 significance level

Where nEY denotes non-election years and EY denotes election years.

Table 4. Activities in the Presidential Cycle

I. Comparing election years to non-election years
*Primary Elections (weeks 5-25)**   *National Conventions (weeks 34-38)*   *Election Day (week 46)*   II. Comparing Year *i* to Year *j* in the presidential cycle
Inauguration (week 3)

* Primary election dates vary state-to-state, only larger difference

Table 5. Average Weekly Percentage Changes in Exchange Rates for Weeks Coinciding with Activities in the Presidential Cycle

	USD →EUR (1999-2006)			USD →GBP (1987-2006)			USD →JPY (1987-2006)		
week	nEY average	EY average	diff (nEY-EY)	nEY average	EY average	diff (nEY-EY)	nEY average	EY average	diff (nEY-EY)
5	0.05%	0.27%	-0.22%						
6	0.08%	-0.15%	0.22%*						
9				-0.01%	0.15%	-0.16%*			
13							0.06%	-0.16%	0.15%
15							-0.09%	0.13%	-0.21%
34				-0.01%	0.17%	-0.17%**			
35	0.00%	0.20%	-0.20%						
38				-0.04%	0.18%	-0.22%*			
week	nIY average	IY average	diff (nIY-IY)	nIY average	IY average	diff (nIY-IY)	nIY average	IY average	diff (nIY-IY)
3									
4				-0.07%	0.09%	-0.16%*			

Where nEY denotes non-election years and EY denotes election years.

Where nIY denotes non-inauguration years and IY denotes inauguration years.

* indicates significance at the 0.10 significance level

** indicates significance at the 0.05 significance level

Figure 1. The Presidential Cycle

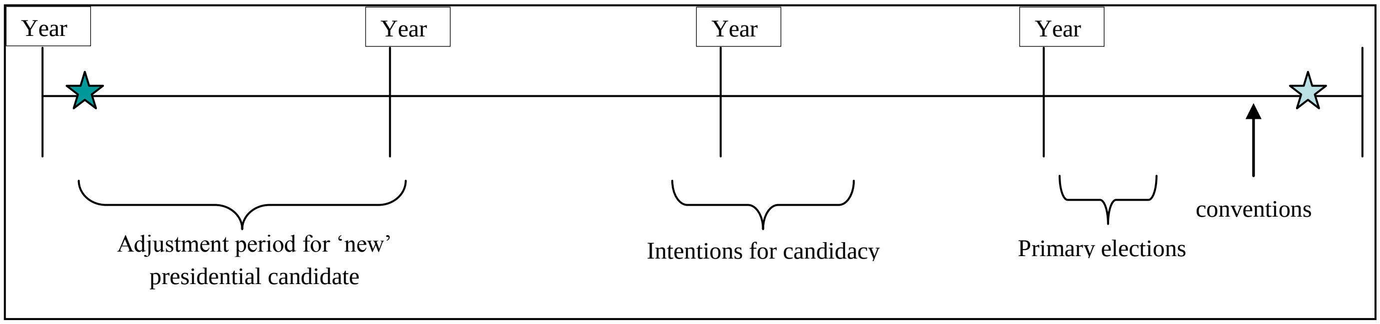


Figure 2. USD → EUR exchange rate for the 2001-2004 Presidential Cycle

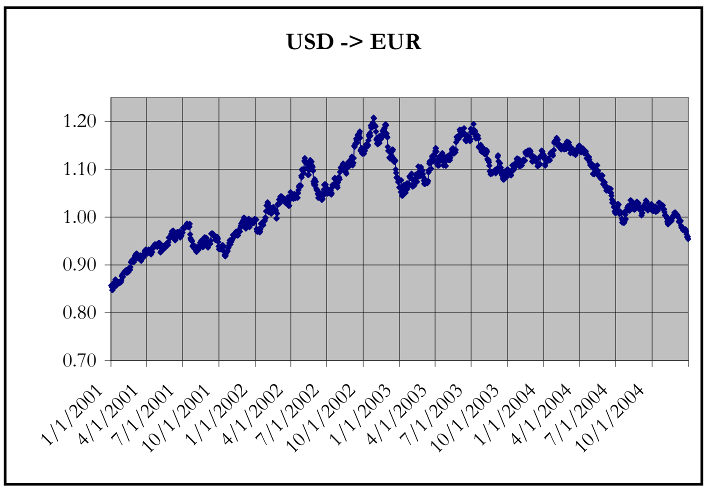


Figure 3. USD → GBP exchange rate for the 2001-2004 Presidential Cycle

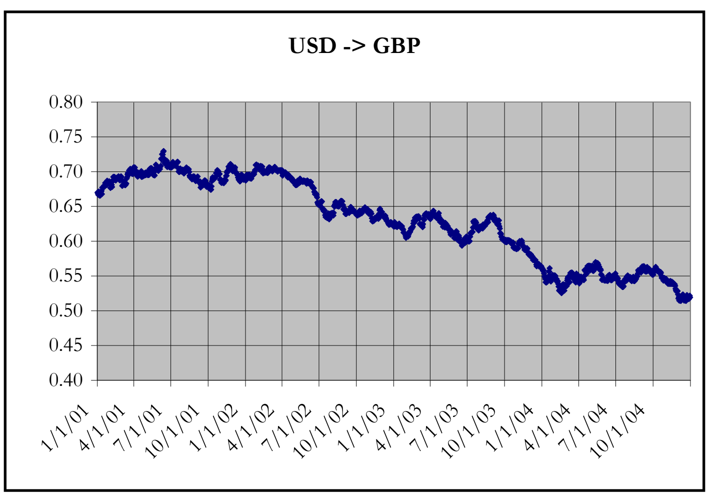


Figure 4. USD → JPY exchange rate for the 2001-2004 Presidential Cycle

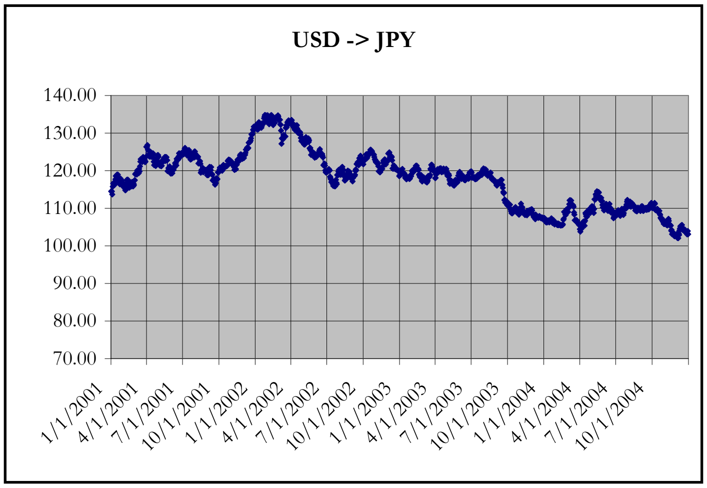
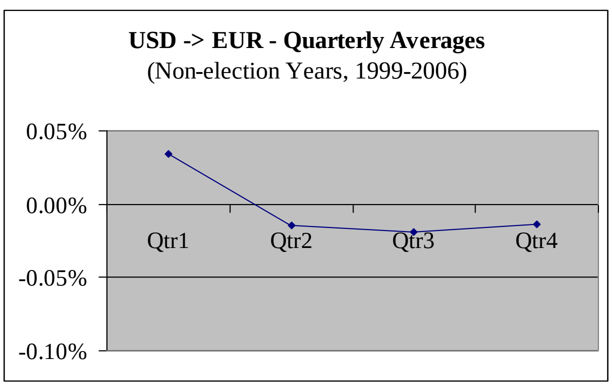


Figure 5. (left) The quarterly percentage change in USD → EUR exchange rates for non-election years between 1999-2006. (right) The quarterly percentage change in USD → EUR exchange rates for election years between 1999-2006 only.



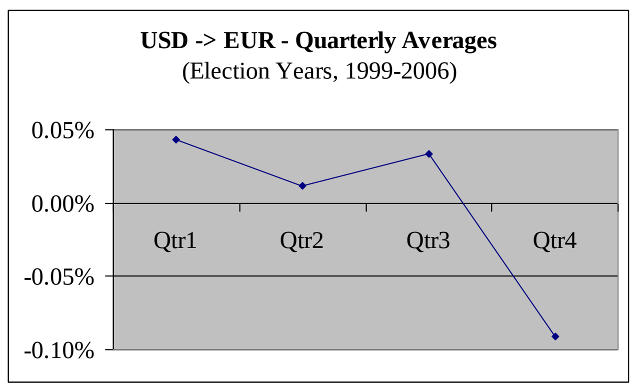
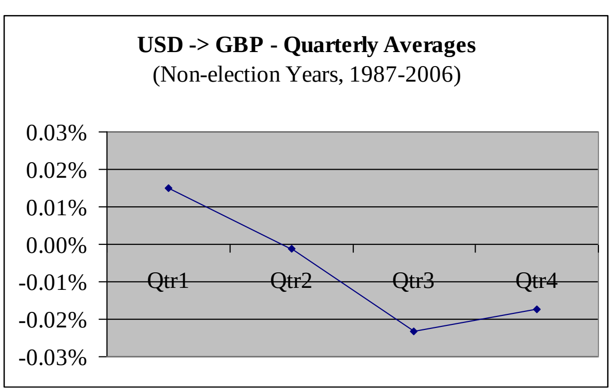


Figure 6. (left) The quarterly percentage change in USD → GBP exchange rates for all non-election between 1987-2006. (right) The quarterly percentage change in USD → GBP exchange rates for election years between 1987-2006 only.



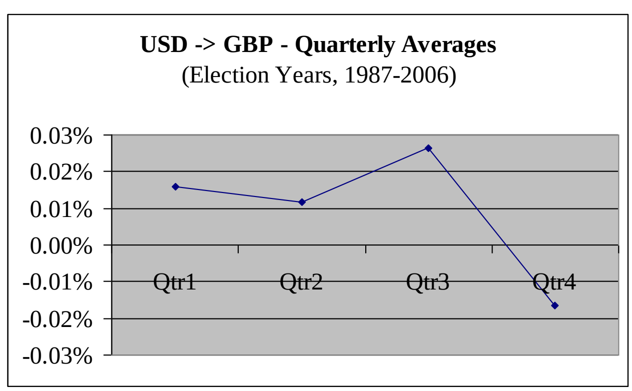


Figure 7. (left) The quarterly percentage change in USD → JPY exchange rates for non-election years between 1987-2006. (right) The quarterly percentage change in USD → JPY exchange rates for election years between 1987-2006 only.

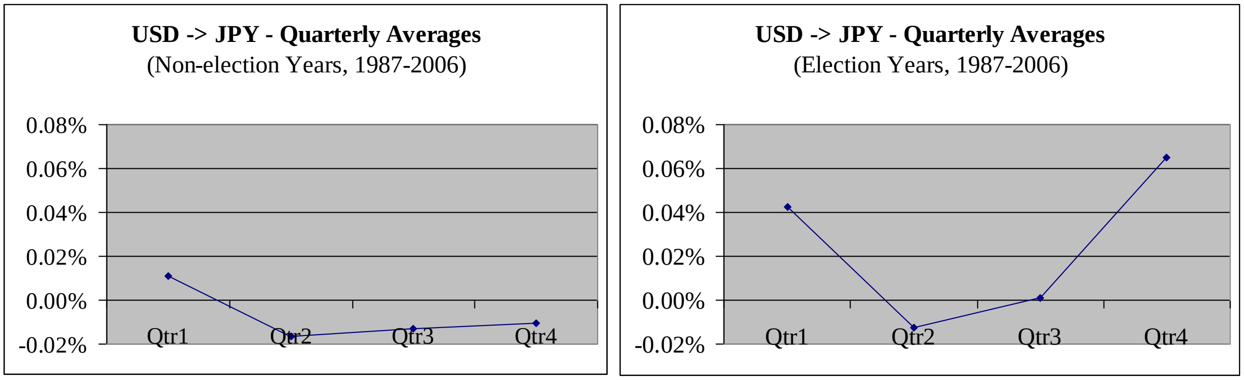


Figure 8. (left) The weekly percentage change in USD → EUR exchange rates for non-election years between 1999-2006. (right) The weekly percentage change in USD → EUR exchange rates for election years between 1999-2006 only.

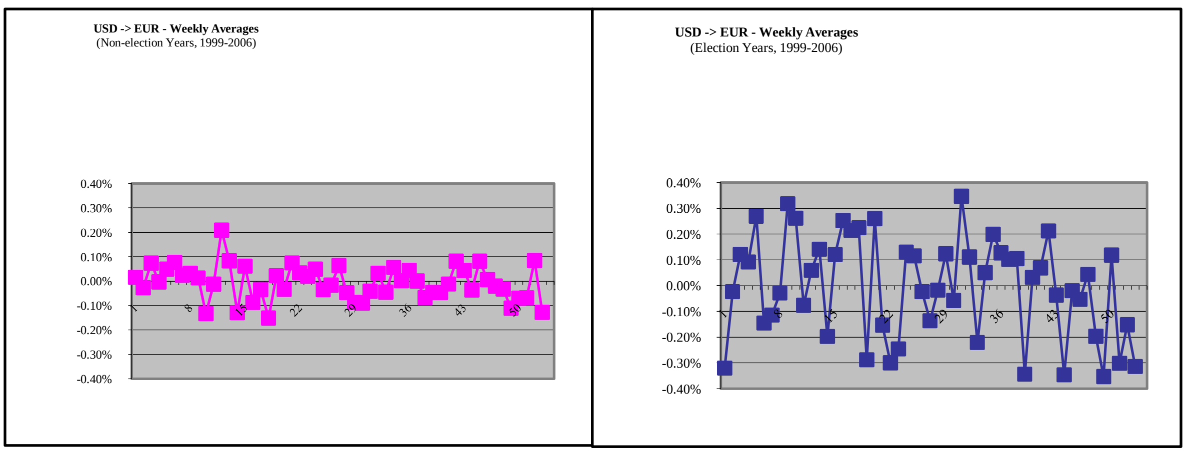


Figure 9. (left) The weekly percentage change in USD → GBP exchange rates for non-election years between 1987-2006. (right) The weekly percentage change in USD → GBP exchange rates for election years between 1987-2006 only.

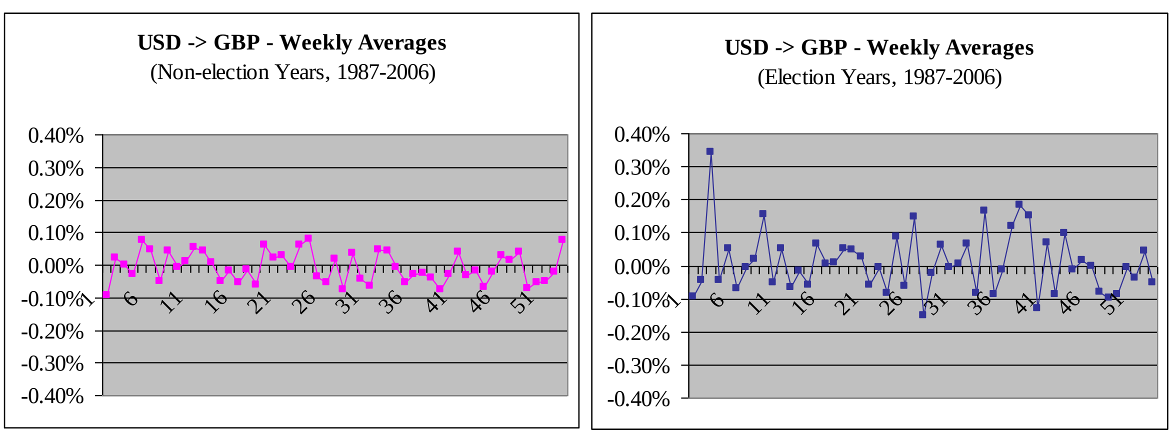
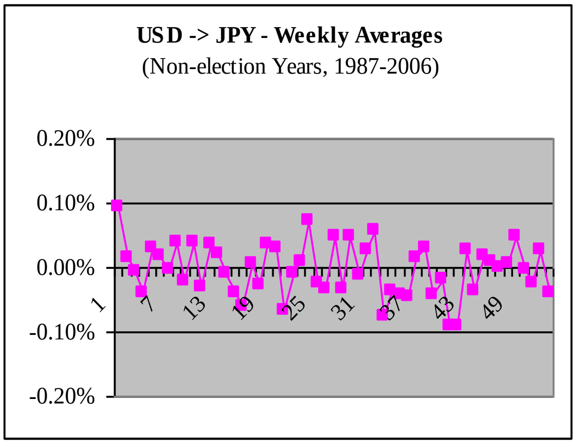
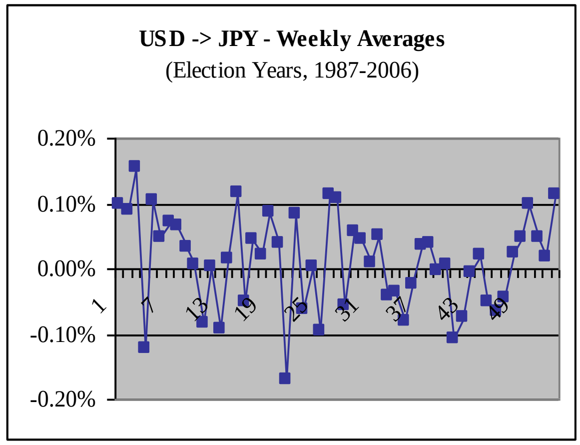


Figure 10. (left) The weekly percentage change in USD → JPY exchange rates for non-election years between 1987-2006. (right) The weekly percentage change in USD → JPY exchange rates for election years between





1987-2006 only.

SOUTH CENTRAL PENNSYLVANIA – TRACKING THE REGIONAL ECONOMY

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ABSTRACT

The availability of good data on the health of regional economies is hampered by the length of time it takes to process and publish sub-national data. Local business and public decision-makers must often make decisions using information that lacks currency. One approach to providing more timely information for local decision-makers is the use of qualitative business activity surveys. This involves asking business participants in the local economy to assess the level of business activity in their region. This paper discusses the use of qualitative business surveys for public policy and business decision-making purposes and then presents the results from the last 6 quarters of a survey conducted in South-Central Pennsylvania.

Sub-national data is notoriously slow to be publicly disseminated, making timely information about sub-national economies difficult to obtain. For both business and public decision-makers, the scarcity of timely local information makes informed decisions difficult to make. Qualitative business surveys are used extensively in Europe[1] and to a lesser degree in the United States[2] in an attempt to provide local decision-makers with better information on the direction of local business activity.

An advantage of qualitative business surveys is that they do not require participants to reveal any information that would leave them at a competitive disadvantage. Since the questions ask only about the direction of change in key business indicators and not for specific numbers more businesses may be willing to participate. Qualitative surveys also take less time to fill out than more extensive quantitative surveys so that busy executives are more likely to respond. Processing time is also reduced. The downside is that qualitative surveys provide less robust information that quantitative ones.

It would be far more useful to know by how much capital spending increased rather than that expenditures just increased. This seems to manifest itself in a typically large portion of respondents who report "no change" on many of the indicators.

South-Central Pennsylvania Business Outlook Survey[3]

In March 2006, we began surveying businesses in South-Central Pennsylvania in cooperation with the Central Penn Business Journal. Using the Central Penn Business Journal's business database of 5000

[1] The Centre for International Research on Economic Tendency (CIRET), serves as a focal point for the many, primarily, European organizations that conduct such tendency surveys.

[2] Examples of qualitative business surveys conducted in the United States include: Kern County, CA conducted by Abbas Grammy from CSUB, Evansville, IN conducted by The University of Southern Indiana College of Business, Dane County, WS conducted by The University of Wisconsin at Madison, entire United States conducted by The Business Roundtable and another conducted by the AICPA, Dallas conducted by the Dallas Federal Reserve Bank, Philadelphia region conducted by the Philadelphia Federal Reserve Bank, South Jersey conducted by the Philadelphia Federal Reserve Bank and Vermont conducted by the Vermont Business Roundtable.

[3] For the purposes of this paper, South-central Pennsylvania encompasses the six county region including Adams, Cumberland, Dauphin, Lancaster, Lebanon and York counties.

email addresses, we send out our survey[4] at the beginning of every quarter. While this does not yield us a scientifically selected sample, it does significantly streamline the data collection process.

Email responses make it far easier for business participants to respond and because all responses are electronic there is no need for data entry. This greatly enhances the turn-around time.

The survey asks participants to indicate 4 basic things: (1) the direction of change in the general level of business activity in the US economy, the state economy, the regional economy and in their company during the quarter just completed as compared to the previous quarter; (2) the direction of change in the general level of business activity expected in the US economy, the state economy, the regional economy and in their company in the coming six months as compared to the quarter just completed; (3) the direction of change in key company-level business indicators[5] during the quarter just completed compared to the previous quarter; and (4) the direction of change in the same company-level indicators in the coming six months as compared to the quarter just completed.

The primary measure we use to track changes in the business indicators reported on in the survey is a diffusion index. For each indicator used in the survey we calculate the percentage of respondents who indicated an increase, the percentage who indicate no change and the percentage who indicate a decrease. Subtracting the percentage reporting a decrease from the percentage reporting an increase we produce a diffusion index for each indicator. This index ranges between -100 and +100 with a midpoint of 0. At the midpoint there are equal numbers of respondents who report increases and decreases.

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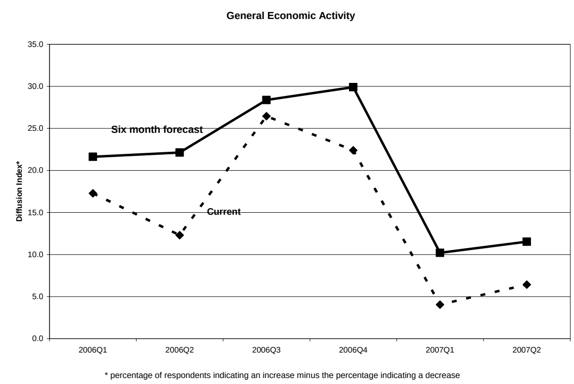
[4] See appendix 1 for a copy of the survey instrument. This survey follows the work of the Philadelphia Federal Reserve Bank and their Business Outlook Survey.

[5] These indicators include sales, inventories, customer inquiries, employment, prices, resource costs and investment spending.

PRELIMINARY RESULTS

The broadest measure used in the survey is simply the general level of business activity. Respondents are asked to compare the current general level of business activity in the region with the previous quarter and with the next two quarters. Based on their responses, we calculate a diffusion index, the results of which are shown below.

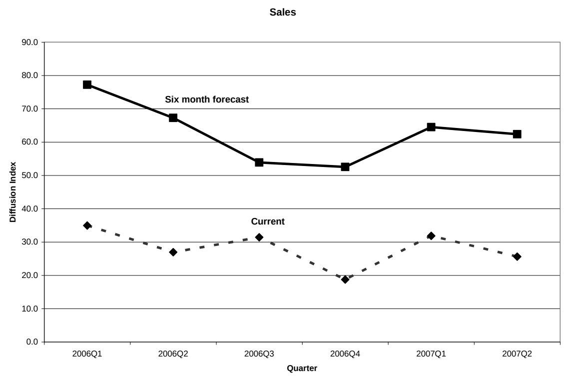


Both the current and future index have remained above zero for the last six quarters although the last 2 quarters have seen a significant fall. It will take some time to gain experience with this survey to understand whether the decline in the first quarter of this year is significant or whether it has some sort of seasonality aspect to it.

Through the first six quarters of conducting this survey, expectations about the future level of business activity for the region are always more optimistic than the perceived level of current economic activity. These two measures certainly trend together and the gap between them is fairly stable.

It may be that the trend, in terms of the gap between the current perceived reality and expectations about the future provides the key to understanding this significance. A widening of the gap may be the signal of an impending downturn in economic activity.

Beyond the general level of economic activity, respondents are asked to report on 12 company-specific business indicators. The first of these is the current level of sales, shipments for manufacturing firms, compared to the previous quarter and compared to the next six months. The diffusion index for this indicator is shown below.

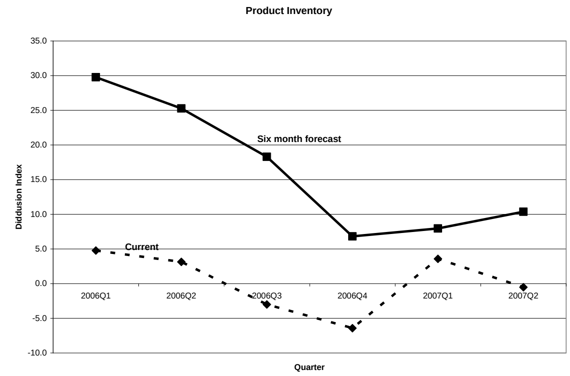


Once again, the current and future indices have been positive since we started the survey but the trend has been slightly downward. The current and future indices trend together and the gap remains pretty consistent

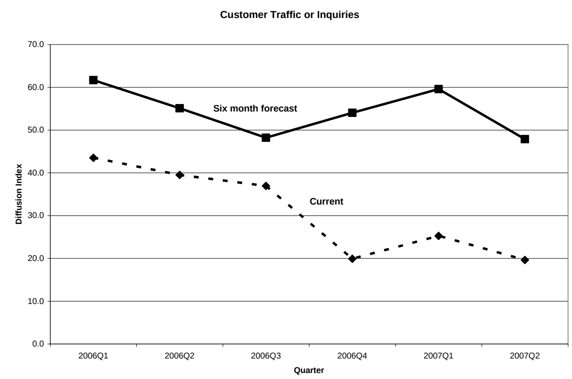
The second company-specific indicator we ask businesses to report on is the level of product inventories. The diffusion index for product inventory is shown below.

The behavior of these indices show that current inventory levels have been pretty stable with the diffusion index hovering between +5.0 and -5.0. The future index has steadily declined reducing the gap between the indices. When current inventory levels are stable but future inventory levels are expected to increase, it either means production is expected to pick up or sales are expected to fall.

With sales expected to be increasing, respondents must, over the last 6 quarters, have been expecting production to pick up. That has not seemed to materialize so the gap between expected future inventory levels and current levels has shrunk.

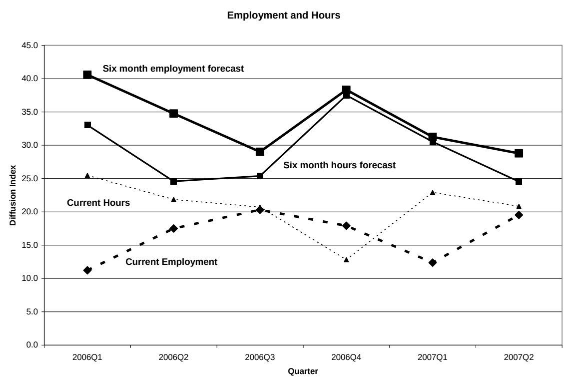


The third company-specific indicator we track is customer traffic or inquiries. This is a leading indicator, perhaps predicting future swings in business activity. The diffusion indices are shown below.



Reports on the current level of inquiries or traffic are steadily positive but falling while expectations about future levels of inquiries or traffic are steadily optimistic.

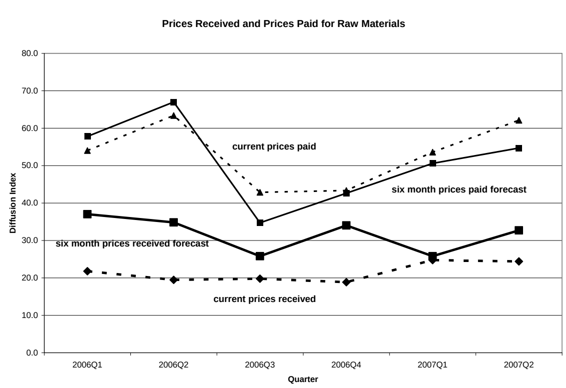
The next two indicators we track are employment and weekly hours. Because of the close relationship between these two indicators, they are shown together. The current employment diffusion index and the future employment diffusion index seem to move in opposite directions.



The results are interesting. Current employment and current hours seem to move in opposite directions suggesting that hiring new employees reduces average hours worked. Not so as respondents look to the future, where employment and average hours move together.

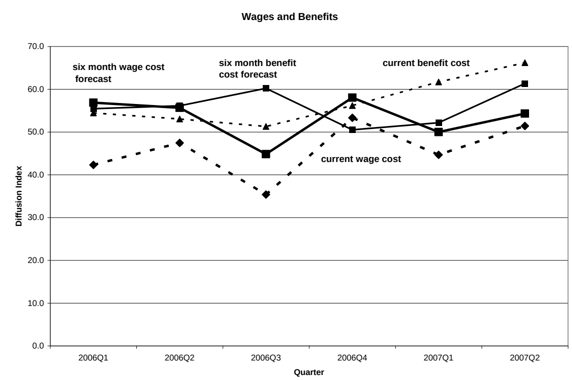
Both the current and the future indices suggest a widespread belief that employment is growing and will continue to grow in the future. The current employment and future employment indices as well as the current hours and future hours indices seem to move in the opposite direction.

The next two indicators are prices received and prices paid for raw materials. Once again, there is value in looking at these two indicators together.



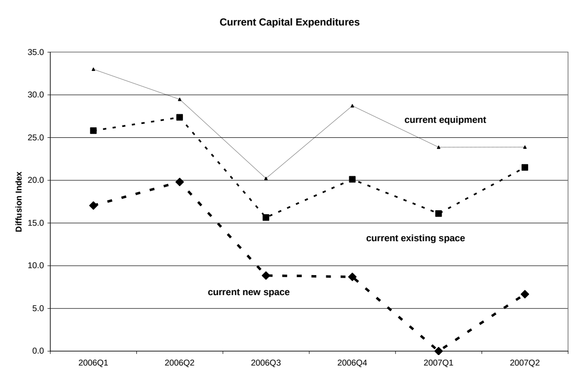
Both indicators are above zero suggesting a widespread belief that both prices received and prices paid are currently rising and will continue to rise in the future. The notion that raw materials prices are rising is more strongly felt in the respondent population than the notion that prices received are rising. Respondents do not differentiate much between current conditions and future conditions for these indices. They tend to move very closely together.

We will also treat the next two indicators together – the cost of wages and the cost of benefits.

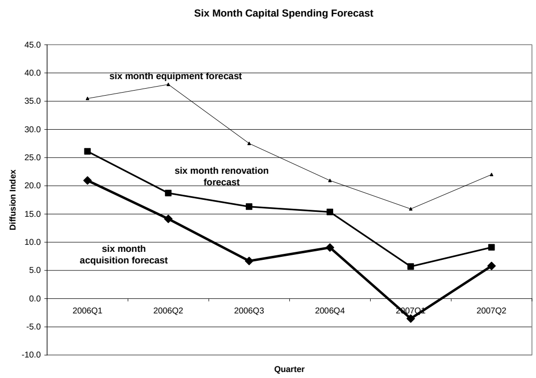


Both wages and benefits are on an upward trajectory. The sense of rising wages and benefit costs is spreading more widely through the sample. Benefit cost seem to be more widely reported as rising than wages do.

The last indicators we track are a series of capital spending indicators, one for spending for the acquisition of new space, one for the renovation of existing space and one for spending on new equipment.



The trend in the diffusion indices for all three categories of current capital spending is down, significantly for new space acquisition but less so for existing space renovation and equipment spending. All three indices are fairly volatile but the swings up and down are consistent across all three indices. Capital spending probably functions as a leading indicator of economic activity.



The six month capital spending forecast indices also show a sharply downward trend. The set of capital spending indicators are the only ones where expectations for the future are less optimistic than the perceptions of current activity. As a leading indicator, this may be an indication of trouble on the horizon.

As we gain experience with this survey and learn to distinguish long-term trends from short-term anomalies regional business and public policy makers will have a tool that they can use to improve the quality of their decisions.

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WHY IS SELLING NOT TAUGHT IN THE PENNSYLVANIA UNIVERSITY ENVIRONMENT

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ABSTRACT

A Wall Street Journal article dated April 11, 2006 brought this topic to the author's attention and upon a detailed study of the course offerings of all major Universities and Colleges in Pennsylvania; the conclusion was that the Pennsylvania Universities and Colleges are truly not meeting the needs of some of their customers (their business students).

OPENING REMARKS

On April 11, 2006, a lead article in the Wall Street Journal, Careers section was entitled "Off Course: If sales is so important why is it not taught?" Using the points in the article as a springboard, this author has summarized his research on Pennsylvania Colleges and Universities course offerings and the findings on this important subject.

There are more than 31,000,000 sales people in the United States. Of that number 15,000,000 people are employed as consumer sales people and the balance of 16,000,000 employed as business-to-business (B2B) salespeople (Zoltners, Sinha & Zoltners, 2001, p.366; Wolfe, 2000).

REASONS FOR THIS STUDY

The purpose of this study was to ascertain the total number of sales jobs and the related turnover and to learn what Pennsylvania Universities can do to bridge the gap by teaching the many skills that are needed in the sales situation.

SUMMARY OF THE LITERATURE and OBSERVATIONS

An important fact to note is that 23.4% of all sales people turnover yearly (Zoltners, Sinha & Zoltners, 2001, p.366). This is a very significant statistic when salespeople are contrasted with other business professional who turnover on average about 12% a year. Why does this happen? There are many reasons, and this paper does not deal with the major reasons but does examine the reasons that why students are not prepared for a selling career .

METHODOLOGY

After completing a comprehensive study of 148 Pennsylvania Colleges and Universities courses of study, and using extensive personal experiences, the following findings were established.

The first major reason is that it appears that Academia has dropped the ball. Many Universities don't even offer Marketing as a major, let alone a major in Sales, at either the undergraduate or MBA level. Yet, it appears that more than 50% of College and University graduates from all disciplines accept a sales job as their first full time career job (NSMC, 2006).

Marketing is a complex integrated process that is changing rapidly (Bearden, Ingram & LaForge, 2006). Direct selling is but one aspect of marketing. Developing a sales professional takes a long time and cannot be covered in one course in Marketing or even in one course in Professional Selling (Tracy, 1995).

A consumer sale is rather straight forward, as it focuses on the consumer needs wants. By the very nature of the position, it is usually conducted in a retail store environment. Direct sales to consumers and businesses are usually conduced over the telephone or on a web site.

Business-to- Business selling is much more complex, as it deals with the customer's many buying elements in the customer's places of business. Of the two different types of sales, B2B sales positions are usually more of a career position (Webster and Wind (1996).

For many years, Industry filled the void left by the University teaching systems, and trained their own sales people at their companies. However the downsizing, rightsizing and re-engineering efforts by companies to control their costs during the 80’s and 90’s have ended with the dismantling of most company training organizations.

As Industry has recovered from one of their biggest blunders; the elimination of Human Resource functions; that have recently been rebuilt at most companies as the focus on Human Capital has emerged. Human resource Departments are usually charged with creating appropriate training programs that usually don’t fill the needs of the sales organization.

So, who is left to build the skills for the B2B salespeople? There is a cottage industry of sales consultants who are generally very poor in their instruction techniques. Industry does not fund the process and Universities don’t fill the bill. What a great opportunity for a perceptive College or University.

In several Midwest locations, at one location in New Jersey, and at sporadically located sites in the Southeast, Colleges and Universities have set up programs to train professional salespeople who graduate and usually receive employment by large organizations such as 3M who work directly with Colleges and Universities that have Sales programs and a PSE Chapter on campus.

To complement the needed University sales focus; over 50 years ago, the Sales and Marketing Executive International (SMEI) was created and also created a student sales organization named PI Sigma Epsilon (PSE). The work of this specific organization allows students to apply classroom learned subjects in selling in many realistic sales environments during their college years (PSE 2006).

In these progressive Colleges and Universities that offer sales programs, you will usually find a very active student PSE chapter. There are no active Chapters of PSE in the state of Pennsylvania. Two PSE chapters were started in two Pennsylvania Universities, but in both cases, after a year, although supported by interested students, they were both discontinued by a myopic administration in each of the Universities involved (PSE, 2006).

Most Universities that have business departments, today focus on granting Accounting degrees, as well they should. As the service environment has gradually replaced the industrial environment there are many auditing positions offered to graduates with accounting degrees.

Those students wanting to focus on learning finance also have a large source of employment upon graduating.

Entrepreneurship is a growing field, as well. The skills learned can be applied to business situations as well as entrepreneurship opportunities opening many avenues for finding employment.

With digital computing growing as rapidly as it is, there are many opportunities for graduates with a computer focused degree.

Many students major in management, but the bad news for the undergraduates is that, there are very few management training opportunities available in industry to graduates with Management degrees. From the MBA program viewpoint company HR organizations have taken on many of the subjects addressed in the MBA courses. The same downsizing referred to earlier in this paper, during the 80’s and 90’s, eliminated most management training startup opportunities for undergraduates.

Marketing majors are in the same situation. There are many marketing oriented jobs available, but they all are generally seeking applicants that have experience. So there are very few startup marketing positions available, except in sales; a subject about which most students have not really learned a lot about in filling the requirements for their major course of study.

CONCLUSIONS

Is the lack of Sales courses available at Universities one reasons for the high turnover in Sales positions? Outside of Penn State who offers a major in Real

Estate, no other Pennsylvania University offers any complete sales programs. Since Industry has eliminated the cost involved in training sales people, many graduating students are a caught in a “Catch 22”.

Public seminars don’t draw very well today. However, if a man named Brian Tracy is in town, his seminars sell out all of the time. The reason is that generations of successful sales people have subscribed to his beliefs in what it takes to succeed as a professional Salesperson, particularly as a B2B Salesperson. (NASA, 2004).

In his very popular Professional Selling Program, he makes the point that a professional Salesperson needs to learn daily. Tracy encourages salespeople to use what he refers to as the University on Wheels. His point is, a salesperson should not to listen to their car radio between sales calls, but to reinforce their skills by listening to Tapes and CD’s dealing with sales subjects (Tracy, 1995).

Aren’t Universities charged with responsibility to teach students applicable business related skills? Are Universities in Pennsylvania going to leave the instructing to sales consultants to try to teach selling skills to business school graduates? Or, will they ever step up to fill the very large void in both undergraduate and MBA programs?

The first step a Pennsylvania Colleges or Universities must get over is to change their perception about professional salespeople. As noted by Miller, Heinman & Tuleja (1985) the authors of one of the best books about selling, the sales profession is one of the oldest professions and “selling is the largest profession in North America, perhaps the world. Yet it has one of the worst reputations of any profession – second only to politics” (p.9). The authors amplify the reason for this statement by also pointing out that “selling is a dirty word to many people, because it has been so long linked to images of manipulation and deceit” (p.10). Yet, the top 5% of salespeople usually are among the highest earners in the country (p.13).

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MODELS DESCRIBING LOYALTY AND THE APPARENT MISMATCH BETWEEN THE MARKETER AND THE CONSUMER

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ABSTRACT

In literature today there are many articles that outline the loyalty or reward programs offered by marketers in a variety of industries and channels. There are also many articles that study consumer behavior and the influencers of loyalty. However, there are few that combine the two areas of research to determine if the rewards provided match the interests and needs of the consumers they are meant to incent. This paper provides one view in that arena based on the literature, as well as a recent survey of grocery shoppers in South Central Pennsylvania.

INTRODUCTION

Reward programs have been used by marketers for years. Some authors point to the American Airlines frequent flyer program started in the 1980s as the first program, and others consider the trading stamp programs from the 1960s as the pre-cursor today's programs (Kim, Shi, & Srinivasan, 2004). The stated purpose of those programs has been to attract and maintain customers to the marketers' products, whether they are goods or services. The programs are designed to provide the marketers with a competitive advantage, and improve satisfaction with the marketers' products (Fowler, 2003; Wansink, 2003).

The type of reward varies by industry. Several authors (O'Brien & Jones, 1995; Matilla, 2001), state that marketers offer a variety of rewards, including price reduction, such as those offered at retailers; reduced costs over time, such as those offered by cell phone companies; price reduction on future purchases, such as those offered by retailers and restaurants; and dollars or points toward future purchases, such as those offered by hotels, airlines, and credit cards.

In this paper a review of several of the models that describe reward programs will be presented. Following that will be a comparison to the consumer's view of importance factors, supported by a recent survey of shoppers in South Central Pennsylvania grocery stores. Finally, a recommendation of future research opportunities will be provided.

LITERATURE REVIEW

In an article by Kim, Shi, and Srinivasan (2001), they developed a game theory model to help marketers determine what kind of reward program would be best for their business. The model was based on identifying the switching costs within the industry and to therefore create a reward program that increases the likelihood of getting a consumer to switch. However, the cost of those programs has to be reflected in the cost of goods, thereby influencing the overall price to be paid for the products. Through the model, once the type of user, size of the market, and type of product are known the model can design the appropriate reward. While the model was tested, the authors admit to a need for further testing to prove the validity of the model.

In a different article the same authors (Kim, Shi, & Srinivasan, 2004) developed another game theory on reward programs, in which they suggest that programs have developed that utilize over-capacity as the reward. They say this is common among hotels and airlines. For example, when the marketer realizes they have excess capacity, they can offer the excess seats or rooms at a reduced price to their frequent customers. In the article, the authors present a model firms could use to determine when and at what discount to offer the reduced product (seat, room, etc.).

In addition to the models developed to examine reward programs used to build loyalty, other factors also are presented in the literature as loyalty drivers; chief among them are pricing strategies. Several articles talk about the need to manage retail revenue (Lippman, 2003; Shoemaker, 2003) through pricing strategies.

With all the money spent on loyalty programs, and related pricing strategies, intended to build trial and loyalty, a search of the literature was done to compare the consumer's view of loyalty to the program rewards offered. In addition, a survey was conducted to measure the effectiveness of the factors discussed above.

Consumer's view of loyalty

In an article by Lal and Bell (2003), they present a study conducted with a grocery chain in the mid-west. The study reviewed frequent shopper card data to evaluate the response rate of several promotions offered to frequent shoppers. The program offered rewards during three promotional periods: a ham in the spring, a discount coupon in the summer, and a turkey in the fall. The purpose of all these rewards was to increase the shopping basket size of the most frequent shoppers. While the program did not significantly improve the behaviors among the best shoppers, it did increase sales among less frequent shoppers.

What was determined is that the best customers already qualified for the reward without changing their behavior. So, although the rewards increased sales on less frequent shoppers, the chain lost money on their best shoppers by rewarding them, even though there was no change in behavior. The reduced prices and product giveaways did not incent additional purchases.

Recent Survey

Recently a survey of loyalty factors was conducted with grocery store shoppers in South Central Pennsylvania. The questionnaire was tested with students in a DBA program, as part of an Advanced Marketing Research class. The survey questionnaire was then administered through a web-based tool to Faculty and Staff in the Business Administration Department at a South Central Pennsylvania College. A link to the questionnaire was sent to 51 individuals, with 31 completing the survey. Of the 31, 2 were not complete, leaving a sample of 29 questionnaires, or 57% of the target population.

The participants completed a questionnaire of the factors influencing loyalty to a particular store. Panelists were asked to pick their favorite store (defined as the store where they purchase at least 50% of the grocery products), from a pre-defined list of stores in the region. The shoppers also chose from a pre-defined list of choices the factors that led them to the store. The list of factors was based on the previous research, as well as informal discussions on this topic. In total there were ten questions, with four additional questions on general demographics, including income, education, occupation, and location (geographic region) where the participant lives. Selected results seen in Table 1.

TABLE 1: FREQUENCY OF RESPONSES TO QUESTIONS 2, 6

Question 2 - Why do you shop?		% of 106	% of 29
Good selection	20	19%	69%
Location	19	18%	66%
Convenience	15	14%	52%
Good everyday prices	15	14%	52%
In-store environment	12	11%	41%
Good sale prices	11	10%	38%
Friendly employees	8	8%	28%
Other	6	6%	21%
Total Responses	106		
Question 6 Why would you switch?		% of 84	% of 29
Good selection	22	26%	76%
Good everyday prices	20	24%	69%
Good in-store environment	13	15%	45%
Good sale prices	10	12%	34%
Friendly employ	10	12%	34%
Better loyalty card program	5	6%	17%
Other	4	5%	14%
Total Responses	84		

Note: Respondents were permitted to choose more than one reason in each of the two questions presented above. For question two, there were a total of 106 reasons chosen, among the 29 completed questionnaires, and in question six there were 84 reasons chosen among the 29 completed questionnaires.

Several questions in the study contradict the reward program outcomes. First, less than 40% of the participants are influenced by the loyalty program at their favorite store. When asked if the shoppers are influenced by the existence of a loyalty card, only 38% admitted to shopping at their favorite store because of the loyalty program.

On a different question, shoppers were asked about the factors that influence the choice of their favorite store. More than 30% of participants' favorite store is based on location or convenience. While convenience did have different meanings for some of the participants, for example some thought of convenience as store format, in this context, the majority thought of convenience as another term for location. In addition, 19% picked good assortment as the reason they chose their favorite store. In fact, only 24% picked a pricing reason – either good everyday prices (14%) or good sale prices (10%) – as the reason they chose their favorite store. This seems to indicate that a majority of the shoppers in this survey are not influenced by a reward program, or the related pricing strategies employed by the retailers.

Another related question in the survey asked shoppers about the factors that would cause them to change stores, if a new store opened next to the existing store. Since location is not a factor here (stores would be co-located), distribution of the remaining factors distribution. Non-pricing factors increased from 38% to 53% as reasons to switch. For example, good selection increase in importance from 19% to 26%; good in-store environment increased from 11% to 15%; and friendly employees increased from 8% to 12%. Of note, pricing factors only increased from 24% to 36%. In addition, only 6% of shoppers said they would switch if the new store had a better loyalty program. These results are hardly a ringing endorsement for the money spent to build the reward program, and the related pricing strategies meant to attract and maintain their shoppers.

What then does influence shoppers to choose one store over another? In this survey, the primary reason was the location of the store. In informal follow-up discussions with the participants, they indicated that in many cases, they had no other reasonable options. Other reasons shoppers choose one store over another include the product assortment (not necessarily that the store carried every item available but that they carried the products the shopper wanted), a good in-store environment, and friendly employees. These specific results are similar to results from other studies in the literature.

Literature examples of shopper results

Despite the rewards and the focus many marketers are placing on these programs, Dowling and Uncles (1997) propose that companies would be more likely to improve loyalty and motivate buyers if they focused on building the perceived value of the goods or services.

Other factors impacting repeat purchases identified by consumers include satisfaction with the services provided, building of some emotional involvement in the product or decision, and finally, at times, a lack of alternatives from which to choose. There are many references in the literature to the increased likelihood of repeat purchases from customers who are satisfied with the goods and services provided (Naumann, Jackson, & Rosenbaum, 2001; Schultz & Bailey, 2000). Therefore, instead of building reward programs that give product away at reduced prices, retailers should focus on programs that improve the customer experience and drive satisfaction.

CONCLUSIONS AND RECOMMENDATIONS FOR FUTURE RESEARCH

Regarding the model presented to dispose of excess capacity (Kim, Shi, & Srinivasan, 2004), while it was not discussed, there may be application to retailers with excess inventory. Could the product be provided to their best customers at a better price? Certainly there are issues, such as products that are not attractive (or perhaps the inventory would not be in excess), or the buying cycle of the product (it may not be purchased on frequency needed to relieve the inventory pressure), but the idea seems viable for future research.

The idea of micro-marketing discussed by Lippman (2003) bears further investigation to determine how to execute different promotional plans at different stores in the same chain. The concept takes into account the need expressed for more individualized execution.

Although the concept of using over-capacity as a reward (Kim, Shi, & Srinivasan, 2004) is most often mentioned with hotels and airlines, the idea is moving to other industries, such as grocery retailing. The idea would propose grocery retailers develop pricing strategies that vary based on the target audience, and the location of the store. Then promotional plans could further be developed to take advantage of the individual needs of the local target.

In another vein, if the stated purpose of loyalty and reward programs is to build sales and profits among best shoppers, then the cost of programs must be evaluated. However, if the programs also provide other benefits, then perhaps additional investigation should be conducted and published to discuss other values for the reward programs. For example, there is a variety of data collected throughout the loyalty card process. First, at signup, and then as purchases are tracked, a pattern can be developed that marketers can use to better understand their frequent shoppers, and the micromarketing programs described elsewhere in this paper.

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DETERMINANTS OF CLASS PARTICIPATION: A PRELIMINARY INVESTIGATION

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ABSTRACT

The purpose of this study was to develop an instrument which measures a student's inclination or tendency to participate in class. Class participation was self-defined by the respondents. A convenience sample of 168 undergraduate students enrolled in a Northeastern United States mid size regional university completed a self-administered questionnaire which included 5 demographic items, 21 items measured on a 5-point Likert scale and 1 open ended question. Factor analysis was performed using principal component extraction with Varimax rotation. Six factors were extracted with a total explained variance of sixty-six percent. Four items were recoded and two other items were dropped from the analysis. The 19 remaining items resulted in a Chronbach's alpha reliability estimate of .806.

INTRODUCTION

Whether it was Socrates in ancient Greek times or today's teacher in an on-line class, the value of a student participating in class has always been recognized as a significant element of the learning process. Yet many teachers struggle with, or worse, simply ignore the students whose participation is less than vigorous and robust. Yet at some level it is understandable that a teacher may feel these non-participators are simply unreachable because we perhaps have not fully come to understand and appreciate why a student does or does not participate. It is also perhaps true that many teachers feel it is too difficult to adjust their teaching methods to a near customized individual level that accounts for all the various reasons, both obvious and nuanced, that keep a student from participating. Put simply, even if one could discover the exact reason for each and every student's own particularly unique reason for not participating, it would still be simply too difficult to then implement an effective teaching strategy in response to the many, many unique requirements across a class of twenty or thirty or even more students!

Research has already shown us many, many of the so-called determinants of class participation (Weaver & Qi, 2005; Dallimore, Hertenstein, & Platt, 2004). Age for example indicates that all other things being equal, a more mature (older) student is likely to participate more. Yet obviously in the here and now having this knowledge does nothing for the teacher or student desirous of increasing their participation beyond waiting for one to grow older. It seems we need a new model for understanding class participation in a more generalized form rather than looking at individual determinants. What the authors have attempted to do in their research is to develop an instrument that measures a student's general proclivity to participate in any class. The hope is that by first understanding class participation in a generalized form can we then and only then, develop an effective generalized teaching strategy that will increase class participation and concomitantly increase learning.

METHODS & INSTRUMENT DEVELOPMENT

The instrument the authors willingly stipulate is in the developmental stage. Accordingly, many of the items in the instrument may seem redundant , however the authors wish to point out that in developing the items it was felt more prudent to include rather than exclude items in the preliminary stages of the investigation. The 21 Likert scale items were developed collaboratively by the authors who collectively have approximately 25 years classroom teaching experience and are representative of several different disciplines (science education, business technology, business strategy).

A convenience sample of 168 undergraduate students enrolled in a Northeastern United States mid size regional university completed a self-administered questionnaire which included 5 demographic items, 21 items measured on a 5-point Likert scale and 1 open ended question. The students were instructed to answer the survey questions in a generic context rather than answering the questions against the backdrop of the particular class and/or teacher they had in class that day. Respondents were assured of anonymity and no individual identifying information was collected.

ANALYSIS AND RESULTS

The data was analyzed utilizing SPPS 15.0 software. Analysis included descriptive statistics, frequency distributions, factor analysis and reliability analysis. The average age of the respondent was 20.82 years while 62 percent of the respondents were male and 38 percent were female. The sample population included approximately 28 percent freshman, 2.5 percent sophomores, 47 percent juniors, and the remaining 22 percent were seniors. 59.5 percent of the sample population were Business Administration majors, 27.4 percent Accounting, 7.7 percent Entrepreneurship and the remaining 5.4 percent were described as other.

Table 1 contains mean responses for the 21 Likert scale items. The highest mean response was item 18Which read, “My participation level depends on my interest in the class” with a score of 3.98 on 5 point scale (1 = strongly disagree; 5 = strongly agree) while item 17, “Compared to other students I participate less ”had the lowest mean response score of 2.26. One surprising item, was item 5, “I don’t mind when a teacher call on me, even if my hand is not up” which had a mean response score of 3.36.

Table 1

Item #	Statement	Mean Response
1	I view myself as a strong class participator	3.57
2	My teachers would say I am a strong class participator	3.54
3	I participate more when the class size is small	3.76
4	I would like to participate more often in class but am hesitant to do so	3.36
5	I don’t mind when my teacher calls on me, even if my hand is not up	3.36
6	I feel that participating in class helps me learn	3.68
7	I feel my level of class participation is an accurate reflection of my abilities	2.95
8	I feel class participation is best defined as answering questions in class	3.15
9	I feel class participation is best defined as asking questions in class	3.23
10	I feel class participation is best defined as paying attention in class	3.60
11	Class participation has a direct effect on my grade	3.40
12	Class participation is a key to earning a higher grade	3.53
13	I feel class participation should not be a factor in determining a final grade	3.10
14	I feel class participation can not be accurately measured	3.50
15	Compared to other students I participate more	3.29
16	Compared to other students I participate equally	3.17
17	Compared to other students I participate less	2.26
18	My participation level depends on my interest in the class	3.98
19	My participation level depends on my interest in the instructor	3.60

Table 1 Continued		
Item #	**Statement**	**Mean Response**
20	If I know the answer to a question I always raise my hand	3.11
21	If I know the answer to a question I rarely raise my hand	2.49

Scale = 1- Strongly Disagree 2- Disagree 3- Not Sure 4- Agree 5- Strongly Agree

The initial factor analysis was performed using principal component extraction with Varimax rotation. Initial inspection of the first-run factor analysis results indicated several variables with negative correlations across eights factors extracted. A reliability analysis was also performed indicating which items should be dropped from the analysis. Upon recoding items 6,7,17 and 21 (1=5; 5 = 1) and dropping items 4 and 14 a final reliability analysis and factor analysis was performed. The 19 remaining items resulted in a Chronbach's alpha reliability estimate of .806, a reliability level generally considered acceptable and well above the .70 level suggested by Nunnally(1967). Table 2 displays the rotated component matrix and Table 3 displays the 6 extracted components with their respective eigen values and percent variance. Results of the open-ended question were not analyzed for this portion of the study.

- **Rotated Component Matrix(a)**

	Component					
	1	2	3	4	5	6
q1	**.831**	.233	.075	.066	.096	-.078
q15	**.792**	.179	-.034	.148	.129	-.189
q2	**.773**	.285	.018	.007	.108	-.115
q17	**.697**	.103	-.090	.067	.198	.282
q5	**.462**	.344	.237	-.269	-.019	.195
q11	.140	**.824**	-.043	-.025	.046	.017
q12	.166	**.796**	.066	.047	.194	.176
q7	.284	**.693**	.136	-.074	-.101	-.120
q6	.233	**.685**	.276	-.001	.193	.063
q13	.247	**.531**	-.024	.024	.239	-.330
q9	-.034	.120	**.850**	-.109	.119	.025
q8	-.088	.246	**.737**	.113	.016	-.111
q10	.277	-.267	**.568**	.262	-.194	.118
q19	.005	-.015	-.005	**.879**	.102	-.037
q18	.142	-.046	.114	**.824**	-.018	.119
q20	.120	.136	.112	.057	**.873**	-.062
q21	.470	.153	-.095	.040	**.692**	-.013
q16	-.054	-.088	-.002	-.032	-.052	**.789**
q3	.013	.268	-.024	.353	.005	**.499**

- Extraction Method: Principal Component Analysis.
- Rotation Method: Varimax with Kaiser Normalization.
- a Rotation converged in 6 iterations.

- **Table 2**

Component		Initial Eigenvalues	
	Total	% of Variance	Cumula-tive %
1	5.157	5.157	27.143
2	2.008	2.008	37.713
3	1.869	1.869	47.548
4	1.359	1.359	54.699
5	1.263	1.263	61.347
6 (Table 3)	1.019	1.019	66.710

DISCUSSION

While many of the individual items are of interest in their own right such as the high and low mean score items previously mentioned, the focus of our analysis will be on the six factors (see endnote on factor analysis methods). The authors have also refrained from labeling the factors for the very reason that the labels can be very subjective and misleading. The authors prefer that the reader draw his or her own conclusions about what the factors mean.

The first factor had the highest loading 5.16 and accounts for 27 percent of the total variance. The five items (1, 2, 5, 15, 17) contained in this factor all seem to speak to the student's own self perception of how the behave in the classroom environment. In other words, this factor is a student's own subjective measure of self; it is as if the student is saying, " I participate a lot because I say I do". This would lead us to suggest an interesting follow up study to measure the correlation between this subjective measure versus some other objective measure. e.g. , how often does this student actually raise his/her hand in class?

The second factor had a loading of 2.01 and accounted for 10.5 percent of the total variance. The 5 items (6, 7, 11, 12, 13) in this factor relate to aspects of a student's performance. This factor may suggest that if a student realizes a cause and effect relationship between participating and performance (or at least grade performance) then that student may indeed have an inclination to participate.

The third factor had a loading of 1.87 and accounted for 9.8 percent of the total variance. The 3 items (8, 9, 10) in this factor relate to how one defines class participation. The authors will note here that in discussions at an earlier conference presentation of the study results a criticism of the methods was that class participation was not defined for the student completing the questionnaire The study authors however felt strongly that in their attempt to craft a generalized measure of a student's tendency to participate it is imperative that class participation be in fact, a self-defined concept, not a proscribed one.

The fourth factor had a loading of 1.36 and accounted for 6.6 percent of the total variance. The items (18, 19) speak to a student's level of interest. Factor 5 had a loading of 1.26 and accounted for 6.6 percent of the total variance. The items (20, 21) are essentially identical and address a student's level of knowledge. The sixth factor had a loading of 1.01 and accounted for 5.36 percent of the total variance. The items (3, 16) do not seem to gel around a particular concept although the effect of class size on class participation is noted.

LIMITATIONS

The sample size (n = 168) greatly limits our findings, especially as it applies to procedures such as factor analysis where sample sizes of 200 or greater are desirable. The use of a non-representative sample of college students which did not include other areas of the curriculum such as the arts or humanities as well as graduate level students limits the generalizabilty of our findings. A more conservative methodological approach would yield fewer factors and we agree that additional refinement of the instrument itself as well as larger and more representative sampling is needed.

CONCLUSIONS

The first question that remains in our minds is, have we actually measured what we have sought to measure? Can one truly measure the inclination to participate in class? We hold out the hope that yes, one can indeed measure anything, including the inclination to participate. And while we will allow that it is ultimately up to the reader to decide, in our judgment this instrument could be used gainfully either in whole or in parts (factor 1 for example) in a classroom setting to form an initial baseline measure from which a teacher could then begin to develop some adaptive strategies, based upon his/her findings.

For example, a teacher could measure a class of students with this instrument and construct a summative scale score, i.e., a class participation score, for each student on the first day of class. The teacher would subsequently give a chapter exam three weeks later and based on the chapter exam scores could develop a grid quadrant as illustrated in Figure 1. The teacher could then at least begin to understand and prioritize his/her strategy(ies) with particular emphasis on those students in quadrant IV (low test score/low participation score) and those student in quadrant III (low test score/high participation score). The teacher could at least recognize that for the students in quadrant III participation in and of itself is apparently not the problem. Perhaps it is an issue of concept understanding or resources. The students in Quadrant IV on the other hand, might simply be best served by some targeted encouragement to participate more often, or use creative avenues to participate, such as a writing down their questions during class and turn them in at the end of the class period.

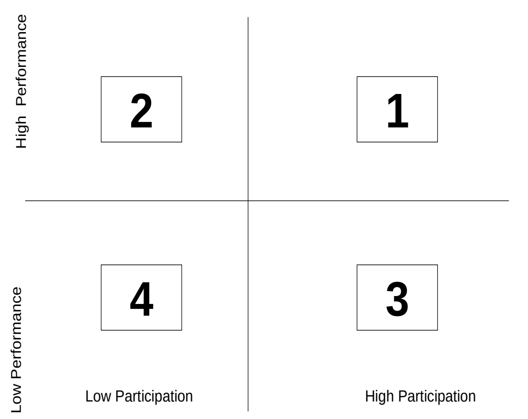

Figure 1

Indeed, the authors very reason for developing this instrument for measuring class participation was born from the need to appropriately assess the effectiveness of a new technology designed to enhance class participation, the so-called clicker technology or classroom response systems. This emerging technology is slowly being adopted in more and more classroom settings with some mixed results (Wood, 2004; Stuart, Brown& Draper, 2004; Brown, 2004). Many feel that the anonymity provided by the classroom clicker technology can be especially effective at engaging precisely this student, the quadrant IV type.

Finally, the authors agree that much more research is needed. Issues such as the definition of participation and the measurement therein continue to be debated. The authors are currently refining this instrument and are contemplating developing a second instrument which takes an opposite approach wherein participation is in fact specifically defined along multiple dimensions and students would then be asked to self-report the strength of their participation. For example, a student might be asked to rank their participation on a one to ten scale (1 = not at all; 10 = very often) on the following items:

> I come to class having read all assigned readings
> I raise my hand when I know the answer to a question
> I offer comments relevant to the discussion
> I attend class

By defining the dimensions of class participation the focus is narrowed for the respondent. In the end, careful assessment and analysis of student participation will require a comprehensive framework that accounts for the many individual and situational influences.

The authors realize that class participation is similar to learning styles and that there is not a "one size fits all" approach. During the study it was apparent that while students recognized the value of participating in class they believed it is unfair to actually attach a grade to class participation.

Like the question the authors initially asked, "Have we actually measured what we sought out to measure?" the same can be asked about class participation in general, "Can it be measured?". The authors believe that with continued adjustments a research a tool can be developed to help both teachers and students work to build a meaningful and measurable class participation tool.

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Endnotes

The authors' purpose in this paper is to first and foremost present the data in something much closer to its raw form with a minimum of data transformation and data reduction. The paper is specifically not intended to be a discussion of methodology in instrument development or factor analysis and other data reduction techniques. However, the authors respect a valid criticism that much more work needs to be done in terms of developing a larger sample and more stringent criteria for including variables into a more refined instrument.

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START YOUR OWN BUSINESS: A SYNTHESIZING FINAL GROUP PROJECT IN AN INTRODUCTORY BUSINESS COURSE

Leon Markowicz, Lebanon Valley College

ABSTRACT

In Business 130, Modern Business Organizations, the first course required of Business Administration and Accounting majors, the last major assignment is an activity in which groups of students create a proposal for starting a business. Assigned to groups, students decide what kind of business they want to start and seek funding. Their written proposal covers the main areas of the text, with resumes included in an appendix. Their oral presentation highlights the main points of the written proposal. This project introduces them to a "continuum" that runs through our four-year program.

INTRODUCTION

In the first required course for Business Administration and Accounting majors at Lebanon Valley College, the final major assignment asks students, assigned to groups, to secure funding to start a business.

The following sections contain: The Course Description and Course Objectives, the Assignment, the Purpose of the Group Project, Minutes, Problems, Group Participation Feedback Sheets, the Written Report, the Oral Presentation, Student Feedback, and Faculty Impressions.

Course Description and Course Objectives for Business 130

The course context for the assignment appears in the course description and in the course objectives.

Course Description

An examination of the functional areas of business administration with an emphasis on management. The course focuses on understanding the composition of business operations with respect to management, structure, leadership, and interpersonal relationships

Course Objectives

Upon completion of the course, students should be able to:

- Gain a basic understanding of the central functional areas of business administration including, organization and structure, finance, human resources, management, marketing, and technology.

-Examine and explain the managerial environment of businesses including the international aspects of the role of ethics and social responsibility in conducting business.

-Begin to acquire the skills employers expect of college graduates:

COMMUNICATIONS: oral, written, interpersonal, small group.

COMPUTER SOFTWARE: word-processing, spreadsheets, presentations, and internet.

CASE STUDIES: know and apply models to analyze cases.

PERSONAL: conventions, etiquette, and expectations.

PROFESSIONAL: understand business issues and vocabulary; networking and building a career; technology skills necessary for business.

Assignment for the Group Project

Students are assigned to groups of four to six, depending on the size of the class, to accomplish the following task:

BUS 130
SPRING 2007
GROUP PROJECT

Your group is responsible for developing a proposal requesting money from private investors to capitalize a small business. The objective is to determine the type of small business you want to start and develop a proposal to seek funding. Each group will submit a written proposal and present a summary of the proposal to the class in a short presentation.

Your group may choose any type of business with the exception of bars, restaurants, and liquor stores/beer distributors. The proposal should fully explain your company by incorporating concepts and themes from the textbook and class lecture. Content might include topics such as business structure, social responsibility, explanation of the actual product/service, marketplace opportunities, the 4 P's of marketing, the use of technology and computers, accounting and finance, and use of human resources (operations).

You will evaluate fellow group members during the semester. Members who do not participate fully can have their group project grade lowered to the point of failure by the professor based on group member feedback.

The group will determine the content and structure of the proposal. Follow five guidelines:

The proposal should be proofread and edited. It should have smooth transition between sections and all parts should be seamlessly integrated in style, form, and design. The document should be professional with consistent fonts, page numbers, and sub-headings.

The proposal should include spreadsheets from Microsoft Excel illustrating a mock balance statement and profit/loss statement based on your hypothetical financial projections. Develop the statements to show where the company will be one year after start-up. Each group should have a solid revenue model to show how the company will make money (and how much).

Resumes of key company personnel (students) should be included in the proposal. Each student in the group will have their resume included. Resumes should be factual and accurate.

The paper should be between 15 to 20 pages of content and the proposal should be single-spaced. Resumes, charts, graphs, and supplemental material can be placed in the back in appendices.

Microsoft PowerPoint should be used in the class presentation. Two copies of the PowerPoint presentation should be handed in your group presentation, six slides on each page.

The project is worth 20% of your grade. **The written portion of the proposal is due the first class period that presentations are scheduled.** The class presentation should last approximately 15-20 minutes (including time for questions). Each group member will speak and the group's PowerPoint presentation will be presented. Refer to the syllabus for presentation dates.

Purpose of the Group Project

The primary purpose of the Group Project is for students to synthesize and apply the concepts and theories they are reading about and being tested on. The Group Project also builds a base for a "Continuum" that runs through their courses in the department. The Continuum focuses on activities and skills students will develop and use in college and, after that, in their personal and professional lives.

Those activities include minutes, case studies, and group work; the skills include time management, organizational skills, and, the focus of the department, communication skills: writing, speaking, and professional and interpersonal communication.

Minutes (See Appendix A)

Since the students meet out of class for the project, they submit minutes of all meetings within 24 hours. Minutes are sent to all group members and the instructor. Each student must do the minutes before anyone does them a second time.

The minutes provide the group with a record of who did what, what needs to be done, who will do what, when they are due, as well as a record of progress, problem solving, and decision making.

The minutes provide the instructor with information on how often a group is meeting, who is doing what, who are the most active participants, who are the least active participants, what progress the group is making, what difficulties the group is facing, how effectively the group identifies and solves problems and makes decisions. The instructor returns the minutes the next class with feedback on the group's progress and on the minutes as written communication.

Problems

Since the students, usually first semester first-year students, do not have much experience working in groups outside of class on a project this size, groups tend to get a late start and to meet infrequently. Some students come late to meetings, some do not attend meetings, some do not do the work on time, some do not do the work at all.

In the groups, one person may dominate, and others may not speak up and contribute to the group's performance. Since students, in general, are not used to holding their peers accountable and since peer pressure is so strong, they often are afraid to say anything to their colleagues about their performance. To deal with this, the instructors use a Group Participation Feedback Sheet.

Group Participation Feedback Sheets (See Appendix B)

After the groups have met twice, each student fills out a Group Participation Feedback Sheet on him/herself and on each group member. The form is on Blackboard, so students type the information, print the sheets, and give them to the instructor. The instructor transcribes the information from the other students' sheets to the sheet the individual filled out on him/herself. The comments are cut off the sheets from the other students and put in an envelope, so all information is anonymous. At the next class, the students receive the feedback.

These sheets allow students to look at how they perceive their own performance and to look at how their group members perceive that performance. At first, students are afraid to give that feedback, but after they learn to focus on their peers' behavior and not on the person, they give accurate, direct, and honest feedback. Often, students who are not meeting the group's expectations respond to the feedback by improving their performance after they receive the first feedback sheet.

Later, students fill out the feedback sheets halfway through the project and again after the project is completed. The assignment for the group project contains a statement that "Members who do not participate fully can have their group project grade lowered to the point of failure by the professor based on group member feedback." The instructor also reserves the right to raise a student's grade.

At first, students are hesitant to give feedback to their peers, but as the semester progresses, they become more forthright. The students, on the whole, overestimate the grades for themselves and their peers.

One of the most positive things about these sheets is how honest students are with themselves. They see themselves very clearly and are not afraid to put it in writing.

Written Report

In addition to the requirements stated in the assignment, the written report must have a letter of proposal, a table of contents, and an executive summary. Here are the names of some of the businesses groups wanted to start: JAABZ Dance Club, The FLix – Drive-In Movie Theater, Clean Cut (Barber Shop), Monkey In The Middle (Sports Apparel), Smooth Flava (Food and Beverage), Lords of Landscaping, Brian's Surf Shop, Valley Transportation Company, Colonel Custard's Last Stand, JSA Land Development (multi-unit housing), Legends (restaurant), Custom T-Shirts, The Arena (indoor and outdoor entertainment complex), The Mile High Club (live bands and disc jockeys), Mommy To Be Day Spa.

To help the students prepare the financial material required, some instructors ask a commercial loan officer from Fulton Bank to review the students' numbers. Two weeks before the project is due, the students send the financials to the instructor in an Excel attachment; the instructor sends them to the loan officer who reviews them, then visits the class and meets with each group individually, so the other groups do not see how that group is working.

Oral Presentation

For the oral presentations, which take place during the third last and second last class periods or during the time scheduled for the final exam, males must wear jackets, dress slacks, shirts and ties. In one class, all male students wore suits. Females must wear professional attire: dresses, suits, jackets.

Each student is responsible for the technology s/he is using, e.g. PowerPoint

Student Feedback

In an attempt to find out what the students thought about the group project, they were asked what semester and academic year they took the BUS 130 class, what they thought was effective, useful, or helpful, and what they thought was ineffective, not useful, or not helpful.

After that, they were asked what semester and academic year they are now, what they think was effective, useful, or helpful, and what they think was ineffective, not useful, or not helpful.

That feedback appears in Appendix C.

Faculty Impressions/Feedback

The Group Project is an invaluable learning tool for first semester majors; they learn by doing. All the concepts and theories come alive in their proposals. The project brings all the material read about and tested on together and integrates it into a unified whole.

The Group Project is extremely effective in laying a foundation for the rest of the students' development in the department. Resumes, for example, are done in at least three other courses, so the student can see where they started and how they are progressing. Group work, reports, and oral presentations occur in other courses including Organizational Behavior, International Business Management, Management Information Systems, Strategic Management, Governmental and Nonprofit Accounting, and Intermediate Accounting.

Case studies, including the current case studies students read about in The Wall Street Journal, appear in many courses, and, with this project, the students create their own case study.

The minutes and group participation feedback sheets are new elements and experiences that they will use in other courses and in the world of work.

Leon Markowicz is a professor of business administration at Lebanon Valley College. He received his Ph.D. in English Literature from the University of Pennsylvania. His research focuses on integrating writing, speaking, and cooperative learning into business and economics courses.

Appendix A
Business 130: Modern Business Organizations   Spring 2007

Examples (C) and Format (O) for Minutes

Business 185-3 Minutes of Group A (Use this also as email Subject)

Present: Jim Jones, Amy Abbey, Curt Short, Joe Long (full names)

Absent: Sam Schwartz   Late: Joe DeLay

Group A met on Monday, February 7, at 1 p.m. in the library.

Body Paragraph 1

Ineffective

We met to make the necessary corrections to our first draft.

Effective

Next, the group viewed the document on the computer, while making headings and spacing uniform.

Body Paragraph 2

Ineffective

We split the sections.

Effective

We decided which group member will be responsible for which section:

Jim – marketing, Amy – financing, Joe – human resources, Curt – sales, Sam - operations

Body Paragraph 3

Ineffective

The group addressed general questions and decided on a recommended course of action.

Effective

Additional work was assigned to Jim and Amy. Jim is going to calculate the personnel costs. Amy is going to do the income statement.

The meeting ended at 1:55 p.m.

Group A will meet next on Wednesday, October 9, at 4 p.m. in the library.

Respectfully submitted,

Joe Long, Recorder

Appendix B

Group Participation Feedback

My Name:_________________ Full name of person receiving feedback: _________________________

Course:_______ Group:__________ Date Report Turned In: ___________________

Please check the appropriate box to rate person's performance.

1 – Consistently fails to meet expectations 2 – Occasionally fails to meet expectations 3 – Consistently meets expectations 4 – Consistently meets/occasionally exceeds expectations 5 – Consistently exceeds expectations	1	2	3	4	5
Amount of participation					
Quality of participation					
Willingness to work with others					
Ability to work with others					
Volunteers to do things					
Accepts responsibility					
Fulfills responsibility					
Listens well					
Communicates well					
Attitude					

Meetings missed: __________ Meetings late: __________

Rate percent of work done (0% - 100%): __________ Suggested Grade ______________ %

(Total for the group = 100%)

Comments (3 required; 1 suggestion)

Appendix C

THEN: First semester freshman

Effective**:** The realization of how a group project in college is different than a group project in high school.

Ineffective**:** The professor failed to provide a clear expectation for the project.

NOW**:** First semester sophomore

Effective**:** It made me realize what my strengths and weaknesses are in term of working with others and how I represent myself as a team member.

Ineffective**:** I had yet to gain the skills of effective communication back then, so I did not know how to communicate well with my group members when we had problems.(the L.E.T. book would had been a good resource to have).

THEN: First semester freshman

I found this project to be effective in helping me realize what was to come in future business classes.

I thought that the material that was included in the project could have been taught to us better before starting the project.

NOW: First semester sophomore

I am glad that we did this project so early, because it helped my group skills which I have used many times since then.

I still think that I was not educated enough on the material to have made an effective business plan.

THEN: Semester 1, Freshman Year

I found that this project was effective in helping me learn how to work better with others.

I found that this project was ineffective in making me a better public speaker or any better with dealing with conflicts inside the group.

NOW: Semester 1, Sophomore Year

I found that the last project, in which I worked with Stephanie, that we were able to take each other's ideas and formulate one better idea. This improved my teamworking abilities because when we had a conflict, we worked through it together to find a simple solution.

I found this project ineffective because Stephanie and I could not help each other in the presentation. We could improve each other's ideas but we did not give any feedback on the way the other person speaks in front of the class.

Then: First Semester Freshman

Effective: The project was effective in teaching group work. I also think that it was a good opportunity to practice public speaking.

Ineffective: At the time, I did not think that the project was effective in applying the concepts that we learned in the book.

Now: First Semester Sophomore

Effective: I think it was effective in teaching concepts like group planning, report division and communication. Our group also had a leader, but we made decisions as a group.

Ineffective: One ineffective thing about the project was the lack of format and set-up guidelines for the report.

Then: first semester freshman

Effective: I met friends in my major who I talked to because they were in our group. Speaking in front of the class helped jumpstart my presentation skills.

Ineffective: Any information put into the project didn't seem relevent to the text. I was lost except for looking at examples of previous business plans.

Now: first semester sophomore

Effective: The project shows me how little skill I have for writing. Comments from Then: are still relevent.

Ineffective: Work between the group members was not evenly distributed. Classes taken second semester freshman year would have helped to better plan the layout of the PowerPoint presentation.

Then: First semester freshman.

Effective: Teaching us how to use and connect all concepts and theories of the course together in one project. Allowed us to apply our knowledge in a real workplace situation rather than just reading it, memorizing it, and then writing a test.

Ineffective: At the time, I thought that the fact that we were not able to choose our own group was ineffective. Many groups did not work well together and some people did not pull their own weight. Not knowing or getting along with the people we worked with caused uncomfortable and tense working conditions.

Now: First semester sophomore.

Effective: After a year, I have come to realize that working with the people I was told to actually helped me. It forced me to adapt and deal with what I had in front of me. In the real world, we are not always able to pick and choose who we work with; so, this project exposed us to potential problems that may arise and helped us learn how to deal with them.

Ineffective: I still feel that everyone getting the same grade on the written business plan was ineffective. It allowed some members of a group to sit back while others did the work. There should have been more peer evaluations and individual grades on the written component of the project.

Then:

Effective: The project made me realize how many different aspects went into actually starting and running a business.

Ineffective: At the time I considered the project only as a grade and not as a learning experience.

Now:

Effective: I understand how much is expected of any person involved in business.

Ineffective: I didn't take advantage of the learning experience and missed important lessons.

Then: 1st semester Freshmen year

Effective: My first opportunity in college to work with others on a project. Encouraged me to communicate with others and share my ideas which I probably would not have done without this project.

Ineffective: Had a group member who did not complete their work to the standards of the rest of the group. Spent a lot of time determining what kind of business we wanted to create oppose to making a decision and committing to it.

Now: 1st semester Junior year

Effective: Prepared me for group work, projects, and presentations for several of my other classes. Gave me experience in presenting which makes me feel more confident in front of an audience.

Ineffective: I worried more about the length of my portion of the paper oppose to focusing on concise information and details. Now many my classes want objective precise papers and do not put much emphasis on length.

Then: First semester freshman

Effective: The group project helped me to understand the importance of communication in explaining a business idea to investors. My group worked together on different parts of the report and was able to blend them all together for the final report.

Ineffective: In the beginning of our group meetings, group members wouldn't show up or didn't have their part complete and therefore we had to postpone some of the parts.

Now: First semester sophomore

Effective: Towards the end of the project, group members had a specific role in the project and worked hard to fulfill each requirement. We all came together to help each other with our parts and picked up the slack in some areas we were procrastinating on.

Ineffective: We did not spend enough time preparing for the oral presentation and we tried to put too much information in the time allotted to us.

Then: Spring sophomore.

I think it was effective at the time because it got us working in groups early in college and not wait until our senior year.

It was ineffective because we never had anything like the group project before and we had to figure everything out instead of getting some guidance.

Now: First semester Junior

I still feel the group project was effective because it got us working in groups early on.

Now I do not think there was anything ineffective about the project.

Then: Second semester freshman

The project was effective in giving me insight into the huge amount of energy and attention to detail involved in creating a business.

The project was ineffective as it required knowledge of accounting concepts that I was not familiar with at the time, making it difficult to prepare financial statements

Now: Sophomore

The project was effective but would be better suited for a higher level business course - when students are more likely to have been taught essential concepts from other classes.

Then: Freshman First Semester

This project gave me a chance to apply concepts from the textbook to help me better understand how they work in the great beyond.

Because no one in my group had ever taken or was currently taking an Accounting class, we did not know how to prepare a balance sheet and an income statement properly.

Now: Sophomore First Semester

This project encouraged me to search for information and perform more than the minimun, which are important in the business world today.

I was not educationally prepared to do the project because I did not have all the basic knowledge needed to complete it.

ASSESSING WRITING ACROSS THE BUSINESS CORE

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Stephen Markell, Bloomsburg University of Pennsylvania
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ABSTRACT

Both the Middle States and AACSB accrediting bodies have called for the assessment/assurance of learning related to student writing skills. Given this charge, our College of Business Curriculum Committee, which manages our Business Core, decided to assess student writing early in the Business Core program. Our goals were to help students understand the importance of good writing communication skills in business and help prepare them for the extended writing demands of upper division business courses. We selected the Managerial Accounting course as our business writing assessment target. This course is required for all business majors and is usually taken during the sophomore year. As part of the course process, students are required to write business memos and that became the basis for our writing assessment. This paper describes the development and implementation of our business writing assessment process, including the preparation of an assessment rubric and the results, analysis, and subsequent adjustments stemming from our trial run and our first full run.

INTRODUCTION

For several years, the companies that recruit and hire our business program graduates have indicated that good written communication skills are essential in all areas of the business world. In addition, both the Middle States and AACSB accrediting bodies have called for the assurance of learning related to student writing skills (2002, 2003).

As a result, in the late 1990's most of our College of Business (COB) programs implemented writing requirements throughout their major required curricula. It was assumed that requiring a variety of business writing assignments, along with the general education requirements of Composition I and II, would serve as sufficient preparation for our students.

THE PROBLEMS

Unfortunately, that assumption was found to be erroneous for two primary reasons. First, we found that most students did not possess adequate writing skills. Assigning a research project or a written case report or a business letter in any particular business course did not ensure that students would write well or that they would learn from their mistakes. As professors, we found ourselves spending valuable class time instructing students on how to write from a business perspective. Even encouraging students to acquire a business writing text that addressed various business writing topics (Murdick, 1999 and May, 2006) did little to alleviate the problems.

In addition, our university's English Department complained about their difficulties in teaching the business students enrolled in Composition II. Their dilemma focused on assigning research and writing projects. Ideally those projects should have topics in areas of the students' major. The English faculty felt ill-equipped to assess research and writing outside their areas of expertise (i.e. English topics). Yet, they also believed that assigning research projects focused on English topics was not conducive to student learning regarding research and writing in their major field.

THE SOLUTION PROCESS

As a result of these problems, our College of Business Curriculum Committee (COBCC), which manages our Business Core program, elected to become involved in developing a solution. We decided to select a Business Core course (a course all business major are required to take), add a business writing requirement to that course, and use the writing assignment for assessment purposes. We wanted to select a course taught early in the Business Core program because we wanted to help students understand, as early as possible, the importance of good written communication skills in a business environment. In addition, we wanted to ensure that students were prepared for the extended writing demands of the upper division business courses.

With these goals in mind, the COBCC identified the Managerial Accounting course as our business writing assessment target. This course is required for all business majors and is usually taken during a student's sophomore year. As part of the course process, students are required to write three business memos, providing us with a 'ready-made' writing assignment. The memos become more challenging as students progress through the class, so we selected the third (and last) memo as the basis for our business writing assessment program.

The Trial Run

The COBCC spent the spring 2005 semester reviewing samples of writing assessment rubrics and developing the rubric to be employed for our trial run assessment. See Table 1 Assessment Rubric.

We decided to obtain samples from each section of the fall 2005 Managerial Accounting course for our trial run. The Accounting Department typically offers eight sections of the course each semester, with 30 – 35 students per section. By the time that the third memo is assigned, attrition brings the total course enrollment down to about 200 students per semester. We elected to sample 4 – 5 memos from each section for the trial run.

COBCC members (six in total) evaluated 10 memos each using the writing assessment rubric, such that each memo was evaluated twice. The committee identified an overall average score of 3.0 as the long range (3 – 4 years) goal, with an overall average score of less than 2.5 being viewed as 'problematic' and an overall average score of 2.5 of greater as 'progressing to proficiency' (Assessment Report to AACSB, 2005).

The overall average score of our trial run was approximately 2.2, indicated a need for improvement in the basic business writing skills of our students. COBCC discussions with faculty teaching the Managerial Accounting course resulted in the institution of a 'do over' policy, as a first step towards improving writing skills (Closing the Loop Report, 2005).

The 'do over' policy applied to the first memo written by the spring 2006 Managerial Accounting students. The policy was for students to write, word process, and submit the first memo for grading. Students receiving a grade of 70 or less on the memo were given the opportunity to correct and re-submit the memo for a higher grade. The goal was to demonstrate where students were making errors in their written work, with the expected result of students improving their writing on the second and third memos.

Plan Implementation and Results

During this same time period, the COB was dealing with the Composition II issues. The University Provost created a Written Communication Task Force to study the issue from a university-wide perspective. The Task Force included two members from each college, with the COB members selected from the COBCC.

Within this environment, the COB implemented the new 'do over' policy for the spring 2006 semester. Again, a sampling of 4 – 5 third memos from each section was taken. Evaluation of 10 memos each was undertaken by each faculty member of the COB, along with approximately 20 members of the COB Advisory Board.

The overall average score was approximately 2.5, meeting our initial short-term goal. However, we also analyzed each individual item in the rubric and discovered that the average scores per item was widely varied. In three of the eight rubric items, students scored well below the 2.5 standard, indicating that further action needed to be undertaken, both in curricular improvement and in the assessment process.

OUTCOMES AND ACTIONS

Following two cycles of business writing assessment, there were a number of actions taken to try to help students improve their writing skills and to improve our assessment process. The writing assessment process was an onerous task for the COBCC to take on, in addition to its regular responsibilities. To mitigate this problem, while still involving the faculty, the COB created an Assessment Committee to develop and implement assessment processes for all areas of our COB Mission Statement.

The Assessment Committee re-worked the writing assessment rubric in an attempt to improve the evaluation process. In addition, a COB writing assessment subcommittee was formed to incorporate the best COB evaluation of writing. This group included faculty who were skilled at writing and evaluating writing, along with business writing experts from the COB Advisory Board. Thus, the writing assessment process itself was improved for the next round during the spring of 2007.

Another area addressed was the business memo assignment. The 'do over' policy was deemed as somewhat successful and was continued. It was also decided that students would be required to acquire a business writing text, rather than recommending that students acquire it. In addition, students were to be provided with samples of the assessment rubric to be used to grade their memos, along with samples of well-written business memos, and were encouraged to utilize the university's Writing Center to help them prepare better written memos. Finally, the value attached to the business memos for final grading purposes was increased, in an effort to motivate students to focus on better writing.

While all of this was taking place, the results of the university-wide Writing Task Force was presented. Those results indicated that students would be better served by removing the requirement for Composition II and replacing it with a more business-oriented writing course. It was also recommended that educational resources be made available for this process.

Our students have not been enrolled in the Composition II course for the last two semesters. During this time our Business Education Department has developed a course in Business Communications that has subsequently been accepted as a substitute for Composition II. This course is now required for majors in Business Education and Business Information Systems and has recently been approved as the second writing course for all COB majors, assuming the educational resources follow that approval.

We have come a long way, in a very short time, in developing the assessment of business student written communication skills. Both the process of requiring business writing and the evaluation of that writing have taken a few years to develop and, during that period, we have learned a great deal about the assurance of learning/outcome assessment. We hope, as a collective faculty, to continue to learn as a means of improving the skills and abilities of our students.

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Table 1: Paragraph Assessment Rubric
College of Business Bloomsburg University

Assessment Criteria	**Level 1 Unsatisfactory (0 points)**	**Level 2 Basic (2 points)**	**Level 3 Proficient (3 points)**	**Level 4 Advanced (4 points)**
Vocabulary & Spelling 1._____	Contains multiple made-up words, incorrectly used words, and/or spelling errors	Contains no made-up words, few incorrectly used words, and/or few spelling errors	Uses appropriate vocabulary with no spelling errors	Shows advanced skill; effectively chooses and uses words appropriately without spelling errors.
Sentence Construction 2. _____	Poor sentence construction makes writing difficult to understand	Writing is comprehensible but shows only basic sentence construction skill.	Shows skill constructing comprehensible sentences w/sub-ordinate clauses.	Shows advanced skill; conveys ideas using complex sentences.
Grammar & Punctuation 3. _____	Multiple errors in grammar and punctuation	One or two errors in grammar and punctuation	Uses grammar and punctuation without error.	Shows advanced skill; uses grammar and punctuation without error.
Clarity & Readability 4. _____	Difficult to read and understand what the author wants to convey.	Conveys a basic point in an unfocused manner.	Conveys a basic point with clarity.	Shows advanced skill; clearly conveys ideas and provides relevant support.
Organization & Idea Development 5. _____	Does not present and/or develop an idea.	At least one idea is minimally developed or related to another idea.	At least one idea is presented and developed by relating it to other ideas or material.	Shows advanced skill; effectively presents, organizes, and develops ideas.
Transition Sentences 6. _____	Lacks transition sentences linking paragraphs.	Contains at least one transition sentence linking paragraphs.	Uses transition sentences effectively to link paragraphs.	Shows advanced skill; uses transition sentences very effectively to link paragraphs
Audience Focus 7. _____	Unfocused; addresses wrong audience.	Audience focus shifts or is lost	Shows clear, consistent audience focus	Clearly and consistently writes to the appropriate audience.
Content Mastery 8.____	Critical errors or omissions in content or knowledge	Minor errors or omissions in content or knowledge	No errors or omissions in content or knowledge	No errors or omissions in knowledge. Shows command of content
Total				
90%=25.2, A= 25	80%=22.4, B= 21	70%=19.6, C= 19	60%=16.8, D= 16	7 x 4=28

Student : _______ Assessment Score: ______ Course/Class Identifier: _______Assessor:_____

COLLEGE TRUSTEE GOVERNANCE: AUGMENTING CARVER'S POLICY GOVERNANCE WITH ACCEPTED CONTROL AND PLANNING SYSTEMS

Spring Walton, University of Maryland, University College
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ABSTRACT

Carver's Policy Governance is widely used in community colleges. The Carver model stresses that Boards of Trustees need to focus on development of policy and avoid supervision of administrative tasks. State law often reserves to the trustees specified operational decisions. Also, trustees are sensitive to media criticism of the lack of controls, with respect to fraud, misappropriation, contract abuses, and employment irregularities. This paper advocated the use of AICPA Quality Systems Auditing Techniques to prepare and monitor controls. An ISO 9000 like system of disclosures is advocated to meet control requirements, while remaining in the spirit of Carver.

INTRODUCTION

Carver's Policy Governance® Model is a widely accepted model of not for profit board governance and has been widely disseminated through the publications and meetings of the Association of Community College Trustees. Carver(2001) claims, "The Policy Governance model developed by the author is the first universally applicable theory of governance." Carver's system advocates the separation of the trustee function and meetings from the administration function. Carver (2006) advocates that board of trustees function without much influence from the administration.

The Carver system depends upon primarily on two constructs: ends and means. Ends are the desired outcomes of the college. They are the deliverables of the college and are similar to the college's mission statement, goals and objectives.

Carver defines means as anything other than ends. In practicality, means are the methods the college uses to achieve the ends. Closely associated with means are Presidential Limitations. Presidential Limitations are the means proscribed by the board for use by the college president. Carver (20006) recommends they be stated as a negative: The president may not ….." Under Carver, except for Presidential Limitations, the president may administer the college in anyway that achieves the ends.

Carver's thesis is that boards do not spend time on the really important matters of colleges and are too involved in managing the administration. Carver(2001) wants boards to focus, almost entirely, on developing of means and upon evaluation solely of the accomplishment of means. Carver has found a receptive audience with college presidents, who desire less active trustee oversight of operations; trustees, who are not interested in the voluminous detail of college operations; and trustees, who want more accountability with evaluation based upon objective criteria.

Carver's Policy Governance® Model has problems from theoretical and practical systems views. This paper addresses problems and advocates a way that accepted management techniques can solve those deficiencies, while retaining the objectives of Carver's system.

A major problem not adequately addressed by Carver is community college boards are political appointees subject to specific legal duties, which may not be delegated. They are also under political pressures to safeguard the community college with respect to controls against fraud, misappropriation, contract abuses, and employment irregularities, as those are the areas most often criticized in the media. In the climate of Sarbanes-Oxley, politically appointed boards are sensitive to media and citizen charges that criticize the Board of Trustees for a lack of controls.

The governance of community colleges by lay boards is difficult without a solid detailed conceptual framework of educational administration and experienced guidance in development of Carver ends and means statements. Carver's system encourages a focus on policy and the avoidance of compliance detail. Carver's system does not provide a balanced approach to control and supervision versus policy. Augmentation by a control system that meets the board's supervision of legally mandated and strategically important items is needed. The control system advocated in this paper drew from principles of ISO 9000's control system.

One control system methodology is the extension of an AICPA methodology developed with Alamo Systems presented ISO 9000 and Quality Systems Auditing continuing education seminars in major US cities. The documentation techniques and ISO 9000 principles taught offer a way for community college trustees to have developed a system of internal controls and an information system in place to meet trustees' responsibility for meeting their responsibilities for legally mandated duties and controls on those areas which the trustees have determined are strategically important. A nationally accepted AICPA methodology provides trustees reliance upon control system developed and taught through AICPA to CPAs. Reliance upon AICPA developed systems and CPA firm provides boards with due diligence by reliance on legally knowledgeable experts in financial controls, which buffers criticism from the media.

Many community college boards have invested a significant amount of time and resources in adopting Carver. For many it would be politically difficult to abandon Carver. The controls present a methodology for the development of means that can be objectively verified in the spirit of Carver. The development of means and ends are consistent with control theory and sensitive to Deming's(2000) quality principles. Development of means is especially difficult for a lay board of trustees.

In addition, the principles advocated have been successfully implemented in a community college. (See the accompanying paper, *A Case Study Augmenting Carver's Policy Governance with Accepted Control and Planning Systems in a Community College)*.

ISO 9000 is a compliance system that is often described as 'do what you say, say what you do'. A major tenet of ISO 9000 is the client describes what is necessary and the ISO 9000 supplier documents the steps used to comply. When the supplier varies from the steps, a non-compliance report is made. ISO 9000 is a disclosure based system. As such, ISO 9000 provides a framework for community college trustees to meet their control and monitoring obligation and remain with the spirit of Carver.

The AICPA Seminar primarily rely upon a knowledgeable auditor interviewing the personnel responsible for a function and developing flowcharts describing what the person does. The interviewee verifies the flowcharts immediately after the interviewee. The flowcharts are compiled and compared with other audit information for presentation to the trustees. A modified trustee governance system is developed. The documents required are listed in Figure 1.

The items audited are those functions legally reserved to the trustees and those functions the trustees deemed strategic. Functions reserved to trustees in Maryland are listed in Figure 2.

Interim reports and reportable auditable conditions should be made to the board designed project officer and usually to the Audit Committee.

The complied reports of each function are used to develop a draft for board consideration of the means and presidential limitations, both of which are documented as a part of Board Policies.

A committee of the board should review documents and forward to the entire Board, significant conditions and move other to the consent agenda. Sometimes Board Policy requires that all documents required by Board Policy be maintained on a website that is open to the public.

The means limitations are submitted to the Board Attorney for an opinion as to whether the Board's Policies meet the legal requirements related to functions reserved to the Board and adequate control of those functions by the Board.

Ends developed with Carver tended to be too global and not quantifiable. Under Carver, the Board's work is to continually develop Ends, so a 'first cut' Ends methodology was developed. The development of first Ends were a function of Deming (2000) definition of quality as meeting stakeholder needs and Miller's (1956) the limitation that the number of Ends should be Seven plus or minus two..

Recommended stakeholders on the accompanying case study were students, employees, County Commission, Economic Development Commission, Arts Council, Special Education Council, Chamber of Commerce, Labor Unions, Aging Council and Historical Society.

A positive gain is that trustees usually gain significant knowledge about their college. Also, trustees were more comfortable that adequate controls were in place and that should something occur, they had performed due diligence with respect to controls.

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Figure 1: Board Governance System Documents

By-Laws

Legislative Authority for Board Action

Legal Restrictions Placed Upon Board Action

Legal Mandates Placed Upon the Board

Board's Internal Operating Policies

Officers of the Board

Legal Counsel, Independent Auditor, and Consultants

Adopted Board Governance System

Board Of Trustee Policy

Board of Trustee Authorization of Administrative Actions to Be Taken in Order to Meet the Mission of the Community College

Procedures

Flowcharts of processes that define WHAT is done to achieve Policy requirements

Instructions

Documents that describe HOW processes are performed

Records

Forms, Reports, or Data that demonstrate compliance to Governance Requirements

Figure 2

Functions Reserved to the Trustees (Maryland)

Adoption of the budget

Authority to borrow, to acquire personal property

Acquisition of property

Award of bids of $25,000

Disposition of property

Procurement by competitive sealed proposals

Charging of student fees

Sole source procurement

Entering of agreements

Staffing and Salary

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EVALUATING THE IMPACT OF INTEGRATED BUSINESS CURRICULA ON STUDENT OUTCOMES: IMPLICATIONS OF CURRICULUM TRANSFORMATION TO MAKE STUDENTS MORE MARKETABLE

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ABSTRACT

There is a growing body of literature in business education that reports a significant disconnect between the traditional undergraduate business school curriculum found in most institutions today, and the needs of the modern business community, in terms of graduate preparedness.

Many undergraduate business school curricula are organized by functions such as finance or marketing that mirror the departments historically found in commercial organizations. However, this traditional curricular model doesn't recognize the many fundamental changes in either the emerging, cross-functional structure of business, or employers' expanded expectations of employees' roles. So many business graduates are not well prepared for today's multi-faceted entry-level jobs.

A growing number of AACSB-accredited business school programs have made dramatic integrative changes in their curricula to address this issue. This research will explore the process of change at several of these schools, including the University of Idaho, which implemented an integrated business curriculum in their undergraduate school more than ten years ago. Other schools include Kent State University, and Oklahoma University. This paper will explore these transformational programs.

INTRODUCTION

The functional structure of curricula found at many undergraduate business schools is largely unchanged over the past 50 years. The approach is traditional, with students declaring a major as early as their freshman year, and pursuing a course in one of six to eight different and distinct areas of study, depending on the school. There is little if any cross-functional coursework between majors, except for a subscribed 'core' of survey courses in each subject area that are designed to represent a common body of knowledge (CBK), and a 'capstone' policy or strategy course that's intended to bring everything together for graduating seniors.

Historically, business schools have designed curricula to meet the needs of the marketplace. The earliest example of a specific undergraduate business curriculum appeared in Philadelphia in 1881 when the University of Pennsylvania established the Wharton School of Business with a $100,000 donation from Joseph Wharton, who was a manufacturer of armor plate for the U. S. Navy (Pierson, 1959). In addition to the basic courses of history, economics, and government, the new business school offered a specific set of courses in accounting, business organization, and commercial law (Pierson, 1959). Over the next fifty years, business as a separate academic discipline grew on public and private campuses across America, in response to the increasing demands of business for trained graduates. Courses were developed based on the needs of business, and schools struggled to find and develop faculty and texts to teach these new subjects. By the start of World War II, there were more than 120 collegiate schools of business in the U.S. awarding 10% of all baccalaureate degrees, up from 3% in 1920 (Gordon & Howell, 1959). Most of theses schools followed curricular recommendations as specified by the AACSB, the Association to Advance Collegiate Schools of Business, (formerly the American Academy of Collegiate Schools of Business), the primary business school accrediting agency, which at the time dictated a set of required courses, including accounting, business law, finance, statistics, and marketing (Pierson, 1959). This fundamental group of courses, usually known as the business core, continues at many business schools today.

This traditional structure may well have served the business community of the mid 20th century, when many entry-level jobs were in large companies in manufacturing industries. These enterprises enjoyed stable pricing, moderate growth, robust staffing, and protection from foreign markets. But in the past half-century, sweeping changes have dramatically altered the organization, structure, size, and survivability of US businesses. Free trade laws have opened the globe to American companies, but they've also opened our economy to increasingly strong competition from many developing countries, materially changing the business environment. Technology has boosted productivity, improved connectivity, and in the process, eliminated many positions from every firm (Friedman, 2006, Jones, 2002). Retailers, who traditionally followed manufacturer's suggested retail prices (and their margins), broke ranks with their suppliers in favor of building sales and customer loyalty through everyday lower prices, vis a vis Wal-Mart (Fishman, 2003).

The growth of small business in the U.S. has also been remarkable. Today, over 50% of all people employed in the U.S. are employed in organizations with less than either 500 employees or $6 Million in annual revenue, depending on the industry. Small businesses represent over 99% of all employer firms. They have generated 60 to 80 percent of net new jobs annually over the last decade, and create more than half of non-farm private gross domestic product (SBA, 2006). Small businesses often expect more versatility and functionality from employees. Service industries have supplanted manufacturing firms, and one of the biggest trends across all industries is consolidation. Companies buy each other because they can't grow from the inside. Today, companies routinely enter new product markets and geographies through acquisition rather than organic expansion.

THE SITUATION TODAY

These fundamental changes in US business have roots in a global focus on efficiency. Economists' theory of comparative advantage is alive and well in commerce today, spurred on by the many changes that have occurred in trade laws over the past quarter century. These changes have literally created global competition in many sectors, forcing most businesses to focus on cost control to maintain profitability. This in turn has led to off shoring and outsourcing in many segments as companies struggle to push their costs and prices lower, to meet the demands of our increasingly competitive economy (Fishman, 2003).

Business people work in process-centered organizations today, as opposed to discrete functional departments. Businesses are concerned not with the finance department, but with the acquisition and dispersal of capital resources. They don't focus on the marketing group; they have a sales/collection/customer service process (Walker & Black, 2000).

These changes have not gone un-noticed in academia. As early as 1988, Porter and McKibbin, in a study commissioned by the AACSB, entitled "Management Education and Development: Drift or Thrust into the 21st Century", pointed out a general criticism of undergraduate business school curricula which placed "insufficient emphasis on integration across functional areas" (pg 65). AACSB-accredited schools currently use a number of different curricular models, ranging from traditional offerings, with a basic set of discrete core courses (CBK), followed by a major course of study, to fully integrated business curricula with cohorts, and cross functional team-teaching. The AACSB no longer dictates a specific curricular formula, but rather suggests topics normally found in general management degree programs (AACSB 2006, pg 70).

There is evidence that many business and professional schools recognize the growing gap between student outcomes and employer needs. Methods to integrate curriculum such as team teaching, business simulation, and interdisciplinary courses have been identified as helpful in making business classes more useful (Cannon et al, 2004; Cook, 1993; Felder, Felder, and Dietz, 1998; Nicholson, Barnett, and Dascher, 2004). A smaller number of schools have actually achieved a breakthrough in transforming curricula to reflect the new business model (Cohen, 2003; Frank, 2006; Pharr, 2000; Putchinski, 1998).

Some of the schools that have made significant curricular modifications in their undergraduate business programs are The University of Idaho, Babson College, and Oklahoma University at Norman. These new curricular models typically focus on cross functional, collaborative, or team teaching of business subjects like marketing, finance, human resources, and management. They also tend to form classes into cohorts, or groups of students, who matriculate together for some part of their schooling.

UNIVERSITY OF IDAHO

For example, according to Dr. Mario Reyes, Asst. Chair of the School of Business, at the University of Idaho, that school uses centralized advising for freshmen and sophomores to insure that liberal arts requirements are completed before a student reaches the business program as a junior. Then, students are formed into cohorts to begin a two-semester, 17 credit-hour course, called Integrated Business Curriculum (IBC). The first semester consists of 9 hours of IBC class work, one three-hour course in IBC Accounting, and an Economics course (Mario Reyes, personal interview, August 20, 2007). The second semester of the junior year, students remain together in their cohort for an 8-hour IBC class, plus one more three-hour IBC Accounting class, and they're also encouraged to choose two courses from their major field of study to complete the semester. Entering their senior year, students are free to concentrate on the balance of their major field (Reyes, 2007).

The IBC course is a team-taught, fully integrated half-day class that meets three times per week for both semesters of the student's junior year. It is also the first exposure students have to business courses, except for basic pre-requisites such as computer skills, public speaking, and math. Subjects covered in IBC include marketing, finance, operations management, human resources, and business strategy (Reyes, 2007.

The IBC teaching team meets weekly to lay out the class schedules. All examinations are either oral or essay. The concept requires a significant time commitment on the part of faculty, and in fact, during the search process, University of Idaho search teams look for candidates who have the background, capability, and desire to participate in the IBC. One of the tenets of the Idaho IBC is the use of a partnering outside corporation, such as Harrah's, or Potlatch, which commits resources and access to the students of the cohort throughout the semester. There are many anecdotal examples of improved student outcomes, including employer and alumni testimonials, and the school is committed to this primary curricular change (Reyes, 2007).

KENT STATE UNIVERSITY

An integrated curriculum has been introduced at the department level in the marketing discipline at Kent State's Business School in Kent, Ohio. This change, while not across all business subjects, was made specifically to improve student outcomes in terms of employability. Dr. Richard Kolbe, chair of the Marketing department at Kent State's School of Business, says the goal of the change was to create marketing graduates who could make an easier transition from college to the business world, where the need was for entry level employees who could immediately contribute to an organization's success (Dr Richard Kolbe, personal interview, June 2007).

The focus of the change is the creation of marketing cohorts that follow a specific curriculum for their last two years at Kent State. The program is designed to give all students the same basic understanding of business, and then build on each module so students link classes and subjects throughout their major studies. One of the key elements is a business internship. Kent State has partnered with businesses throughout the Akron, Ohio metropolitan area to give students hands-on internship experiences that are analytical in nature, with an emphasis on developing problem-solving skills while earning course credit.

While Dr. Kolbe is hopeful that the entire School of Business can achieve an integrated curriculum, they've begun the change at the department level as a model. Some of the professional skills subjects that receive added emphasis in the new marketing curriculum are entrepreneurship, team dynamics, business writing, and communications skills (Kolbe, 2007).

OKLAHOMA UNIVERSITY

The Michael F. Price College of Business at OU, Norman developed an integration model in their more than twelve years ago that has student-created and student-run businesses built into the two-semester, junior-year IBC program as a practicum. According to materials received from Shelly Grunsted, Director of the IBC program, students are formed into 'companies' of approximately 20 students. These companies elect their own officers and board of directors, develop and manufacture products or provide services, and contribute all their profits to a pre-selected charity in the Norman area. In addition to this contribution, students volunteer their time in support of the charity during the semester. They are required to finance their business through a loan from a local bank and in fifteen weeks, completely servicing this obligation, including interest. Many of the classes in the practicum focus on specific aspects of the day-to-day operations of these companies.

CONCLUSION

Many stakeholders, including faculty, administration, and students, need to be convinced that change is needed. As Alan Cohen, writing about the curricular transformation at Babson College puts it, "Change in academia is hard; too many stakeholders can block change and almost no one … can legitimately drive it" (Pg 160). Faculty tends to be either change agents, or strong resistors of change. Curricular compartmentalization, as found on most campuses today, allows for maximum faculty autonomy, and sustained specialization. Those programs that have instituted a significant business school curricular change have started with an evaluation of outcomes, including employers' needs and expectations, and these employer surveys have been the key to creating a sense of urgency for change. According to Cohen, the costs of change at Babson College included a dramatic increase in intensity and pace of faculty life, and an increased fear of job security among faculty (Pg 175).

There's indeed a sense in the business schools on some college campuses today that the traditional curriculum currently in use is out of step with the modern business organization. A gap continues to grow between business practice and the knowledge being delivered by academia (AACSB, 1996). Some schools have found a way to overcome significant hurdles to curricular change and model the integrated business curriculum. There seem to be many business schools that either don't recognize the need for change, or haven't been able to make it happen.

Today's graduate is competing for employment on a global scale, whether she realizes it or not. Schools that've made the change to an integrated curriculum are convinced by their own anecdotal evidence that their students are better prepared to compete in this new business paradigm.

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AN ATTITUDINAL SURVEY OF CLASSROOM RESPONSE SYSTEMS

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ABSTRACT

Classroom response systems (CRS) are interactive technologies that enable teachers to streamline administrative tasks, conduct real time assessments, and initiate conversations with students. This paper describes the basics components of a classroom response system and its impact on student learning and classroom pedagogy. Survey results from a Fundamentals of Real Estate class provide evidence that classroom response systems are an effective means of engaging students and assessing performance, but more research is needed to evaluate the impact of CRS on student learning and classroom pedagogy.

INTRODUCTION

The barriers to adopting classroom response systems continue to fall, as vendors develop affordable easy to use products (Beatty, 2004). Classrooms are increasing equipped with the basic technology required to incorporate classroom response systems, and most faculty are familiar with the basic technology. Perhaps the biggest barriers to the wide-spread successful adoption of classroom response systems may be that faculty must learn new classroom skills and adjust their teaching methods, and students must adapt to active learning (Johnson, 2004)

Classroom response systems (CRS) are interactive technologies that enable teachers to streamline administrative tasks, conduct real time assessments, and initiate conversations with their students. While the ability to quickly and easily take attendance and grade quizzes might be an initial draw, the greater benefits from CRS come in the form of their capacity to allow faculty to see students think (Johnson, 2004). Classroom response systems engage students in active learning. They upend traditional asynchronous teaching models in which information flows in a single direction from faculty to students, and feedback is obtained via exams, quizzes, and homework assignments. Classroom response systems replace the controlled lecture environment with a synchronous classroom model in which faculty gather real-time data on student beliefs, attitudes, and understanding. This synchronous mode requires greater flexibility, responsiveness and creativity on the part of faculty. To realize the full benefits of a CRS faculty must allow students to shape classroom discussions and be willing to adapt lesson plans on the fly in response to student feedback (Birdsall, 2002).

Beatty (2004) offers insights gained from CRS teaching and mentoring. Classroom response systems should be used for more than administering endless series of quizzes. They offer a means to more fully engage students both inside and outside of the classroom. Brief quizzes at the start of class can allow faculty to push descriptive material out of the classroom and encourage students to come to class better prepared. CRS-based pedagogy leaves more class time for exploring core concepts and developing deeper levels of understanding. This transition however requires a shift in the focus of classroom planning from lecture note presentation to CRS question design. Beatty argues that apart from brief content based assessments; effective CRS questions should be limited to those that have clearly identifiable pedagogical goals such as:

- Making students aware of their own and other's perceptions
- Discovering points of confusion or misconception

- Distinguishing between related concepts
- Realizing parallels or connections between different ideas
- Elaborating on the understanding of a concept
- Exploring the implications of an idea in a new or extended context

Shifting from simple computational or fact based questions to ones that require deeper understanding also often requires adjustments on the part of students. Students may perceive questions that involve ambiguities as being unfair or trick questions. Thus it is important to communicate with students the purpose of the questions (learning), and to balance correct answers with participation when evaluating CRS results.

TYPES OF CLASSROOM RESPONSE SYSTEMS

The two most common types of CRS systems are infrared systems (IR) and radio frequency (RF) systems. The typical components of classroom response system include:

- Response pads – one per student
- A faculty receiver unit
- A faculty computer with server software
- A projection system or TV

The receiver unit is connected to the faculty computer via a USB port, and questions are tabulated and results are projected on a screen or TV. While the features of CRS vary by vendor, most popular models can be integrated with WebCT or Blackboard, and allow faculty to use the CRS within existing PowerPoint presentations. The infrared systems (IR) are typically the cheaper of the two systems, but are designed for smaller classrooms, as they require a clear line of site between student response pads and the IR receiver units. RF systems overcome line of site limitations by transmitting student responses via radio waves, and are effective in large classroom settings. Depending on vendor specifications, a single RF receiver can accommodate up to 1,000 response pads.

Most vendors offer both student and institutional pricing plans. The pricing of institutional packages varies widely, and usually involve the purchase of software, receiver units, and student response pads. Student packages typically involve the purchase of a response pad for as little as $5 and the payment of a registration fee. Student packages can often be bundled with a textbook. Vendors typically provide software and receiver units free of charge to adopting faculty. The CRS used in this study was a RF system developed by eInstruction. The RF response pads cost students $25 and required the payment of a $15 registration fee.

THE STUDY

This study was conducted in a Fundamental of Real Estate course, an upper level finance elective. The initial course enrollment was 23 students, 3 students withdrew form the class, and 18 students completed the CRS survey. A summary of the survey results appears in Table-1. Students were required to purchase and register their CRS pads by the second week of a class. They were provided a handout with step-by-step instructions on how to register their pads. The handout included screen shots of eInstruction's registration web pages and detailed instructions on how to complete the registration process. Only one of 23 students had questions about the registration process. The CRS was used to gage classroom participation and administer homework based quizzes. Graded homework assignments and quizzes accounted for 15% of the student's final grade. During the semester 11 homework assignments were collected, and students were given five unannounced "homework" quizzes. These CRS quiz scores accounted for 32% of the student's final homework grade. The 10% classroom participation grade was based on CRS tracked attendance and performance on "lecture" quizzes. Lecture quizzes were administered in PowerPoint presentations. They consisted of numerical and content based questions, as well as deeper-level context based questions. Attendance accounted for 25% of the participation grade, and performance on "lecture" quizzes accounted for the remaining 75%.

THE SURVEY

A twenty-five question Likert scale survey was administered on the last day of class to 18 students. The five categories used to measure student attitudes were (1) Strongly Agree (2) Agree (3) Neutral (4) Disagree (5) Strongly Disagree (see Table-1). Ironically, to save time, the survey was administered using scantron forms rather than the CRS. To identify potential spurious positive responses and to strengthen the results, the survey included five reverse directional duplicate questions. The five paired questions concerned ease of use, classroom attendance, classroom participation, motivation outside of class, and overall effectiveness. The question pairs and correlation results appear in Table-2. The correlations between the paired questions were negative and ranged from -.40 to -.48; this suggests the impact due spurious responses is minimal.

A frequency table of student responses appears in Table-3. For the purpose of describing survey data in the sections that follow student responses have been combined into three groups: agree, neutral, or disagree.

EASE OF USE

CRS vendors claim that their systems are easy to use. The survey results and student experience support this claim. Only one of 23 students experienced difficulties in registering their eInstruction CRS pad, and during the semester one response pad failed, but was promptly replaced. Seventy-eight percent of the students agreed with the statement that CRS was easy to use and no students disagreed with the statement (see Table-3).

ClASSROOM PERFORMANCE

CRS vendors claim their technology improves classroom performance. Although this study does not evaluate direct measures of classroom performance, it provides indirect evidence to support vendor claims. Survey results found more than 60% of students agreeing with the statements that the CRS added value to their learning experience, encouraged them to pay attention, and increased classroom participation. On-the-other-hand, the CRS had little impact on effort outside of the classroom. Sixty-seven percent of the students reported no change in how they prepared outside of class, and only 22% agreed with the statement that CRS motivated them to keep current with readings and homework. These results may have been due to the fact that homework assignments were collected on a regular basis (see Table-5).

CLASSROOM ATTENDANCE

CRS vendors claim their systems improve classroom attendance, but the survey results in this study do not support this claim. Only 44% of surveyed students agreed with the statement that CRS improved their classroom attendance. This likely due to the small class size, as Edmonds (2006) provides evidence that a CRS may improve attendance in large lecture hall settings. Attendance was taken at the start of each class with the CRS, but only 22% of the surveyed students felt that CRS motivated them to be on time (see Table-6). Interestingly 61% of surveyed students agreed with the statement that CRS is an appropriate way to assess classroom participation.

STUDENT SATISFACTION

Overall measures of student satisfaction are mixed. While 61% of surveyed students agreed with the statements that CRS was fun to use and 67% would recommend the continued use of a CRS in this course, other measures of student satisfaction were mixed (see Table-7). Fifty-six percent of surveyed students agreed with the statement that CRS improved their learning experience, but only 44% felt that CRS added value to their learning experience, and only 33% agreed with the statement that CRS was worth the cost. At the same time only 6% of surveyed students felt CRS was a waste of time and only 28% would rather not use CRS in other courses. These findings are consistent with finding by Everett (1998) in large section micro-economics classes and Edmonds (2006) in large section managerial accounting classes.

CONCLUSIONS AND FUTURE RESEARCH

Students in a Fundamental of Real Estate class had little difficulty mastering CRS technology, and had an overall positive response to the use of a CRS. Survey results suggest a positive impact on student attendance, classroom performance, and overall student satisfaction. Survey results provide evidence that classroom response systems are an effective means of engaging students and assessing performance, but more research is needed to evaluate the impact of CRS on student learning and classroom pedagogy. Future research should attempt to compare direct measures of student learning in traditional and CRS classrooms, to assess the impact of CRS on classroom pedagogy, and evaluate instructor perceptions of classroom response systems.

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Table 1
Student Survey

Questions		SA	A	N	D	SD
1	The CRS system was fun to use	1	2	3	4	5
2	CRS did not change how I prepared for class	1	2	3	4	5
3	CRS added value to my learning experience.	1	2	3	4	5
4	CRS slowed down class too much.	1	2	3	4	5
5	CRS improved my class attendance.	1	2	3	4	5
6	CRS responds pads were difficult to use.	1	2	3	4	5
7	CRS motivated me to be on time.	1	2	3	4	5
8	CRS encouraged me to pay attention.	1	2	3	4	5
9	CRS increased my class participation.	1	2	3	4	5
10	CRS is an appropriate way to assess classroom participation.	1	2	3	4	5
11	CRS is a good way to take classroom quizzes.	1	2	3	4	5
12	CRS did not affect my classroom attendance.	1	2	3	4	5
13	CRS helped me compare my performance with other students in the class.	1	2	3	4	5
14	CRS improved my learning experience.	1	2	3	4	5
15	CRS was a waste of time.	1	2	3	4	5
16	CRS was straight forward and easy to use.	1	2	3	4	5
17	The anonymity provided by CRS encouraged participation.	1	2	3	4	5
18	CRS motivated me to keep current with readings and homework.	1	2	3	4	5
19	CRS motivated me to exchange ideas with my classmates.	1	2	3	4	5
20	CRS did not effect my class participation.	1	2	3	4	5
21	Based on my experience, I would recommend the continued use of CRS in this course.	1	2	3	4	5
22	I made use of the eInstruction (CRS) website to check my grades and performance.	1	2	3	4	5
23	Based on my overall experience CRS is worth the costs.	1	2	3	4	5
24	I would like my Professors to make use of CRS in other courses.	1	2	3	4	5
25	CRS should be an optional component of the course.	1	2	3	4	5

Table 2
Reverse Directional Question Correlations

Questions		Correlations
6,16	CRS responds pads were difficult to use. CRS was straight forward and easy to use.	-0.40054
5,12	CRS improved my class attendance. CRS did not affect my classroom attendance.	-0.44384
9,20	CRS increased my class participation. CRS did not effect my class participation.	-0.44278
14,15	CRS improved my learning experience. CRS was a waste of time.	-0.47618
2,18	CRS did not change how I prepared for class CRS motivated me to keep current with readings and homework.	-0.48037

Table 3
Frequency Table

Questions		SA	A	N	D	SD
1	The CRS system was fun to use	5	6	4	1	2
2	CRS did not change how I prepared for class	5	7	6	0	0
3	CRS added value to my learning experience.	0	8	9	1	0
4	CRS slowed down class too much.	0	5	6	6	1
5	CRS improved my class attendance.	3	5	5	4	1
6	CRS responds pads were difficult to use.	0	1	4	9	4
7	CRS motivated me to be on time.	2	2	6	8	0
8	CRS encouraged me to pay attention.	3	9	6	0	0
9	CRS increased my class participation.	5	6	5	2	0
10	CRS is an appropriate way to assess classroom participation.	2	9	4	2	1
11	CRS is a good way to take classroom quizzes.	6	5	2	2	3
12	CRS did not affect my classroom attendance.	5	6	3	3	1
13	CRS helped me compare my performance with other students in the class.	3	8	5	1	1
14	CRS improved my learning experience.	3	7	4	3	1
15	CRS was a waste of time.	0	1	7	9	1
16	CRS was straight forward and easy to use.	5	9	4	0	0
17	The anonymity provided by CRS encouraged participation.	6	7	3	1	1
18	CRS motivated me to keep current with readings and homework.	0	4	4	8	2
19	CRS motivated me to exchange ideas with my classmates.	2	5	2	9	0
20	CRS did not effect my class participation.	0	6	3	7	2
21	Based on my experience, I would recommend the continued use of CRS in this course.	1	11	3	0	3
22	I made use of the eInstruction (CRS) website to check my grades and performance.	0	1	3	6	8
23	Based on my overall experience CRS is worth the costs.	1	5	7	5	0
24	I would like my Professors to make use of CRS in other courses.	2	5	6	3	2
25	CRS should be an optional component of the course.	3	6	4	5	0

Table 4
Ease of Use

Questions		A	N	D	Mean	Median	Std.Dev
6	CRS responds pads were difficult to use.	6%	22%	72%	3.89	4.00	0.83
16	CRS was straight forward and easy to use.	78%	22%	0%	1.94	2.00	0.73

A – Responses: strongly agree and agree

N – Neutral

D – Responses: strongly disagree and disagree

Table 5
Classroom Performance

Questions		A	N	D	Mean	Median	Std.Dev
2	CRS did not change how I prepared for class	67%	33%	0%	2.06	2.00	0.80
3	CRS added value to my learning experience.	44%	50%	6%	2.61	3.00	0.61
8	CRS encouraged me to pay attention.	67%	33%	0%	2.17	2.00	0.71
9	CRS increased my class participation.	61%	28%	11%	2.22	2.00	1.00
14	CRS improved my learning experience.	56%	22%	22%	2.56	2.00	1.15
15	CRS was a waste of time.	6%	39%	56%	3.56	4.00	0.70
17	The anonymity provided by CRS encouraged participation.	72%	17%	11%	2.11	2.00	1.13
18	CRS motivated me to keep current with readings and homework.	22%	22%	56%	3.44	4.00	0.98
19	CRS motivated me to exchange ideas with my classmates.	39%	11%	50%	3.00	3.50	1.14
20	CRS did not effect my class participation.	33%	17%	50%	3.28	3.50	1.07

Table 6
Classroom Attendance

Questions		A	N	D	Mean	Median	Std.Dev
5	CRS improved my class attendance.	44%	28%	28%	2.72	3.00	1.18
12	CRS did not affect my classroom attendance.	61%	17%	22%	2.39	2.00	1.24
7	CRS motivated me to be on time.	22%	33%	44%	3.11	3.00	1.02
10	CRS is an appropriate way to assess classroom participation.	61%	22%	17%	2.50	2.00	1.04

Table 7
Student Satisfaction

Questions		A	N	D	Mean	Median	StdDev
1	The CRS system was fun to use	61%	22%	17%	2.39	2.00	1.29
3	CRS added value to my learning experience.	44%	50%	6%	2.61	3.00	0.61
14	CRS improved my learning experience.	56%	22%	22%	2.56	2.00	1.15
15	CRS was a waste of time.	6%	39%	56%	3.56	4.00	0.70
21	Based on my experience, I would recommend the continued use of CRS in this course.	67%	17%	17%	2.61	2.00	1.20
23	Based on my overall experience CRS is worth the costs.	33%	39%	28%	2.89	3.00	0.90
24	I would like my Professors to make use of CRS in other courses.	39%	33%	28%	2.89	3.00	1.18
25	CRS should be an optional component of the course.	50%	22%	28%	2.61	2.50	1.09

A – Responses: strongly agree and agree
N – Neutral
D – Responses: strongly disagree and disagree

WILIFE -- ITS NEW INDOOR SURVEILLANCE CAMERA AND ITS CONTRACT MANUFACTURERS IN CHINA

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ABSTRACT

This case, written as a travelogue, summarizes the first author's activities and observations in an inspection trip he made to his firm's Chinese contract manufacturer, KYE. Besides showing interesting aspects of the Chinese manufacturing economy, the case is notable for portraying the relative proficiency of Chinese manufacturers in assembling complex electronic products.

I [Mudrow] work for a US firm, WiLife [www.WiLife.com] which designs and sells a line of home and business surveillance cameras which connect to a PC. This case is an account of a trip John, WiLife's Vice President of Manufacturing, and I made to Dongguan, China, in late 2006 to evaluate the readiness of our contract manufacturer, KYE, to start production of our new outdoor camera. This is one of nine trips to China I've made in the last year.

While at KYE we also wanted to visit other current or prospective suppliers and contract manufacturers. We also wanted to talk to the current manufacturer of our indoor camera about some unresolved quality problems.

Background

WiLife successfully introduced its first product, an indoor surveillance camera, in November 2005 after nearly a year of development. This system allows the owner to quickly set up a surveillance camera in their house or garage by networking it through the house's power lines. I installed such a camera in my home garage.

Our original manufacturing strategy for the indoor camera was to produce it in the U.S. until there was enough demand to allow us to offshore the manufacturing. However, when we got price quotes from several Chinese manufacturers we saw that we could offshore production even at modest levels of two or three thousand units a month. So we contracted with KYE, a Taiwanese firm, which manages a plant in Dongguan but uses native workers who are supervised by Taiwanese managers. The resident plant manager, Summer, is Taiwanese as are several other project managers under him. Before I left for China I emailed KYE various production files and instructions for manufacturing tests. A barrage of emails about these files followed. Overall, in this trip I wanted to see how KYE sourced the components and to evaluate their readiness for producing the camera.

Al's tip

The best starting point for finding a Chinese supplier is by asking your existing contacts. For example, Radio Shack, one of WiLife's customers, gave us a list of contract manufacturers they've had good relations with. Suppliers of suppliers can also provide contacts. And don't overlook non-obvious sources: A neighbor whose firm buys sports drink bottles from China asked me to suggest additional suppliers. Also, if you're on a plane to China talk to the person sitting next to you. Internet search is less preferable: Alibaba, Global Sources, and China Sources can be starting points but make sure you make a personal visit.

Friday: We leave from Los Angeles

Our flight leaves LAX airport at 11:20 pm on China Southern, a mainland Chinese carrier which has recently started direct flights from Los Angeles to Guangzhou, China. The KYE factory is in Dongguan, about an hour away by car from Guangzhou. In the past we had to fly first to Hong Kong, spend the night there, then take a bus or ferry to China. This was painful because the border formalities between Hong Kong and China were very time consuming and could take up to two hours.

This is the worst leg of the trip; it can take up to 15 hours because we're going against the jet stream.

Sunday

John and I arrive at Guangzhou Airport 6 am Sunday. We are met by a KYE driver who shows me the text message on his cell phone which says that John and I are to be driven to the plant until we can check into our hotel this afternoon. Most of the trip to the factory is on a modern toll expressway and, since early Sunday mornings have the least amount of traffic, the drive is pleasant. Also, the expressway meanders through scenic, reforested hill country. Aside from the environmental degradation caused by overpopulation, China is a beautiful place.

An hour later John and I arrive at the KYE's factory and are taken to the demo room, just off the lobby, where I check my email and learn that the KYE team will arrive from Taiwan in a few days. So John and I decide to use our time until then to visit and evaluate several of KYE's suppliers.

Another email tells me that there were three recent motion detections by the WiLife camera I recently installed in my home garage. So, over the internet in real-time, I check the garage camera and notice that the garage light has been left on, then call my home on Skype - at three cents per minute -, get my sister-in-law, and ask her to turn the light off. She thinks it's a bit strange for me to call from China just to get someone to turn a light off – but in-laws are like that. My call also prompts the kids to run into the garage so they can wave to me.

After a few hours Summer, the plant manager and one of the permanent Taiwanese staff who lives full-time at the factory, meets with us, discusses a little business, then invites us to have lunch with his fellow project managers. The factory has a decent restaurant for the Taiwanese managers; the restaurant is in a part of the building non-Taiwanese Chinese can't enter.

During lunch John and I note that WiLife has worked with five different Taiwanese project managers at KYE in Dongguan. They tell us that most of them have "graduated" to Taiwanese system companies. Most Taiwanese engineers and manufacturing people see China eventually taking over Taiwan's commodity manufacturing and try to find work at systems companies rather than components manufacturers. They hope that their systems companies will be able to differentiate themselves when components are sourced entirely by China.

Summer also talks about one of his big problems: The high turnover among his factory workers. Several decades of a one child policy in China have produced an older population and people are living longer so the population is not dropping rapidly. However, the pool of young, unskilled, and available workers is being rapidly depleted as China's economic growth continues. So it's likely that in the future Chinese employers will have to pay higher wages, use more automation, and employ older workers to keep China's GDP growth rate high. This trend will eventually reduce China's ability to differentiate their products on cost alone.

Al's tip

After visiting a factory, invite the factory managers to eat lunch or dinner with you. During the meal talk about your personal life, such as your family, your parents, how and why you got into business, etc. The Chinese place higher importance on the value you have in your group than on your individual strengths.

Al's observation

All factories in Guangdong must provide housing for their employees. New employees must be also be recruited from other provinces rather Guangdong. A worker can't simply show up looking for work at a factory gate; taking up residency is restricted.

Later that afternoon John and I check into our hotel, the Dongguan Sheraton, a four to five star hotel close to the factory. I'm beginning to feel jet lag and, after dropping my luggage off in my room, go to the hotel spa for a workout. I feel a little better afterward.

Later that evening we look for a restaurant, even though the hotel has several excellent ones, because we like variety of foods and flavors. After walking around for a few minutes, we spot a Korean restaurant which has signs in Chinese, Korean, and English. In the restaurant we are surprised to find that the receptionist is reading a Bible and in the upstairs dining room we're greeted by the owner who is wearing a crucifix. She speaks passable English, is very friendly, and tells us she has a brother in Maryland. In looking over the menu we avoid poultry, note a dish made of dog, which we resolve to try on another visit, and instead order Gimshi pork.

Al's tip

China is officially an atheist country and expressions of religion are illegal. Avoid religious symbolism and don't discuss religion with the Chinese.

Monday

John and I plan to visit two suppliers today. The first supplier, Camstar, is new to us – I found them on the Internet and we've exchanged a few emails -- and we want to see if they have the capability to produce parts for us. They claim to be the leading analog surveillance camera manufacturer in China. WiLife's cameras, on the other hand, are all digital and networked so there is little competitive overlap. Camstar may produce accessories or components which we could buy rather than make ourselves. We've been in touch with the second company, RDI, for a while and want to solidify our relation with them and also see if they have any components in development that may interest us.

A Camstar salesperson, Anton, meets us at our hotel lobby and drives us to their factory in Shenzhen. Although the factory is only 33 miles southeast of our hotel, our drive takes about and hour and 45 minutes. The last 10 miles is on side streets and takes about and hour and 10 minutes. When we arrive, John and I talk about what WiLife makes and which parts we need. At first Anton is puzzled about our interest since Camstar makes only analog cameras but WiLife markets only digital cameras. Finally after an hour, he sees the bigger picture and realizes that we may be interested in camera parts and accessories and brings out some samples.

The Camstar factory is a bleak building typical of many medium-sized factories in China and our tour of the Camstar factory is disappointing. The factory seems to be more of a job shop rather than an assembly line and quality doesn't seem to be a priority. Furthermore, Camstar's claim of being the largest Chinese manufacturer of surveillance cameras may be a stretch.

Incidentally, during the tour factory, among the typical 18 to 22 year old workers, I am surprised to find an older couple. When I ask about them, I am told that they are the parents of the factory owner.

We next take an hour and a half taxi ride to the RDI factory, almost 15 miles directly west of Camstar's factory. Taking side streets, it takes us about an hour to get close to RDI but the taxi driver becomes confused and can't locate the address we give him, a typical occurrence. Streets aren't well marked and rapid construction means things change rapidly. After several cell calls and about 30 minutes of driving randomly, he gets us to RDI.

Unlike Camstar's factory building, RDI's is bright and well-landscaped. We are met by Wiley, their salesperson, who takes us to their demo room. It turns out that although RDI does manufacture surveillance cameras, it seems to focus on the baby monitor market. Wiley shows us several innovative baby monitors which come with wireless LCD [liquid crystal display] television monitors. Since we already have a business relation with them, we talk about additional ways to do business with each other rather than feeling each other out as we did with Camstar.

Al's tip

Keep in mind that Chinese supplier-customer relationships are often strengthened by cross ownership of companies. It's not necessary that you buy stock in your supplier's companies, but it will strengthen your relationship if you exhibit a commitment to a long term relationship.

We end the tour impressed by the cleanliness and organization of the factory. This leads us to believe that, unlike Camstar, RDI is oriented toward manufacturing for international OEMs [original equipment manufacturers]. Each worker's uniform has the English phrase "Do it right the first time" emblazoned on the back.

Al's tip

Once a list of potential suppliers has been identified, make a trip to China to evaluate their capabilities. During your factory tour look at the overall cleanliness of the work stations, the age and maintenance of the equipment, the quality assurance processes and personnel, and the level of professionalism of management and staff. Always ask for names of reference suppliers, customers, and partners, then follow up.

We end our discussion with Wiley by giving him a purchase order for two types of illuminators and take a taxi back to our hotel.

Tuesday

After breakfast John and I are at KYE's plant inspecting the manufacture of a part they are now making for our indoor camera now in production. We think they've had enough experience making this part so we don't anticipate any problems. We also spend a few hours closely inspecting several assembled printed circuit boards. Everything looks great.

After lunch we travel to Lucky Light Electronics, an LED [light emitting diode] fabricator I found on the internet. Lucky assembles LEDs using third party LED suppliers and looks interesting because they claim that their LEDs' efficiency is three times that of the best US supplier but at half the cost.

We are introduced to Freya, Lucky's salesperson, who talks to us about their LED specifications and later gives us a tour of their factory which is clean and well-run. We're here to gain confidence in Lucky's operations and level of quality. Their prices are good so the quality of their suppliers is of less concern to us. Freya had some samples for me to test but she had sent them to my office in the U.S.; she promises to send additional samples to KYE by this Saturday.

Al's observations

Freya gives us a cool reception; we think she is annoyed because we meet her at the factory rather than at their more comfortable sales office in Shenzhen, which is south of Dongguan. Freya's annoyance reflects southern China's "zones of desirability." Shenzhen has been a "special economic zone" longer than other parts of China, is more developed, and resembles Hong Kong more than other parts of China. However, in southern China the most desirable place to live and to be from is Hong Kong rather than inland. The further north from Hong Kong, the less desirable the location.

Wednesday

We travel to the plant of our second subcontractor, GigaFast in Dongguan, which makes the USB/powerline bridges for our indoor camera. A USB/powerline bridge is a device that plugs into, for example, a home's electric outlet and WiLife's system to create a camera surveillance network. A bridge, in other words, allows the owner to create a computer network using the home's electrical lines. Like Lucky Light Electronics, GigaFast doesn't make the bridges but outsources them to another firm. And like KYE, GigaFast keeps a crew in China, around four or five, which overviews the manufacturing on GigaFast's behalf.

We've received some of GigaFast's bridges improperly programmed so John and I spend the whole day here working on this problem. GigaFast has had problems in performing the four quality tests we require with the bridges. While WiLife provides them the equipment to do the testing, in using this equipment on the factory floor, they unfortunately used the wrong kinds of tests or did them improperly. As a result, all bridges failed. Furthermore, their engineers assumed that the test equipment was faulty rather than the type of test they were doing. So they "repaired" the test equipment; they were unsuccessful of course because there was nothing wrong with the equipment in the first place.

Al's thoughts

Wednesday's experience at GigaFast illustrates some of the difficulties in making sure that Chinese products have good quality. Chinese manufacturers truly want to meet world-class quality standards but seem more devoted to following procedures than focusing on a quality end-user experience. In this case, if one of the quality engineers had stood up and said "Something is not right here," the issue could have been easily resolved.

Thursday

John and I are back at KYE's factory and May, the Taiwanese project manager, and her staff have arrived. We review the parts list for the new outdoor camera to verify that all parts are ready for the production run. We also review their test procedures for the production line, the system test procedures, and KYE's quality procedures.

During the review we receive some bad news. KYE has misplaced some pre-programmed memory chips I brought with me from the US – a problem because now we need to buy them here and to program them at KYE's factory.

To source the missing chips, we drive to the Dongguan electronics market, located in a large, multi-story building filled with small vendors who each focus on a small range of electronics components. To find what you want, you walk from vendor to vendor until you find one who specializes in what you need. They either have the part here, nearby, or, as in our case, at their affiliate at the Shenzhen electronics market. We send James, a Taiwanese electrical engineer, to Shenzhen to get the parts.

The second bit of news is more troubling: KYE has failed to give the computer design files for the camera's plastic enclosure to their plastic subcontractor, Merrich. This problem will come up again in my stay here. We hadn't planned to use the enclosure for this test but this failure pushes back the next production run and the release of the product. I am upset that they didn't inform us of this earlier and I tell KYE to send the computer design files to the plastic subcontractor immediately.

Friday

This morning we review the details of the manufacturing schedule for the outdoor camera. According to the revised schedule, we should have the first plastic case from the supplier ready for review by the middle of May, a four week slip from our plans.

KYE seems to be having problems programming the memory chips we purchased yesterday from Shenszen. They claim that the socket for the chip is too small to allow the chip to be reliably programmed. They ask us to redesign the printed circuit board to accommodate a larger chip so I ask to see their programming procedure because we've had no problem programming it in the US. After watching an operator do this step, I understand their difficulty. Rather than using a standard programming socket, they use what is essentially a bare board with exposed pads for the electrical connection. The operator holds the parts against the pads with her fingers during the programming. Any minute movement by the operator would cause the programming to fail. I recommend that they get our kind of socket.

A few hours later they come up with a new socket from Shenzhen. However, even with the new socket they still have problems programming the chip because the computer instructions they're using are for a different brand of chip. I try to help them but have problems because the instructions are a combination of Chinese and cryptic English menu items like "Motorola way." After an hour of tweaking the computer instructions, we set it up as we think is best. In the end the chips are misprogrammed anyway.

Saturday

First thing this morning I go to the YKE factory to make sure the reprogramming is working. It seems to be progressing but at a very slow pace. We expected it would take about 20 seconds to program each chip on the production line but it’s taking about one minute. After I discuss improvements with the production line manager we are able to improve the time to 30 seconds.

This afternoon I meet with Merrick, the plastic vendor, and am surprised to hear that this is the first time they’ve heard of our new camera and its requirements. Why hasn’t KYE moved forward with this vendor?

Sunday

John and I take a break and go with several factory people on an excursion to Waterfall Mountain, about six miles east of the factory. The hike on a paved trail to the top of the mountain, a 2300 foot elevation gain, is fairly easy but with humidity nearly 100% I am drenched with sweat by the time I return to the hotel.

After a quick shower, change of clothes, and lunch, John and I go shopping to Human, a noted shopping district known for price dickering. I’m not much into shopping but am entertained watching the process. We go to a clothes shop then a CD/DVD shop, which seems to have limited selection and under-stocked shelves. To get what you want there you need to know the secret: One of the bare walls is a hidden door. I hand my son’s list of DVDs to a clerk who spends the next 20 minutes excitedly running around the hidden shop filling my order.

Monday

John meets with the suppliers of our wall mount bracket while I travel to Yes Cable, our Ethernet cable vendor, to review their test process. On my last trip we talked to them about a quality problem we found with some of their cables: Their cables failed to operate with our system. In that meeting, we discovered that Yes failed to do one of the tests we had recommended. So John and I proposed a more complete test which they agreed to implement.

Yes now tells me that the test we proposed was not implemented because it failed. Digging into the cause I discover that their tester has a problem and I propose a hardware fix to the problem. They instead propose a software fix to the problem. I in turn convince them that their software solution would mask potential problems. After poking around a little bit on the internet I find a cable test program that they can use.

During a brief tour of their factory, I am surprised to see an eight year old boy testing cables. The factory manager assures me that he is really 26 years old.

I return to KYE and begin evaluating the first six cameras they’ve made. This is a stressful time for the whole team. With about twelve people looking over my shoulder I connect each camera to the test unit and start the test program. All six cameras fail the test. So I ask for a voltmeter to at least see if the voltages are correct and find that each camera has half of the correct voltage. It’s late and the factory is shutting down for the night so I have to wait until tomorrow to find out what’s going on.

Tuesday

I’m at the KYE factory again trying to determine why the cameras aren’t working. After a few minutes of work I discover that the voltage regulator is the wrong type. The correct part was listed on the list of materials we sent but somehow the wrong part was ordered. Furthermore, checking the part in more detail, I discover that two changes we made had not been implemented here. The changes were not transmitted to KYE by WiLife.

Doing more checking, I also notice some problems with the hand-soldering on the printed circuit board. WiLife and Dongguan agreed to make this part with a lead-free process. Several of the parts were not lead-free so the correct parts had to be soldered manually. They are extremely difficult to solder by hand so I’m not surprised to find several shorts and opens in their wiring.

I receive updated test software from WiLife and test it on my laptop before installing it on the test machines on the production line.

Wednesday

We go to the Shenszhen Electronics Market to find the correct voltage regulators. We wander around the floors of the electronics market for a while. This market is much larger than the Dongguan electronics market and you can find just about any electronics component, subsystem, and test equipment ever made. After an hour we locate a vendor who will sell us fifty units at a reasonable price. We wait another half hour for the parts to arrive then consummate the transaction. Later we wander the floors of the market a bit and then return to the factory to spend the rest of the evening replacing the regulators.

Thursday

John and I continue troubleshooting the new outdoor camera. We get twenty more units from manufacturing and find that none of them work. As I dig into them, I find more manufacturing errors: shorts, opens, components in wrong orientations, etc. When they hear about these problems, the Taiwan team gets anxious because they are scheduled to fly out early tomorrow morning.

Tonight we have the "outdoor camera production evaluation meeting." Everyone is tense. I begin by giving my report: None of the cameras is working but I believe that the issues are production-related, not engineering-related, I say. May, the Taiwanese project manager, believes the production is fine and tells us to return to the US and redesign the printed circuit boards.

The discussion then turns to the plastic case. The design files are being held up for evaluation by KYE's mechanical design team in Taiwan. They've proposed a redesign that would delay production by two weeks. I tell May that this is absolutely impossible: WiLife engineers have tested the design and WiLife management has approved it.

At this point May loses control and begins screaming in Chinese to her team: She wants to intimidate the KYE team into backing her against us. Her message is that KYE should stop doing business with WiLife. However, she's unaware that I understand much of what she's saying; I've been taking courses in Mandarin. I resolve to tell WiLife that it would be in WiLife's best interests to get an alternate contract manufacturer as soon as possible, preferably one which does not have a Taiwanese relation.

Al's thoughts

I've had difficulties in the past with KYE's engineers who have tried to redesign things which don't need to be redesigned such as our plastic case. The Taiwanese mangers try to interject themselves into trivial matters so that they will be worthwhile to keep around. Twenty years ago, when a lot of US manufacturing left for Japan, I saw the same thing. The Taiwanese are doing this to maintain their position as they see Chinese engineers becoming more and more capable so I am sympathetic to their position.

The meeting ends and I tell the KYE team that I'll return to the factory in the next two days to continue debugging the cameras. Who will accompany me, they ask, since they're all returning to Taiwan early tomorrow morning. I tell them I know my way around the factory and that if I need something I can ask one of the Chinese production engineers with whom I've worked in the past. They are incredulous that I would ask this after such a rancorous meeting.
The Taiwanese are loath to let their customers interact directly with the native factory staff. If customers become comfortable dealing with mainland Chinese, of what value is KYE? They quickly huddle and one of them, Jimmy, volunteers to stay in China until I leave.

Friday

Since my flight isn't until Sunday, I might as well do something useful until then. So I spend the entire day debugging the circuit board for the camera. It heartens me when I get one of the cameras to work later in the day. This confirms my suspicion that the primary problem is sloppy manufacturing.

In defense of KYE: This is the most complex circuit board they've manufactured up to now and it pushes them to the limits of their capabilities. KYE top management, which seeks to develop KYE's ability to make products with higher margins than computer mice, wants to work with WiLife because it forces their factory to enhance their capabilities. The bulk of KYE's current output is fairly simple mice and game controllers.

Saturday

Knowing that our design is correct, I perform quick checks on the remaining units. Manufacturing yields thus far are extremely low, less than 20%. I leave two of the working units with Jimmy and take the rest with me to hand-carry back to WiLife. We also package the non-working units and express ship them to WiLife. I thank Jimmy for staying and helping me get the cameras working.

Sunday

Heading home at last!

After breakfast John and I walk to the local "Main Street" to a bargain shopping arcade we spotted a few nights before. I buy a gym bag to hold the samples I will hand carry to WiLife. We have lunch at arestaurant which has pictured menu items so we make out fairly well. Later we take a taxi to a furniture market about three miles away and, as usual, the driver gets lost. The furniture is reasonably priced but more high-end than would fit in a modest US house so we walk back to our hotel then drive to the airport. I'm not looking forward to the long flight home.

Al's tips for traveling in China

1. China is mostly BYOTP [bring your own toilet paper] so carry tissue paper with you when you leave your hotel.

2. Take a GPS receiver with you. Mark the important waypoints like your hotel, your factory, and supplier locations. You can use it guide your way when your factory forgets to pick you up or when guiding your taxi driver who will inevitably get lost.

3. Plan a trip to China as you would plan an extended backpacking trip to the wilderness. Start with a backpacking checklist but scratch off the tent, sleeping bag and sleeping pad. Pretty much everything else on your list will be useful.

4. If you go out for a massage, which is commonly available in China, make sure you tell the receptionist that you want a "foot massage." I've been told that a regular massage involves more intimate contact than you may be comfortable with.

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CUSTOMER SATISFACTION MEASUREMENT AND THE MANAGEMENT OF CUSTOMER SERVICES: A CASE STUDY

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ABSTRACT

A qualitative inquiry was used to supplement a comprehensive customer satisfaction measurement program and explore the cause of lagging satisfaction scores in a particular region of an electric company's service area. This case study highlights the interplay of customers' transaction experiences, salient consumer events and corporate communications in building and enhancing strong customer relationships and positive brand perception.

INTRODUCTION

The contemporary approach to customer satisfaction measurement consists of the systematic administration of questionnaires with predetermined response categories.

A number of authors (Fournier & Mick, 1999; Parasuraman, Zeithaml & Berry, 1988; Zeithaml, Bitner & Gremler, 2006) have reviewed the well-established SERVQUAL approach to measuring service quality and have described five dimensions of customer satisfaction. The five SERVQUAL dimensions are:

Reliability - The customers' perception that a desired service is provided as promised in a dependable and reliable manner

Responsiveness - The customers' perception that a service provider is willing to help and promptly responds to requests

Assurance - The customers' appraisal of the knowledge and courtesy displayed by the service provider including the ability of the provider to inspire trust and confidence in the customer

Empathy - The customers' perception that they are receiving individual attention from a provider who cares about their needs

Tangibles - The impact on the customer of the appearance of physical facilities, equipment, personnel and written materials

Well-managed service providers regularly assess their performance on the SERVQUAL dimensions through the use of questionnaires that incorporate a variety of rating scales. Data are collected by telephone interviews, by mailed questionnaires and by electronic means.

SERVQUAL questionnaires provide systematic customer feedback that service providers use to monitor trends in their customer service performance and to make internal regional comparisons and external competitive assessments.

In the present case, an electric utility observed consistent sub-par satisfaction ratings in a particular region of the company's service area.

These sub-par ratings persisted over time despite steady operational improvements. As a result, the company suspected that the lower regional ratings were due to a different set of customer expectations.

The service region in question is a rural/resort area characterized by an influx of new residents migrating away from urban centers. It was believed that these new residents were not accustomed to and not likely to tolerate weather-related interruptions in their electric service. In addition, management suspected that urban consumers are generally more demanding of service providers and consequently harder to please.

A qualitative approach was employed to investigate the likelihood that the lower customer satisfaction ratings were due to a new and different consumer mind set.

METHOD

The development of the discussion guide and the recruitment of participants are two noteworthy methodological issues. Once the guide and the recruitment strategy are set the conduct of the session using a trained moderator and the recording of the discussion for analysis follow customary procedures.

Discussion Guide Development

The discussion guide was organized along the SERVQUAL dimensions of service quality and was designed to probe customer attitudes, awareness and beliefs concerning the following topics:

Knowledge of the nature of electric service outages

- Views of the electric company's efforts to avoid service outages
- Perceptions of the strengths, weaknesses and opportunities to improve the service restoration program
- Customer service expectations, value judgments and price comparisons
- Comparisons of service expectations and satisfaction with other similar service providers
- Awareness and attitudes towards the company's community service efforts
- Consumer preferences with respect to the company's marketing and customer service communications
- Recruitment Strategy

The main goal of recruitment was to locate electric company customers who were likely to provide a useful perspective on the topics contained in the discussion guide. Towards this end, a list of customers was developed to recruit focus group participants. Customers were included in the recruitment list if they were year-round residents, had lived in the region at least one year but less than five, had received their electric service from another electric utility before moving into the host company's service area and resided, for practical reasons, proximate to the meeting location (that is, within a 15-minute drive).

Twenty eight customers were recruited for two sessions. In the development of the list of recruits, an effort was made to obtain gender balance and a broad range of ages. The provision of a meal and a $65 honorarium were inducements for participation. In addition, participants arriving at least 15 minutes prior to the start of the session were entered in a lottery for a $65 prize to encourage a prompt start.

In the event, the show rate of recruits was 54% yielding a group of 8 participants for the first session and 6 for the second. Participants ranged in age from 30 to 85 years old. There were 9 men and 5 women among the participants.

The session was conducted by a trained and experienced moderator who directed group discussion to the topics listed in the guide, encouraged participant interaction and probed relevant themes. Company representatives viewed the session unobtrusively and participants were fully informed about the nature and purpose of the sessions so that their consent to continue could be obtained before the discussion began.

RESULTS

The discussion participants were cooperative and contributed to productive sessions. In general, they displayed a high level of satisfaction with the performance of the electric company. They were well aware of improving service reliability and they were especially complementary of the company's rapid response to power outages.

Participants reported that the design and performance of the company's outage reporting system exceeded their expectations. They found the system to be well designed and easy to navigate. In fact, they were delighted with the ability to opt out of the automated voice response system and speak to a customer service representative. Furthermore, the participants felt that the representative they reached were concerned, courteous and well informed. Finally, such options as electing to receive phone calls from the company with updates on the progress of service restoration as well as the option to receive a wake-up call from the company exceed customer expectations.

The participants also talked about company field personnel displaying extra effort to restore electric service and their appreciation of the work. Both customer service representatives and field service personnel are viewed as dedicated and committed to meeting customer needs. The participants either had experienced encounters to support these positive views or they had heard stories from friends, neighbors or relatives to substantiate the perspective. In either case, the perceptions of customer-oriented personnel enhance the image of the company.

In counterpoint to the high level of satisfaction with power restoration efforts, participants voiced concern that the company was not doing everything it could to serve their needs. For example, participants expressed concern that trimming tree limbs around power lines and conducting preventative maintenance on electrical equipment seemed to be postponed in order to reduce costs and maintain profit goals. Along similar lines, customers articulated a feeling that the company was not innovative, that is, it did not use state-of-the-art technology to improve the reliability of electric service. In sum, participants voiced a suspicion that corners were being cut at their expense.

The doubts about corporate management's concern for the customer contributed to restrained value perceptions. For example, the cost of electric heating is considered to be excessive. What's more, the negative impact of this perception is exacerbated by the unmet customer need for information, advice and assistance concerning energy efficiency and conservation efforts that can by used to reduce the size of home heating bills. This gap in service expectations contributes to the view that the company is not concerned with the affordability of electricity. One participant summed up the position, "They're concerned with their profits and bonuses and couldn't care less if we can afford to heat our homes."

In addition, when participants were asked to compare their electric company with other similar service providers (telephone, cable, ISP, etc.) electric company employees are considered to be an asset. In general, participants report that their interactions with electric company employees are superior to other service providers. However, brand perceptions are diminished due to the perceived lack of choice. "…other companies compete for our business; if we're not happy we can choose a competitor, but we're stuck with you."

Finally, a communications gap was identified that serves to erode the company's relationship with its customers. Other than a vague awareness of assistance programs for the needy and the elderly, participants are unaware of numerous community development efforts. Furthermore, the participants indicate that as they become aware of these efforts, they are appreciated.

From a technology perspective, participants were not aware of the successful implementation of a new automated meter reading system and numerous improvements to the electric distribution system. The lack of communication about these important actions contributes to the perception that the company is not taking any important action.

In sum, participants doubt that management is concerned about their needs, that the company acts to protect the environment or that the company cares about energy efficiency.

When comparing the company's communications to other similar companies, the electric company is viewed as lax while the others are viewed as more effective communicators. Other service provides, like telephone companies, cable and satellite television companies and internet service providers are all seen to employ television, radio and print ads. In addition, the other companies obtain news coverage on important issues. The electric company is viewed as relatively uncommunicative.

And while the electric company may feel it is working on new channels of communication, as demonstrated by a newly redesigned website, not one participant reported visiting the site.

Participants strongly suggest that their impression of the company would improve if appropriate communications concerning issues of customer interest were made.

DISCUSSION

The results of the focus group suggest that participants do not have unreasonable customer service expectations of the electric company. Relative to participants' prior electric company service experience, their current provider is doing well and the overall performance of the electric company is satisfactory relative to other similar service providers.

However, participants have three major concerns which appear to be rooted in a communications gap that fosters a weakened customer relationship.

1. The company does not care about my needs

There is an implicit assumption that if the company does not inform customers about its efforts to meet the customers' needs, then its activities are focused on the corporation's profitability. In this light, customer service is at best lip service. As a result, participants feel that cost reduction efforts and efficiency gains are focused on profitability rather than service enhancement.

2. The company is indifferent to the customers' cost of electricity

Another factor contributing to the suspicion that customer needs do not count is the apparent corporate indifference to the price of electricity.

Rates and cost per kilowatt hour are viewed as corporate trivia. What matters to the customer is the size of the electric bill especially when electricity is used for home heating. Customers feel that if the company were not totally absorbed in its own success and profitability and had some concern for them then they would provide information about energy efficiency, conservation and how to make electric heat affordable.

Additionally, the apparent lack of competition contributes to the customers' view of corporate indifference to their costs. Customers feel that increased costs are passed onto them through rate cases and the lack of an alternative renders them helpless.

3. The company does not use technological innovation to improve its performance

In general, customer perceptions of corporate innovation are related to positive brand perceptions. The drive to innovate, spurred by competitive pressure, is seen as a positive force. The belief that the electric company is not innovative and fails to use the latest technology is related to the view that company management is focused on profits and indifferent to customer needs.

A communications gap has been identified which undermines favorable brand perceptions and raises doubts about management's effectiveness and their concern for the customer.

The company should develop communications programs on energy efficiency and conservation, on the use of innovative technology to improve electric service, on management efforts to avoid price increases and on the company's community development work. A multi-channel communications strategy is suggested.

MANAGERIAL IMPLICATIONS

The discussion group findings support the following management actions.

1. The integration of transaction-based customer services, corporate communications and public relations efforts. Customers should be informed and reminded of the value of the services that are available. In addition, customers need to be convinced of the commitment and effort sustained to meet their needs.

2. Effective corporate communication is an essential building block for maintaining and

enhancing a satisfactory customer relationship.

The lack of communication about corporate accomplishment, i.e., about community development, the innovative use of technology or about the corporate commitment to creating value for customers leads to the conclusion among customers that such efforts are neither valued nor pursued by the company.

3. The impact of salient events endures for an extended period. As a result, companies face a challenge of managing the residual impact of such events. Companies should aim to position positive events so as to diminish the lasting impact of adverse customer experiences and aim communications toward reducing the life-cycle of salient events.

4. Finally, systematic customer satisfaction measurement is enhanced by qualitative inquiry aimed at identifying the root cause of dissatisfaction. Interacting with customers and exploring their attitudes, perceptions and beliefs can create valuable insights for the successful management of customer services and corporate communications efforts.

ADDITIONAL QUESTIONS

This qualitative inquiry was motivated by the lagging performance of a particular region of the company's service area. And while the findings of the work point to a communications gap that ought to be addressed, as exploratory research, we do not know how widespread the gap may be. Further, because the region in question has unique characteristics we do not know if the findings are applicable to other areas with more traditional urban and suburban characteristics. As a result, additional measurement is suggested to determine the extent of the communications among all customers. Alternately, carefully evaluated pilot programs aimed at reducing the communications gap can be administered to determine new approaches to maintain and enhance strong customer relationships.

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INCOME DENSITY AND MARKET POTENTIAL IN PENNSYLVANIA SMALL TOWNS

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ABSTRACT

This paper compares and analyzes geographical patterns of income density (income per unit of area) and median household income for a set of 15 Pennsylvania small towns using 2000 Census data at the block group level. The primary finding of the study is that all of these towns contain central clusters of high income density block groups much like those found in major central cities, and that these central clusters often contain high percentages of the town's aggregate income despite having lower median household incomes. The characteristics of these high income density neighborhoods are described, and the possibility of unmet retail demand in central small towns is discussed.

INTRODUCTION

Income density, which measures aggregate income within a given geographic area, has proven useful in analyzing and promoting the retail potential of relatively poor urban neighborhoods. Since the mid-90s this concept has been used by Dr. Michael Porter and others to make a case that inner city neighborhoods with relatively low median household incomes contain large pools of untapped purchasing power due to their higher population density.[1] The Initiative for a Competitive Inner City (ICIC), an organization founded by Dr. Porter in 1994, has utilized the concept of income density and other locational factors to make the case that inner city neighborhoods have untapped comparative advantages in retail, service, and manufacturing operations. This concept has already been measured and used to support inner-city development in some large cities. The Davis and Habiby (1999) conclude that there is substantial profit potential in these inner-city neighborhoods because of their highly concentrated markets. For example, Figure 1 identifies high density market areas in Philadelphia. "Despite 33 percent of Philadelphia's inner city population living in poverty, it has roughly ten times the income density of the rest of the surrounding metropolitan area." (ICIC) To this point relatively little effort has been made to apply the income density concept to small towns. For example, the ICIC concentrates its research and policy efforts in the nation's largest 100 cities.

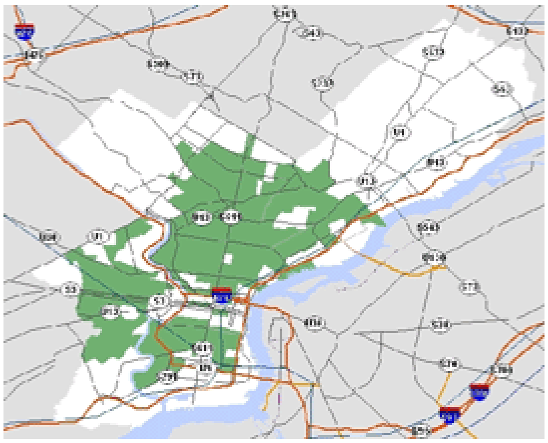
The goal of this paper is to examine income density patterns and the characteristics of high income density neighborhoods for a sample of small towns in Pennsylvania, and to suggest some preliminary implications of these patterns for the market areas and commercial potential of high income density small town neighborhoods. The primary finding of this study is that there is no systematic or general relationship between median income levels and income density in small town neighborhoods. However, high income density neighborhoods are highly correlated with housing density, indicating that in many small towns income density is likely to be higher in older neighborhoods closer to the central business district.

While negative results are often uninteresting to academic audiences, the finding that there is no consistent correlation between median household income and income density is far from negative in its policy implications. Poor neighborhoods are likely to contain as much spending power as non-poor areas in most Pennsylvania small towns. If other factors such as traffic flows, land availability, and crime are not a hindrance, retail opportunities in such neighborhoods may be far more promising than is generally

[1] Michael Porter, "The Competitive Advantage of the Inner City" Harvard Business Review, v. 73 (May-June 1995), pp. 55-71.

perceived. Because of the limited scale of small town neighborhoods, however, commercial opportunities may be limited to small scale convenience stores and local services unless land availability and traffic patterns permit larger retail operations.

Figure 1: Philadelphia's
High Income Density Neighborhoods



Source: ICIC website

This study also tests the roles of various social and structural factors in determining income density. Using regression analysis to test the correlation between income density and social variables related to race, crime, family status, town size and group housing population will provide some evidence of the characteristics of higher income density neighborhoods. However, housing density is certainly the most significant determinant of income density (with a simple correlation of .70), so in the absence of housing density the overall predictive value of the empirical model is very low.

THE DATA SET

Equation 1 defines income density as either aggregate income per unit of geographic area or as per-capita income times population density. All data used in this

(1)
$$IncomeDensity = \frac{AggregateIncome}{area} = PercapitaIncome\left(\frac{population}{area}\right)$$

analysis comes from the 2000 U.S. Census. The Census provides sufficient information on land area and aggregate income to calculate income density for any geographic area from the state or county level down to the individual block. The U.S. Census provides the total land (and water) area in square meters for each geographic area. [2] A simple arithmetic calculation allows income density to be measured per square acre or square mile.[3] Aggregate income per acre will be the most commonly used measure of income density in this paper, although aggregate income per square meter and per mile may also appear. The choice of land area measure has no effect on the significance of the relationships being tested in this study. Aggregate household income for each type of geographic area is also available directly from the Census. Many demographic and social variables are also available from the complete sample or the 1 in 6 detailed survey of the decennial census.

Income density will be analyzed in greater detail for a data set of 15 boroughs and small cities. These places have an average population of 21,859, ranging in population from 8,998 in Lewistown to nearly 31,000 in Williamsport. McKeesport is an industrial suburb of Pittsburg, while the others are scattered throughout smaller metropolitan and rural areas in Pennsylvania. The block groups in these towns have the following mean values for household income and income per acre (see Table 1). Among the more interesting

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[2] To calculate income density, go to the American Factfinder page (http://factfinder.census.gov) , click on data sets on the left side of the page, choose the detailed tables option for the Census 2000 summary file SF 1, choose your geographic options and aggregate income measures of choice (aggregate household income, aggregate household earnings, etc) , produce the table, then click the dark blue "options" button on the top, then click "show geographic identifiers". Amongst the many lines of irrelevant numerage is the measure of total land area in square meters. Downloading this table into an excel file will permit a simple calculation of aggregate income per square meter. Alternatively, the variables listed in the custom tables option include geographic identifiers at the end of the variables list.

[3] 1 acre = 4,046.85642 square meters. 1 square mile = 2,589,988.11 square meters.

findings of this very general set of data is that the highest average income density occurs in Hazleton, a relatively old mining and manufacturing town which is one of only 6 towns in the data set with an average median household income of less than $30,000.

Table 1: Average Block Group Income

Place		**Median Household Income**	**Income per acre**
Total	Mean	$32,130	$123,289
	block groups	370	370
Beaver Falls	Mean	29,315	99,232
	block groups	17	17
Carlisle	Mean	36,113	155,117
	block groups	15	15
Chambersburg	Mean	35,555	96,371
	block groups	17	17
Columbia	Mean	33,976	149,393
	block groups	7	7
Hazleton	Mean	29,161	181,815
	block groups	32	32
Johnstown	Mean	32,683	103,977
	block groups	34	34
Lebanon	Mean	36,294	143,420
	block groups	39	39
Lewistown	Mean	24,116	113,252
	block groups	11	11
McKeesport	Mean	24,346	144,217
	block groups	23	23
Meadville	Mean	30,865	76,991
	block groups	24	24
New Castle	Mean	24,211	92,551
	block groups	14	14
Pottstown	Mean	49,906	101,065
	block groups	21	21
Pottsville	Mean	33,658	148,532
	block groups	16	16
Uniontown	Mean	23,467	91,593
	block groups	25	25
Williamsport	Mean	30,765	120,940
	block groups	46	46

INCOME DENSITY VERSUS HOUSEHOLD INCOME

One initial question in this study is how to identify low versus high income block groups. Within this sample income density is calculated for all block groups, block groups with median household incomes below 75 percent of the county average, block groups with median household incomes below 1.25 times the federal poverty level for a family of four and block groups with household poverty rates greater than 20 percent. Comparisons of income density are made across the various income categories, with relatively minor differences in the results.

The first categorization measures low income neighborhoods as having median household incomes less than 75 percent of the county median. Table 2 displays the results of t-tests for the equality of means for income density in low income block groups (those with median incomes below 75 percent of the county average) and other block groups for 18 small towns in Pennsylvania. In Table 2 income density is measured in dollars of household income per square meter. The significance of the figures may be better understood by translating them into dollars of income per acre. At 4,046.85642 square meters per acre, these figures range from 59,732 dollars per acre in the low income areas of New Castle to 204,366 dollars per acre in the low income neighborhoods of Lebanon.

Table 2: Income/Square Meter by 75 percent of County Median Income

PLACE	INCOME DENSITY: BELOW 75% OF MEDIAN	INCOME DENSITY: OTHER	T-TEST VALUE
Beaver Falls	22.16 (n= 9)	27.17 (n=8)	-.788
Carlisle	43.48 (n= 8)	32.45 (n=7)	.934
Chambersburg	29.53 (n= 5)	21.43 (n=12)	1.13
Columbia	39.88 (n= 4)	32.97 (n=3)	.389
Hazleton	40.44 (n= 8)	46.42 (n=24)	-.552
Johnstown	29.51 (n= 9)	24.54 (n=26)	.778
Lebanon*	50.50 (n=16)	24.97 (n=23)	2.13
Lewistown	31.50 (n= 6)	23.77 (n=5)	.812
McKeesport	32.92 (n=14)	39.87 (n=9)	-.760
Meadville	25.80 (n= 8)	15.64 (n=16)	1.35
New Castle*	14.76 (n= 7)	30.98 (n=7)	-3.99
Pottstown*	33.06 (n=10)	17.62 (n=11)	2.28
Pottsville	32.62 (n= 4)	38.06 (n=12)	-.323
Uniontown	22.78 (n=11)	22.52 (n=14)	.042
Williamsport	30.24 (n=13)	29.75 (n=33)	.085

*significant at the .05 level

Regarding the differences in means between the low income and high income block groups, while Pottstown and Lebanon have significantly higher income densities in their lower income block groups and New Castle has a significantly lower income density in its lower income block groups, the more general conclusion is that income density has no clear or general relationship to median household income in Pennsylvania towns. Twelve of the 15 communities have insignificant differences in mean income density, though 10 of the 15 have higher average densities in their poorer neighborhoods.

INCOME DENSITY IN SMALL TOWN POOR NEIGHBORHOODS

Another noteworthy result of the previous comparison is that New Castle is far less well-off financially than the other towns, raising the possibility that income density may not be able to hold its own in truly poor neighborhoods. More generally, measuring low income areas relative to the county median income does not create a directly comparable measure across individual towns in the sample. For this reason a separate comparison of income density levels was conducted for block groups with a median household income of more or less than 1.25 times the federal poverty line for a family of 4. This cut off point for household income in 2000 was 1.25 x $17,463, or $21,829. Three of the 15 towns in the sample were excluded because they had one or zero block groups with household incomes below the 1.25 times poverty criterion. Of the remaining 12 towns, 6 had lower income densities and 6 had higher income densities in their poor block groups, again suggesting the lack of a clear pattern between median income and income density. Overall, income density was somewhat lower in poor block groups, with a t-statistic of -2.36 for the difference of means for the two groups across all towns. However, as with the previous results, the variance across towns seems to be the more important finding. These results are presented in

Table 3. While 4 towns have differences in income densities that are at least marginally significant, only Beaver Falls achieves a significantly higher income density in its poor neighborhoods. While Carlisle has the highest income density of any borough in its poor block groups and the largest absolute difference in favor of its poor areas, these areas do not achieve a statistically significant advantage over Carlisle's non-poor neighborhoods.

Table 3: Income Densities Separated at 1.25 Times the Poverty Line

PLACE	INCOME DENSITY: NEAR-POVERTY INCOME	INCOME DENSITY: OTHER	T-TEST VALUE
Beaver Falls**	32.83 (n= 3)	22.74 (n=14)	2.26
Carlisle	47.44 (n= 3)	36.05 (n=12)	1.12
Hazleton	39.70 (n= 5)	45.90 (n=27)	-.478
Johnstown	26.51 (n= 8)	25.64 (n=27)	.114
Lebanon*	19.01 (n= 3)	36.81 (n=36)	-2.09
Lewistown	31.34 (n= 5)	25.19 (n= 6)	.637
McKeesport*	23.69 (n= 7)	40.86 (n=16)	-2.03
Meadville	23.38 (n= 7)	17.23 (n=17)	.776
New Castle**	15.52 (n= 6)	28.38 (n= 8)	-2.58
Pottsville	30.89 (n= 3)	38.04 (n=13)	-.383
Uniontown	22.98 (n=13)	22.25 (n=12)	.114
Williamsport	24.27 (n= 9)	31.25 (n=37)	-1.23

**significant at the .05 level

*significant at the .10 level

The final measure of poor neighborhoods defines poverty in terms of the percentage of poor households (See Table 4). This has the advantage of comparing each household to its relevant poverty standard, which varies considerably by number of people in the household. Two of the 15 towns had zero poor neighborhoods by this definition. The results are similar for this measure as well. Again, the few towns with significant differences across poverty definitions are exceptions to a clear overall pattern. There is no systematic pattern between the income density of poor and non-poor neighborhoods in Pennsylvania small towns.

Table 4: Income Densities Separated by a 20 percent Poverty Rate

PLACE	INCOME DENSITY: NEAR-POVERTY INCOME	INCOME DENSITY: OTHER	T-TEST VALUE
Beaver Falls	30.32 (n=6)	21.36 (n=11)	1.45
Carlisle	47.44 (n=3)	36.05 (n=12)	.765
Chambersburg	29.48 (n=4)	22.07 (n=13)	.954
Hazleton	52.64 (n=7)	42.77 (n=25)	.876
Johnstown	29.24 (n=9)	24.42 (n=25)	.789
Lewistown	31.50 (n=6)	23.77 (n=5)	.812
McKeesport	30.54 (n=10)	39.55 (n=13)	-1.04
Meadville	21.79 (n=9)	17.37 (n=15)	.612
New Castle*	17.70 (n=7)	28.04 (n=7)	-1.90
Pottstown**	38.39 (n=3)	22.74 (n=18)	3.20
Pottsville**	13.08 (n=2)	40.08 (n=14)	-3.31
Uniontown	23.90 (n=13)	21.26 (n=12)	.415
Williamsport	27.23 (n=16)	31.30 (n=30)	-.748

**significant at the .05 level

*significant at the .10 level

A fourth measure is meant to concentrate more specifically on the relation between median household income and income density. This measure simply compares above and below average values for these two alternative income measures. The lack of a clear pattern between median income and income density can be clearly demonstrated through a simple cross-tabulation of above and below average income density and median household income block groups. See Table 5 for these findings. The significance of Table 5 is that the majority of block groups in the sample (201/370) have either above average median incomes and below average income densities (128), or below average incomes and above average income densities (73). Table 6 at the end of this article demonstrates this same random pattern for specific towns in the data set.

Table 5: Crosstabulation between Income Density and Median Household Income

	Income Density		
Median Household Income	Below mean	Above mean	Total
Above Mean	128	100	228
Below Mean	69	73	142
Total	197	173	370

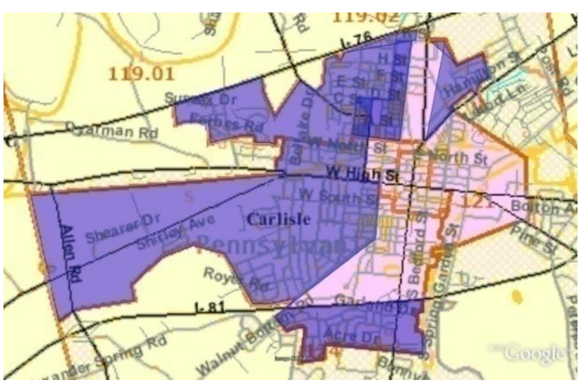
HIGH INCOME DENSITY CLUSTERS AND AGGREGATE INCOME

The final step in identifying the scope of small town high income density neighborhoods is to identify the number and combined size of contiguous block groups with high income densities. High density clusters were identified as any set of 3 or more contiguous block groups with income density above the average for that borough or city. All of the 15 small towns in this data set have one or two clusters of above average income density located near the central business district. Examples of high income density clusters are seen in Figures 2 and 3.

Figure 2: Columbia High Median and High Income Density Areas*

*Red=High Income Density, Blue=High Median Income, Purple = High for Both

Figure 3: Carlisle High Median Income Areas



Some block groups with above average income densities are located elsewhere and not every central block group has above average income density. Every town in this data set features one or two clusters of high density block groups located near the central business district. Aggregate incomes for these central high density clusters are shown in Table 7 below. In some cases individual block groups with non-residential uses divide a single cluster of into two parts, and in some cases individual block groups with high income density are located outside of the central core of the towns. However, the one or two central high income clusters contain a significant portion of the total income and purchasing power of each town, although only 4 towns (in boldface in Table 7) have a majority of their aggregate income in their high density cluster.

Table 7: Aggregate Income for High Income Density Clusters

PLACE	HIGH I.D. CLUSTERS	OTHER AREAS	TOTAL
Beaver Falls	$141,080,900	$142,741,500	$283,822,400
Carlisle	99,866,300	265,245,300	365,111,600
Chambersburg	245,236,300	206,455,100	451,691,400
Columbia	66,404,000	102,480,200	168,884,200
Hazleton	294,731,300	218,715,800	513,447,100
Johnstown	201,878,400	378,840,700	580,719,100
Lebanon	273,004,500	549,812,300	822,816,800
Lewistown	72,650,000	91,374,500	164,024,500
McKeesport	141,314,500	157,052,200	298,366,700
Meadville	151,065,200	207,720,100	358,785,300
New Castle	230,831,200	95,557,900	326,389,100
Pottstown	168,707,400	442,224,900	610,932,300
Pottsville	97,974,000	198,642,100	296,616,100
Uniontown	179,900,100	127,137,900	307,038,000
Williamsport	268,411,700	448,548,300	716,960,000

In some respects the general pattern of high income density clusters in central areas mirrors the general pattern found in large cities. In some cases one low income density block group, generally a non-residential area, is located within a larger high income density cluster. One such group at most is included in the larger high income areas measured in this paper.

CHARACTERISTICS OF HIGH DENSITY CLUSTERS

For the entire data set the demographic and economic differences between the high density clusters and other areas are not particularly stark. However, for some towns demographic differences may play a part in determining the most efficient development and retail choices. For example, African-Americans make up 9.3 percent of the high density cluster population and 7.8 percent of the low density population for the entire sample. The percentage of the population living below the poverty line is about 16 percent for both areas. Thirty-nine percent of households are married in high density areas compared to 45.7 percent in other areas, while 58.3 percent are families in high density clusters versus 63.5 percent elsewhere. Nearly 4 percent of high density area workers rely on public transportation versus less than 2 percent elsewhere.

Overall, the lack of demographic distinctiveness among high income density neighborhoods creates a somewhat different situation from that in major cities. Except in towns where ethnic diversity is unusually significant, specialty retail is less likely to find a niche than in larger and more diverse urban areas. However, locational convenience may still be a factor in encouraging greater retail development in and near central small town neighborhoods.

REGRESSION ANALYSIS

The mixed and predominantly insignificant simple correlations between median income poverty measures (Table 4) and income density across this sample raise additional questions regarding the determinants of income density. Controlling for housing density, which is largely determined by an inverse relationship between housing size and housing age, various measures of income and neighborhood social health are likely to show more significant and expected relationships to income density. In order to address these questions a series of regressions were run using a housing density measure (total housing units per square mile) and a series of variables related to general economic and social factors such as race, crime rates, marital status, median age, median town income, and group or institutional population. The size of the town was also included as a factor, since larger towns are likely to have higher housing costs and average income levels. People living in group or institutional housing are most likely to be college students, prisoners, or residents of group homes, shelters, or halfway houses. Group housing is expected to have a negative effect on income density, particularly with regard to the income numerator. For example, college students tend to have low current incomes, although their spending may well outpace their incomes. Prisoners also have very low current incomes, but unlike college students they don't get out much.

Two sets of regressions are reported in the following tables. Table 8 summarizes the findings for all block groups in the sample, while Table 9 displays results for those block groups with below 75 percent of the median county income and also for block groups with poverty rates above 20 percent. The results reported in Table 8 are relatively robust, and indicate a dominant role for housing density (housing units per square mile) in determining income density. If this variable is excluded from the estimating equation, as in equation 8-2, adjusted R^2 values drop to about .1 and the equation becomes a very poor predictor of income density. However, even in equation 7-2 most other variables show relatively consistent results without housing density included. As expected, median income has a significantly positive relation to income density. The consistently negative and significant values for group housing are also expected. The crime, race, housing occupancy and family variables are somewhat less consistent or more difficult to interpret. The mixed significance for the crime index should be interpreted carefully. On one hand it is possible that lower income or densely housed neighborhoods encourage more property crime. On the other hand high crime rates tend to encourage abandonment and therefore lower income density.

Table 8: Income Density Regressions for All Block Groups

EQUATION	**8-1**	**8-2**
Dependent variable	Income/ sq. Meter	Income/ sq. Meter
Constant	-11.798 (-1.59)	105.05 (4.55)
Housing Density	.008 (22.69)	
Town population	.0001 (1.46)	.0001 (2.25)
Index crime rate (town)	.0001 (.454)	-.002 (-2.27)

% in group housing	-.302 (3.91)	-.334 (-2.77)
Housing Occupancy %		-.951 (-3.20)
Married Family %	.087 (1.35)	-.167 (-1.50)
town median household income	.001 (4.19)	.001 (3.54)
% black	-.290 (-5.04)	-.191 (-1.92)
Number Adj. R^2	347 (.635)	347 (.110)

*t-statistics are in parentheses

Table 9: Income Density Regressions for Low Income* and Poor** Block Groups

EQUATION	**9-1***	**9-2***	**9-3****	**9-4****
Dependent variable	Income/ sq.Meter	Income/ sq. Meter	Income/ sq. Meter	Income/ sq.Meter
Constant	21.10 (.933)	81.18 (2.39)	29.70 (1.40)	73.03 (2.28)
Housing Density	.006 (13.05)		.006 (11.04)	
Town population	.0001 (1.29)	.001 (2.30)	.0001 (1.45)	.0001 (1.19)
Index crime rate	.001 (.523)	-.0001 (-.320)	.001 (1.07)	-.001 (-.668)
Housing occupancy %	-.540 (-1.87)	-.907 (-2.05)	-.693 (-2.64)	-.875 (-2.17)
Married family %	.155 (1.45)	-.016 (-.100)	.243 (2.36)	.171 (1.08)
Town median income	.001 (3.65)	.001 (2.40)	.001 (2.84)	.001 (2.22)
% Black	-.375 (-4.48)	-.333 (-2.60)	-.402 (-4.21)	-.288 (-1.97)
% in group housing	-.346 (-3.04)	-.486 (-2.79)	-.359 (-3.53)	-.380 (-2.43)
Number Adj. R^2	132 .633	132 .120	95 .629	95 .120

* household income < 75% of the county median

**block group poverty rate above 20 percent

t-statistics are in parentheses.

Table 9 estimates the determinants of income density for block groups with median incomes below 75 percent of the county median and those with poverty rates greater than 20 percent. In comparing tables 8 and 9, one finds minor differences in the results. As with the full sample, housing density has near-dominant explanatory power in low income neighborhoods. Controlling for housing density, median income measures are significantly positive. The population in group housing has a significant negative role, as does the percentage of blacks in most specifications. Crime has an insignificant relation to housing density in all specifications. Along with its mixed significance for the total sample, one can reject the existence of any relationship between income density and crime for these small towns. Overall, low income neighborhoods behave much like average neighborhoods with regard to the determinants of income density.

IMPLICATIONS FOR BUSINESS OPPORTUNITY IN SMALL TOWNS

The challenges and issues relating to retail opportunity in small towns seem to overlap with those of larger cities, but may also involve additional factors. The Boston Consulting Group study for the ICIC indicated that retailers' major concerns with inner city operations include shrink (shoplifting and employee theft), area crime or the perception of crime, greater required flexibility in product lines, and employee turnover and qualifications (1998).

The applicability of these issues to small towns may differ with the characteristics of the community and its school system. Local crime data is not generally published by neighborhood or block group, but it is likely to be locally available. Increased collection of and access to such data in most small towns will tend to alleviate public concerns about crime in central neighborhoods. In general, these towns have significantly lower crime rates than those of major cities, even in their poorer neighborhoods. For example, Carlisle's crime statistics for its low income block groups are somewhat higher than the community as a whole for property crime, but lower for violent crime and well below major city crime rates for all categories (Bellinger and Bender, pp. 37-40). Also, the educational performance in most of the towns in our sample is good, with high school dropout rates below 3 percent for 6 of the towns in our sample, 3 to 4 percent for 4, 4 to 6 percent for 4, and over 6 percent for 4 others. The lowest dropout rate was for New Castle Senior High School with 2.1 percent. These are low rates by the standards of most big city districts, and indicate a relatively healthy labor force in terms of basic skills and responsibility.[4] Overall, common social factors related to retail efficiency are likely to be far less negative than in large central cities.

Unlike social factors related to retail supply, geographical and infrastructural factors are likely to be far more limiting to retail in central locations. Because of the small scale of the towns and component block groups analyzed in this paper, the generally competitive income densities of low income small town neighborhoods may have more limited development implications than large inner city neighborhoods with similar characteristics. The often limited availability of land, particularly in large parcels, the relatively small neighborhood customer base, and the relatively short distance to peripheral big box retail outlets may limit the range of development options available to these neighborhoods.

However, as with larger cities the finding that income density is often greater in low median income neighborhoods does have some positive implications for retail and service firms. High income density directly affects the viability of small scale retail and service firms such as convenience stores, specialty retail outlets, bank branch offices, and individual financial or medical services. These smaller retail and service outlets survive in most places because of their greater access to neighborhood customers, rather than through cost or variety advantages. Information regarding income density could prove persuasive in attracting such businesses to centrally located or poor neighborhoods.

Another relatively direct implication of the income density concept involves downtown retail space. Poor small town neighborhoods, like those in big cities, are often located relatively close to downtown business districts. In small towns such business districts are often limited to one or two streets, but the logic of income density may still apply. Downtown retail space closer to poor block groups provides access to both consumption spending from the poor neighborhood and from downtown traffic flow. This dual use for downtown property can be marketed more effectively using local income density information.

Other common factors relating to inner city retail may or may not apply in small towns. Minority oriented stores will have significant market potential in some of the towns in this sample, but not others. Low income block groups have average African-American population ratios of at least 20 percent in McKeesport (29 percent) and New Castle (20.1 percent), and between 15 and 20 percent in Williamsport, Beaver Falls, and Johnstown. Other towns in the sample have relatively small minority populations and less opportunity for minority-oriented retail stores.

Other aspects of small towns are likely to limit business development options in or near poor neighborhoods. The average block group in this sample covers about 0.65 square miles, and at least half the towns in the sample have 3 or fewer block groups with near-poverty median household incomes, so the poor neighborhoods may not have the potential to support medium to large retail firms. Also, high housing density generally means that land for larger scale retail or manufacturing development may not be available. Finally, most of these communities have peripheral strip malls or big box retail outlets, and the commuting distance from anywhere in town to these retail stores is relatively small. The major questions to be asked by any town involve the availability of relatively large tracts of land within the town, traffic flow, crime rates and perceptions of crime.

CONCLUSION

The missing link in the analysis of income density in a small town context is a detailed and comparable

[4] Data on dropout rates are available at the Pennsylvania Department of Education's web site: http://www.pde.state.pa.us/k12statistics/lib/k12statistics/0203PubSecSchDropsbySch2.pdf .
Dropout rates are for the towns' senior high schools rather than for the school district as a whole, since several districts average middle and high school rates in producing their total figures.

business location measure with which to judge the degree to which central small towns are underserved by retail establishments. Such data is available by zip code, but in the smaller towns in this data set one zip code is likely to cover the entire area of the town or more. Business data for single zip codes is limited to general categories of establishments, and the small distances involved do not capture the full market area for small towns.

However, within even small towns distributive issues exist, most commonly in the form of relatively unhealthy downtown business districts with insufficient demand. The mismatching of demand and supply is likely to be more subtle in situations where downtowns do not include local conveniences for nearby residents. Overall, the results of this study indicate that low income and poor neighborhoods in Pennsylvania's small towns have income densities which are essentially equal to those of seemingly more prosperous communities, and are likely to provide undiscovered business opportunities for small scale retail and service firms within low income neighborhoods or in nearby downtown business districts. Retail opportunities may be limited compared to large inner city areas by the lack of available land and easier access to big box retail stores, but problems such as crime, tax burden, and labor force quality may be smaller than in many large cities.

This study attempts to answer an important preliminary question in small town development, but others remain. For the most part issues such as crime, land availability, traffic flows, and ethnic product demand must be answered on a town by town basis. My hope is that the awareness of income density patterns in small towns might provide some of the initiative for neighborhood and downtown development that it has done in major cities.

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Table 6: Income Density and Median Income Crosstabulations by Town

Place	Median Income Above Avg.			Median Income Below Avg.		
	Inc. Density Below Avg.	Inc. Density Above Avg.	Total	Inc. Density Below Avg.	Inc. Density Above Avg.	Total
Beaver Falls	4	4	8	5	4	9
Carlisle	5	2	7	4	4	8
Chambersburg	6	6	12	1	4	5
Columbia	2	1	3	2	2	4
Gettysburg	4	3	7	1	2	3
Hazleton	9	15	24	5	3	8
Johnstown	14	12	26	4	4	8
Lebanon	18	5	23	7	9	16
Lewistown	4	1	5	2	4	6
McKeesport	4	5	9	8	6	14
Meadville	11	5	16	4	4	8
New Castle	0	7	7	6	1	7
Pottstown	9	2	11	3	7	10
Pottsville	8	4	12	2	2	4
Uniontown	7	7	14	5	6	11
Williamsport	17	16	33	6	7	13
Total	128	100	228	69	73	142

FANTASY SPORTS AND SPORTS MARKETING

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ABSTRACT

Despite the fact that fantasy spots has become a relatively large and popular industry, little academic research has yet been done about the industry. This paper addresses three issues: the demographics of fantasy sports, the impact of fantasy sports on fan behavior, and the relationship between fantasy sports and gambling. The demographics of the participants are consistent with other non-academic studies – young, white, male-dominated. Participation leads to increased interest in sports, and can lead to mixed team/player loyalty. Participants do gamble on fantasy sports, but believe that gambling on fantasy sports is somehow different from other forms of sports gambling. Implications are presented for five groups of organizations local sports teams; national sports associations; internet firms and advertisers; local and mass media; and, regulators.

BRIEF DESCRIPTION OF FANTASY SPORTS

The basic concept of any fantasy sport is that each player in the league has to create a simulated "fantasy" roster of players from the real leagues. Points are amassed based on the real stats of the real players. For example, in a fantasy hockey league, a goal scored by a real player in a real game may be worth 2 fantasy points, and an assist may be worth 1 fantasy point. Winners are determined by whose fantasy team was able to accumulate the most points. There are countless variations of ways to run a fantasy sports league by changing the way points are awarded, the length of a fantasy game (could be as short as one real game or as long as a whole season of real games), and by changing various options that are typical of most online fantasy sites (trade deadlines, free agency, and other options that make the game seem more real).

Fantasy sports can be played by keeping track of players and statistics with a paper and pen, a computer spreadsheet, or most commonly, through one of the many websites that provide fantasy sports services (e.g. ESPN.com or yahoo.com). Websites seem to be the most common because of their convenience and since, in many cases, they are free to join and play. Because of this, many fantasy sports participants will join random leagues and play against people unknown to themselves.

For some, gambling is also a major reason to play fantasy sports. Fantasy sports provides unique and interesting ways to place wagers on sports, as opposed to the simplicity of just betting on which team will win a game or on the line given by a Las Vegas sporting book. In addition, people who gamble on fantasy sports may believe that they are more likely to win. Because they are able to choose and manage their own team, they may have the perception of more control over outcomes.

THE LITERATURE OF FANTASY SPORTS

As an academic subject, fantasy sports has not yet generated a great deal of interest. For example, in a recent search of the literature, of the 719 articles about fantasy sports, there were three from academic/scholarly journals. An anonymous article in the San Diego Law Review (2002), notes that although gambling takes place in the fantasy sports leagues, there has not been prosecution for violation of local gambling ordnances.

In Bernhard and Fade (2005) focused on gambling in “rotisserie” baseball leagues and based on qualitative research conclude that the level of gambling is non-trivial. In addition, they present views about the positive and negative aspects of participation in fantasy baseball leagues.

Finally, Davis and Duncan (2006) looked at gender roles and participation in fantasy sports leagues and concluded that participation in such leagues reinforces traditional males roles that are developed through sports.

Caskey (1997) did a masters thesis in which he examined the then new area of internet sports sites. In 1996/1997 although there were a number of on-line fantasy sports sites, the owners of the sites expressed strong beliefs that the sites would become profitable, although many at that time were not. From the perspective of 2007, the study is interesting now from a historical standpoint, particularly from the early evolution of the fantasy sports sites (for example, in 1996/7 few sites charged users, although many indicated an inclination to do so in the near future.

There have been two theses that relate to fantasy sports. Caskey (1997) did a study of internet sports sites. In 1996/1997 although there were a number of on-line fantasy sports sites, the owners of the sites expressed strong beliefs that the sites would become profitable, although many at that time were not. From the perspective of 2007, the study is interesting now from a historical standpoint, particularly from the early evolution of the fantasy sports sites (for example, in 1996/7 few sites charged users, although many indicated an inclination to do so in the near future).

Levy's dissertation (2005) about the sociological make-up of fantasy sports participants focused more on the nature of the participants rather than the nature of fantasy sports.

The published literature for the most part does not address managerial issues regarding fantasy sports, but has more of a pure descriptive focus.

There were three main objectives that we wanted to achieve. The first was demographic information. We wanted to include demographic questions in the survey in order to get a better idea of what kind of people play fantasy sports. Examples of some of the demographic questions had to do with income levels, education levels, and ethnicity. As a sub-objective of this section, we wanted to find out information about the types of fantasy sports players, such as how many fantasy leagues they typically play through the course of a year and what method do they use to conduct their leagues, and so on. In addition, this information serves as a validity check on our sample.

The second main objective that we wanted to achieve was to find out if fantasy sports affect people's attention to real sports to any degree. Examples of this kind of question included amount of time spent watching sports on TV or listening to it on the radio or if fantasy sports has ever influenced a person's decision to buy a ticket to a game. Changes in fan behavior can have implications for team owners, managers and players.

The third main objective was to examine gambling issues involved with fantasy sports. We wanted to find out if people who gamble on fantasy sports perceive it as being different than other sports gambling. We also wanted to get an idea of what percentage of fantasy sports participants actually gamble on fantasy sports.

METHODOLOGY

In order to learn more about fantasy sports, a survey of fantasy sports players was conducted. The survey consisted of 33 close-ended questions. The survey was created using WebSurveyor® software.

The original intent was to obtain an e-mail list from a website that provides fantasy sports, such as espn.com or yahoo.com. However, after contacting several online fantasy sports sites, it was realized that this approach was not viable. It was decided to post the link for the survey on message boards on the sites that had been contacted so that participants could simply read the message board and take the survey if they wanted.

The survey was online for just over two weeks. In all, 95 people responded to the survey.

FINDINGS

Demographics of Participants

Participants of this survey were asked a series of demographic questions at the end of the survey. The purpose of these questions was to get a better idea of what type of people typically play fantasy sports. This information would be valuable to fantasy sports providers on the Internet because it would give them a better idea of where they should advertise their site(s). It would also help them choose companies that might desire to advertise on their websites. If they are able to attract a large number of users, then they may be able charge a higher price for advertising on the site.

The average respondent was 28 years old, but the range of ages was from 16 to 50. Males clearly largely outnumbered the females, making up 91.1% of the respondents. Though surprisingly, females were a larger percentage of respondents than we would have anticipated. Fantasy sports appear to be as male-dominated as is sport watching.

The most common answer to the marital status question was "never married." There are several reasons that this was the most common answer. Since the mean age of respondents was around 28 and the mode was 22, many of the respondents just are not old enough to have been married. It is also possible people who are single have more time on their hands, and therefore, have more opportunity to compete in fantasy sports leagues during their free time.

Four-fifths of respondents have either attended, are attending or completed college. Like sports watching, participants of fantasy sports vary across the board in terms of education level. And although there was only one respondent who answered "less than high school," this could be due to the fact that the survey was conducted through message boards online. Children may be restricted by their parents from communicating to strangers through this medium.

In terms of income, 41.4% had annual household incomes of over $75,000. According to the Internet research firm ComScore Networks, online sports fantasy players are younger and more educated than typical online users, and are 45 percent more likely to have household incomes of more than $100,000 (Tedeschi, 2004).

The second most common response was an annual household income of less than $15,000, accounting for 20.7% of respondents. It is possible that those living at home may have included parental income as part of household income, thus giving an upward income bias to the results. Alternatively, it may be that playing fantasy sports is an upper income activity, with players being on average more literate and numerate. Given the demographics of the typical fantasy player, it is no surprise that advertisers are moving in this direction

Participation Patterns of Respondents

Participants of the survey were asked several questions about the characteristics of their participation in fantasy sports. These questions dealt with things such as the number of fantasy leagues in which they play, what method they use to conduct play, and how many hours they spend researching information to use in order to make fantasy sports decisions.

Number of Leagues per Year

On average, respondents participated in more than 6 leagues per year. This is somewhat skewed by a few respondents who participate in a large number (20 or more) leagues per year. Sixty percent compete in three or fewer leagues per year.

Hours Spent Researching Fantasy Sports. Respondents to the survey spend about 5 1/2 hours per week researching fantasy sports on average. A few respondents spend large amounts of time (20 hours per week or more) on research. Slightly over half spent 2 or less hours per week researching fantasy sports.

Most Useful Source of Information

By far, the Internet is the most useful source of information for people who play fantasy sports. Eighty percent of respondents stated the Internet is the most useful source of information. Presumably, since the respondents play fantasy sports online, they have immediate access to the information they desire to play in the leagues. The second most commonly cited source of information was other people (such as other players in the leagues).

Money Spent on Fantasy Sports Leagues

Some websites that provide the capabilities to play fantasy sports charge a fee for participants. Just under 30% responded that they spend $0 to play fantasy sports through the course of the year. Thus 70.8% of respondents pay a fee for playing fantasy sports. Of those who pay, they paid on average $169 to play over the course of a year or about $14.00 per month.

Method Used to Conduct Fantasy Sports

The most common responses to this question were "online through yahoo.com" and "online through espn.com." The percentage of respondents that gave these answers was 42.1% and 40%, respectively. Overall, only 10.6% of respondents said that they conduct their fantasy sports by some method other than an online site. 7.4% of respondents said that they use the paper and pen method in order to play fantasy sports.

How Fantasy Sports Influences Attention to Real Sports.

A second objective of this survey was to discover if playing fantasy sports has an impact on the fan's attention to real sports. That is, does playing fantasy sports influence the amount of time that people spend watching sports on TV or does playing fantasy sports influence decisions to buy tickets or sports memorabilia.

Influence on Time Spent Watching, Listening and Reading about Sports

No respondent claimed to spend less time watching sports on TV as a result of playing fantasy sports. Almost two-thirds (64.5%) claimed to spend either somewhat more or a great deal more time on watching sports on TV. A few respondents (3.3%) claimed to spend less time listening to the radio as a result of playing fantasy sports. Most (83.5%) did not change listening behavior. The rest (13.2%) increased their radio listening behavior. Only one respondent claimed to read less about sports as a result of playing fantasy sports. Most did not change reading behavior (53.8%). The remainder (45.1%) claimed to read more about sports as a result of playing fantasy sports. These are not surprising findings.

Fantasy Sports' Effect on Excitement Level

On average, respondents find that watching sports on TV or listening to them on the radio are more exciting when they have some sort of fantasy stake in them (mean = 5.74 on a 7 point scale, where 7= far more exciting). The excitement level may increase since each play that involves one of the players that has been chosen for the fantasy team becomes more meaningful, and therefore, the end result of the game is not always or the only important aspect.

Fantasy Sports' Influence on Buying Tickets and Memorabilia

Playing fantasy sports do not seem to have a huge influence on people buying tickets to sporting events. The majority of respondents, 82%, said that fantasy sports "has had no influence on me buying a ticket either way." Almost 16% noted a positive influence, with 3.2% saying that fantasy sports have definitely caused them to buy a ticket to a sporting event. Only 1.1% said that they have definitely caused them not to buy a ticket.

Fantasy sports also do not seem to have a large effect on buying sports memorabilia. 82.1% of respondents said that fantasy sports have had no influence on them ever buying sports memorabilia. 8.4% of respondents did say that a fantasy sport "has had a positive influence on me buying sports merchandise," and 4.2% said that a fantasy sport "has definitely caused me to buy sports merchandise. Therefore, sometimes fantasy sports do have a positive effect on sports merchandise sales, but most people are not influenced in this manner.

Fantasy Sports' Effect on Team Loyalty

Just under half (51.1%) of respondents said that fantasy sports have "never" caused them to root against one of their favorite teams. However, this means that 48.9% of respondents have rooted against one of their favorite teams due to a fantasy sport. Now, 25.6% only do this “rarely” and 15.8% do this “sometimes.” Fewer than seven percent of respondents said that they root against one of their favorite teams “often” or “always” due to fantasy sports.

Gambling and Fantasy Sports

Participants of this survey were asked several questions about their opinions about their involvement with gambling in conjunction with fantasy sports. Examples of questions in this section are whether or not they have ever gambled on fantasy sports, and if so, how much they have risked. Gambling is so closely connected to sports that it would seem reasonable to expect it to become a part of fantasy sports as well. We note in particular that the complexity of many of the fantasy leagues may add to the excitement and thrills that gamblers get when they risk money.

Level of Gambling on Fantasy Sports

Nearly two-thirds of respondents said that they have gambled on a fantasy sport. This means that most people that play fantasy sports not only enjoy the fun of merely out strategizing opponents, but they also play in the hopes of receiving a financial pay-off. 34.4% of respondents claimed that they never gambled on fantasy sports.

When asked how much they had risked on fantasy sports, ninety percent claim to have risked something (as contrasted with the previous question where one-third claimed not to have gambled on fantasy sports). Of those who gambled, just under half (48.2%) have risked less than $20.00 on fantasy sports. Just over one-third (36.2%) have risked more than $50 on a fantasy sport. A fair number (15.3%) have risked over $100.

Perceived Difference in Fantasy Sports Gambling

Respondents were asked "How strongly do you agree with the following statement (7 being strongly agree and 1 being strongly disagree): Gambling on fantasy sports is not the same as other forms of sports gambling." The mean for this question was 4.39, which means the respondents, on average leaned slightly more towards agreeing with this statement. 17.8% of respondents strongly agreed with this statement, which means that they perceive gambling on fantasy sports as being different than placing Vegas bets or other forms of sports gambling. The most common response was “5,” which means that the largest group of respondents thinks that gambling on fantasy sports is only slightly different than other forms of sports gambling.

Frequency of Other Forms of Gambling

Respondents were asked: “How often do you gamble on sports other than those made in conjunction with fantasy leagues?” Surprisingly, only 2.2% of respondents said that they “always” partake in other forms of sports gambling. 34.4% of respondents “never” gamble on sports outside of fantasy sports. A cumulative percent of 68.9% of respondents either gamble on sports “rarely” or “never.” With so many people gambling on fantasy sports, we would have expected more people to participate in other forms of sports gambling.

DISCUSSION

Demographics of Participants

Age information shows that fantasy sports are not just something that young sports fans play. It is an entertainment activity that spans from the young to the old.

The gender information is probably fairly close to the national percentages. It is quite possible that roughly 90% of people, who play fantasy sports, are male. Watching sports is a male-dominated activity for the most part so it is logical that playing fantasy sports would skew that way was well.

It is difficult to say whether or not the marital status information is close to the national average. There were definitely more “never married” responses because the convenient part of the sample was mostly college students. However, it still may be true that roughly 70% of all people, who play fantasy sports, are single because of the free time that is associated with this lifestyle.

The education level information, though skewed towards college respondents, did show that fantasy sports are played by people with all sorts of education levels. "Less than high school" respondents were probably underrepresented merely because the survey was posted on message boards, which children may not have had permission to access. This group may also be underrepresented due to the fact that most fantasy sports are played on the computer. Older people, who may have never received a high school education, may not play fantasy sports because their income level does not afford them a computer, which also would have restricted them from taking this survey anyway.

The household income level information is further proof that people of all backgrounds play fantasy sports. The main reason that fantasy sports are played by people of all income levels is because of three things. The first is that most households have computers now. The second is that many websites now provide fantasy sports because of their popularity. The third is that many of these sites provide them for free. This results in people of all income levels being able to participate in fantasy sports.

Fantasy sports are an Internet-dominated activity. The Internet is both the place where most people get their fantasy sports information and where they play their fantasy sports. The main reason this is so is probably because of the convenience of doing so through any number of fantasy websites.

In addition, this information shows that although most people spend only a few hours a week play a couple leagues per year, there are a fair number of people who spend large amounts of time playing many leagues per year. This borderline obsession is probably a result of the combination of two things. The first is what would seem to be a natural correlation between being an avid sports fan and being a fantasy sports fan. Fantasy sports allow obsessed sports fans to keep track of all their sports and have fun at the same time. The second reason why some people spend a large amount of time on fantasy sports is because some of the fantasy sports websites give out prizes to the people who do the best in their fantasy leagues. This allows the websites to increase traffic on their sites, which in turn, allows them to charge more for advertisements.

How Fantasy Sports Influences Attention to Real Sports.

This part of the survey and the resulting data shows a number of interesting things. To start, it seems that playing fantasy sports may increase the amount of time that people watch sports on TV. There is probably a combination of reasons that this is so. The first is that people may watch more sports on TV in order to become more familiar with players and leagues in general. By doing this, they can gain more sports information and knowledge in order to be more competitive in their fantasy sports league or leagues. They also may merely be watching more sports on TV because they want to see their fantasy players actually play. Whereas before fantasy sports, a person may have only watched their favorite team play, now they are paying attention to other games because they have some sort of stake in them, no matter how minute it may seem.

Reading about sports has also been affected by fantasy sports. This is probably true because people want to keep up on their fantasy players as much as possible. Therefore, they may read that extra article in the morning paper that they would have previously just given a glance. In addition, there are actually fantasy sports magazines made by some companies, and some people must be buying them. As for the other medium included in the survey, radio does not seem to be as greatly affected. Radio is probably not affected because it has become an outdated media of sorts. With the progression of technology and imagery on TVs, practically no one listens to sports on the radio anymore unless they are in their car.

According to this survey, fantasy sports also have a great effect on the excitement level of watching sports on TV or listening to them on the radio. This is mainly due to the fact that every play becomes meaningful. A basketball game could be a complete blowout, but if one of your fantasy players has a chance to score a basket at the end of the game, you are definitely going to keep watching. And that is what happens with a meaningless play. In situations that actually matter, your excitement has to go up because of your additional, valued interest in the game stats.

Fantasy sports do not seem to have a large influence in sales of sports tickets or memorabilia, though they do have some. Most people claimed that fantasy sports have never influenced them positively or negatively in a decision to buy tickets or memorabilia. Except for a couple who said that fantasy sports were a negative influence, all of the other responses said that fantasy sports have either positively influenced them to buy a ticket or memorabilia or definitely caused them to do so. This means that although fantasy sports do not have a huge influence on these sales, whatever effect it does have is basically a positive one.

Finally, fantasy sports seem to be such a valued activity that roughly 50% of participants actually root against their favorite teams as a result of playing fantasy sports. The degree to which they do so is probably associated with how many leagues they actually play, which would increase the amount of times where there may be a conflict as to what you want to happen so that it causes a positive effect for your fantasy team and what you want to happen so that your favorite team does well. However, responses to this question varied across gender lines. Only one female respondent said that a fantasy sport ever caused her to root against her favorite time, and she said that this rarely happened. Males seem to be much more likely to let their fantasy sports influence what they want to happen to their favorite teams.

Gambling and Fantasy Sports

Though not an inherent part of playing fantasy sports, gambling almost inevitably becomes a part of anything that is sports-related. This survey shows that this is true. Nearly two-thirds of all respondents said that they have gambled on fantasy sports. What could simply be a leisure activity to enhance the entertainment value of sports is much more important to some of these gamblers. And these are not always trivial wagers just to make things more interesting. Three respondents actually said that they have placed more than $500 on a single fantasy sports league. Bernard and Fade (2005) also claim a non-trivial level of gambling on fantasy baseball, although their findings seem to based more on anecdotal records rather than the results of a survey. The reason that so many people bet on fantasy sports is probably because fantasy sports gives off the illusion of control over the outcomes, assuming you know (or think you know) a lot about sports. Participants who think that they know more about sports than everyone else in the league are more likely to feel as if there is no way they will lose. Such surety of outcomes may reduce inhibitions about gambling. We note that everyone else is probably thinking the same thing, and it all becomes a toss-up once the season starts because of injuries, failures, and flukes that happen every year in every sport.

There does not seem to be any great links between education level and the highest amount that a person has gambled on a fantasy sport. The only noticeable trend is that people with graduate school experience are more likely to place larger bets since two of the three people, who said that they have placed $500 or more on a fantasy sport, were in this group, and only two people in this group said that the most they have risked was $20 or less. Otherwise, people from all of the other education levels vary on what amount is the most they have risked on a single fantasy sport, except for the "less than high school" group, which only had one respondent. Income level does not seem to have a huge effect on the amount risked either. Though noticeably, no one from the two lowest income levels placed any bets of more than $100. However, two of the three people, who bet over $500, were from the middle income level of this survey.

Respondents typically felt that playing fantasy sports will not lead to any kind of sports gambling addiction. Only three people strongly agreed that fantasy sports could lead to gambling addictions, while 18 people strongly disagreed. The reason that respondents probably thought this is because respondents believe that betting on fantasy sports is different than other forms of sports gambling. The respondents generally felt that betting on fantasy sports is slightly different than other forms of sports gambling. If this is what they actually think, then it makes sense that they would believe fantasy sports would not lead to gambling addictions because the two are separate in some perceived way. Even further proof of this slight separation between gambling on fantasy sports and other forms of sports gambling is the fact that only 2.2% of respondents said that they always partake in other forms of sports gambling, while nearly 70% of respondents said that they either never do or rarely do. The reason that people, who bet on fantasy sports, do not typically engage in other forms of sports gambling is probably because fantasy sports add a different element of fun. Whereas people betting on the simple outcome of a game will not be happy if they do not win, fantasy sport gamblers can still have fun managing and organizing their fantasy team even if they do not win the bet at the end of the season. It is also possible that the control elements is present here also. That is, while I cannot control the outcome of a real New York Yankees game, I can control the outcome (to an extent) of my own fantasy team. And since the fantasy sports service is provided for free on so many websites, people do not have the hesitation that comes with the question of where to put more money into the hobby. The gambling money is typically the only money that is involved.

MANAGERIAL IMPLICATIONS

At least four groups of organizations need think about the implications for themselves. These include: local sports teams; national sports associations; internet firms and advertisers; local and mass media; and, regulators.

Local Sports Teams

The picture here is not clear. Of benefit to the local teams is the generally increased interest in the sport that fantasy sports creates – hence there should be some spillover to every local team (as long as that local team has players that are believed to be desirable to players of fantasy sports. However, it should be noted that as methods develop to track the relative importance of sports stars to fantasy sports players, there is likely to be contractual impact, in that as the popularity of the players increase, such increase will be likely reflected in the negotiation stance of the player. Since an actual team wins and loses on the basis of team performance, it is in the interest of local team managers and players to create and play on well-balanced teams. However, since a fantasy team wins or loses on the basis of the aggregation of disparate individual performances of individuals, the interest of the individual player may take a subtle shift from team performance to individual performance.

Local sports teams may be able to capitalize on the popularity of fantasy sports by integrating fantasy sports into their own websites. People in the local area may be willing to play their fantasy sports on a local team's website because they would be able to play against other local fans. If this actually worked for the website, they would be able to increase their site traffic and improve their advertising profits as well.

National Sports Associations

National Sports Associations such as the NBA, MLB, NHL, and so on, would seem to generally benefit from fantasy sports since playing fantasy sports increases interest in all teams and the results of all contests. As a result, it would appear that the sport in general would benefit. Thus, sponsorship of Fantasy Leagues and other actions to promote fantasy sports would seem to be in the interest of the National Associations.

Mass Media

Mass media, if it wants to reach the fantasy sports players, would need to increase coverage, including more detailed information, about the performance of individuals as opposed to increasing coverage of team efforts.

Regulators

Regulators may have a more difficult time detecting cheating. If the level of gambling increases (as would seem likely) and the quantity and quality of information about fantasy sports increases, gamblers and those who run gambling will be able to estimate the value of a given play or action of a given player. Thus, gambling profits can be directly made on the basis of performance of a single player on a team on any given play. Detection of attempts to product abnormal gains from deliberate bad performance is likely to be more difficult.

The overall conclusion of this report is that fantasy sports help the sports entertainment industry. They increase attention to sports. They make sports more exciting to watch. They even influence sales of ticket and memorabilia to a small extent. Therefore, it is necessary for all companies and organizations involved with professional sports to work with this trend and use it to their advantage. In no way are fantasy sports diverting attention from real sports. Since they are based on real sports, they are only enhancing attention. The marketers for the big companies have already realized this, and some of the smaller, more local companies should follow suit.

The Internet is the choice for fantasy sports and fantasy information. It is convenient, accurate, and simple, no matter what website is used. And that is why a marketing shift towards the Internet has occurred and will continue to do so.

According to this study, people play fantasy sports across all income levels, education levels, and ages. The discrepancy lies in the gender demographics and the ethnicity demographics. The gender demographics are probably always going to be heavily skewed towards males because that is how the sports industry typically is. There is almost nothing that the sports industry can do to increase the popularity of sports with women other than offering more family deals for sporting events and programs. It is highly doubtful that this will ever increase the popularity of fantasy sports with women, and therefore, it will not cause women to watch more sports on TV or visit sports websites more often. This just is not going to happen. Ethnic demographics are probably also hard to change, though it is doubtful that the results of this survey match the actual demographics of fantasy sports participants throughout the United States. Therefore, the goal of any company in the sports entertainment industry should be to continue focusing on males in all of their advertising, whether it is on TV, the Internet, a fantasy program, or something else. This target demographic will never change.

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ARGUABLY, NO ONE KNOWS MORE ABOUT CANDY AND TECHNOLOGY THAN TEENS

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ABSTRACT

Working with a business partner, a national candy company, Cedar Crest College Marketing professors and students launched iCandy as a pilot Internet contest among area high schools. The contest was managed within the Marketing Practicum course in the Department of Business, Management and Economics of Cedar Crest College. Practicum students helped design this innovative candy contest intended to promote marketing as a career and field of study among high school students. Cedar Crest College and Just Born, Inc., maker of Peeps®, Mike and Ike® and Peanut Chews®, teamed up to invite area high school teens to explore their creativity, learn about and submit a storyboard using emerging Internet marketing applications, and compete for prizes. The students had free rein with the product development concept; they were able to change the brands they were assigned in terms of function, shape, color, flavor and texture. Each competing teen team designed either a Web site or a viral execution to communicate the Brand essence to the target audience. Because of the success of the pilot year, the program is being evaluated for global launch so that teens from different cultures, languages and creative approaches can be included.

INTRODUCTION

Teens chat online, buy online, learn online and listen to music online. Katie Peters is 17. With the exception of sleeping, she's on her Mac and Sidekick more than she is not. She just bought tickets for a *"Brand New"* concert in Philadelphia via her mobile phone and texted a group of five friends that she snagged them on eBay. They chat for a few minutes, and Katie moves over to Facebook to post a comment on Cali's wall. She gets poked and smiles at the application Cali sent back; she got trout slapped. She's tossing jelly beans into her mouth with a free hand, and all this time she has a television on mute playing old "Friends" episodes and listens to Dave Matthews on iTunes.

If it sounds as if this average day can cost some money, you're right. The market for products bought by and for the 26-million-member teen market will undergo a slight growth spurt, increasing from $190 billion in 2006 to $209 billion in 2011, despite an estimated 3% decline in the 12- to 17-year-old population in that same period ("The Teens Market in the US" report Package Facts).

Teenagers are using technology at a younger age to connect with more people, according to Forrester Research (December 2005), Cambridge, Massachusetts, confirming that youths are more tech-savvy and communications-oriented than ever before. They are the first generation to have mobile phones with cameras and movie and TV broadcasting and touch screen Internet capability. As of April 2006, 45% of US teens had a cell phone and 87% had online access (Dealerscope, April 2006). This usage is predicted to grow rapidly; Salt Communications (January 2007) estimates that 90% of the world's population will have access to mobile networks by the end of the decade.

At the same time we see evidence that teens and technology are connected and have forward momentum; we also find that teens are primary consumers of another category in a growth stage: candy. Teens are heavy users of the snack and confection category. According to the Washington Times (March 2007) children and teens influence about $500 billion in annual spending on categories such as candy, cereal and fast food.

In the Food, Drug, and Mass channels, candy and gum rank third in food categories behind carbonated beverages and milk. Table 1 outlines 2006 confectionery sales, reported by The National Candy Association, as $28.9 billion dollars, up 2.8% from the previous year.

According to Package Facts, a division of marketresearch.com, the prime consumers of chocolate products are young people ages 5-24 years. Information Resources, Inc., reports the heavy consumers of non-chocolate candy are teens age 12-17 years and children age 6-11 years (August 2007).

Table 1
Summary of 2006 Confectionery Sales

2006 Confectionery Sales
(in billions of dollars)

Category	$ Retail Sales	$ Manufacturer Sales	% Change (vs. prior year)
Chocolate	16.3	10.5	3.1
Non-Chocolate	8.9	5.8	1.7
Gum	3.7	2.5	3.6
TOTAL	*28.9*	*18.8*	*2.8*

Source: NCA Estimates based on 2006 U.S. Department of Commerce 311D Report & NCA Monthly Shipment Reports

THE iCANDY PROJECT

The iCandy project is a pilot program designed to promote marketing as a career and field of study among high school students. The Practicum students at Cedar Crest College leveraged their Marketing course learning as they took on the role of teaching marketing principles and contest guidelines to the high school teens. Since the Practicum students were juniors and recently teenagers themselves, they shared an interest in technology and candy. Throughout the semester, the Practicum students modeled their Business course learning as they presented training information and interacted with teens.

When the teens were gathered for training, the direction was to go out and think about Mike and Ike® and Peanut Chews® in the context of technology and cultural creativity. The teens were encouraged to use their own language and inspirations. They were encouraged to take cell pictures of other teens eating candy or hanging out and to find out when and why they were snacking so they could translate the scene onto a storyboard. The teens explored the Internet for viral and Web campaigns with the Practicum students. They viewed video viral marketing and interactive Web sites featuring Webisodes, along with other holistic approaches to Internet marketing.

The creative process for the teens began with the exploration of the teen culture and ended with a hands-on application of marketing principles to a storyboard. They completed the assignment independently or with a teammate. This paper reports on the anecdotal and qualitative data used in evaluating the process and the results.

THE BUSINESS CONTEXT

The business context was important to the process. According to Harvard Business Review, *Managing for Creativity*, page 125 (August 2006), "A company's most important asset isn't raw materials, transportation systems or political influence. It's creative capital, simply put, an arsenal of creative thinkers whose ideas can be turned into valuable products and services. Creative employees pioneer new technologies, birth new industries and power economic growth" (Florida & Goodnight).

With creativity and innovation at the core of business growth, consideration was given to changing the actual product in form, shape or color and to address what precisely attracts and engages teens in advertising messages. According to Elissa Moses, author of The $100 Billion Allowance Accessing the Global Teen Market, page 182, it is apparent that this group of prime candy and technology consumers just wants to have fun. The top 10 appeals are "make me laugh, be fun, use music, be realistic, use young actors, use colors and graphics, use effects, show the product in use, be interesting, and show that the company cares." One of the top 10 advertising trends in candy, according to the Confectioner Magazine.com, page 1, News and Trends (January 2007) is that Internet marketing prevails. "Brand-based blogs will become more frequent and Web-based marketing initiatives will continue to chip away at more classical consumer marketing budgets."

THE QUALITATIVE FINDINGS

Method

Sixty teens were interviewed and then went through a training session in groups of 15 at the beginning of the iCandy project. The top 5 teams, 11 teens in all, were finalists in the contest. Of these 11 teens, seven were interviewed after they received their awards.

Hypothesis: Teens can produce creative work when asked to think about specific brands (particularly in a category they are prime users of) in the context of technology and cultural creativity.

Measurement

Four judges rated each of the top 10 presentations on Originality (30%), Overall Appeal (40%) and Likelihood to Motivate People to Eat Mike and Ike® or Peanut Chews® (30%). Judges completed score cards and handed them to Official tabulators to be compiled.

Specific Findings

1. There are definitely cool and uncool words in the teen vocabulary. While this has occurred through the ages, it's the words that are new. Most "cool," "now" words are in some way tied to Internet or mobile communication. Some examples are hard candy (computer), eFlirt, eCrush, LOL, wiki (hurry), cyber "e" or "i" as a prefix.
2. Teens love brand names. They like to see their favorite brand names (like, True Religion) in songs by popular artists.
3. Mass appeal is no longer an option. What is relevant is what happens to them, not others.
4. Among teens, adoption is quick, or quickly rejected.
5. "The medium is the message" (Marshall McLuhan 1911-1980) still stands; however, now the medium is all about unique viral properties and electronic social communities.
6. The mobile phone transcends economic viability. Teens don't really want to be without one, so they have one.
7. Mobile blogging is emerging among teens.
8. Teens are providing content without blinking. Sites like Flickr, MySpace, Facebook, Wikis, Second Life, YouTube, craigslist and Xanga are all mainstream.
9. Along with adults, teens are becoming "pro-sumers" by sharing knowledge, videos, commercials, political statements and other resources on open source sites.
10. It's all about being original, even if you use sponsored applications and existing graphics to do it. It's when you use them and how you express yourself that matters.
11. Teens are not at all bashful about money and what it can buy. "Unabashed consumerism," Elissa Moses terms it and ranks it as the number one global teen unifier. Number two and three are passion for technology and perpetual entertainment.
12. Teens had no reservations communicating their culture (good or bad) in their creative work. They were at ease with the podium presentation, cameras flashing; they plugged in and spoke the word.
13. There was no apparent gender dominance in collaboration or presenting in male/female groups.
14. Teens eat candy at any time of the day or night. Teens are online at any time of the day or night.
15. Teens are adaptable. They are living several centuries of technology each year of their lives. Approximately 33,000 products were launched this past year; they are on top of the ones that apply to them.
16. Teens are resourceful; if there were a barrier, for example a blocked site, they got around it.
17. In terms of this contest, teens were inspired by the fact that they were competing using a real creative project that may be used in the marketplace. They responded to the Practicum students who encouraged them to have fun with the project via a YouTube and PowerPoint presentation. They also seemed motivated by the $1,000 prize structure with a Just Born, Inc., factory tour and a shadow day at Cedar Crest College with the Practicum students.

RESULTS

The students submitted their contest submissions in August 2007, and the Finalist Live Judging Event took place in September. The four Judges included two executives from Just Born, Inc., the Cedar Crest College Business Chair and the Marketing Director for *The Morning Call*, the Lehigh Valley newspaper. Winners were announced at the live judging event and prizes were awarded.

The results of the study support the original hypothesis that teens can produce solid work when asked to think about Mike and Ike® and Peanut Chews® in the context of technology and cultural creativity. All of the top entries illustrated realistic scenes in the language of the teen. All the storyboards were meant for the electronic medium of the Web because that is where teens are spending their time. The teen is capable of providing content to manufacturers. In the case of a teen-targeted product, content was perhaps more relevant than what manufacturers can provide themselves

The iCandy project resulted in a robust learning experience for the teens, rich findings and experiences for the Practicum students, and promising creative storyboards for Just Born, Inc. Table 2 outlines the concept that ultimately won the contest, "Men Love Sports."

Table 2
iCandy Contest Grand Prize Winner

Title	"Men Love Sports"
Brand	Peanut Chews®
The Target	18- to 24-year-old men
Viral Execution	YouTube
The Concept	If men want quiet during a game, buy Peanut Chews® for girlfriends
The Personality	Unique, social, masculine
The Product	The chewy attribute is featured

SUMMARY

The iCandy contest is viewed as a successful pilot project with a national business within the Practicum course requirements at Cedar Crest College. It maximized the Cedar Crest College students' opportunity for professional development and leadership. The Practicum students were required to provide a debriefing presentation on this assignment to all Practicum students and to The Principles of Marketing class so that the lessons of this assignment can be leveraged with current and future students. They were also required to present a final project comparing results to goals to the Marketing Department at Just Born Inc.

The project was also viewed as successful among the teens who participated in that they were able to take away new learning on the creative process using emerging technology and were able to explore what a career in marketing may include. The top three winners received cash prizes for their schools. The contest is being evaluated for a global launch in the coming year.

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AN EMPIRICAL STUDY OF UNDERGRADUATE STUDENT'S BASIC FINANCIAL MANAGEMENT COURSE ACHIEVEMENT RELATIVE TO STUDENT BACKGROUND AND PREREQUISITE TIMING.

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Douglas Frazer, Millersville University

ABSTRACT

All business curriculums contain a course in basic Finance. This course is often a major hurdle for students because Finance requires a mastery of numerous earlier prerequisites such as accounting, statistics, calculus and economics.

An in-depth study over two semesters of four separate classes was carried out to assess those factors that lead to success in finance. The study is also concerned with evaluation of the present curriculum structure and timing, as well as assessing the value of more detailed record keeping on student achievement.

The results were as would be expected in general, with stronger students doing better than weaker students. However, several interesting results were found. The pre-test showed little predictive power, and the inability of weaker students to "catch up" on prerequisite areas was disturbing, despite the availability of review classes on identified problem areas. As an example, nearly all students were unable to do a yield to maturity bond problem (covered in two earlier accounting classes) in the pre-test, and despite extra classes, and (pre-announced) problems of this type on several quizzes and all exams, a significant number of students were unable to correctly answer a bond problem at the end of the semester.

INTRODUCTION

All business curriculums contain a course in basic Corporate Finance or Financial Management. This course is often a major hurdle for students because Finance requires a mastery of numerous earlier prerequisites such as accounting, statistics, calculus and economics. Students at Millersville University must earn a minimum of a C- in accounting and economics. Finance is a junior level course, required as a prerequisite for upper level courses in most concentrations. A C- in Finance is required for many of these upper level courses. In addition, business students must take a course in calculus and a course in statistics. These two are not prerequisites for the finance course, but must be taken as part of the degree. Most of the students do take these classes prior to taking finance.

The finance course requires students to show a mastery of mathematical modeling using accounting and economic concepts to understand key financial concepts (forecasting, capital budgeting, breakeven, etc.). All of these areas require a mathematical background that is beyond merely algebraic manipulation. It requires a high degree of mathematical comprehension to understand complex ideas and relationships in finance.

Identification of prerequisite tools/skills and achievement levels necessary for success in finance is critical to aiding students in preparing for their course in finance and for designing curriculum. By establishing a baseline of required incoming knowledge, it was hoped to understand the development of financial knowledge during the course, and identify key prerequisite skills necessary for success in Financial Management.

The study was undertaken to help provide a baseline of student knowledge entering the finance course, and to evaluate the worth of moving to a preliminary examination for entry into the business major.

This study was also aimed at evaluating our curriculum in terms of student preparedness for upper level courses.

Finally, this study was designed to evaluate the worth of detailed record keeping on students to understand trends in learning and to develop tools for documenting student progress. The public and our students increasingly are demanding better support and measurement of the learning process.

Data Gathering and Sample

An in-depth study over two semesters of four separate classes (a total of approximately 100 students) was carried out to assess the effect of earlier course work on success in finance. Information on each student was gathered, including GPA, prerequisite course results, and timing of prerequisite courses. The course included a pretest given the first day, two hourly exams, a final, and numerous quizzes. Test and quiz questions were grouped in terms of area and subject (for example, economics and fiscal policy) and results for every question on every quiz and test were recorded.

The classes started with 25 students each, but early drops and later withdrawals reduced the classes. Our institution allows students to withdrawal from a class up until 10 weeks into the semester. Some students were not included if they did not provide background information. All background information was provided by the students, including their grades in other courses.

The fours sections differed somewhat in their makeup, but generally were fairly homogeneous.

	#	#			Cum. Aver.		Fin Grade	
Section	Finished	used	Male	Female	Average	Std. Dev.	Aver.	Std.Dev
1	22	17	7	10	2.92	0.56	75.12	9.51
2	21	19	15	4	2.77	0.51	69.16	14.52
3	21	19	10	9	2.75	0.46	76.63	12.34
4	23	23	11	12	2.99	0.57	80.17	9.82
All	87	78	43	35	2.86	0.53	75.53	12.17
Percent			55.1%	44.9%				
Average CUM			2.79	2.92	2.86			

While the average grade in Finance was a C (75%), the distribution was such that 47% of the students in the two semesters did not earn the required C- in the course in order to move on to upper level courses in Finance. This rule is presently being investigated for all upper level classes.

The breakdown according to concentration differed somewhat across sections.

	Majors					Business	
Section	Acct.	Fin.	Inter.	Mang.	Mkt	as Minor	Other
1	1	1	2	4	8	1	
2	4	1	1	4	9		
3	1	2		8	6	2	
4	3	2	3	5	9		1
	9	6	6	21	32	3	1
Percentages	11.5%	7.7%	7.7%	26.9%	41.0%	3.8%	1.3%

Pre-Test

The pre-test was administered to all students, who were given notice regarding this study by e-mail two weeks prior to the semester start. They were requested to bring a calculator to the first day class and to be prepared for a test of their background knowledge and the first chapter of the finance text. A syllabus was included with the e-mail, and students were asked to confirm that they had received the e-mail. A large majority affirmed that they had received the e-mail.

The pre-test included basic problems and essays from the two prerequisite courses in accounting (financial and managerial), two prerequisite courses in economics (microeconomics and macroeconomics) and two required business major courses in calculus and statistics. Students also were advised that while calculus and statistics were not prerequisites, it was assumed that students would have finished their freshmen and sophomore required courses prior to taking finance.

The questions were supplied by professors teaching the prerequisite courses and were designed to be rather basic.

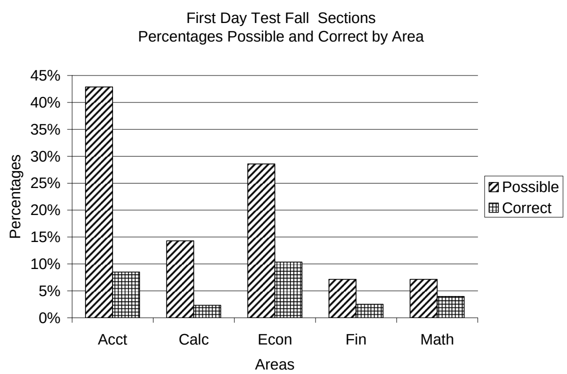
The accounting covered basic theory, income statement and balance sheets, t-accounts, contribution margin, a bond problem, and breakeven. Economics questions included fiscal and monetary policy, how banks affect the money supply, and some basic multiple-choice questions on economic theory. Calculus and mathematics included the graphing of a straight line, derivatives and minimums and maximums. The finance questions were on basic background from the first chapter, which was assigned for the first day.

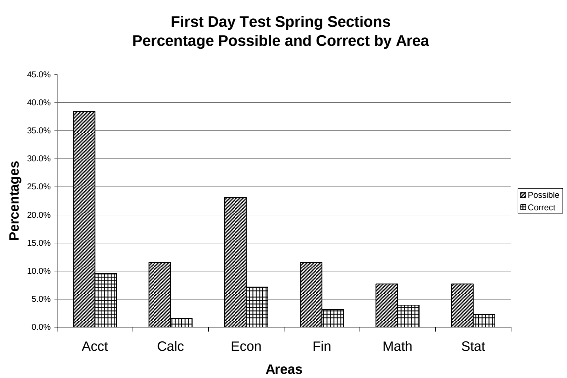
In the spring semester several questions on statistics were included, mainly involving the normal distribution. Sections 1 and 2 were the fall semester classes, and sections 3 and 4 were the spring semester classes.

Pre-Test Results

The pre-test results were as follows.

	First Day Test Results			
Section	1	2	3	4
Mean	27%	20%	25%	32%
Std. Dev.	12	7	11	5
Maximum	57%	40%	57%	69%
Minimum	7%	11%	11%	5%





Prerequisite Timing

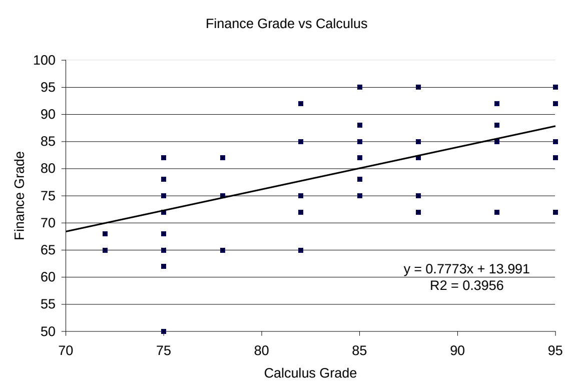
The majority of the students in both semesters were traditional students, with an average age of 21.8 years, taking the normal sequence of classes. The vast majority had taken all the required classes. Most of the students had taken the two required economics classes during their freshman year, and taken the two required accounting courses during either their freshman year or at the beginning of their sophomore year. Calculus was normally taken during their freshman year or first semester sophomore year, with statistics taken during their sophomore year (calculus is prerequisite for statistics). The vast majority of the students were taking finance as rising seniors with an average of 90 credits (out of 120 required for graduation) completed prior to the finance course. Hence, on average the students had approximately two full years since taking accounting, calculus and economics and one and one half years since taking statistics.

Student Backgrounds

Regressions were calculated on final grades in the finance class versus earlier academic results. There were no strong results, with pre-testing and prior academic performance providing no guidance in estimating student performance in finance.

Finance Grade versus:	
	R^2
Average Prerequisite Grades	0.2301
Accounting Grade	0.2766
Calculus Grade	0.3956
First Day Test Results (Fall)	0.0182
First Day Test Results (Spring)	0.2062
Credit Hours (Fall)	0.2295
Credit Hours (Spring)	0.0148
Cumulative Average (Fall)	0.0454
Cumulative Average (Spring)	0.5376

A typical regression plot looked as follows:



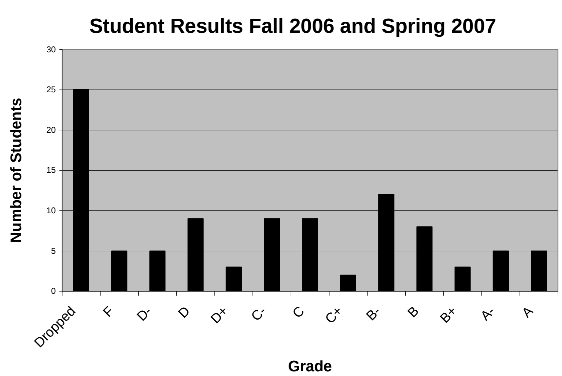
Student Throughput

It was noted that the average student had 90 credit hours completed prior to taking Finance. This means the average student taking the course is a rising senior. Finance is suppose to be a junior level course and hence students should have 60 to 75 credits prior to taking Finance.

Taking Finance later has two problems: first, the student is even further away from prerequisite courses, and second, in many cases the student does not have Finance as a prerequisite when they take upper level courses.

The reason for this late taking of finance is twofold: first the course is viewed as a difficult course, and second, the course is difficult to get into as there is such a backlog of students trying to take the course since the throughput is low.

In looking at the grades for these four sections, it becomes obvious where part of the problem lies.



At Millersville students can withdraw from a class up to 10 weeks into the semester. The classes started with 25 students per section, or 100 students. Final grades were given to 75 students. Hence, out of 100 students, only 75 completed the class and got a grade. Of these 47% got a D+ or lower, which means they must repeat the course before going on to upper level courses.

This means only 53% of the beginning students completed this course with the minimum required grade or better.

Student Learning in Finance

As shown by the pre-test the students seem to have entered the course with weak backgrounds in all major areas. The question of whether students learned anything in the finance course is a reasonable one. While all areas cannot be presently evaluated, on one area, bonds and their pricing, an extensive program of classroom work and testing provides some measure of the learning accomplished in the class. Bond pricing and calculation of the market rate of return on a bond is a basic problem in present value that is taught in both financial and managerial accounting. Present value calculations are a major tool in finance, used in calculations for bonds, stocks, weighted average cost of capital, and capital budgeting, as well as a necessary theoretical background for understanding market actions.

A particular student shortcoming was found in the bond area in the pre-test. In the fall semester this was covered in the review of the pre-test, in an extra topic review session and during the normal chapter on Present Value in class. The results were not encouraging.

Fall	No Credit	Partial Credit	Fully Correct	Total Students	%
Pre-Test	46	2	0	48	0.0%
Final	20	0	20	40	50.0%

In the spring semester there were similar results on the pre-test, with one student out of 52 successfully solving the pre-test bond problem. The bond problem was covered in the review of the pre-test, students were told it would be emphasized during the course, a review session outside of normal class was offered, and the problem was covered on the first hourly, three quizzes and the final. Students were told the exact nature of the problem. The results were better but still were not overly encouraging.

Spring	No Credit	Partial Credit	Fully Correct	Total Students	%
Pretest	51		1	52	1.9%
1st Hourly	16	30		46	0.0%
Quiz 1	11	10	20	41	48.8%
Quiz 2	12	13	20	45	44.4%
Quiz 3	4	6	35	45	77.8%
Final	7	4	32	43	74.4%

While approximately three-quarters of the students finally learned to do this bond problem, the amount of teaching effort and time was huge, particularly for a small area of the course which students had covered in two other classes. Students were allowed to use financial calculators, but my observation was that most students lacked the mathematical skills to set up the problem, as well as being unable to use a calculator efficiently.

CONCLUSION

This research was undertaken to test how well our curriculum is preparing students for intermediate courses like finance as well as ultimately for graduation. Several major problems were uncovered. First, students are retaining little in the way of prerequisite skills. The pre-test Mathematical skills were particularly weak and certainly not up to any standard necessary to understanding finance.

A second problem is that there is too much time between accounting and economics courses, and finance. These critical courses are now being moved to later in the student’s curriculum to reduce the time between prerequisites and upper-class courses.

The final problem evident in these results is that students have a mind set of viewing courses as hurtles to be passed and forgotten as opposed to being building blocks to future success. Changing this culture is a difficult problem, but three potential paths are being investigated.

The use of time-series information on individual student accomplishment in particular tools/skills shows promise as a way to provide feedback for review within the semester, and for counseling students on areas of weakness. It also appears that the C- minimum grade should be applied to all prerequisites as a screening device. It may also be necessary to impose a minimum grade point average higher than the 2.0 required for graduation.

A longer approach is to develop a freshman handbook for business majors that outlines the courses and the particular skills taught, and explains how these skills fit in with later courses. The second step is to move toward a pre-business major, with entry into the business major dependent on GPA and successful completion of a rigorous test on all prerequisites. Finally there is an effort in the department to have more testing in upper level courses on prerequisite material, or review sessions either in class or on-line to review prerequisite material.

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IMPACT OF STRATEGY ON FIRM PERFORMANCE IN AN EMERGING MARKET: AN EMPIRICAL EXAMINATION OF TURKISH INSURANCE INDUSTRY

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ABSTRACT

Strategic group concept has been used in the field of strategic management to understand competitive behavior in industries. In this study, we apply the research methodology used to study the US insurance industry by Fiegenbaum and Thomas (1993) to study Turkish insurance industry. We carry out a strategic group analysis and present our findings. We tested the implications of strategy on performance and found that in most of these tests, strategy had significant impact on firm performance.

INTRODUCTION

Since the central issue of interest in Strategic Management is improving firm performance, there have been many streams of research examining the impact of strategy on firm performance. The stream of research on strategic groups is one such stream where the performance implication of group membership has been extensively in various industries. For example, Bogner and Thomas, (1993); Cool and Schendel (1987) and Pandian, Thomas, Furrer, and Bogner (2006) examined the US pharmaceutical industry and Leask and Parker (2007 examined the UK pharmaceutical industry; Fiegenbaum and Thomas (1993) examined the US insurance industry; Athanassopoulos (2003) and Lewis and Thomas (1993) studied the UK retail grocery industry and Marlin, Huonker, and Hasbrouck (2004), Marlin, Huonker, and Sun (2002) and Short, Palmer, and Ketchen, Jr. (2002) researched the U. S. hospital industry. Most of these studies focus on industries in stable environments (the USA or the UK). In this study, we examine the Turkish insurance industry and test the impact of strategy on firm performance. The rest of the paper is organized to provide a brief literature review, statement of hypothesis to be tested and the research methodology. Then, the findings of our analysis are presented and discussed. The implications for further research and practice are presented which is followed by a conclusion.

LITERATURE REVIEW

Hunt (1972) introduced the concept of strategic groups to explain intra-industry performance differences that could not be explained by the structure-conduct-performance paradigm. Firms in an industry that adopt similar strategies form a strategic group and the performance differences across strategic groups were significant. That is, the firm strategy had a direct impact on its performance. One of the most revered theses in Strategic Management is that the strategic choice mattered for firm performance. That is, managers by choosing appropriate strategies could improve the performance of firms. If managers could consciously adapt firm strategies, then most firms would attempt to choose the best performing strategic group's strategy and completely homogenize the industry. Since differences in strategies and performance were observed in empirical studies, Caves and Porter (1977) suggested the concept of mobility barriers which prevented firms from moving from one strategic group to the other. Lippman and Rumelt (1982) suggested that 'uncertain imitability' could be another reason for firms' inability to change their strategies (McGee and Thomas, 1986). Though these theoretical arguments support the impact of strategy on firm performance, the empirical evidence had been inconclusive (Pandian, Thomas, Furrer and Bogner, 2006). But, recent studies have suggested a renewed interest in the concept of strategic groups and its performance implications (Leask and Parker, 2007). In this study, we decided to reassess empirically the impact of strategy on firm performance applying the strategic group concept. Most of the earlier studies had examined developed economies since most researchers carried out their research in these economies. In this study, we examine Turkish Insurance Industry. Turkey is a candidate for accession to the European Union (EU) and has been in the process of introducing legal and fiscal policies which will make it an equal member of the EU. Turkey has also been attempting to reducing bureaucracy to make it attractive for businesses to enter. Entry of new entrants intensifies the competition in industries and firms need to adopt strategies that suit their resource endowments. Given this reality, we anticipate that the impact of strategy will be discernible.

HYPOTHESIS

The hypothesis tested in this study is simple and is central to strategic management research. That is, the firm strategy has significant impact on its performance. Since strategic group is formed of firms with similar strategies, the performance will differ across strategic groups. Hence the following hypothesis:

Hypothesis 1:

Firm performance will significantly differ across strategic groups.

Null hypothesis:

Firm performance will be the same across strategic groups.

METHODOLOGY

In this study we chose to examine Turkey which has been going through regular changes in political and regulatory environment in order to meet the requirements of European Union. Turkey applied for associate membership in the European Economic Community in 1959 and signed the association agreement in 1963. In 1987, Turkey applied for formal membership into the European community. In 1999, European Union recognized Turkey as a candidate and Turkey has to make the necessary changes to its political and economic systems in order for its membership to be accepted (Wikipedia, 2007). Many industries that were heavily regulated traditionally have seen these strict regulatory systems being dismantled. In fact, Turkey has been becoming more and more attractive for foreign firms. For example, it is ranked at 53 in 2006 for the ease of starting a new business according to the World Bank survey of countries (World Bank, 2007). According the World Bank reports, Turkey is one of the top five reformers to make doing business in their country easy (The World Bank, 2005). Despite facing the most turbulent political environment during the 1990s, Turkey has had a stable government since 2002 providing stable political environment. The political turbulence of the 1990s resulted in economic problems and financial crisis in 2001. The economic reforms brought about following the crisis with the support of IMF and which were ratified by the Government after 2002 elections ensured that Turkish economy became stable (The Economist Intelligence Unit, 2005).

Traditionally, Turkey had a mixed economy and in most industries private companies, public companies and joint venture between private and public companies thrived. Due to poor performance of public companies, the privatization of these public companies started in the 1980s. The insurance industry was started with the entry of foreign firms early on but later both public and private Turkish companies and joint ventures between Turkish and foreign companies became active (Association of the Insurance and Reinsurance Companies of Turkey (TSRSB), 2007). In order to satisfy the European Union requirements and to make the economy run more efficiently, joint ventures between private and public companies started in the insurance industry. The introduction of Insurance Auditing law of 1990 relaxed the control over how firms competed (e.g., in non-life insurance sectors, firms could participate where and how they deemed fit) resulting in increased competitive intensity. Following the Asian Financial crisis of 1997, Turkey faced its own financial crisis in 2001 which had significant impact on the insurance industry due to its link to banking sector which was affected heavily. Right now, the Turkish insurance industry is at a satisfactory condition in terms of performance and competitive capabilities (TSRSB, 2007). Since we were interested in an industry which faced changes in its external environment, the insurance industry fitted well with our requirements.

The data for these insurance firms were collected from the Department of Treasury, Government of Turkey. There were forty-one firms in 1998 and thirty-one firms in 2005. In order for us to map the movement and to minimize effects of extreme values, we followed twenty-seven firms from 1998 through to 2005 though twenty-five firms remained in the 2005 sample.

Traditionally, the strategy variables were divided into product market scope variables and resource deployment variables. In this study, we used the strategic variables from Fiegenbaum and Thomas (1993). Fiegenbaum and Thomas (1993) studied the US insurance industry and the data for that study was collected from Best's Insurance Reports. We used three variables to capture the product market scope: the proportion of business was from personal insurance, a Herfindal index to measure product diversification, and firm size. We used four variables to capture the resource deployment decisions: expense ratio (to measure cost effectiveness), proportion of reinsurance used (to measure how the risk is spread to third party insurers), financial leverage and nature of investment (as a proportion of stocks to total investment). Three performance measures were used to assess how well these insurance firms performed: combined ratio (a measure equivalent of return on sales), market share and weighted market share (capturing the diversified nature of the firm and how well it did in its chosen markets). All the variables are defined in Table 1.

The SAS software was used for the statistical analysis and the clustering procedure was used to identify strategic groups. The number of effective clusters was determined using the Cubic Clustering Criteria (CCC). The Cubic Clustering Criteria changes with the number of clusters created and peaks when the incremental exploratory power of the new cluster created drops below 0.05. The number of clusters thus selected is considered adequate to explain the variance in strategies across different firms. Analysis of Variance (ANOVA) will be used to test the impact of strategic group membership on firm performance. ANOVA was carried out for every year from 1998 through 2005 and all the three performance variables were tested independently. The results of analyses of variance are presented in Table 2.

RESULTS

The findings clearly indicate that the results are not consistent but more results support the hypothesis that strategy has significant impact on firm performance. The performance measured by the combined ratio is the least consistent where as strategy had significant impact on market share and weighted market share most of the years except 1998. Overall, during seven out of eight years examined and fifteen out of twenty-four tests carried out, the hypothesis that strategy affected firm performance has been supported. If one excluded the tests carried out on the impact of strategy on combined ratio, the hypothesis is supported every year except 1998. Though more consistent support to the hypothesis would be welcome, it is important to see if we could explain the findings.

DISCUSSIONS

The combined ratio measures economic efficiency (how well the net premium written is utilized). Though this measure is supposed capture how efficiently the funds have been used, the firm does not have any control over two major components: loss incurred and loss adjustment expenses since both these depend not on firm's efficiency but on unexpected adverse external events (accidents, natural calamities etc.). Given that reality, it is difficult to manage combined ratio by any firm strategy. Then, what is the purpose of using this as a performance measure? Investors and customers should know how well a firm did despite uncontrollable external events. As long as firms were able to explain their performance, investors and customers would continue to support it. But, if firms never reported this measure of performance, then firms could hide behind measures which hide their real financial health. Also, firms at times sacrifice short term performance to achieve sustainable long term performance. That is, if market share would provide a sustainable long term performance, firms would sacrifice short term performance and attempt to gain more market share. This behavior also explains why performance measures capturing market share is consistently different across strategic groups.

To some extent, these findings support the effort put into strategic management and developing competencies, acquiring resources and constantly adapting strategies to suit the changes in the external environment should all be worth it because strategy does have a significant impact on firm performance. This is the first of the exploratory study of the Turkish insurance industry. Though the results of hypothesis testing did not support the hypothesis 100%, the high support for the hypothesis observed in the Turkish insurance industry is encouraging. Though it is very difficult to make any universally applicable conclusions, this study is in line with earlier research and hence one could conclude that managers consciously could choose firm strategy to improve firm performance.

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Table 1
Strategy and Performance Variables

Strategic Component/ Performance Variable	Strategic Function	Variable name	Definition
Product Market Scope	Product Scope	A1	$\frac{\text{Personal Net Premiums Written(NPW)}}{\text{(Personal NPW +Commercial NPW)}}$
	Product Diversity	A2	H=$1-\sum_{i=1}^{n} p_i^2$ where P_i is the relative size of the *ith* line in the firm portfolio i=1…n is the number of lines
	Firm Size	A3	LOG(NPW)
Resource Deployment	Production Efficiency	B1	$\frac{\text{Underwriting Expenses}}{\text{NPW}}$
	Risk Coverage	B2	$\frac{\text{Direct Premium Written – NPW}}{\text{NPW}}$
	Finance	B3	$\frac{\text{Net Premium Earned}}{\text{Policy Holder Surplus}}$
	Investments	B4	$\frac{\text{Stocks}}{\text{Stocks + Bonds}}$
Performance Measures	Combined Ratio	CR	$\frac{\text{(Incurred losses + Loss Adjustment Expenses + Underwriting Expenses + Dividends)}}{\text{Net Premium Written (NPW)}}$
	Market Share	MS	$\frac{\text{Firm's net premium written}}{\text{Industry net premium written}}$
	Weighted Market Share	WMS	$\sum_{i=1}^{R} P_i LB_i$ where i = indicates line of insurance, P_i = relative share of line in the total Portfolio, LB_i = the market share of the line in the segment

Table 2
Independent Variable: Strategic Group Membership (Strategy)

Dependent Variable	Year → Model ↓	1998	1999	2000	2001	2002	2003	2004	2005
Combined Ratio	R-Square	0.1264	0.0516	0.0877	0.0075	0.0244	0.0696	0.2251	0.5801
	F=Value	1.11	0.42	0.74	0.06	0.21	0.57	2.13	9.67
	Pr > F	0.3656	0.7426	0.5407	0.9800	0.8894	0.6382	0.1253	0.0003
	Sig, level								***
Market Share	R-Square	0.2057	0.3559	0.1709	0.3902	0.4982	0.4072	0.2600	0.2828
	F=Value	1.99	4.24	1.58	5.12	8.27	5.27	2.58	2.76
	Pr > F	0.1443	0.0160	0.2214	0.0070	0.0005	0.0065	0.797	0.0676
	Sig, level		**		***	***	***	*	*
Weighted Market Share	R-Square	0.2044	0.3864	0.1801	0.4786	0.4466	0.2998	0.3118	0.2781
	F=Value	1.97	4.83	1.68	7.34	6.72	3.28	3.32	2.70
	Pr > F	0.1467	0.0095	0.1982	0.0012	0.0018	0.0390	0.0385	0.0719
	Sig, level		***		***	***	**	**	*
Number of Observations		26	26	26	27	28	26	25	24

MARKET EFFICIENCY IN THE POST-LOCKOUT NHL: ELIMINATING THE REVERSE FAVORITE-LONGSHOT BIAS

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ABSTRACT

When the National Hockey League returned from its one year hiatus due to a lockout by the owners, it returned with many changes. Perhaps the most important change on the ice was the addition of a shootout. This rule change led to an elimination of the tie from the standings and changed how hockey is bet in Las Vegas and offshore. Hockey betting went from a combination of a half-goal line with an odds adjustment to strictly odds betting, similar to the baseball betting market. In the years after the lockout, no evidence of the reverse favorite-longshot bias is found. The market appears to now be efficient, with the bettor bias toward big favorites and road favorites found in previous studies eliminated. Possible reasons for this change in the market are discussed.

INTRODUCTION

When the National Hockey League (NHL) returned from its one year lockout of 2004-05, it boasted a team roster salary cap for the first time and new rules on the ice. These new rules included a shootout to determine the winner of a tied contest (after a 5 minute 4-on-4 overtime), stricter restrictions on the size of the goaltender equipment, the elimination of the red line so that 2-line passes were now allowed (which theoretically would allow for more breakaway chances and odd-man rushes (2-on-1 or 3-on-2)), and a renewed emphasis on the calling of penalties for the clutching-and-grabbing (obstruction) that were prevalent in the game before the lockout (which would lead to more power plays and more scoring opportunities).

These new rules led to changes in the betting market for the NHL as well. Given that ties were eliminated, the typical betting line of using a half-goal line coupled with odds was replaced across the board by odds betting that mimic the wagering market for baseball. Given that games still tied at the end of regulation and a 5-minute overtime now proceed to a shootout, where a winner is always determined, games that previously would have been a win for underdog bettors if the game concluded in a tie, now have been opened to the somewhat random world of a 1-on-1 shootout.

Shootouts are not unheard of in the sports or sports betting world. Events such as the world cup of soccer, which has an avid following both in terms of spectators and gamblers around the world, have shootouts to determine winners in elimination matches. Even hockey in the Olympics has a history of shootouts, including Peter Forsberg’s spectacular goal in 1994. Although there is precedent for shootouts in some betting markets, this major change in how winners are determined in NHL games could very much alter the expectations of bettors and the prices (odds) that are determined in this market.

This paper explores the nature of the favorite-longshot bias as it applies to the new NHL. Using 2 full regular seasons worth of data, testing for the favorite-longshot bias (and the reverse of this bias) is performed for the sample of games as a whole and in a variety of subsets of the data following the lead of Woodland and Woodland (1994; 2001) and the corrections to testing the favorite-longshot bias provided by Gandar, Zuber, Johnson, and Dare (2002) and Gandar, Zuber, and Johnson (2004).

Subjective and objective probabilities of underdog wins are shown for samples of all underdogs, home underdogs, and "heavy" and "slight" underdogs in each sample. Z-tests of the null hypothesis that the subjective and objective probabilities are the same are tested. The likely reasons for the findings of the test results concerning efficiency and the reverse of the favorite-longshot bias are then discussed.

BETTOR BIASES IN WAGERING MARKETS

In an efficient market, no simple investment (wagering) strategies are expected to be profitable (null hypothesis of no profitability) or to exceed the expected return, which in the case of gambling markets is negative (null hypothesis of a fair bet). When simple investing or wagering strategies are found that reject the efficient markets hypothesis, questions arise about the validity of the theory itself and/or the structure of the market in which the rejection of the efficient markets hypothesis is found.

One recurring rejection of at least the weak-form of market efficiency is the favorite-longshot bias and its reverse. The existence of the favorite-longshot bias was first demonstrated in the scientific literature by psychologists Griffith (1949) and McGlothlin (1956) in their studies of bettor behavior under uncertainty. Griffith and McGlothlin studied horse racing and found that bettors tended to over-bet the long odds horses. The horses were over-bet to the extent that a strategy of betting on long odds horses had a significantly lower expected value than strategies of betting on shorter-odds horses.

Later studies concerning the favorite-longshot bias by Ali (1977) and Asch et al. (1982) found similar results in horse racing at tracks in New York and Atlantic City, respectively. Meanwhile, Busche and Hall (1988) do not find the bias in their study of pari-mutuel wagering in Hong Kong, suggesting that this bias may not represent a universal human preference. It has been suggested that the source of the favorite-longshot bias is the tendency of people to over-estimate the likelihood of unlikely events and underestimate the likelihood of likely events (Sauer, 1998, and Slovic et al., 1982), although other theories abound as well.

Similar biases have been found in sports betting, in cases where simple strategies such as wagering on home underdogs or on big underdogs have been shown to be profitable in pointspread markets and wagering on the under has been shown to be profitable for totals markets. Some examples of the biases in pointspread markets are Golec and Tomarkin (1991) and Gray and Gray (1997) in the NFL, Dare and McDonald (1996) and Paul, Weinbach, and Weinbach (2003) in college football, Paul and Weinbach (2005) in the NBA, and Paul and Weinbach (2005) in college basketball. Examples in totals markets include Paul and Weinbach (2002) in the NFL and Paul, Weinbach, and Wilson (2004) in the NBA.

In professional sports that use odds in the betting market, such as Major League Baseball and the National Hockey League, the reverse of the favorite-longshot bias was actually found. This reverse bias implies that favorites are overbet and underdogs are underbet meaning that bets on the underdog will win more often than implied by efficiency and could lead to profits. These results were found by Woodland and Woodland (1994, 2001) and both sports were found to have a significant reverse favorite-longshot bias. Woodland and Woodland did not equate a unit bet on the favorite and the underdog in the proper manner, so their tests were corrected by Gandar, Zuber, Johnson, and Dare (2002) and by Gandar, Zuber, and Johnson (2004). After the corrections were implemented, the baseball betting market was shown not to exhibit the bias, while the bias was still found in the hockey betting market, although to a slightly lesser extent than originally estimated.

THE POST-LOCKOUT NHL BETTING MARKET: 2005-06 TO 2006-07

The betting market for NHL games, before the addition of shootouts to the end of tied games, was typically structured using the so-called "Canadian" Line. This format consisted of one team being favored by a half of a goal. Typically, this half-a-goal pointspread was also accompanied by odds that could involve laying additional money (to win a dollar) on the favored team on the goal line or possibly laying additional money on the underdog team (against the half goal). Straight odds betting was not common due to the prevalence of ties and the fact that all monies (commission included) are returned in the cases of tied bets (pushes).

With the elimination of the possibility of a tie in NHL games, sportsbooks converted hockey betting into a form familiar to American and Canadian bettors from baseball. Games were bet with strictly odds on the favorite and odds on the underdog. One other major change, which likely has nothing to do with the change in format of hockey betting, is that the sportsbook's commission on hockey bets has been lowered over time. Not long ago, all hockey bets in Las Vegas occurred at a 20-cent line. A 20-cent line means that there is a 20-cent difference between what amount must be bet on the favorite (to win $1) and what amount is returned (in addition to $1) on the underdog. Over time, due to increased betting volume and competition between on-line sportsbooks, illegal local bookies, and legal sportsbooks in Nevada for betting dollars, the commission on the NHL has decreased to a standard 10-cent line, which is graduated as the odds on the favorite increases.

A typical hockey betting scenario, on the sides (betting on a team to win) market, looks as follows:

NY Islanders	+115
NY Rangers	-125

In this game, the Rangers are the favored team. A bet on the Rangers of $1 will return the original $1 plus $0.80 (1/1.25), if the Rangers win the game. A bet on the Islanders of $1 will return the original $1 plus $1.15, if the Islanders win the game.

To study market efficiency in the betting market for totals in the National Hockey League, we use the tests first used by Woodland and Woodland (2001) and later adjusted for the proper use of a unit bet by Gandar, et al (2004). Both of these studies tested market efficiency in the market for hockey betting (on the side in the game) and the implications for totals markets in hockey are a simple extension of their tests. The following model uses the Gandar, et al (2004) correction for the definition of a unit bet.

Under the traditional assumption of sportsbook behavior, in order to capture a risk-free return, the sportsbook must attract unit bets on the favorite and underdog such that $X + (1/\beta_1)X = Y + \beta_2 Y$, where X is the number of unit bets on the more popular side of the proposition and Y is the number of unit bets on the less popular side of the proposition. The commission of the sportsbook is net receipts divided by total dollars bet, which is calculated as:

$$c = Y - (1/\beta_1)X / (X+Y). \qquad (1)$$

This simplifies to:

$$c = (\beta_1 - \beta_2) / (2\beta_1 + \beta_1\beta_2 + 1), \qquad (2)$$

defining the more popular (the overlay side of the proposition) and less popular prices respectively as β_1 and β_2, with $\beta_1 > \beta_2 \geq 1$

Under the null hypothesis of efficiency, expected returns on any bet are equal to the negative of the commission of the sportsbook. Expected returns to unit bets on the less popular side of the proposition are defined as:

$$E(R_1) = \rho(\beta_2 + 1) - 1 \qquad (3)$$

and expected returns to unit bets on the more popular side of the proposition are defined as:

$$E(R_2) = -\rho((1/\beta_1) + 1) + (1/\beta_1), \qquad (4)$$

where ρ is the subjective probability of an underdog win and is equal to:

$$\rho = (1 + \beta_1) / (2\beta_1 + \beta_1\beta_2 + 1). \qquad (5)$$

The expected returns to all simple strategies are negative due to the difference in prices for each proposition. The expected losses of the bettors represent the commission earned by the sportsbook.

Table I presents the results of the NHL betting market for the 2005-06 and 2006-07 seasons. In each table, the number of observations, the subjective probability of an underdog win (the expected percentage of wins by the underdog implied by the closing odds in the betting market), the objective probability of an underdog win (the actual percentage of underdog wins from the games themselves), and the Z-statistic of the test that the subjective and objective probabilities are equal, are presented.

The table includes two major groupings: All underdogs and Home Underdogs. Home underdogs are included as a separate sample due to the relative betting success of home underdogs found in various pointspread and odds betting markets. Each grouping is then broken into different sub-samples, in addition to the sample as a whole, that include "Heavy" underdogs (midpoint of odds of 160 or greater – favorite at -165 and underdog at +155) and "Slight" underdogs (midpoint of odds of less than 160). This distinction was first used by Woodland and Woodland (2001) and then used in the unit bet correction of the original model by Gandar, Zuber, and Johnson (2004).

Table I: NHL Betting Market Results: 2005-06 to 2006-07 Seasons

		All Dogs		
Subset	Obs	Subj. Prob.of a Dog Win	Obj. Prob. Of a Dog Win	Z-Stat
All	2340	0.3907	0.3885	-0.2220
Heavy Dogs ≥ 160	1000	0.3266	0.3160	-0.7177
Slight Dogs < 160	1340	0.4385	0.4425	0.2976
		Home Dogs		
All	648	0.4163	0.4090	-0.3776
Heavy Dogs ≥ 160	190	0.3511	0.3105	-1.1725
Slight Dogs < 160	458	0.4433	0.4498	0.2799

As can be seen in table I, the reverse of the favorite-longshot bias that was present in the sample of Woodland and Woodland (2001) and Gandar, Zuber, and Johnson (2004), is not present in the post-lockout "new" NHL. For the sample as a whole and for the subset of "heavy" favorites, underdogs win less frequently than implied by the odds, suggesting, if anything a favorite-longshot bias, not the reverse. None of the Z-statistics are significant, meaning that the null hypothesis of the subjective and objective probabilities of an underdog win being the same cannot be rejected. In short, the betting market appears to be quite efficient.

One possibility of how a bias could still exist within this market is that the definition of a "heavy" underdog is not high enough. Longshots that are overbet at horse or dog racing tracks consist of odds far greater than +155. Therefore, other classifications of "heavy" underdogs were considered, specifically for midpoints of odds greater than 250 and greater than 200. The results, with similar structure to table I, are shown in table II.

Table II: Alternative specifications of "Heavy" Underdogs – NHL 2005-06 to 2006-07

		All Dogs		
Specification of "Heavy" Dogs	Obs	Subj. Prob. Of a Dog Win	Obj. Prob. of a Dog Win	Z-Stat
> 250	240	0.2560	0.2625	0.2306
> 200	491	0.2875	0.3096	1.0802
		Home Dogs		
> 250	7	0.2647	0.1429	-0.7305
> 200	50	0.3142	0.3600	0.6976

Using a higher threshold for the specification of "heavy" underdogs does not reveal a reverse of the favorite-longshot bias either. None of the z-statistics for the null of the subjective and objective probabilities being equal can be rejected. Home underdogs of > 200 do win more than implied by efficiency, as do all underdogs of > 200, but neither are statistically significant at normal levels. Again, the reverse of the favorite-longshot bias does not appear within this sample.

There a few possible reasons for the lack of a reverse favorite-longshot bias in the post-lockout NHL. Some of these have to do with the evolution of the betting market and the technology that supports it and another has to do with the change in how outcomes are determined in this "new" NHL. One potential reason for the disappearance of the bias is the expansion of betting in the United States and Canada.

Through the evolution of on-line betting, many more bettors on NHL games have been brought into the fold. This increase in liquidity in the market it may have improved the accuracy of the betting lines, correcting the bias previously found among the more limited market of NHL bettors. At the same time, the increased competition between sportsbooks has lowered the commission which has also likely contributed to the increase in bettors in the NHL wagering market.

Another potential reason for the disappearance of this bias is technology. The internet has provided more data in a speedy fashion than was possible at the time of the studies by Woodland and Woodland (2001) and Gandar, Zuber, and Johnson (2004). With plenty of internet sites showing all sorts of regular NHL statistics, injury reports, and even historical betting data, understanding and exploiting simple betting biases, such as the overbetting of big favorites, becomes much easier for bettors. This expansion of information may have therefore enhanced the accuracy of the betting market, dampening any biases and significant deviations from market efficiency.

Apart from increased betting activity, competition among sportsbooks, and better available information, the way the NHL betting market is set up and the outcomes of NHL games in the post-lockout world have likely also contributed to the apparent increases in efficiency of the betting market. First, the old-style "Canadian" line of a half-goal favorite coupled with odds was somewhat difficult for bettors to understand. This likely contributed to the relatively light betting volume in the NHL compared to other sports. With the elimination of the tie from NHL game outcomes, there was no longer a need for a half-goal line to prevent pushes, and therefore bettors were offered strict odds betting on NHL games. These odds are familiar to bettors from sports such as baseball and likely made betting on NHL more attractive to some bettors.

The elimination of the tie from NHL game outcomes may have also contributed to the removal of the reverse of the favorite-longshot bias due to the nature of bets themselves. It has recently been shown in English Soccer, a market where one could bet on a tie (draw) directly, that there is a bias against betting the tie (Deschamps, 2007). This could have been evident in the NHL as well, even though a direct bet on the tie was not available in Las Vegas or through traditional illegal bookies. When betting the favorite on the old "Canadian" line, a tie was a loss. In betting the underdog on the "Canadian" line, an outright win by the underdog or a tie resulted in a betting win. Much like in soccer, the probability of a tie may have been generally undervalued by bettors. Particularly in games with a heavy favorite, bettors may have been discounting the probability of a tie, more focused on who would win the game, the favorite or the underdog. This discounting of the likelihood of a tie may have exaggerated any "normal" bias that may have existed toward wagering on favorites in sporting contests.

CONCLUSIONS

The betting market in the post-lockout NHL is examined to test for the existence of the reverse of the favorite-longshot bias. This reverse bias was originally found by Woodland and Woodland (2001) for a sample of NHL seasons of 1990-1991 to 1995-1996. Their tests were later corrected by Gandar, Zuber, and Johnson (2004) for the same sample, but both papers found the existence of a statistically significant reverse favorite-longshot bias.

In the post-lockout NHL, the reverse favorite-longshot bias is not found. Favorites actually win slightly more often than implied by efficiency, which would support a favorite-longshot bias (not the reverse), but none of the groupings for all underdogs or home underdogs produced returns significantly different from those implied by efficiency. The market for the "new" NHL simply appears to be efficient.

Potential reasons for the disappearance of the reverse favorite-longshot bias from the NHL betting market stem from the expansion of the NHL betting market, the increased availability of information on NHL games via the internet, and the change in the betting mechanism (a change from a goal line and odds to just odds) in which hockey is bet. An increase in the number of bettors on NHL games, due to internet expansion and an increase in wealth, and bettor access to statistics, game information, and historical betting records on-line have led to the odds being more accurate. The elimination of the tie in hockey, due to the introduction of the shootout, has also likely led to more accurate odds as bettors, who in the past may have been deterred from betting on NHL games by the unfamiliar posting of the “Canadian”-style line have added volume and liquidity. In addition, any bias that may have resulted from bettors inappropriately discounting the likelihood of a tie, which in the past would have been a win for underdog bettors that may not have been recognized by those who wagered on the favorite, has been removed by the introduction of the shootout to determine winners in each contest.

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AN EMPIRICAL ANALYSIS OF THE DETERMINANTS OF FOREIGN DIRECT INVESTMENT WITH A FOCUS ON ASIA

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ABSTRACT

In decade-wise panel data regressions, we analyze the determinants of foreign direct investment (FDI). To diminish causality problems, we regress FDI for each decade from 1970 to 2000 on variables one decade earlier from 1960 to 1990. Using the World Bank *World Development Indicators*, we include many variables that could affect FDI. In the worldwide sample, openness to trade and enrollment rates in higher education are statistically highly significant in attracting FDI. Primary education enrollment rates show significance as well. In Asia, openness to trade, exports, and enrollment rates in primary and tertiary education are significantly promoting FDI. A high income per capita instead decreases it. Among East Asian countries, trade, exports, primary and tertiary enrollment rates, as well as government expenditures show significantly positive effects to subsequent FDI. The variables explain at least 77 percent of variation in FDI.

INTRODUCTION

Note: The views expressed in this paper are those of the authors and do not necessarily reflect the views of respective employers.

Foreign Direct Investment (FDI) is one of the most relevant, critical factors to economic gains across countries. According to Chuang (2004), foreign capital can become a significant factor for beginning the developing stages of a nation. While this is beneficial to countries like China or India, some analysts have expressed concern about the ever-increasing centralization of the world's manufacturing production in East Asia, and particularly in China (Adams, 2004). However, evidence supports the argument that FDI is beneficial to both developed nations and developing nations (Pantulu and Poon, 2003).

The most specific benefits of FDI, especially of inward FDI, would be seen in growth of GDP per capita. FDI is found to have a relatively more significant effect on growth than domestic investment, if a sufficient level of human capital stock is available (Borensztein, De Gregario and Lee, 1998). In investigating the causal links between FDI and GDP, Hansen and Rand (2006) establish lasting benefits of FDI on GDP, however, no long-run impact of GDP on FDI as a share of GDP. Zhang (2001) observes FDI increasing economic growth in China. On the other hand, according to Braga Nonnenberg and Cardoso de Mendonça (2005), growth causes FDI but not the other way around.

FDI can take place either by a company entering directly and establishing production facilities in another country, through the acquisition of an existing firm or plant by a foreign company. Even though the method is different, the underlying reasons why an international company would want to establish production abroad are likely to be the same. They would then decide on the most cost-effective way of establishing production facilities, depending on ease, the costs of converting existing facilities to the new production, as well as the benefits from keeping existing employees, company structure, contacts, etc. The latter may depend on whether the reason for establishing production is outsourcing with the intention to sell back to the country of origin, or to enter the new market. This research will focus on the pull-factors of the reasons for inward-investment into a country, rather than push-factors, causing companies to direct their investments outward and away from the home country.

The reasons why FDI takes place in one country rather than in another vary. Production costs are considered an important reason why companies establish production in a foreign country. Costs come in many forms, such as shipping costs depending on the proximity of the country, the going wage rate of workers, corporate tax rates, and the cost of upholding labor and environmental standards. The state of the economy, market conditions, and size, including those of the financial markets, are also important considerations. Good infrastructure, such as roads, rails, supply of raw materials, technology, telecommunications, internet connections, and the availability of educated and skilled workers, facilitates new production. Soft infrastructure, such as law and order and the political system are also crucial to a company's success, such as the likelihood that contracts will be upheld in court, the existence of established police security, and potential risks of nationalization, delays from bureaucratic red tape, or sudden drastic changes in corporate tax rates. Openness to trade makes an economy more attractive for companies so that products can be exported to other countries from the one in which production occurs, as well as to be able to import resources needed for production.

This research analyzes the determinants of FDI, using decade-wise panel data regressions. The FDI variable is from each decade 1970 to 2000 and regressed on variables one decade earlier from 1960 to 1990, to diminish causality problems. We include many variables that could affect FDI mainly from the World Bank *World Development Indicators* and then exclude those of little availability and statistical significance in order to find the variables of the highest statistical significance worldwide, for Asia, and for East Asia. This allows us to see if the variables attracting FDI worldwide are different from that within Asia or within East Asia, which are the regions that have attracted much of the FDI going to less developed countries in the last decade. Worldwide, openness to trade and enrollment rates in primary and higher education are significantly promoting FDI. Within Asia, trade, exports, and enrollment rates are statistically significant in attracting FDI, while income per capita decreases it. Among East Asian economies, trade, exports, primary and tertiary enrollment rates, as well as government consumption are significantly positively related to subsequent FDI. The regression variables for this sample explain at least 77 percent of variation in FDI.

This paper is organized as follows: first, we provide a review of the relevant literature of the determinants of FDI, especially as it relates to Asia and East Asia, then we address the methodology, followed by a discussion of the results from our panel regressions, and the final section concludes our findings.

LITERATURE REVIEW

The areas of costs, the state of the economy, as well as law and order and the political system have been identified in the literature as important to FDI.

Cost Factors as Determinants Of FDI

Costs to a company arise for varied reasons, and choosing a country in which to invest might depend on different cost factors. Some factors that have been identified in the literature as attracting FDI and that can be categorized as cost related include proximity to the home country, home country culture and language, labor costs, cost of environmentally safe technology, and corporate taxes. A common or similar culture may, however not necessarily, be thought of as a cost factor by the company. It may bring down costs in reducing the amount of changes to the product and marketing. On the other hand, the geographical distance could raise transportation costs.

Geographic and cultural distances are established as negatively affecting cross-border mergers and acquisitions (M&A) by Organisation for Economic Co-operation and Development (OECD) member firms (Bertrand, Mucchielli and Zitouna, 2007). In comparing China and India as destinations for FDI inflows from OECD countries, Wei (2005) finds that China has larger FDI inflows. However, India has an advantage over China when it comes to its geographical and cultural closeness to OECD countries.

As would be expected, labor costs are found to attract FDI, such as M&A (Bertrand, Mucchielli, Zitouna and 2007). China's low labor costs are a contributing factor to FDI into China (Hong and Chen, 2001). Despite receiving less FDI for other reasons, India is identified as having an advantage over China due to its even cheaper labor costs (Wei, 2005). However, in investigating the importance of the abundance of low cost labor, Kumar (1999) establishes, in line with other literature, that this does not seem to play a significant role in determining FDI inflows. Other factors are of higher importance. Home market oriented export has declined with automation, reducing the role of labor in the production process. India is more successful in attracting software design and service centers, as well as research and development (R&D), because of the availability of skilled labor and because electronic transmission is not dependent on geographical distance. Other literature finds similar results of FDI costs not depending on wage differences (see, e.g., Kumar, 1999; and Dupuch and Milan, 2005, for Eastern Europe).

Low environmental standards and corporate tax rates would lower costs and could therefore attract FDI. Low environmental standards could attract companies who do not want to take on the cost of upgrading their technology to adhere to higher environmental standards in the home country. However, according to Xing and Kolstad (2002), lax environmental regulations are only significant from heavily polluting U.S. industries, while insignificant for less polluting industries. Low corporate tax rates would also be expected to lower costs and therefore be an incentive for companies to locate their production in countries with low tax rates. Bertrand, Mucchielli and Zitouna (2007) find low tax countries as a group to be attractive to M&A. However, within a low tax group, variations in the corporate tax rate show no signs of providing a further incentive. Morisset and Pirnia (1999) find little evidence that tax incentives matter, other than when factors such as human and physical infrastructure, transport costs, and political and economic stability are equal.

Interestingly, while low costs are found to attract FDI, the literature does not seem to point to them as the main reasons why FDI locates to one country over another. Geographic proximity, culture and language similarities, low labor costs, low environmental standards, and low tax rates have some effects. However, these do not seem to be the main determinants as to where FDI is directed.

Economic Factors As Determinants Of FDI

Macroeconomic variables are influential to FDI. In a 33-country panel from 1975-2000, Braga Nonnenberg and Cardoso de Mendonça (2005) estimate the main macroeconomic determinants of FDI inflows into developing countries as being the size and growth of the economy, the level of labor education, FDI-friendly policies, country risk, and stock market performance. Economic freedom and the level of GDP are found to be highly significantly positive to FDI, while debt service and inflation have negative effects (Bengoa and Sanchez-Robles, 2003, for Latin America), although the host country requires sufficient human capital, economic stability, and a liberalized market to benefit from FDI. The macroeconomic or socioeconomic environment is also shown to be important for different administrative regions within China to benefit from FDI (Hon, Poon and Woo, 2005).

In testing the hypothesis of the importance of macroeconomic variables on FDI, Singh and Jun (1999) find exports, especially manufacturing exports, to be a highly significant determinant of FDI. They use Granger causality tests to establish that the causality runs predominantly from exports to FDI. The research by Singh and Jun (1999) supports the trend of increasing complementarity between trade and FDI found in empirical research. According to Zhang and Felmingham (2001), the causation of exports and FDI in China, in high- and low-FDI-recipient regions, the causality is bidirectional, while exports cause FDI in the medium-FDI-receiving regions. Moreover, Liu, Burridge, and Sinclair (2002) find weak bidirectional causality between economic growth, FDI, and exports in China and state that their "results are consistent with previous findings that FDI takes place in China because growth and foreign trade prospects have made the country more attractive to foreign investors, reflected here in the causal link from growth, and exports to FDI... On the other hand, two-way causal links between these variables also imply FDI affects growth …" as found in previous literature (p. 1438). Growth and foreign trade prospects seem to be mutually reinforcing under an open-door policy. These three variables affect imports, but not the other way around. Liu, Wang, and Wei (2001) estimate that, for China, the growth of *imports* causes the growth of FDI (from the home-country), which causes the growth of exports. The growth of the latter causes the growth of imports. Aizenman and Noy (2006), also using Granger causality find that *trade openness* (exports and imports combined) leads to FDI by 31 percent and FDI leads to trade openness by 50 percent. Graham (2005) finds that *export processing zones* lead to increased FDI, especially relevant in an initial stage to establish confidence and credibility among investors. Thus, the literature points to bidirectional causality between exports and FDI. It seems likely that trade openness and the ability to export products and import raw materials would attract FDI and as part of FDI is outsourcing this would in turn increase exports.

Reduced trade costs seem to have increased FDI (Neary, 2006). Nevertheless, Singh and Jun (1999) find evidence of tariff-hopping, where FDI flows into countries with high-tariffs. In this case, FDI would avoid the trade costs by producing inside the country. As trade regions and trade ties are intended to lower trade barriers between member countries, such regions would be expected to reduce trade costs in order to increase trade. Thus, the effect of tariffs on FDI may either be a decrease or an increase. Hejazi and Pauly (2005) find that regional trade agreements (RTA) lead to intra- and inter- regional FDI, as also non-members increase FDI in the RTA (for NAFTA - see also Cole and Ensign, 2005). In Jaumott (2004), the size of the RTA market positively impacts FDI. Wei (2005) explains China's higher level of FDI partially by its stronger trade ties with OECD countries compared to India. According to Bende-Nabende (1999), a low level regional economic integration has lead to increased FDI among ASEAN-5 (Indonesia, Malaysia, Philippines, Singapore, and Thailand) economies, although only indirectly through increased regional stability. Moreover, the currency union has augmented FDI among the European Monetary Union (EMU) members, however, without decreasing it for EU countries outside the EMU (Aristotelous, 2005).

Not only openness to trade, but also financial openness is important in order to attract FDI. Moreover, financial stability and financial access are vital for FDI. Bertrand, Mucchielli, and Zitouna (2007) show that financial openness (measured as the share of stock held by foreign residents on the stock market) is statistically significant to M&A. In Braga Nonnenberg, and Cardoso de Mendonça (2005), friendly policies toward foreign capital are highly significantly positive to FDI and likewise for stock market performance. Jaumott (2004) finds that within a RTA, financial stability coupled with a relatively more educated labor force further attracts FDI to certain countries within a RTA.

Business practices, business conditions, characteristics of the host-country market, and especially the market size are critical in attracting FDI. According to Weinstein (1996), FDI into Japan is inhibited by the business and trade practices in Japan, such as government regulations restricting competition and labor-market barriers. Singh and Jun (1999) consider the business conditions in terms of the operation risk index, which assesses the general business climate, and find that a higher quality of the general business climate is statistically significant in increasing FDI. Characteristics of host-country markets, especially the market size, is critical to FDI, while economic freedom only shows high significance to FDI stocks in the 1990s (Zhang, 2005). Market size, measured as GDP, is highly significant in all samples, while GDP per capita (an indication of income) is highly significant only to the full-sample and developing countries, and the growth of GDP (a predictor of future market size and a measure of market dynamism) only shows occasional significance to these samples, while is insignificance to already developed countries. Market size (production) is statistically significant to FDI in Bertrand, Mucchielli, and Zitouna (2007) and in Braga Nonnenberg and Cardoso de Mendonça (2005). Hong and Chen (2001) similarly find that great market potential is the most important determinant of FDI into China. In comparing China to India, Wei (2005) explains China's higher levels of FDI by its larger domestic market. Jaumotte (2004) demonstrates the market size of RTA to have a stronger positive impact on FDI than the domestic market.

A country's infrastructure, such as roads, rails, communication, technology, as well as human capital affects production and FDI. High quality roads are highly significant to FDI into China for each of the countries, while the amount of rail is highly significant only for Japanese and South Korean FDI in China (Fung et al., 2006). In Rossotto, Sekkat, and Varoudakis (2005), better telecommunication sector performance is the second most important variable to FDI after market size, both in terms of the size and significance of the coefficient. Hong and Chen (2001) demonstrate that imports of new technology and equipment augment FDI in China.[1]

Human capital and skills are vital in attracting FDI. Human capital is statistically significant and one of the most important determinants of FDI, and its importance has increased over time (Noorbakhsh, Paloni and Youssef, 2001). They measure human capital alternatively as secondary school enrollment, the stocks of either the number of accumulated years of secondary schooling, or as secondary and tertiary education in the working-age population. The measures are generally significantly positive to FDI at the 1 percent level. Griffith (2005, p. 979) states:

> Firms from the more developed countries are still trying to remain competitive and increase profitability, and they are seeking inexpensive labor wherever it is found, but the tendency is toward a reduction in the demand for low-skilled labor and an increase in the demand for knowledge-based labor in production processes.

He questions whether Caribbean education is enough to attract knowledge-based FDI. Labor qualifications in terms of education raise FDI in Braga Nonnenberg and Cardoso de Mendonça (2005). The percentage of the population with secondary education is highly significantly positive to FDI in panels with fixed effects. In Globerman and Shapiro (2002), the education index, which combines adult literacy with primary, secondary, and tertiary enrollment ratios, has a large and highly significant effect on FDI inflows. Average schooling years in the population over age 15 is highly significant to FDI stock both in the domestic and the regional model in Jaumotte (2004). She states that within a RTA, those countries with a more educated labor force and a stable financial situation have benefited more from FDI than others.

Societal And Political Factors As Determinants Of FDI

Not only economic factors and economic stability, but also political stability and the legal system matter in determining FDI. According to Morisset and Pirnia (1999), taxes only matter after other factors such as political and economic stability, infrastructure, and transport costs are equal. Singh and Jun (1999) find that a qualitative index of political stability is a significantly positive determinant of FDI, and that sociopolitical instability negatively impact FDI flows. The coefficient on country risk is large and highly significantly negative to FDI in fixed-effects panels in Braga Nonnenberg and Cardoso de Mendonça (2005). Even though India receives less FDI than China, Wei (2005) finds that one of India's advantages is in its lower political risk. Nevertheless, Bennett and Green (1972) generally do not find political instability to be a

[1] Moreover, within Latin America, intellectual property rights increase FDI as well (Blyde and Acea, 2003)

determinant of U.S. FDI in marketing, except the hypothesis is accepted for Asian countries.

Globerman and Shapiro (2002) estimate different indices for government infrastructure, and show that the composite government infrastructure index (which includes rule of law, instability, regulatory burden, government effectiveness, corruption, and democracy, with a higher index indicating worse conditions), and separately the regulatory burden index (government intervention, trade policy, capital restrictions, etc.) are strongly negative and highly significant to FDI outflows from the U.S. to all countries and separately to developing countries.

Similarity of legal rules is favorable and highly significant to M&A (Bertrand, Mucchielli and Zitouna, 2007). Fung et al. (2006) show that policy and reform significantly induce FDI in China (state owned production has a negative influence). Rule of law, investment law, property rights and civil society all show statistical significance to FDI and the variations in institutions explain 20-30 percent of the variation in FDI across transition economies (Grogan and Moers, 2001). Investor protection improves FDI (Cyrus, İşcan and Starky, 2006; see also Gubitz, 1991). According to Gubitz (1991), easing investor restrictions (or providing modest incentives) are good strategies for developing countries to attract FDI. FDI is more likely to take place when there are lower local content requirement (Qui and Tao, 2001).

Thus, not only is FDI more likely to flow toward where the micro- and macroeconomic conditions are favorable, but also where there is low political risk, law and order rule, and the institutions reduce restrictions and the legal system protect FDI.

Methodology

In estimating the determinants of FDI, we use panel data, where the logarithm of average FDI over each decade between 1970 and 2000 is the dependent variable. Using decade averages smoothes business cycles' impact on FDI. We regress FDI on variables lagged by one decade prior (1960 to 1990), which diminishes causality problems, or alternatively include them contemporaneously. This gives a dynamic estimation of the variables effects on FDI across countries over time. The World Bank *World Development Indicators*, include hundreds of variables, and we initially included many variables that could possibly affect FDI (see Table 1). However, we then excluded those showing little statistical significance (or of limited data availability). Our main model includes those variables which showed signs of statistical significance to FDI:

$$(1)\quad \mathbf{\ln(FDI/GDP)_{it} = \alpha_0 + \alpha_1 \ln(GDP/capita)_{i(t-10)} + \alpha_2 (Exports/GDP)_{i(t-10)} + \alpha_3 e_{1i(t-10)} + \alpha_4 e_{3i(t-10)} + \alpha_5 (Trade/GDP)_{it} + \alpha_6 (Gov/GDP)_{it} + \varepsilon_{it}}$$

where ln(GDP/capita) is the natural logarithm of GDP per capita, Trade/GDP is openness to international trade measured as imports plus exports as a share of GDP, and Gov/GDP is government consumption exclusive of education expenditures as a share of GDP. The data is generally from the World Bank (2004) *World Development Indicators*, except as noted.[2] The education variables are gross enrollment rates (e_i) in primary and higher education (i=1,3).[3] Regressing them separately identifies their

[2] Political Rights are from Freedom House (2004), except the 1960s values are from Bollen (1990). The Rule of Law data is from Knack and Keefer (1998). Real GDP per capita and its growth rates are in constant 1995 $U.S. When CPI data is unavailable, the GDP deflator is used for that decade in calculating inflation rates. Political Rights and Rule of Law are transformed into scales of 0-1, where 1 indicate the most favorable conditions of democracy and law and order (as in Barro, 1997).

[3] Gross enrollment rates include all publicly or privately enrolled students, including those older than their age group, as a share the standard age group for that education stage. Some countries have primary enrollment rates exceeding 1 (or 100 percent), when students above the usual age group attend school. For enrollment rates, observations not available in WDI (2003) but in WDI (2001), are inserted from the latter.

individual effects on FDI. Enrollment rates in secondary education do not show any statistical significance to FDI and is therefore excluded in the main model presented.

This model specification is also applied to the sub-samples for Asia and East Asia to identify any differences between countries worldwide in attracting FDI inflows, and countries in Asia and East Asia.

We use an unbalanced data set, where missing observations cut out the relevant decade data for that country. Including various variables which are expected to affect FDI reduces problems of possible omitted variables. The education variables further impact other variables used as controls (see Keller, 2006a; 2006b).

TESTING FOR FIXED EFFECTS AND THE FIXED-EFFECTS MODEL

The assumption of a common constant between the world's countries as in the pooled least square (PLS) model may be too restrictive. It may also be restrictive for the Asian region, which includes varied regions such as East Asia, South East Asia, South Central Asia, and sections of the Middle East. This model may even be restrictive for the East Asian economies. The presence of fixed effects is tested and if found indicate that the unrestricted fixed-effect model, where each country has its own intercept, is more efficient. The following F-test examines the null hypothesis that the constant is equal for all countries within the sample (Greene, 1997, pp. 617-18):

$$(2)\quad F_{(n-1,nT-n-K)} = [(R_f^2-R_p^2)/(n-1)]/[(1-R_f^2)/(nT-n-K)]$$

where subscript f indicates the fixed-effects model, with a dummy variable for each country, rather than a common intercept. The subscript p signifies the PLS model. The test is applied to each sample and regression.

This F-test rejects a common intercept for all regressions presented. The PLS model provides consistent and unbiased estimates, however, as the null hypothesis of a common constant is rejected, the fixed-effects model is also efficient.

The regression equation for the fixed-effects model is:

$$(3)\quad \mathbf{ln(FDI)_{it}} = \mathbf{i}\boldsymbol{\alpha}_i + \boldsymbol{\alpha}_1\mathbf{ln(GDP/capita)}_{i(t-10)} + \boldsymbol{\alpha}_2\mathbf{(Exports/GDP)}_{i(t-10)} + \boldsymbol{\alpha}_3\mathbf{e}_{\mathbf{1}i(t-10)} + \boldsymbol{\alpha}_4\mathbf{e}_{\mathbf{3}i(t-10)} + \boldsymbol{\alpha}_5\mathbf{(Trade/GDP)}_{it} + \boldsymbol{\alpha}_6\mathbf{(Gov/GDP)}_{it} + \boldsymbol{\varepsilon}_{it}$$

where $i\alpha_i$ is a matrix of country dummies (bold font symbolizes vectors). The country dummy accounts for any enduring country-specific factors not included, such as culture, geography and history. By controlling for GDP per capita, these fixed effects are unexplained nonmarket effects.

Table 1
List of Variables Tested

• Investment • Risk • Trade (exports & imports of goods & services) • Exports • Imports • Manufacturing • Wages • Labor force • Primary, secondary & tertiary enrollment rates • Household consumption • Import vs. export duties • Royalty & license fees • Information & communication technology • Research & development .(researchers vs. technicians) • Taxes • Roads, goods transported • Railroad, goods transported	• Air transport, freight • Electricity production • Imports of fuel • Price of diesel fuel International tourism • Unemployment • CO2 emissions • GDP per capita • GDP per capita growth • Inflation rate (from Consumer Price Index or if unavailable GDP deflator) • Real interest rate • Government consumption • Official exchange rates • Real exchange rates • Terms of trade adjustment • Political rights • Law and order • Life expectancy (health) • Fertility Rates

One disadvantage with using fixed effects is that it reduces the cross-country differences, which are the strength of cross-country data, and instead focuses on the time-series variations (Barro, 1997). For example, in Braga Nonnenberg and Cardoso de Mendonça (2005), both models with a common constant and with fixed effects are presented, and we follow their example.

RESULTS OF PANEL REGRESSIONS

Determinants Of Fdi Worldwide

As can be seen in Table 2, the most important determinants of FDI worldwide are the openness to trade (exports and imports), as well as enrollment rates in primary and higher education. Openness and tertiary enrollment rates are statistically significant at the 1-percent level. Enrollment rates in primary education are significant at the 10-percent level, although with a 0.0521 probability it is close to the 5-percent level of significance. Exports are not significant at standard levels, however, are not far from the 10-percent level. This model with a common constant for countries worldwide explains 31 percent of variation in FDI inflows.

In a fixed-effects model with individual constants for each country, the explanatory power increases to 58 percent. It is natural that allowing for differences in the unexplained effects for each country would increase the adjusted R-squared. In this model, openness and enrollment in higher education are significant at the 1-percent level. Government spending only shows significance at the 20-percent level, which is not significant at standard levels. Hence, it seems that the individual constants of country-specific factors are related to primary enrollment, insinuating that perhaps schooling enhances those factors that provide for differences between countries in attracting FDI.

In both the common constant and fixed-effects models, the largest coefficients worldwide are those of enrollment in higher education. The countries receiving the most FDI inflows are those already developed, such as Europe and the U.S., mainly because they are attractive as large wealthy markets with highly educated workforces.

Table 2
Determinants of FDI Worldwide

Dependent Variable: FDI Countries: 126; Total observations: 280		
	PLS	**Fixed Effects**
Variable	**Coefficient**	**Coefficient**
GDP per Capita	0.0011 [0.018]	-0.212 [0.539]
Exports/GDP	0.326 [1.521]’	-0.074 [0.189]
Primary Education Enrollment Rates	0.617 [1.951]*	0.555 [0.905]
Higher Education Enrollment Rates	2.392 [3.623]***	7.831 [4.273]***
Trade (Exports & Imports)/GDP	1.229 [4.382]***	3.035 [4.039]***
Government Expenditures (excluding education)	1.446 [0.886]	4.69 [1.490]’
F-statistic	*22.083****	*3.966****
Adjusted R-squared	*0.312*	*0.582*

Note: the absolute value of t-statistics in brackets. ***, **, *, and ‘ denote statistical significance at the 1-, 5-, 10-, and 20-percent levels, respectively. Regressed with a common constant, not reported. Fixed effects not reported. White's heteroskedasticity-consistent covariance matrix is used.

DETERMINANTS OF FDI IN ASIA

When the sample is limited to Asian nations, which still include a wide range of countries from East Asia to the Middle East, we find that the explanatory power of the regressions increases. These variables explain 48 percent of the variation in FDI among Asian countries for the regression with a common constant (Table 3). In this regression, trade is highly significant: openness to trade is significant at the 1-percent level, and exports are significant at the 5-percent level. Enrollment rates in primary school are statistically significant at the 10-percent level. Here, individual wealth matters also – the higher the GDP per capita, the lower the inward FDI flows. This is then a sign of FDI inflows into Asia going to countries with lower per capita income such as India and China, where the average wage is lower, rather than entering markets with wealthy individuals, like Japan.

The fixed-effect model for Asia explains 68 percent of the variation of FDI inflows into Asia. When country-specific reasons for attracting FDI is allowed, enrollment rates in higher education are highly significant at the 5-percent level, and exports are statistically significant at the 10-percent level. Again, it seems that the fixed effects are related to primary education, yet there are still benefits displayed in higher tertiary enrollment rates in attracting FDI to a country. Foreign enterprises often need the expertise, language skills, etc. of local managers to run their operations.

Table 3
Determinants of FDI in Asia

Dependent Variable: FDI Countries: 31; Total observations: 61		
	PLS	**Fixed Effects**
Variable	**Coefficient**	**Coefficient**
GDP per Capita	-0.225 [1.981]*	-0.332 [0.531]
Exports/GDP	0.807 [2.426]**	1.013 [1.977]*
Primary Education Enrollment Rates	1.533 [1.743]*	1.797 [0.706]
Higher Education Enrollment Rates	1.661 [1.089]	7.043 [2.311]**
Trade (Exports & Imports)/GDP	1.308 [3.275]***	0.901 [1.306]
Government Expenditures (excluding education)	1.073 [0.591]	0.242 [0.063]
F-statistic	*10.216***	*4.587****
Adjusted R-squared	*0.480*	*0.683*

Note: the absolute value of t-statistics in brackets. ***, **, *, and ‘ denote statistical significance at the 1-, 5-, 10-, and 20-percent levels, respectively. Regressed with a common constant, not reported. Fixed effects not reported. White's heteroskedasticity-consistent covariance matrix is used.

DETERMINANTS OF FDI IN EAST ASIA

We further limit the Asian sample to the East Asian countries which have seen more development and growth compared to the others, even though affected adversely by the Asian crises of 1997. Over the time period of 1970-2000, the main reasons for some of these countries attracting more FDI than the others are high levels of openness to trade and more government expenditures. The coefficient on the government expenditure variable is the largest. The trade and government consumption variables are both significant at the 1-percent level. Primary school enrollment and exports are also both statistically significant at the 10-percent level. Average per-capita income is negatively related to FDI, although is statistically insignificant. The variables in the model with a common constant explain 77 percent of the variation of FDI among East Asian economies.

The model with individual-country effects explains a full 96 percent of the variation of FDI inflows into East Asian economies. Interestingly, the East Asian countries attracting higher levels of FDI than their peers are those with higher enrollment rates in primary and higher education, the former significant at the 1-percent level and the latter at the 5-percent level. Exports are statistically significant at the 10-percent level.

Table 4
Determinants of FDI in East Asia

Dependent Variable: FDI Countries: 8; Total observations: 20		
	PLS	**Fixed Effects**
Variable	**Coefficient**	**Coefficient**
GDP per Capita	-0.108 [0.806]	-0.424 [0.742]
Exports/GDP	0.643 [1.882]*	0.878 [2.872]**
Primary Education Enrollment Rates	3.77 [1.920]*	6.547 [5.764]***
Higher Education Enrollment Rates	1.065 [0.461]	5.673 [2.619]**
Trade (Exports & Imports)/GDP	1.52 [3.951]***	0.599 [1.412]
Government Expenditures (excluding education)	27.164 [3.359]***	12.395 [1.335]
F-statistic	11.40032***	35.434***
Adjusted R-squared	0.76659	0.959

Note: the absolute value of t-statistics in brackets. ***, **, *, and ‘ denote statistical significance at the 1-, 5-, 10-, and 20-percent levels, respectively. Regressed with a common constant, not reported. Fixed effects not reported. White's heteroskedasticity-consistent covariance matrix is used.

Conclusion

In finding what attracts FDI to certain countries, especially in Asia, this paper estimates the determinants of FDI using panel data over time worldwide, as well as for the sub-samples of Asian and East Asian countries. The variables found to be statistically of the highest significance explain more of the variations in Asian and East Asian FDI, up to 77 percent for the latter group, for the most standard regression model.

In the worldwide sample, the most highly significant variables explaining FDI inflows are openness to trade and enrollment rates in primary and higher education. Foreign enterprises are likely to prefer workers with some basic schooling, as well as employing managers with higher education.

Among the Asian nations, the variables indicating the highest statistical significance are openness to trade, as well as exports separately, and primary and tertiary enrollment rates.

Between East Asian economies, again openness to trade, exports and enrollment rates in primary school and higher education display high statistical significance. Additionally, the host country government spending on the economy is highly significant to FDI inflows. The East Asian countries that have shown the most development are those where the governments have taken active roles within the market. That strategy seems to also have been beneficial to FDI inflows into those economies. These variables (including also the average per-capita GDP which is statistically insignificant for the East Asian sample) explain at least 77 percent of the variation in FDI inflows.

These results confirm previous findings that FDI occurs in China because growth and foreign trade prospects have made the country more attractive to foreign investors, as reflected in the causal link from growth and exports to FDI (Liu, 2002). The culmination of this research confirms previous literature linking statistically the relationship between FDI and China’s export skill (Adams, 2004).

Export processing zones have been found to be beneficial and lead to increased FDI, especially important in an initial stage to instill investor confidence (Graham, 2005). It would be interesting for further research to establish if there is a certain amount of openness or exports needed for investors to be ascertained that investing in the country is a good idea and that they will not have any trouble exporting their products, or importing resources needed for production.

This research points to the conclusion that FDI needs its employees to have some amount of basic schooling, and local managers to have higher education. More high-tech production needing perhaps a more technologically savvy workforce with a high-school education may stay in the home-country. However, such education is still important for countries to experience economic growth even if not from FDI, as shown elsewhere both worldwide and in Asia (Keller 2006a; 2006b).

Our research indicates that openness to trade and education are the variables that are of the highest statistically significance to FDI in the following decade. Thus, for policy-makers wanting to attract FDI, these are two areas to further expand. Not only do they promote FDI, which increases economic growth of the country, but they also increase growth directly as shown worldwide and for Asia (Keller, 2006a, and 2006b).

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A CORRELATION ANALYSIS OF PRICE OF CORN AND PRICE OF GASOLINE

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ABSTRACT

Corn price has risen dramatically in recent years because of its usage as a source for bio-renewable fuel. Ethanol is derived from corn and is an alternative substitute for gasoline. As gasoline price rise, ethanol becomes more economically viable, raising the demand for corn.

This paper examines the relationship between corn and gasoline price with statistical analysis of corn futures price and gasoline futures prices. Regressions are performed on daily price changes for both commodities. It is found that corn price is only indirectly correlated with gasoline prices and that the removal of ethanol subsidy might cause gasoline price to rise about 12 cents per gallon.

INTRODUCTION

According to Wikepedia, "almost half of Brazilian cars are able to use 100% ethanol as fuel, which includes ethanol-only engines and flex-fuel engines. Flex-fuel engines are able to work with all ethanol, all gasoline, or any mixture of both. Brazil supports this population of ethanol-burning automobiles with large national infrastructure that produces ethanol from domestically grown sugar cane. Sugar cane not only has a greater concentration of sucrose than corn (by about 30%), but is also much easier to extract. The bagasse generated by the process is not wasted, but is utilized in power plants as a surprisingly efficient fuel to produce electricity.

World production of ethanol in 2006 was 51 billion liters, (13.5 billion gallons), with 69% of the world supply coming from Brazil and the United States.[

The United States fuel ethanol industry is based largely on maize. According to the Renewable Fuels Association, as of November 2006, 107 grain ethanol biorefineries in the United States have the capacity to produce 5.1 billion gallons of ethanol per year. An additional 56 construction projects underway (in the U.S.) can add 3.8 billion gallons of new capacity in the next 18 months. Over time, it is believed that a material portion of the ~150 billion gallon per year market for gasoline will begin to be replaced with fuel ethanol.

The Energy Policy Act of 2005 requires that 4 billion gallons of "renewable fuel" be used in 2006 and this requirement will grow to a yearly production of 7.5 billion gallons by 2012.

In the United States, ethanol is most commonly blended with gasoline as a 10% ethanol blend nicknamed "gasohol". This blend is widely sold throughout the U.S. Midwest, and in cities required by the 1990 Clean Air Act to oxygenate their gasoline during the winter.

As reported in "The Energy Balance of Corn Ethanol: an Update," the energy returned on energy invested EROEI for ethanol made from corn in the U.S. is 1.34 (it yields 34% more energy than it takes to produce it). Input energy includes natural gas based fertilizers, farm equipment, transformation from corn or other materials, and transportation. However, other researchers report that the production of ethanol consumes more energy than it yields.

Lately criticism and controversy has been growing over the massive subsidies that some companies have been receiving for ethanol production, including "the bulk of the more than $10 billion in subsidies to Archer-Daniels-Midland since 1980," according to the CATO institute. Recent articles have also blamed subsidized ethanol production for the nearly 200% increase in milk prices since 2004, although that is disputed by some.

Oil has historically had a much higher EROEI than agriculturally produced ethanol, especially from petroleum deposits accessible by land, but also from those that only offshore drilling rigs can reach. Apart from this, the amount of ethanol needed to run the United States, for example, is greater than its own farmland could produce, even if fields now used for food were converted for production of non-food-grade corn. It has been estimated that "if every bushel of U.S. corn, wheat, rice and soybean were used to produce ethanol, it would only cover about 4% of U.S. energy needs on a net basis."

In the United States, preferential regulatory and tax treatment of ethanol automotive fuels introduces complexities beyond its energy economics alone. North American automakers have in 2006 and 2007 promoted a blend of 85% ethanol and 15% gasoline, marketed as E85, and their flex-fuel vehicles, *e.g.* GM's "Live Green, Go Yellow" campaign. The apparent motivation is the nature of U.S. Corporate Average Fuel Economy (CAFE) standards, which give an effective 54% fuel efficiency bonus to vehicles capable of running on 85% alcohol blends over vehicles not adapted to run on 85% alcohol blends."

Hurt, Tyner, and Doering (2006) estimated that a gallon of ethanol will only do about 70% of the work of a gallon of gasoline. Therefore, the energy value of ethanol should be about 70% of the wholesale price of gasoline.

Subsidy on Ethanol

According to the March 2007 issue of Taxpayers for Common Sense titled "Ethanol Subsidies: Too Much for Too Little", "corn is a very inefficient source of ethanol. Reasons given are as follows:

- Various tax credits and incentives for ethanol will cost taxpayers an estimated \$6.3–\$8.7 billion dollars annually between 2006 and 2012 .This cost is due largely to a federal 51-cent-per gallon excise tax credit that refiners receive for meeting the federal Renewable Fuels Standard (RFS) mandate.
- Imported ethanol is largely prevented from entering the U.S. thanks to a 54-cent-per-gallon tariff. Two Iowa State University economists estimate that if this import tariff were removed, domestic ethanol prices would drop by about 18 percent.
- Corporate agricultural industry giants Archer Daniels Midland, Ethanol Products, and the Renewable Products Marketing Group control two-thirds of all ethanol production; more than 90 percent of all ethanol is controlled by just eight firms.
- U.S. ethanol from corn costs \$1.05 per gallon to produce, while Brazilian ethanol from sugar cane costs 81 cents per gallon to produce. U.S. ethanol production from corn, per acre, yields about 400 gallons; Brazilian ethanol production from sugarcane, per acre, yields about 590 gallons.
- Ethanol cannot replace current gasoline consumption. As a Princeton economist points out, even if we met the President's goal of 60 billion gallons of ethanol by 2030 that would merely put a dent in the projected increase in fuel consumption between now and then doing nothing to decrease our dependence on oil.
- University of Minnesota researchers estimate that converting the entire U.S. corn crop into ethanol would reduce fossil fuel use by only 2.4 percent. Meanwhile, this would increase the cost of feedstocks for poultry, beef, and pork."

Elobeid and Tokgoz (2006) estimated that the removal of trade distortions and 51¢ per gallon tax credit to refiners blending ethanol will induce a 16.5 percent increase in the world ethanol price.

STATISTICAL ANALYSIS

Using monthly data 2000-2006 from EIA/DOE, Hurt, Tyner, and Doering (2006) estimated that the relationship between crude oil price and gasoline price to be:

Wholesale gasoline price (\$/gal.) = 0.3064 + 0.03038 *crude oil price (\$/bbl.)

They found that the results are remarkably stable across various periods. Now that ethanol is used as a component for gasoline, gasoline price might be affected by corn price. To analyze the correlation between gasoline price and corn price, a regression of gasoline price on crude and corn prices is performed in this paper. Crude Oil, gasoline, and corn futures are traded on a daily basis and thus daily prices for these commodities can be obtained readily. Gasoline and ethanol may be viewed as final products, whereas crude oil and corn may be viewed as intermediate or raw products. Since it might take a few weeks for refineries to refine crude oil into gasoline and also a time period for distillers to transform corn into ethanol, it make sense to use December futures for crude and corn, and January futures for gasoline and ethanol. The one month difference in contract expiration provides a more accurate pricing correspondence between the intermediate products and the final products. Specifically, the data used for statistical analysis are daily closing prices for December 2007 Corn futures, December 2007 Crude oil, January 2008 Gasoline, and January 2008 Ethanol.

Given that gasoline in the U.S. comprise about 10% ethanol, which in turn is derived from corn. It makes sense to specify a linear regression for unleaded gasoline as a function of crude oil price and corn price.

The price of gasoline is affected by both cost and demand. The regression functions in this paper may be considered as cost functions since gasoline prices are specified as function of price of inputs, including crude oil and ethanol. Since ethanol is derived from corn, one might specify gasoline price as function of crude oil and corn:

UNLEAD= a + b1 * OIL + b2*CORN (1)

UNLEAD= .1477 +
.0255 * OIL + -.00024*CORN
(35.35) (-1.45)
R-squared = .910253

Based on the t-statistics, the coefficient for corn price in (1) is not statistically significant. This might be due to the fact the statistical link between corn and gasoline is weaker than that between ethanol and gasoline. Thus, an alternative regression where ethanol is used as the independent variable instead of corn is performed.

UNLEAD= -.543 +.028*OIL + .23*ETHAN (2)
(48.06) (7.51)
R-squared = .929494

Based on the estimated coefficient for oil in Equation 2, an increase of one dollar per barrel of crude oil would lead to about 2.83 cents per gallon.

Note that the coefficient for ethanol is statistically significant. His suggests that the statistical link between ethanol and gasoline is much more direct than that between corn and gasoline. The coefficient for Ethanol is .23, which means that a one dollar per gallon increase in the price of ethanol would lead to an increase in the price of gasoline per gallon by about 23 cents.

If the 51 cents subsidy (tax credit) for domestic ethanol refiners is removed, then this could cause gasoline price rise by about 12 cents per gallon, which is derived by multiplying the coefficient for ETHAN by .51. (.51 x .230762). However, if a totally free market were to hold for ethanol, not only the subsidy needs to be removed, but also the tariff on ethanol imports needs to be removed as well. The removal of tariff on ethanol will reduce the ethanol price, which should partially offset the price increase caused by the removal of the subsidy for domestic refiners.

To estimate the effect of corn price changes on the price of ethanol, ethanol price is regressed as function of corn prices:

ETHAN = .961924 + .00218475*CORN (3)
(7.80)
R-squared = .235288

The product of the coefficient for ethanol (.230762) in Equation 2 and that of the coefficient for corn in Equation 3 (.00218475) is .050416, which means that a one dollar per bushel increase in the price of corn would lead to about 5 cents increase per gallon in the cost of gasoline. If corn were to be utilized even more in the future for making ethanol, then the demand for corn will rise, causing the price of corn to rise correspondingly, which in turn will make corn less economically attractive as an alternative source for biofuel. However, if crude oil price continues to increase, corn might still remain an attractive intermediate product for the manufacturing of gasoline.

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Ethanol

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IS THERE A RELATIONSHIP BETWEEN CORRUPTION AND JOB CREATION IN RESOURCE RICH OIL AND GAS DEVELOPING COUNTRIES?

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ABSTRACT

Though the relationship between corruption and development has attracted increased research attention in the last 5 years, past research has not segmented developing countries in a unique manner in examining this relationship. Using data from the Economic Intelligence Unit, Transparency International and the Heritage Foundation, this paper examines the relationship between corruption and employment growth in oil rich developing countries between the 1999 and 2006 time period. The period was selected as it represents an era of high oil and gas prices and in theory, an enhanced ability to create jobs. The paper will deepen our understanding of the impact of corruption on employment in emerging resource rich countries.

INTRODUCTION

Economies are hard pressed to create good jobs at a reasonable clip, if their resources are sub-optimally utilized. Since corruption creates inefficiencies, there should be a direct relationship between job creation and the incidence of corruption. Corruption is however but one force impacting job creation. The openness of an economy also impacts its ability to create jobs. If it is true, that the more institutionalized corruption is in an economy, the less open it becomes, it means that ceteris paribus, the more corrupt a country is, the less competitive it becomes, and the more constrained its ability to create jobs becomes.

The relationship between natural resources and slow economic growth in emerging economies has been well demonstrated (Sachs and Warner, 1995, Gylfason, 2001). Likewise the negative correlation between slow economic growth and job creation has been well documented. This finding is counter to classic economic theory which holds that ceteris paribus, the more abundant the supply of natural resources in a country, the better for the country's economy. It is a fact that today, aside from the United States, the rich countries and the emerging economies do not possess an abundant stock of natural resources.

Most economists agree that a plausible reason for the seeming contradiction is that, other important job creating factors tend to be crowded out in countries with abundant natural resources. Gylfason (2001) for instance, points to a dearth of investment in human capital, Sachs and Warner (2001) argue that natural resources tends to crowd out manufacturing, while Kronenberg (2004) contends that natural resource rich countries are plagued by rent seeking behavior and widespread corruption that negatively affects their economic performance.

Empirical work on the relationship between corruption, economic openness and jobs in oil and gas rich emerging countries has been limited. This paper analyses this relationship, using corruption estimates from Transparency International, measures of economic openness from Heritage Foundation and employment data from Economic Intelligence Unit.

We opted to study employment growth in the period between 1999 and 2006 as this represents a period of significantly increased earnings for oil and gas endowed countries. The countries studied were selected, based on the fact that sales from crude oil represent a majority of their earnings and also because of the existence of reliable data. This meant that a lack of consistent data led to the exclusion of interesting countries such as Nigeria, Iran, Iraq, Kuwait and Angola from the study. To control for the level of development in the selected countries, we included Norway, a developed country, endowed with huge oil and gas deposits, in the regression equation. We reason that everything being equal, given the significant increase during the period under review, the selected countries should demonstrate significant gains in employment.

Section 2 of this paper provides a brief overview of the literature on corruption and economic openness and how they may affect job creation. The next section describes the data methodology used in the regression analysis. In section 4, we discuss the regression results and present concluding remarks in section 5.

WHAT IS CORRUPTION?

The conceptualization of corruption in this paper includes all of it economic forms, public and private. Public sector corruption, includes activities such as the blatant use of public money for private gain such as trade mispricing where public contracts are over-invoiced for private gain and the payment of bribes to a public official to gain undue advantage such as evading taxes, winning a competitive contract, winning a tender offer, winning a privatization bid, or winning access to a license to exploit natural resources. Private sector corruption includes, over-invoicing of import transactions as a tool for facilitating transfer payments, evading taxes or to conceal illegal payments, under-invoicing of import prices to reduce import duties, to avoid paying taxes or to foster capital flight (de Boyrie, Pak and Zdanowicz, 2004).

Though corruption is an age old problem (Bardham, 1997), there are divergent views on how it has impacted national economies. Some researchers (Leff, 1964, Huntington, 1968, Lui, 1985, Lien, 1986) have argued that corruption has an efficiency effect in developing countries where bureaucracies tend to distort efficient economic activities and to hinder entrepreneurial behavior as practiced in western market economies. In essence, these researchers argue that corruption should have a positive effect on economic growth and employment. A second group (Rose-Ackerman, 1978, Shleifer and Vishny, 1993) contends that the impact of corruption depends on the nature of government. That corruption hinders growth in countries where power is decentralized but not in countries where power is centralized. Shleifer and Vishny (1993) use this argument in contending that the increase in corruption in Russia post the communist Soviet Union was due to the ensuing decentralization of corruption. A third group, argue that corruption impact negatively on static efficiency, investment and growth (Romer, 1994, Mauro, 1995, Tanzi, 1998, Leite and Weidman, 1999).

METHODOLOGY

Data Sources

The unit of analysis for the study was an oil and gas producing country, with a country defined as a distinct autonomous entity, able to take independent decisions on the structure of its internal institutional environment and its domestic economic, social and political policies. Longitudinal data was collected for the period between 1999 and 2006 from the websites of Transparency International, Economist Intelligence Unit and Heritage Foundation. Data was collected for the following countries: Algeria, Kazakhstan, Mexico, Norway, Russia and Venezuela.

Dependent Variable

The dependent variable for the study was employment growth. Data for the variable was collected from the Economist Intelligence Unit for the period between 1999 and 2006 and indicates yearly changes in job creation. Analysis was done by pooling the individual country data. Countries are presumed to constitute relatively homogenous economic/political entities, thus they are the logical units within which to identify variations in the independent variable, and to assess the impact of these variations on job creation.

Independent Variables

Nine indicators of a country's ability to create jobs were identified from the Heritage Foundation's Index of Openness, Transparency International's Corruption Perceptions Index (CPI) and the Economist Intelligence Unit Country Reports database. These indicators include variables measuring economic freedom, corruption and economic growth. As the extent of a country's economic openness, level of corruption and rate of economic growth is expected to affect job creation, each measure is expected to correlate with employment growth.

Retroactively analyzing the effect of economic openness, corruption and economic growth on employment growth in selected natural resource rich countries, will help in understanding how these countries in general can leverage their natural resource wealth to create jobs. From this understanding comes different theoretical, empirical and policy making attributes, which will inform future theoretical, empirical and policy making activities.

- The measurement of each of the nine variables is briefly described below.
- Business Freedom: "The ability to create, operate and close an enterprise quickly and easily."
- Trade Freedom: "A composite measure of the absence of tariff and non-tariff barriers that affect imports and exports of goods and services."
- Monetary Freedom: "Combines a measure of price stability with an assessment of price controls."
- Freedom from Government: "Includes all government expenditures, including consumption and transfers."
- Fiscal Freedom: "A measure of the burden of government from the revenue side. The measure includes both tax burden and the overall amount of tax revenues as a proportion of GDP."
- Property Rights: "An assessment of the ability of individuals to accumulate private property secured by clear laws that are enforced by the state."
- Investment Freedom: "An assessment of the free flow of capital especially foreign investment."
- Financial Freedom: "A measure of banking security as well as independence from government control."
- Gross Domestic product Per Capita: GDP in US$ per capita at current prices and exchange rates

(Source: Heritage Foundation 2007)

STATISTICAL ANALYSIS

Our data consisted of 10 variables collected on 6 countries during 9 years for a total of 540 observations. Our data is referred to in the econometric literature as panel data or longitudinal data. Since a couple of observations were missing our data is by necessity referred to as an unbalanced panel.

Our interest in this study is on the impact that corruption has in general on the ability of countries to generate employment. This of course meant that employment growth (empgrwt) will be our dependent variable. The independent variables comprising our data set were named as follows:

Gdpch = percentage change in GDP

Corrupt = corruption index

Regul = freedom from regulation index (business freedom)

Trade = trade freedom

Fiscal = a measure of the burden of government from the tax revenue side.

Govinterv = a measure of the degree of freedom from government.

Monpolcy = a measure of price stability and absence of price controls.

Invest = a measure of investment freedom – how freely capital can flow.

Finance = a measure of financial freedom: banking security and freedom from
banking regulation

According to economic theory, the creation of jobs is of course primarily a function of the growth of gross domestic product (GDP) – the more output the economy generates the more manpower it needs. We see corruption then as a force in itself which reduces the effectiveness of GDP for it siphons funds from GDP which would otherwise be employed productively.

Any attempt to measure the effect of corruption has to be done directly and not via its effect on GDP. We thus posit the following estimating equation:

$$\text{Empgrwt}_{i,t} = \alpha + \beta_1(gdpch)_{i,t} + \beta_2(corrupt)_{i,t} + \beta_3(regul)_{i,t} + \beta_4(trade)_{i,t} + \ldots + \beta_9(finance)_{i,t} + \upsilon_i + \varepsilon_{i,t}$$

'i' refers to country i and 't' refers to year t.

The term υ_i corresponds to the country specific term that would define a different intercept equation for country i. The term ε_i on the other hand represents an assumed standard normally distributed error term with expected zero mean and standard deviation equal to 1.

A fixed effects estimator was used to estimate equation 1. Our fixed effects estimator was by necessity a country-fixed effects estimator. This is so because our 9 independent variables are variables which are likely to differ across countries but which will change little over the 9 years studied by our data. More precisely, a country's level of corruption, level of trade freedom, fiscal freedom, monetary freedom, etc., are country characteristics which are more likely to stay constant over the period studied but which can easily differ among the countries studied.

The theory of fixed effects, of course, assumes more than that. It also assumes that country-specific variables relevant in explaining employment but not appearing in our data, such as a country's share of the oil market, a country's view of women's role in the marketplace, etc. will remain constant over the time studied.

INITIAL RESULTS

Table 1 shows the results of estimating equation. The signs on most of the coefficients are as would be expected from economic theory, though their level of statistical significance is disappointing. The only significant effects are those for monetary freedom and for investment freedom. The coefficient on corruption not only has the wrong sign it is also statistically insignificant.

Table 1
Summary of Initial Regression Results

Empgrwt	Coeff.	t-statistic	p>| t |
Gdpch	0.196	1.56	0.127
Corrupt	-0.045	-0.81	0.425
Regul	-0.035	-0.94	0.355
Trade	-0.069	0.88	0.382
Fiscal	-0.134	-0.92	0.366
Govinterv.	-0.028	0.34	0.738
Monpolcy	0.171	3.52	0.001
Invest	0.080	1.86	0.071
Finance	0.027	0.68	0.502

BETTER RESULTS

The most likely cause of the poor performance of our initial results is the high degree of collinearity of our independent variables. Most of the freedom indexes used have lots in common and rob each other of significance when trying to explain employment growth. A decision was made to drop the worst performers from our initial equation – namely: trade, govinterv, and finance. We also decided to model corruption separately rather than use it directly in our estimating equation. This forced us to use an instrumental variable approach for corruption in hopes of detecting its indirect effect on the creation of employment for each country. The two equation model that resulted from this approach necessitated the use of a two-stage least squares estimating procedure. The model that resulted looked as follows:

$$Empgrwt = \alpha + \beta_1(gdpch)_{i,t} + \beta_2(monpolcy)_{i,t} + \beta_3(invest)_{i,t} + \beta_4(Corrupt)_{i,t} + \upsilon_i + \varepsilon_{i,t}$$

$$Corrupt_{i,t} = \delta + \gamma_1(regul)_{i,t} + \gamma_2(monpolcy)_{i,t} + \mu_{i,t}$$

Table 2
Summary of Better Regression Results

Empgrwt	Coeff.	Z	p>| t |
Corrupt	0.126	0.82	0.410
Gdpch	0.188	1.75	0.080
Monpolcy	0.131	3.17	0.002
Invest	0.090	2.25	0.025

ANALYSIS OF THE RESULTS

All coefficients including the one on corruption not only have the correct sign, they are all statistically significant but for the exception of the coefficient on our instrumented index of corruption. The latter being significant only at the 59% level of significance.

CONCLUSION

There is little doubt that economic openness has an impact on job creation among the group of oil and gas producing countries studied. Consistent with the rent seeking literature, the results demonstrated the expected relationship between corruption and employment creation. However, the relationship was not statistically significant. This may be because of the static nature of the incidence of corruption in these countries and the possibility that corruption perceptions tend to change slowly. Another possibility could be low data quality since data could not be found for many of the oil and gas endowed countries. However, it is impossible to ascertain what the results would have been had good quality data been available on all oil and gas dominated economies. As such, the rent seeking literature's presumption that a positive relationship exists between corruption and job creation is weakly supported.

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EXECUTION, THE SECRET TO GREAT PERFORMANCE

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ABSTRACT

The difference between average companies and great ones is their ability to execute. Failure to execute is listed as the primary reason that CEOs fail. Execution starts with plans that have specific, clearly articulated goals and assigned responsibility. But wishes become execution only when individuals are held accountable for measurable achievement. Financial and non-financial measures that impact performance should be measured frequently and prompt corrective action taken when goals are not being met. Some companies develop a culture in which failing to meet goals is the norm. This can be changed by successfully completing short interval projects and eliminating managers who can't, or won't meet goals. Selecting the right people and grooming them with training and field experience is critical to developing a culture of execution. CEOs who execute well are hungry for details and have frequent contacts with workers and customers in addition to scrutinizing performance measures.

INTRODUCTION

The difference between average companies and great ones is execution. A company that expects and demands great execution year after year will get it. A company that only demands great execution sporadically or not at all will not get great execution (Stewart and O'Brien, 2005).

Knowing what must be done; and having equations to model it, is far different from executing a plan. Execution is where most companies fail. A Harvard study indicated that large companies achieve only 63% of their plan goals every year and a third of companies achieve less than 50% of plan (Mankins and Steele, 2005). An AMA study of CEOs indicated only 3% believed their companies were very successful at executing strategy and 62% indicated their ability to execute was moderate or worse (AMA/HRI, 2007). In another survey, companies estimated that 60% of planned productivity gains were lost due to failure to execute (Neiman and Thomson, 2004). Lack of execution is a substantial factor in 70% of CEO failure (Charan and Colvin, 1999).

EXECUTION SHORTFALLS

Why does execution fall short so often? Table 1 Reasons for Execution Failure lists the eleven most widely cited reasons that execution falls short of plans in a study of companies with sales over $500 million (Mankins and Steele, 2005).

Table 1 Reasons for Execution Failure

Reason	Percent
Inadequate or unavailable resources	20.3%
Poorly communicated strategy	14.1%
Action plan not clear	12.2%
No accountability	11.1%
Organizational silos and cultural failure	10.0%
Inadequate performance monitoring	8.1%
Inadequate consequences for failure	8.1%
Poor senior leadership	7.0%
Uncommitted leadership	5.1%
Unproven or inadequate strategy	1.9%
Other, including inadequate skills	2.1%
	100.0%

A company will never have enough resources to do everything, so one factor in good execution is how well a company matches plans and limited resources. This and other reasons for failure are avoidable and can be overcome with discipline and strong leadership. For example, one study found less than 15% of companies routinely compare actual results to strategic plans (Mankins and Steele, 2005). Unless a company systematically analyzes variances from plan, it is difficult to tell whether the plans were unrealistic, or whether execution was poor. There can be no accountability without measurement.

Many factors contribute to failure execution. One of the most insidious is a culture of underperformance. When there is a gap between performance and goals year after year, with few consequences, management learns to expect a performance shortfall. Other factors that contribute to the performance gap include a poorly formulated plan, misapplied resources, breakdowns in communication and limited accountability for results (Mankins and Steele, 2005). On the other hand, there are examples of excellent performance. Combining good execution practices with mistake avoidance provides a systematic framework for outstanding execution.

THE PLAN

Plans outline broad goals, set directions for reaching those goals, assign responsibilities and allocate resources. Unfortunately, many companies invest a significant amount of time and energy to develop a plan, put it in a nice cover, approve it, stamp it, and put it on a shelf. Thereafter, it rarely sees the light of day.

Plans often suffer from several other maladies as well. First, they represent compromises between corporate which always wants more, and divisions who want to set targets low so that bonuses will flow. Second, budgets revolve around what top management wants to hear rather than what is realistic. For example, some managements' idea of planning is to tweak excel spread sheets until a certain profit number appears. Profit doesn't come from spreadsheets; it comes from meeting customer needs. Third, budgets are used to allocate resources which constrain strategy. The reverse should be in effect. Strategy should be developed, and then budgets should be used to communicate resource allocations. If strategy doesn't drive budgets, budgets will drive non-strategic behavior (Sorensen, 2003). On the other hand, good plans drive execution (Mankins and Steele, 2005). Good plans are executable, set priorities, assign responsibility and have monitoring build into them.

Executable Plan

Strategic plans are often too vague to execute. A strategic plan should set specific goals. If the goals are to sell as much as possible and cut costs as much as possible and make customers as happy as possible, the company has no plan. These goals are unexecutable because they not specific enough.

Executable plans must be realistic. Unrealistic plans cause people to shut down rather than to stretch. Executable plans must be adequately funded and staffed with good people. Plans should be simple, concrete and measurable (Mankins and Steele, 2005). If the goal is to grow revenue by 20% everyone should know it. Another plan goal might be to increase gross margin by 5% or to enter a particular market. Each of these high level goals can then be deconstructed into the specific steps that have to be executed at each level of the organization.

Although responsibility for executing plan elements is assigned down through the organization, the CEO cannot be excused from performance of his or her goals by saying the Vice President of Marketing did not meet his or her goals. The CEO is responsible for meeting goals no matter what. Likewise the Vice President of Marketing is responsible for meeting his or her goals no matter what. Each person in authority must take responsibility for the performance of those acting under them and to a significant extent for those in other departments that support their effort. No excuses (Stewart and O'Brien, 2005).

Priorities

A hallmark of successful plans is that they set priorities. A laundry list of priorities simply dissipates a company's energy. A company must focus on initiatives that are clear, specific and few. The first few priorities selected should have the greatest impact on bottom line results and growth (Neiman and Thomson, 2004). No new initiatives should be introduced until the old initiatives become deeply embedded in the company's culture. Jack Welsh, as CEO of GE, only launched five major initiatives in 18 years (Charan and Colvin, 1999).

Other successful companies focus on just three to five goals every year. For a company in restructuring the goals might be to (i) focus on the customer, this includes improving customer service, delivery times, product quality, and talking to former customers about why they left the company, (ii) cutting overhead, overhead is the great killer of companies, (iii) reducing cost of goods sold which is the same as saying increasing gross margin, and (iv) increasing return on invested capital by minimizing the assets the company uses. In subsequent years, the goals might be to introduce new products, take additional quality control initiatives, or expand into new territories.

Clarity & Communication

There must be absolute clarity as to the company's goals and those goals must be repeated over and over again. Dell, for example, gives presentation after presentation as to its goals, priorities and performance expectations so there was no mistake about what the company wants. To reinforce the message, rewards follow good performance and punishment follows bad performance (Stewart and O'Brien, 2005). At UPS managers meet with their employees for exactly three minutes every day to make sure everyone know the goals and priorities for the day (Kaihla, Baltatzis, et al., 2006).

The habit of clarity of communication must be ingrained at a deeply cultural level. For example, one practice of successful CEOs is to write down what everyone promised to do and when they promised to do, and at the end of every meeting, read the list back to make sure everyone understand its, and then to send follow up notes afterwards (Charan and Colvin, 1999).

Responsibility

Clarity of expectations as to what each employee must do, backed with the knowledge that he or she will be held accountable is the most effective way to drive profit improvement. This goal alignment was responsible for doubling one chemical company's division profit in a single year (Layman, 2005).

As strategic goals are deconstructed into sub-tasks, each sub-task must be assigned to a specific individual who will be responsible for meeting that sub-task goal. Responsibility must be backed up by accountability which means sub-task results must be objectively measurable. At Dell, every level of management has three to five sub-tasks to perform or goals to meet in support of higher level goals (Stewart and O'Brien, 2005). Great CEOs always hold people accountable for meeting their commitments (Charan and Colvin, 1999).

Rewards must be aligned with responsibility otherwise rewards will drive non-strategic behavior. If bonuses are given just for making it through the year, rather than for hitting specific numerical goals, effort will be focused on survival versus execution. The key to keeping good people is to learn how to measure and reward them (Bhide, 1986).

Of course the argument against detailed plans with specific steps is that it limits flexibility. In the balance between the principal of flexibility and specific steps of execution, remember that execution pays the rent, not principals.

Time frames & sense of urgency

One of the reasons companies fail to execute is indecisiveness. Quick action on problems is imperative. When Lou Gerstner was hired to restructure IBM he focused on execution, decisiveness and simplifying the organization for speed (Charan and Colvin, 1999). Dell believes that a company requires a sense of urgency in every thing it does. The notion of investing in the future can become a trap. The future is this afternoon and this evening (Stewart and O'Brien, 2005). Much of the success of Silicon Valley companies is attributed to their view that there is no time for committees, meetings and task forces. They have to get things done and products to market (Charan and and Colvin, 1999). What counts most in good execution is vigor and nimbleness, or what one might call hustle (Bhide, 1986).

Contingencies

Life never unfolds exactly as planned. However, many managers are linear thinkers and set about to achieve goals in a step one, step two step three fashion. When something goes awry with step two, that brings them to a halt. A good manager will always have two or three ways to complete step two so that his or her ultimate commitment and goals can be met.

Contingency planning should not take the form of padding budgets or time estimates. Contingency planning should be about alternative courses of action. The more credible alternatives one develops, the more likely one is to reach goals. Adapt. Improvise. Overcome.

A Culture of Success

It is difficult to instill a culture of success in an underperforming company with a demoralized workforce, but it can be done. Just as failing to meet goals one year increases the likelihood that goals will be missed the next year, and the expectation of fail can become the norm, a culture of success can become the norm.

Success begets success. One way to turnaround the culture is to focus on a number of short interval projects, those which can be completed in 60 to 100 days. Select projects with a high payoff, and for which the payoff can be quantitatively measured. For example, one firm set and met the goal of reducing the time from order to installed service by 80% (Neiman and Thomson, 2004). A credit card company set and met the goal of replacing lost cards in two days and reduced customer billing query time by a third (Bhide, 1986). The demonstration of a clear impact on profitability is required to turnaround the culture. When a CEO who executes well brings his or her habits into a company where they didn't exist, attitudes begin to change in subtle ways. People are more prepared for meetings and begin to focus on closing the plan-performance gap. They begin to realize that commitment is everything (Charan and Colvin, 1999).

Successfully completing significant short interval projects give people a sense of the possibilities, but not everyone is likely to have the skill or desire to follow through on every task. Another aspect of building a culture of success is to continually remind people in presentations and by other means what is expected of them in a concrete. Assigning specific responsibilities, deadlines and measuring performance is critical to create a culture of success. Those who can't or won't meet their goals must go. The first people cut under a regime that insists on success will be shocked, but those who remain will get the message, and will find ways to improve performance. Dell's no excuses policy, is a model for the kind of success based culture a company should aspire to (Stewart and O'Brien, 2005).

MEASUREMENT AND MONITORING

Accountability must be designed into plans to improve execution. Accountability requires measurable goals and a systematic means to collect and analyze progress toward goals (Stewart and O'Brien, 2005).

Key Performance Indicators

Everything that can be measured should be measured is an overstatement, but not by much. Everything that contributes to the company's overall goals should be measured, not just financial measures, but non-financial measures as well. For example, quality costs money, inventory costs money and time costs money, so measures of quality, inventory and time are critical to a company making profitability goals (Stewart and O'Brien, 2005).

If a retailer's goal is to grow company sales, then it should measure sales by store; sales per square foot per store; sales this year compared to last year; sales per square foot per dollar of rent to determine whether it pays to rent stores in expensive venues; sales per dollar of assets invested in plant property and equipment; sales per dollar of inventory investment; the number of customers visiting stores; the conversion rate which is the number of visitors that actually make a purchase; the average purchase; the contribution on the average purchase; and so forth. These measures should drive store managers to get more customers to the store; focus on customers likely to make a purchase; stock more attractive merchandise; offer more impulse buy items; spawn high contribution sales through better product selection and placement; train sales staff to up sell and suggest accessories to go with purchases.

Every industry has a key set of metrics that are used to determine performance. In auto manufacturing, it might be the number of hours it takes to assemble a vehicle; the time it takes to assemble a vehicle; absenteeism; overtime; on the job injuries; percentage of vehicles that pass final inspection; warranty claims in the first 90 days; days of unsold inventory; and contribution per vehicle. It is important to understand how each of these metrics contributes to the company's goals. Measure performance and hold people accountable for meeting expectations.

Dell tracts things like new leads, change in margins and new customers (Stewart and O'Brien, 2005). Hewlett Packard tracks more than a dozen variables across its business units including things like real estate cost per square foot and operating expenses as a percent of gross margin. They also benchmark themselves against an estimate of their competitors' ratios (Kaihla and Baltatzis, et. al., 2006). Other companies tract things like sales from new products and number of new products introduced.

Industry association publications are one place to find industry specific metrics. The financial literature is another source. As writers grapple to compare companies and sort out the good, the bad and the hopeless, they often report or develop interesting metrics. Company specific metrics can be developed through an understanding of all the sub-activities that roll up to financial performance. Regular contact with workers and first line managers might help identify such metrics.

For metrics to be consistent and reliable, data should be captured and reported on a routine basis. For metrics to be useful, they must be timely. The best metrics are those captured as a byproduct of operations rather than as separate tasks that require staff to fill out forms or make computer entries they wouldn't ordinarily have to make. For example, most of the metrics discussed for retail stores can be gleaned from computerized inventory and sales data.

Annual or even quarterly reports are not useful for execution management because they are not timely. Even monthly reports have limited value. Many companies measure metrics on a weekly basis and some measure key metrics like sales and production on a daily basis. Dell, for example, monitors order activity in real time and if fewer orders than expected come in by 10:00 AM, they run a special on their website by 10:15 (Stewart and O'Brien, 2005). Great CEOs are always hungry for details that can help improve performance (Charan and Colvin, 1999). But, lower level managers need this kind of feedback as well so they can constantly adjust tactics to meet commitments.

There is an unfortunate tendency in many underperforming companies to keep information secret. This isn't healthy. A better approach is to make everyone's metrics available to everyone else so they can see where they are. No one wants to be the last one around the track or even in the last half of the pack, so making performance measures widely available can stimulate performance (Stewart and O'Brien, 2005).

Management by walking around

Monitoring also means the CEO must make it his or her business to routinely talk to workers, first line managers and customers (Charan and Colvin, 1999). Bloomberg's new headquarters takes this idea to a new level by placing the CEO in a glass office in the middle of the sales and customer service floor. This gives him an unprecedented, real time view of what is going on. Home Depot's board members are expected to visit a dozen stores a year and report on customer service, merchandise selection, store appearance and a number of other variables (Kaihla, Baltatzis, et. al., 2006).

This is sometimes called management by walking around and it can be useful in collecting intangible information about morale, operations, and the market place. It also helps provide context to the numbers. Sometimes management by walking around can identify trends, good or bad, before they are reflected in the numbers. And sometimes management by walking around generates ideas for new and more relevant measures of performance.

PEOPLE DEVELOPMENT

Unless a company has the right people, with the right skills and the right attitude, it will not be able to execute its plan. GE's philosophy is people first, strategy second (Charan and Colvin, 1999). The idea is that if one has the right people, people who can execute well, they will achieve good results even if the strategy is inadequate. In fact, there are some who say that strategy confers a temporary advantage at most and that true competitive advantage comes from superior execution (Bhide, 1986).

Selection

Selection of the right people for leadership positions is challenging. Investment banking is an industry in which the hustle and drive of individual employees makes or breaks a firm. Therefore it is rare for any professional to be hired without an interview with one or more of its managing directors (Bhide, 1986).

An advantage to promoting internally is that internal candidates have a track record that is easier to evaluate than that of a new hire. Dell, for example has shifted from 75% new hires for leadership positions to 70% internal promotions (Stewart and O'Brien, 2005).

Southwest Airlines begins the interview process with a candidate's first company contact and documents the candidate's interaction with every Southwest employee he or she meets, from reservationists, if they are flying in for an interview, to secretaries, to flight attendants and human resource staff. Candidates are asked to give speeches about themselves and the company watches the reaction of the other candidates. If they are bored, they are probably not the people people they want. Southwest credits this screening process for both superior execution and one of the lowest employee turnover rates in the airline industry (Kaihla, Baltatzis, et. al., 2006).

Training, Coaching, Nurturing

It is rare that anyone is born with all the habits needed for superior execution. Building habits, which is deeply ingraining a philosophy and method of operation in a person, is far different than sending someone to a seminar. Coaching as well as live experience is required to build habits and discipline (Neiman and Thomson, 2004).

Skills training is also needed. Executives and managers who don't understand profit and loss are in trouble (Stewart and O'Brien, 2005). If they don't understand how all the elements of a business work together to produce a profit or loss they can't help build a top performing company. Top commercial banks understand this and invest in rigorous training. Some investment banks put their professional recruits through a year long training program that is the equivalent of a top MBA (Bhide, 1986).

GE has a school for developing it managers throughout their careers at Crotonville, New York. Jack Welsh regularly gave lectures there and met informally with future general managers to listen to their complaints about bureaucracy and management indecisiveness, and at the same time he provided one-on one coaching. Jack Welsh also ran what he called "work-out" meetings in which managers met in open forums to argue, discuss and debate the best ways to meet performance objectives (Abetti, 2006).

In addition to building skilled, focused leaders, training and education has other benefits. For example, when managers believe a company is interested in their professional development, they tend to be more dedicated and loyal to the company which results in better execution and reduced turnover (Stewart and O'Brien, 2005).

CONCLUSION

The difference between great companies and others is of the quality of their execution. Good execution begins with an executable plans, that is a plan that has well defined goals, clearly articulated, with dates certain for performance and clear responsibility. One of the hallmarks of a good plan is that it sets priorities. Long lists of plan goals dissipate energy. Shorts lists focus attention. Performance to goals must be measured at short intervals so that corrective action can be taken. Strategy should drive performance, not budgets. If meeting budget is the goal, that goal will drive unstrategic behavior.

A CEO may inherit a company with a culture of underperformance; where results are either never compared to plan or results routinely fall short of plan. One way to change the culture is to focus on short interval projects with measurable results. The success of these projects is the first step in changing the culture. This must be followed by the consistent discipline in setting and achieving goals.

Performance to goals and rewards must be aligned. Commitment to meeting goals must be the highest virtue. Those who make commitments should be rewarded, those who don't, can't or won't must be pushed aside.

Measurement and monitoring are two of the keys to good execution. Everything that affects a company's performance should be monitored. This includes both financial measures like contribution margin and non-financial measures like the number of leads generated or the number of new customers. Performance should be transparent across all divisions so that everyone can see where they stand. This encourages superior performance. Secrecy is the enemy of good execution.

Management by walking around is another important source of information. Many aspects of a business cannot be adequately captured by performance measures and management by walking around can provide context to the numbers. Management by walking around includes regular contact with workers, first line supervisors and customers.

Companies must select people on a number of criteria including drive, commitment to company goals, technical skills, willingness to be a team player and leadership. Not everyone possesses these qualities.

Training, coaching and nurturing are important tools for management development. They can help build technical skills, help people understand how various aspects of the company work together to drive performance and provide direction. However, companies should be in the behavior selection business not the behavior modification business. People who can't, won't or don't commit to company goals or people who can't, won't or don't want to be team players should be eliminated from the company.

In summary, good execution is probably the most important element driving excellent performance, more important than strategy, market position or a number of other factors. Good executions starts with well thought out and specific plans and well defined responsibility and continues with prompt and detailed measurement and accountability applied on a consistent basis.

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SELLING A STATE-OWNED ENTERPRISE IN THE PEOPLE'S REPUBLIC OF CHINA

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ABSTRACT

This paper discusses the privatization efforts of the Chinese government of state-owned enterprises and state-owned hotels since the 1990s. The advantages of privatization are outlined as well as the issues associated with privatization. Then, the privatization process of a hotel in Yantai City is examined through the eyes of the general manager of the hotel and the director of foreign affairs of Yantai City.

PRIVATIZATION

The privatization of state-owned enterprises has been going on for over twenty-five years in China. Although some studies by advocates of state-owned businesses show that these (state-owned) businesses can be efficient as private enterprises, the vast majority of studies on the issue show that state-owned enterprises are "structurally crippled as economic units" (Watkins). In the mid-eighties, China began to undergo economic reform that included a move to a market economy. By the nineteen-nineties the lack of state-owned enterprise (SOE) reform had undermined China's development (Cao et. al., 1997). Since then, the government has been privatizing large, small, and medium size enterprises at the national, provincial, and city levels of government. In China the privatization record is mixed. Of all SOEs in China, Close to half lose money (Cao et. al., 1997). As a result, the non-state sector has become a major factor in the Chinese economy (Cao et. al., 1997). By the end of 1996 up to 70% of all small SOEs in China had been privatized (Cao et. al., 1997).

There are financial and economic challenges to SOEs in China. SOEs have to deal with shrinking budgets due to lack of government funding (Cao et. al., 1997). This has increased the debt burden of many SOEs and made them less attractive to investors (Cao et. al., 1997). SOEs that are privatized usually result in layoffs. Ten percent of the urban labor force has been laid off as a result. If the local government feels the affected area cannot absorb the layoffs, privatization is delayed (Cao et. al., 1997).

State-owned hotels (SOHs) are part of the SOEs being privatized. Tang et. al. writes that there are SOHs that do operate as effectively and efficiently as foreign owned hotels, but they are few and far between (2006). In addition to the financial and economic problems associated with SOEs, there are additional reasons why SOHs do not perform as well as their privately-owned counterparts. SOHs are often operated for non-economic reasons, such as to improve the image of the city. According to Tang et. al. the major problem with these hotels is that hotel management cannot be separated from state ownership (2006). As such, the hotels often serve the interests of the local officials rather than responding to the demands of the market. In addition, like other SOEs, up to thirty percent of the staff working for SOHs are redundant (Watkins). Typical reforms of SOEs (including SOHs) included profit sharing between the SOE and a fixed salary plus bonuses for management (Tang et. al., 2006). As a result, managing for the short term became the norm and many hotels deteriorated (Tang et. al., 2006). According to Tang et. al. " … the SOHs gradually have become political toys and sometimes are parasites on the local economy for the entertainment of self-indulgence by principles in the local governments or the local SOEs (2006)." This has made some SOHs hard to sell and as of 2002, sixty-three percent of all hotels were still owned by the state (Tang et. al., 2006).

When SOEs are sold, the new, private owners often make new investments creating profit and growth. A large portion of these privatized firms take the form of “stock cooperatives” (Cao et. al., 1997). Tang et. al. (2006) found that when comparing five-star SOHs and five-star foreign-owned hotels the profit per employee for the foreign-owned hotels is 9.2 times the SOHs. A hint as to the effect of the economic impact of privately held hotels in China can be seen in Shanghai, where eleven percent of foreign hotels (privately held) accounted for thirty-five percent of total hotel revenue in 2002 (Tang et. al., 2006).

The Golden Gulf Hotel is a SOH located in Yantai, China. The hotel is currently for sale and is undergoing the privatization process. The general manager of the Golden Gulf and the director of foreign affairs of Yantai City were interviewed relative to this process.

THE STATE-OWNED ENTERPRISE

The Golden Gulf Hotel is located on the Yellow Sea in Yantai City. To the right of the hotel are rocky bluffs. To the left is a boardwalk that goes on for several miles along the sea. The Golden Gulf is one of probably the two nicest hotels in Yantai. It has the advantage, compared to the other hotel, of being right at the water’s edge.

The Golden Gulf is a modern hotel, built in the 1980’s. The Golden Gulf has 271 rooms, six restaurants, meetings rooms for conferences, and the kinds of amenities, such as gift shops, piano bar, and spa that you would expect in a five star hotel. Discussed below are some of the issues related to the privatization of this SOH.

STRUCTURE OF THE PRIVATIZATION

The privatization will result in forty-five percent of the stock being held by the buyer of the hotel. Another forty-five percent of the stock will be owned by the government. The remaining ten percent of the stock will be owned by the employees. All three hundred seven employees of the hotel will be given the opportunity to buy shares in the new corporation. The general manager of the Golden Gulf, Mr. Liu, felt that most of the hourly employees would not be able to afford the price of the shares. He also stated that current management would be required to purchase shares, even if it means borrowing money to do so.

The government will appoint the chairman of the Board of Directors. The purchasing company will appoint the deputy chair. The purchasing company will determine the operating management.

Within a period two or three years after the privatization, the government will sell its shares of the company. It will put its shares on the open market where the shares can be purchased by existing employees, the current owner, or outside investors. At that point, if the hotel is successful, the government can realize a positive return on the initial stock purchase. The company buying the Golden Gulf would only be buying the building and not the land. At this point, the government owns the land and private individuals cannot. The hotel would come with a long-term lease.

BENEFITS OF PRIVATIZATION

From the point of view of Mr. Liu, there will be a number of benefits to the privatization of the Golden Gulf. One benefit will be the opportunity to reduce the debt load of the hotel. All of the money used to build the hotel came from government debt on which the hotel must pay interest. The capital that will come from the sale of stock will be used to reduce the debt and thus lower a significant part of the operating expenses. Another benefit of the privatization will be a change to the management system. For the general manager (GM), the privatization will lead to a new reporting structure. Currently, the GM has the final say in operating issues. He does not get input about hotel related issues from the government. With the privatization, there will be a Board of Directors to report to as well as a CEO and other Vice-Presidents, from whom he could seek advice on strategic and operating decisions. Mistakes can be spotted sooner. A larger management structure will allow more opportunities for upward mobility for talented workers. As a result, the hotel will be able to attract better employees.

With privatization will also come more opportunity to change operating methods. Mr. Liu was looking forward to being able to implement "Western Management" methods that will be less bureaucratic, more flexible, and hopefully improve efficiency.

A third possible benefit of privatization could come from the employee stock ownership. Mr. Liu felt that having employees also being part owners would improve their motivation, allow for participation in management in management decisions, and concern for the success of the hotel.

Concerns about Privatization

There are a variety of concerns about privatization. One concern is stability. According to Mr. Yuankun Sun, Director of the Foreign Affairs Ministry in Yantai, the government does not want someone to come in, buy the hotel, and then resell the hotel for a quick profit. According to Mr. Sun, that had been a problem with privatization efforts in southern China. The government is looking for an owner who will have a long-term commitment to the hotel. Another concern is that the purchase price will not be high enough to pay off the debt used to build the hotel. An additional concern deals with human resource management (HRM) issues.

One HRM issue cited by Mr. Sun is staffing levels. The hotel currently has approximately three hundred employees. The government did not want a new owner to come in and immediately slash the number of employees. That would be a public relations problem for the government. Another HRM issue was the possible reaction of the employees in the event of large-scale changes. If a new owner came in with new methods, it was felt that the older workers would provide significant resistance to change. Another HRM concern was that the workers would not want to work for a capitalistic organization rather than the state-owned enterprise.

The Golden Gulf is the nicest "old" hotel in Yantai. As a result, it is seen as a sentimental symbol of the old way of doings things. There is resistance to change on that basis.

Process of Privatization

The decision to sell the Golden Gulf started within the regional government of Yantai. Once the decision was made to sell, the books had to be audited for the benefit of the potential buyer. The next step was to get offers from potential buyers.

Once a buyer was selected, then the sale would have to be cleared through the Commission for Public Property Administration.

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EFFECTIVELY ADDRESSING ENTERPRISE COMPLIANCE RISK

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ABSTRACT

Compliance with applicable laws and regulations is a core objective of the successful legitimate business enterprise. The existence of effective compliance risk control systems is an implicit assumption of investors and other enterprise stakeholders. Unfortunately, existing control systems in the typical business often fail to meet investor and stakeholder expectations. All too often, the fragmented nature of compliance control systems results in negative "surprises". Numerous compliance failures over the past decade help make the case for an integrated, effective enterprise-wide risk management system. Investor losses and large corporate settlements help highlight the costly nature of compliance failure, supporting the case for change.

The focus of Sarbanes-Oxley control reporting has been limited to financial reporting controls; it is now time to expand control design, integration, evaluation and governance reporting to other risks as well. Directors and executive managers should compare the current control system to a model, such as the COSO enterprise risk management framework. The resulting gap analysis will highlight potential weaknesses and areas to be addressed. Many organizations can leverage the lessons learned from the costly Sarbanes-Oxley Section 404 implementation process to effectively integrate compliance risk management, controls, evaluation and communication into existing business processes. Successfully recognizing and addressing compliance risk should result in a positive return on project investment through risk reduction, lower cost of capital, and favorable treatment under Federal sentencing guidelines.

INTRODUCTION

Corporate responsibility and governance have undergone a serious transformation as a result of the provisions of the Sarbanes-Oxley Act of 2002 (referred to herein as Sarbanes-Oxley). The responsibilities of management and the board of directors for financial reporting and controls are clearly defined in the law. In contrast Sarbanes-Oxley does not address corporate legal regulatory compliance (outside of financial reporting compliance) to any great degree.

The new law has a distinct focus on financial reporting and related internal controls. This was in no small part in reaction to the abuses and financial frauds committed by management in the most egregious cases. However, the COSO framework for internal control identifies three control objectives:

- Reliable financial reporting,
- Compliance with applicable law and regulations, and
- Operating effectiveness (COSO, 1992)

At the large public company level, transparency now exists for the first and third objectives: Sarbanes-Oxley requires auditing and reporting on financial controls. Operating effectiveness can be derived from the information contained in the financial reports and management disclosures. The one control objective lacking transparency for many corporations is that of legal compliance.

Compliance weaknesses or control failures can lead to contingent or real liabilities when legal violations are alleged. Yet without any disclosures as to how a particular enterprise addresses compliance risk, stakeholders lack vital information about business conduct. Without appropriate information, financial markets cannot efficiently price the compliance risks for a given enterprise. Such mis-pricing results in poor allocation of capital and when illegal acts are disclosed, huge, potentially disruptive price adjustments.

There is no relevant reporting methodology to support outsider assessment of legal compliance. For years investors, boards and management of many public enterprises have implicitly assumed that legal compliance was effectively managed and controlled within the organization. This assumption has resulted in the discounting of this risk into relative obscurity. Yet, compliance risk (violations of laws and regulations) represents a significant, albeit rare threat, to shareholder value.

Without assurance that an active comprehensive compliance control system is in place, stakeholders have no basis for evaluating the impact of compliance risk events on the enterprise. Moreover, without a comprehensive risk plan, the board of directors does not have a basis for providing shareholders reasonable assurance that compliance risk is appropriately managed. When material compliance failures are alleged and made public, markets are swift to react. Existing research supports the proposition that markets punish illegal behavior (Rao, Hamilton 1996) and (Davidson, Worrell, Lee, 1994). Conversely, companies with long-standing pervasive ethics programs seem to be rewarded with exceptional financial growth.

This paper proposes that compliance risk be addressed explicitly and in a comprehensive manner by the enterprise. Numerous examples of legal violations by high profile organizations help make the case for active risk management and robust ethics programs. Existing research supports this recommendation. The compliance risk plan needs to encompass risk identification and assessment, risk response, ethics program implementation, compliance controls, monitoring, assessment and regular reporting.

The benefits of adopting such a program are:

- Enhanced shareholder value (through reduced risk)
- Improved governance
- Better management accountability
- Positive public opinion
- Leniency under Federal sentencing guidelines, should violations be uncovered

These incentives should prove sufficient motivation for adopting a robust risk compliance program, without legal mandates similar to Sarbanes-Oxley. Private sector initiatives should be encouraged and monitored; voluntary adoption should provide for a more positive experience than the control evaluation reporting and reporting mandated by Sarbanes-Oxley Section 404.

THE CASE FOR COMPREHENSIVE COMPLIANCE CONTROLS

Enterprise Risk

Enterprise risk is categorized by COSO into the following categories:

- Strategic,
- Financial reporting,
- Operational and
- Compliance (COSO, 2004)

Their proposed risk management framework was published subsequent to the original control framework and Sarbanes-Oxley. Logically, risk management guidance would precede controls, however, the original charge of the committee was to develop a controls framework in response to perceived control failures in the late 1980's and early 1990's. The COSO risk categories do not naturally align with typical organizational structure, but rather were adopted for sake of analysis and discussion. Overlap of risks and controls among functional business areas can occur. However, the COSO construct is useful in discussing the compliance challenges facing modern enterprise.

From a shareholder perspective, strategic and operational effectiveness are tied to management planning and execution, and would normally be evaluated based upon financial results and other disclosures made by management. Before Sarbanes-Oxley, financial reporting and compliance risks were not easily evaluated by investors. Traditionally these risks have been entrusted to management controls and the implicit assumption was that such risks were remote and mitigated by factors such as the external audit report on the financial statements.

The primary qualitative characteristics of financial reporting are relevance and reliability. Sadly, in light of the Enron, Worldcom and other scandals, investor reliance on auditors' opinions was misplaced. As repeated reports of new alleged reporting scandals unfolded, reliability was discounted by the market so highly, that an overall investor flight from equities occurred. Beyond auditor responsibility, management disclosures provided little assurance as to the control environment. Corporate chief executives defended their actions by claiming ignorance as to the effectiveness of organizational controls. Sarbanes-Oxley was the legislative reaction to audit failure and management irresponsibility for controls. The law also addressed other abuses identified in the course of investigations and hearings.

Yet Congress only primarily focused legal requirements on reporting risk, leaving compliance risk in virtual status quo. Numerous high-profile cases of alleged legal and regulatory violations highlight the need for adopting of a stricter, actively managed program for corporate ethics and compliance risk management. Regular reporting and active communication with the board are key elements of such a program.

Compliance risk discussions and disclosures are not commonly found in corporate annual reports, typically these are usually disclosed once a major compliance violation has been alleged by regulators or government representatives. Rather than learning about compliance failures and the company's program to address failures, a more proactive approach is encouraged. Voluntary disclosures about preventative measures in the company's control system and the results of monitoring would provide the information which is now sorely lacking.

COMPLIANCE CONTROL CHALLENGES

Legal compliance is not a separate process or function. It pervades just about everything the enterprise does in the course of business. Under the current legal regimes of most developed countries, significant regulation covers labor and wage practices, contracting, bidding and sales, restraint of trade, environmental impacts, illegal bribes , privacy of information, product safety, pensions and benefits, taxes and financial reporting, with numerous other areas as well. Thus it is impossible to address legal compliance without reviewing all business areas, business processes and employees responsibilities.

Many laws and regulations are industry-specific; thus companies in the public utilities, pharmaceutical, insurance, banking , transportation, health care and similar businesses have detailed, often complex rules to follow. Compliance with such industry based laws and regulations is essential to maintaining a successful ongoing franchise, yet as we will see, even such industry rules are violated on occasion.

Subject matter experts in the various laws and regulations must be part of the team analyzing risk compliance risk. They must work with business units, in order to understand the particular organizations risk profile. Because of this linkage with basic business processes, most compliance controls are embedded in everyday policies and procedures. In many cases, the linkage of a control activity to legal compliance may be less than apparent. The employee performing the required activity may not even recognize it as a regulatory requirement. In such cases, ongoing training and awareness assessment can help support effective compliance.

Since not all compliance risks have potentially material impact on the enterprise, management must perform a risk assessment to evaluate both the probability and potential impact of compliance failures. The typical organization may have thousands (or more) of compliance risks. The risk assessment allows for a ranking and identification of those possible events which would have material impact on the enterprise and its value. By combining likelihood and monetary impact, the material risks can be ranked and given appropriate attention. High risk impact events need to identified and reviewed periodically. Control activities addressing such risks require elevated monitoring and communication.

Assessment of control effectiveness is as important as the control itself. Audits of key controls and their effectiveness help complete this cycle. A risk-based audit of compliance controls and assessment of controls weaknesses and failures must be conducted regularly and thoroughly. The evaluation of control effectiveness through regular auditing is essential. Reports of controls assessment and monitoring need to be shared with communicated effectively. “Risk Focused audit programs should be reviewed regularly to ensure that audit resources are focused on the higher-risk areas as the company grows and produces and as processes change….Audit committees should receive reports on all breaks in internal control.” (Bies, 2004)

Noncompliance may be attributed to lack of knowledge and proper training. On the other hand, individual behaviors and corporate incentives to take undue risk can result in illegal acts. Since violating the law potentially gives a business an unfair competitive advantage, unscrupulous individuals or groups might conspire to achieve personal gain. Because incentive compensation can reward such wayward efforts, ethics training is a key component of an effective program. Likewise, business practices and compliance controls must be pervasive and actively monitored. Research has demonstrated that compliance programs alone are less effective than combined programs addressing ethics and compliance (Verschoor, 1998). The ethics portion of the program establishes the corporate norm, the “tone at the top” for all employees. The compliance program targets specific risks with controls and monitoring activities. Verschoor’s study links strong management controls that emphasize ethical and socially responsible behavior and favorable financial performance. Finally, US Public companies are now required to adopt and disclose corporate codes of ethics. Sarbanes-Oxley defines a code of ethics to include promotion of “honest and ethical conduct” and requires disclosure of the codes applicable to senior financial officers.

RECENT FAILURES

If reports of alleged illegal acts were rare or the consequences insignificant, one could argue that the benefits of a comprehensive compliance program do not justify the program costs. Unfortunately, disclosures of such occurrences are both frequent and the direct costs (fines / settlements) are often material. This is without even considering the losses suffered by debt and equity investors as a consequence of such news.

In particular, disclosures of violations which threaten the revenue stream and profitability can result in huge stock price corrections. Because the shareholders have not appropriately discounted the enterprise risk, the market reactions to such announcements are immediate, steep drops in the share price. Share price volatility and increased trading volume are typical in such circumstances. Shareholders’ losses reflect both the direct costs of regulatory and legal settlements as well as the loss of future business cash flows.

The recent experience of implementing Sarbanes-Oxley requirements, most notably Section 404, shows that most organizations did not have well-documented, comprehensive systems which were continuously monitored. The fragmented nature of financial controls and the resulting efforts and resources required to align the management control systems have received impressive publicity. There is no reason to believe that the present state of most compliance control programs is different or better. Organizations which have not experienced recent violations of the law, many have such controls on “autopilot”.

If management does not perform a vigorous risk management exercise, the board and shareholders have inadequate information for risk assessment. The dangers inherent in control systems without active management are all too apparent. Current news headlines reflecting product recalls because outsourced manufacturers used lead paint in toys or tainted food products reflect such lax controls. Likewise, scores of public companies have admitted back-dating stock option grants, or are under investigation for such practices. While these allegations will be resolved over time, we can examine failures in the recent past where closure has been reached. Table 1 lists five well-publicized compliance failures occurring after the enactment of Sarbanes-Oxley and their direct consequences.

Table 1 Recent Major Compliance Failures:

Corporation / group	Alleged illegality	Direct consequences
Marsh and McLennan	Bid-rigging, anti-competitive practices	$850 million restitution fund
Titan Corp	Bribes, payments in violation of Foreign Corrupt Practices Act	$12 profits disgorged and $13 million fine
Wyeth-Ayerst labs	Failure to meet FDA production quality regulations	$30 million in fines
ABB Ltd	Bribes, payments in violation of Foreign Corrupt Practices Act	$5.9 million civil penalty, $10.5 million criminal penalty
Music industry (Universal Music, Sony Music, Warner Music, et al.)	Anti competitive practices	$67 million settlement and distribution of $76 million in CDs to public and non-profit groups

Material compliance failures in public corporations are indicative of failed or inadequate control activities. Likewise, the tone at the top – the ethical control environment may also be lacking in such cases.

Marsh and McLennan (Marsh) is a noteworthy example. Marsh is an insurance broker which is alleged to have engaged in illegal bid-rigging business practices. The incidents were not isolated but rather formed a key component of Marsh's business model for insurance brokerage. The NY Attorney General filed suit alleging violations of general business law, monopoly, restraint of trade, and anti-competitive violations of insurance law. On January 30, 2005 Marsh settled with the state, establishing a policyholder fund of $850 million. Following the announcement of the state's lawsuit, Marsh's stock price dropped from approximately $45 a share to $22.75 per share. (Marsh, 2005) This resulted in a loss of over $11 billion in market capitalization in just one day. Shareholders were not the only investors adversely impacted. Debt securities also dropped in value and the company, an industry leader, faced serious liquidity and financing challenges. (Marsh, 2005).

Foreign Corrupt Practices Act (FCPA) violations are receiving increased publicity. One consequence of such heightened scrutiny is that alleged transgressors are being required to put compliance officers into place, as part of the settlement agreement. "The impact of SOX (Sarbanes-Oxley) has rippled outward from the statute's core accounting as provisions to affect many areas of corporate business practices. The SEC and the DOJ have increased investigatory staffs and are coordinating their efforts more closely, and companies are subjecting their records to greater scrutiny. Therefore, increasing FCPA enforcement is, to some degree, a byproduct of accounting reforms unrelated to FCPA" (Burr, 2005) .

In the most notable recent FCPA case, Titan Corp, a government contractor, set records for settling charges of numerous violations of the FCPA. The $25 million combined settlement caused management upheavals, and resulted in unraveling of a proposed merger with Lockheed-Martin. Titan Corp is an example where the control environment or "tone at the top" lacked respect for legal compliance, alleged violations pervaded many businesses and locations.

Other allegations of illegal acts have included many recognizable public corporations: Schering-Plough, Monsanto, DaimlerChrysler and Syncor, just to name a few. Clearly, significant compliance violations are all too frequent and create unacceptable risk for corporate investors and other stakeholders.

It should be noted that an enterprise with an effective compliance program can mitigate legal consequences (Hess, 2007). Federal sentencing guidelines provide exceptions and leniency in cases where such programs are proven to exist.

COMPREHENSIVE COMPLIANCE RISK MANAGEMENT

Unless management has adopted a comprehensive compliance risk management plan, shareholders cannot reasonably assess enterprise risk. With perfect information available, in a case where management adopts an risky stance towards legal compliance, investors would demand a stock price risk premium, which in turn, would cause the enterprise cost of capital to rise. Such an enterprise would be at a competitive disadvantage relative to competitors with less aggressive risk profiles. An enterprise adopting active risk management controls should disclose its programs and its evaluation as to the program effectiveness. Such disclosures should be particularly effective where industry-specific compliance is critical to ongoing profitability.

Recognizing the importance of a comprehensive plan for risk management, COSO has published guidance for implementing enterprise risk management. In particular, the COSO risk framework relies upon the quantification of risks inherently associated with the business. Specific techniques may vary from business to business within an enterprise. Once assessment has taken place, the appropriate responses are: avoidance, reduction, sharing and acceptance. Such responses should be developed from an entity-wide, portfolio perspective (COSO, 2004).

Ethics programs tied to the control environment or "tone at the top" should be adopted along with, or ahead of a compliance program. Thus the combination of the pervasive ethics component, along with target control activities, should address specific risks while providing the appropriate control environment or organizational tone.

RECOMMENDATIONS

Because of the consequences to stakeholders and potential benefits of socially responsible programs, the enterprise should undertake:

- Implementation of a corporate ethics program which includes training, support and assessment on a continuous basis. Such a program has to set high standards for ethical behavior throughout the entire organization.
- A compliance risk assessment which estimates both the probability of risks and the potential consequences, direct and indirect.
- Evaluation and realignment of existing controls in light of the risk assessment activities.
- Vigorous testing of legal compliance through all business areas, through monitoring and internal audits. Results of audits must be reported to the Board of Directors on a regular basis.
- Clear and regular communication as to the consequences for employees found responsible for illegal acts.
- Communication to shareholders about ethics and compliance programs, including updates on the assessment and monitoring processes.

Correspondingly, members of the Board and shareholders should demand that management implement such a program and report regularly on its progress. If the markets do indeed reward ethical behavior and transparency, then such voluntary efforts should lead to widespread adoption of comprehensive compliance programs. Competition for capital and the desire to maximize shareholder return will accomplish adoption, through market forces.

SUMMARY

Research in the existing literature supports the notion that markets react negatively to disclosures of alleged illegal behavior. While the direct costs associated with settlements and fines are by themselves significant, when the indirect costs of investor losses are counted, the impact can be staggering. Most investors and other stakeholders have no information about the enterprise's compliance risks. While Sarbanes-Oxley has achieved transparency with regard to financial reporting, no parallel requirements exist for legal compliance. Implementing a comprehensive ethics and compliance risk management program is complex, since every facet of the business is potentially impacted. By using a risk-adjusted approach, management can and must identify, rank and establish robust controls and monitoring of high risk activities. The program must include an overarching ethics component and be regularly monitored through audits and assessments. Voluntary disclosure of such compliance programs to stakeholders is encouraged. There are a number of benefits to the enterprise when a successful compliance program is in place, most notably reduced cost of capital and improved governance.

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TOWARD AN UNDERSTANDING OF AUDIT FIRM ROTATION AS PUBLIC POLICY: THEORIES OF DEVIANT BEHAVIOR

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ABSTRACT

In the aftermath of the recent financial reporting scandals, policy makers have suggested that audit firm rotation may be one way to reduce fraudulent financial reporting. The Sarbanes-Oxley Act of 2002, requires that partners and managers, but not audit firms, be periodically rotated off the audits of publicly traded companies. This paper considers several prominent criminology theories, including differential reinforcement and strain theory, as rationales for legislation requiring rotation of audit firms.

INTRODUCTION

Enron, WorldCom, Tyco International, Global Crossing, Quest Communications, Adelphia Communications, ImClone, Xerox, HealthSouth, and Royal Ahold. These recent audit failures highlight the significance of accounting fraud (Hwang & Staley, 2005). It is estimated that fraud affects about 75% of U.S. companies, and costs approximately $652 billion (KPMG Forensic United States, 2003; ACFE, 2006). Unfortunately, most occupational fraud schemes involve either the accounting department or upper management (ACFE, 2006, p. 5).

Public policy makers frequently propose requiring the mandatory rotation of audit firms as at least a partial solution to the pervasive problem of fraud in organizations (*see, for example,* GAO, 2003; Raiborn et al., 2006). Indeed, in 2007, the Internal Revenue Service proposed rotation of audit firms for non-profits (IRS, 2007). Advocates of mandatory rotation of audit firms achieved a small measure of success with the passage of the Sarbanes-Oxley Act, which requires rotation of audit partners, though not audit firms (15 U.S.C. 78j-1(j)).

Just as public policy makers traditionally propose mandatory rotation of audit firms, audit firms and the American Institute of Certified Public Accountants just as traditionally oppose such a requirement (*see, for example,* GAO, 2003). Unfortunately, the arguments both for and against mandatory rotation of audit firms lacks historical and theoretical substance. For example, a traditional argument for mandatory rotation of audit firms is simply that it provides for a "fresh look" at an organization's internal controls and financial reporting, without any support for whether this is or might be true (*see, for example,* GAO, 2003).

This paper adds to the audit literature by providing a rationale for audit rotation that is based on grounded theory, specifically criminology's *Differential Reinforcement Theory*. Specifically, this paper provides a detailed history of mandatory audit firm rotation proposals. It then considers other reasons why companies change auditors and several prominent criminology theories, including differential reinforcement and strain theory, as rationales for legislation requiring auditor rotation. The paper concludes with a discussion of mandatory audit firm rotation based on the historical and comparative analysis and based on grounded theories of criminology.

MANDATORY AUDIT FIRM ROTATION

Mandatory Audit Firm Rotation – US

The aftermath of the McKesson Robbins Case of the 1930s, where audited financial statements of a nonexistent drug company showed assets of $19 million and profits of $1.8 million, produced an atmosphere where change in accounting procedures appeared necessary. Not only did the AICPA establish the Committee on Auditing Procedure (later morphing into the Auditing Standards Board) but in hearings, before the Securities and Exchange Commission (SEC) in 1939, the subject of mandatory audit firm rotation was first mentioned (Hoyle, 1978).

Although not seriously considered at that time, the issue of mandatory audit firm rotation continued to resonate with some. In 1958 another author, N. Loyall McLaren, listed the potential benefits of audit firm rotation and those that pertain to the issue addressed in this paper include:

- A fresh, viewpoint is desirable at more or less frequent intervals.
- New blood ensures greater alertness.
- Long-established familiarity between the auditor's representatives and the client's employees may lead to collusion.
- Mistakes of previous auditors may be detected and corrected.

McLaren then proceeded to argue why each did not make sense. His primary arguments however relied on the integrity of those hired into the accounting profession and those audit standards that made collusion between the firm and its auditors almost impossible (McLaren, 1958).

In 1967, an editorial in the Journal of Accountancy decried the idea of mandatory audit firm rotation. A past president of the AICPA, J. S. Seidman argued in his response that in "an age of consumerism" the accounting professions first duty is to the shareholder, not management (1967, p. 30). Seidman went on to say that "company satisfaction with the auditor may be the occasion for public dissatisfaction" (1967, p. 30). It is this attitude that is given some credit for the calls for mandatory audit firm rotation (Hoyle, 1978).

In 1976, consumer activist Ralph Nader and members of the Corporate Accountability Research Group argued before the Senate Committee on Commerce, Corporate Rights and Responsibilities for mandatory audit firm rotation as a means to insure auditor independence (Hearing, 1976). After fairly strong recommendations by committee staff, the Committee adopted a compromise position of self-policing of the profession by the profession in cooperation with the SEC.

In 1978 the AICPA Commission on Auditor's Responsibility (Cohen Commission) recommended changes in the accounting profession and considered mandatory audit firm rotation because "the tenure of the independent auditor would be limited" and therefore "the incentive for resisting pressure from management would be increased" and because mandatory audit firm rotation would "bring a fresh viewpoint" (p. 108) However, the Commission cited the following as reasons to not require firm rotation: increased cost of changing audit firms; the finding that continuous relationships between audit firms and clients was beneficial; and, in a study of cases but determined that where there was substandard auditor performance, it appeared to occur much more often in the first or second year of an audit rather than in the later years of audits. The Commission did recommend audit personnel rotation due to "over familiarity" or a close relationship between client and audit firm (Commission on Auditor's Responsibility, 1978, p. 109).

In 1987, the National Commission on Fraudulent Financial Reporting (Treadway Commission) recommended that special attention be paid to first-year audits of clients, because there appeared to be a significant correlation between fraud-related cases and those companies that has recently changed auditors (Treadway Commission, 1987).

In 1995, Congressman John Dingell asked the General Accounting Office to evaluate recommendations made for improvements of audits of public companies. The GAO considered the findings of 37 separate study groups and concluded that while most issues had been addressed, there were five major unresolved issues including "auditor independence" (Carmichael, 1997, p. 18). Although the GAO considered mandatory auditor firm rotation, it was rejected because "the continuing auditor relationships outweighed the risk" (Carmichael, 1997, p. 22).

However, attitudes changed following the scandals at Enron, WorldCom and others. In response to these audit failures, Congress passed the Corporate and Auditing Accountability, Responsibility, And Transparency Act of 2002 (Sarbanes-Oxley Act). After passage of SOX, the U.S. House of Representatives sponsored hearings to discuss past attempts to reform the accounting profession. In his opening statement, Representative Dick Gephardt stressed the need for accountability and responsibility to serve as the basic operating principles for the capital markets. While it required a number of changes, SOX did not mandate rotation of audit firms. According to Congressman LaFalce, the benefits of such a change would include:

A new audit firm would bring to bear skepticism and fresh perspective that a long-term auditor may lack;

Second, auditors tend to rely excessively on prior years' working papers, including prior tests of client's internal control structure, particularly if fees are concerned;

Long-time auditors may come to believe that they understand the totality of the client's issue, and may look for those issues in the next audit rather than staying open to the other possibilities; and

An auditor may place less emphasis on retaining a client relationship even at the cost of a compromised audit if it knows the engagement will end after several years.

In 2003, the GAO produced a study *The Required Study on the Potential Effects of Mandatory Audit Firm Rotation* for the Senate Committee on Banking, Housing and Urban Affairs and the House Committee on Financial Services. The study included testimony that the mandatory rotation of audit firms was necessary to maintain the independence and objectivity of financial statement audits, as well as statements that rotation could be disruptive and not cost-effective. In its summary, the report recommended that mandatory audit firm rotation not be required at that time. The report cited the many changes required by SOX and the need to implement those changes before taking additional steps, and the results of a survey that indicated the cost of such a requirement could outweigh the benefit.

As companies and audit firms have absorbed the changes required by SOX, the issue of mandatory audit firm rotation has re-surfaced. A list of reasons supporting mandatory audit firm rotation was published in the *Journal of Corporate Accounting & Finance* (Raiborn, 2006). Reasons pertinent to this paper include:

- Decreases the development of friendships and "coziness" between audit firm and client employees
- Decreases the potential for auditor to succumb to management pressure to use questionable accounting techniques or accept compromised accounting procedures
- Increases public perception of auditor independence
- Increases the potential for audit firms to be more vocal about disagreeing with questionable client practices.
- Increases audit quality by providing a "fresh look" at client reporting practices.
- Increases audit quality because the current audit firm would be aware that a successor auditor would be more likely to detect and disclose predecessor auditor errors or inefficiencies.

Evidence that this position is gaining support may be found in the current draft Good Government Practices for 501(c) (3) Organizations in which the US Internal Revenue Service recommends that: "The auditing firm should be changed periodically (e.g., every five years) to ensure a fresh look at the financial statements" (no page).

Mandatory Audit Firm Rotation – US states

At this point while not an exhaustive analysis, there appears that no state has adopted mandatory audit firm rotation. An analysis of the five states hardest hit by the recent corporate scandals (Arizona, California (considered in 2005), Connecticut, New York and Texas) found no support for mandatory audit firm rotation (Gantt, 2007)

Mandatory Audit Firm Rotation – International

According to a report published by the Bocconi School of Management, following a number of perceived public accounting failures and corporate scandals, only five countries, out of 24 countries studied, require the mandatory rotation of audit firms (SDA Bocconi, 2005).

These include: Brazil (banks and listed companies– every five years) India (banks, privatized insurance companies and government companies– every four years), Italy (listed companies–every nine years), Singapore (Singapore chartered banks only– every five years) and South Korea (companies listed on the Korean Stock Exchange or registered with Korea Securities Dealers Automated Quotations– every six years.)

Among those countries that have tried mandatory audit firm rotation and have eliminated it are: Canada (required for banks until 1991), Spain (eliminated in 1995), Slovakia, Latvia, Turkey and the Czech Republic (Institute, 2002).

Ireland and Australia both considered mandatory audit firm rotation in 2001, but rejected it (Institute, 2002).

Countries currently considering the requirement include Austria (now waiting to see what the European Union as a whole will decide) and South Africa (Business Day, 2003).

The European Union 8th Directive went into effect in May 2006. The directive, similar to many aspects of SOX does not require member states to implement mandatory audit firm rotations, but it does specifically allow those who choose to do it to make that choice (Journal, 2006).

The International Monetary Fund (IMF) is one international organization that has weighed in on the issue. The IMF as of a 2004 decision now requires rotation of its external audit firm every 10 years (International Monetary Fund, 2004).

OTHER REASONS FOR AUDITOR CHANGES

A review of the existing literature identifies a mixture of behavioral and economic reasons for auditor change. Beattie and Fearnley (1998a, b) suggest that purely economic factors, such as industry specialization, top management/auditor relationship and banker/auditor relationship, are the primary reasons for audit firm changes

Attempting to reduce the cost of the audit is also frequently cited as a reason for changing auditors (Beattie & Fearnley, 1995; Bedingfield & Loeb, 1974; Woo & Koh, 2001

Another issue cited by companies for changing auditors is their concern about the quality of the audit work. Menon and Williams (1991) contend that quality serves as an important differentiating audit attribute and is heavily reliant on the perceived credibility that certain auditors bring to their engagements. Audit quality also includes such factors as size of audit firm, its name brand, independence and industry of expertise. Auditor changes occur more frequently among companies employing non-Big 4 firms. Larger audit firms are perceived to be able to render a certain level of service and therefore synonymous with a higher quality level.

Another, highly sensitive, reason for changing audit firms relates to the level of audit opinion issued by the current audit firm. While some studies indicate that auditor changes are not affected by the audit opinion issued (Knapp & Elikai, 1988), Lennox found that those companies who received a qualified opinions were more likely to switch auditors thereby increasing the probability of getting a better opinion (Lennox, 2000, 2003). Vinten (2003) suggests that in the post-Enron era "companies do successfully engage in opinion shopping, swapping auditors to suit their narrow self-interest

CERTAIN THEORIES OF CRIMINAL BEHAVIOR

While the theoretical arguments for, and against, the rotation of audit firms appear to be in the developmental stages, theories of criminal behavior are robust and well grounded. Responding to "stinging criticism" in the 1930s that criminology was not scientific enough, criminologists have sought to develop a scientific understanding of criminal behavior based on observed behavior, biological origins, and behavioral models (such as operant conditioning) (*see, e.g.,* Hoffman, 2003; Matsueda, 1988; Sutherland and Cressey, 1974; Sutherland, 1939). Two theories of criminal behavior most relevant to fraud in organizations are strain theories and differential association theories.

Strain Theories of Crime

At the most basic level, strain theories of crime hold "that crime breeds in the gap, imbalance, or dysfunction between culturally induced aspirations for economic success and structurally distributed possibilities of achievement" (O'Connor, 2007, no page). The strain theory was first applied specifically to fraud (embezzlement) by Cressey in his 1953 work *Other People's Money: A Study in the Social Psychology of Embezzlement* (Ganon & Donegan, 2007). Cressey's application of strain theory to understanding and explaining fraud in organizations has been adopted by the Association for Certified Fraud Examiners (ACFE) and much later by the American Institute of Certified Public Accountants (AICPA) (Ganon & Donegan, 2007; ACFE, 2005; AICPA, 2006). Cressey developed what accountant recognize as the fraud the triangle (Ganon & Donegan, 2007), namely, the "three conditions generally present when material misstatements due to fraud occur: incentives/pressures, opportunities, and attitudes/rationalizations" (AICPA, 2006, at A.1).[1]

Citing the inclusive studies of strain theory, Ganon and Donegan (2006) argue that strain theory in general and strain theory as operationalized by the fraud triangle may not explain why individuals may commit fraud in organizations. Coleman (2002, p. 195) explains that "there appears to be no necessary reason why an embezzlement must result from a non-shareable problem instead of a simple desire for more money." Thus, while intuitively appealing, the fraud triangle as a model for understanding and explaining (and thus presumably preventing) fraud in organizations has been adopted by the accounting profession "without a serious consideration of other perspectives" and they suggest that "fraud accounting research would be enriched by expanding the dialogue to include the fruits of current criminology theory and research" (Ganon and Donegan, p. 6). Further, strain theory would not seem to support the mandatory rotation of audit firms as such rotation would not break any of the three elements of the fraud triangle.

Differential Association Theories of Crime

Another, and we would argue, more relevant theory of criminology is differential association. Sutherland's theory of differential association (1939, 1947) attributed the cause of criminal activity to the social context of individuals, rather than to the individuals themselves. It stated that criminal behavior is learned through interaction with other persons, predominantly within primary groups (family, peers, and friends). This learning process included not only the specific techniques and skills for committing crimes but more importantly, the

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[1] By incentives/pressures, the ACFE (2005, p. 4.504) means "non-sharable problems that threaten the status of the subjects…." By opportunities, the ACFE (2005, p. 4.508-4.509) means that the subject must have general knowledge that fraud may be committed, and the specific skill to commit the fraud. By attitudes/rationalizations, the ACFE (2005, p. 4.509-4.510) means the subject's *ex anti* justification and motivation to commit the crime, e.g., their crime is not really a crime or is justified or is just part of a continuing pattern of behavior in their organization.

motives, rationalizations, and attitudes as to whether rules should be followed or broken (Matsueda, 1988).

Burgess and Akers (1966) revised Sutherland's theory to include the impact of operant conditioning and social learning theory on behavior. According to Akers (1985), crime is initially learned through direct imitation or modeling of deviant peers. The subsequent likelihood of criminal behavior is determined by differential reinforcement i.e., the rewards and punishments following the act. Reinforcement can be direct to the individual or indirect, where observing another's criminal behavior being reinforced will reinforce the observer's own criminal behavior (Matsueda, 1988).

Burgess and Akers (1966) summarized this process in seven stages. These stages reorganize Sutherland's nine propositions of behavior and add the concept of reinforcement:

- Criminal behavior is learned according to the principles of operant conditioning or imitation.
- Criminal behavior is learned both in nonsocial situations that are reinforcing or discriminating and through social interaction when the behavior of others is reinforcing or discriminating.
- The principal learning of criminal behavior occurs in those groups that compromise the individual's major source of reinforcement.
- The learning of criminal behavior is a function of the effective and available reinforcers and the existing reinforcement contingencies.
- The type of learning, including techniques, attitudes, and avoidance procedures, and their frequency of occurrence depends on the effective and available reinforcers and the rules and norms by which these reinforcers are applied.
- Criminal behavior is a function of norms which are discriminative for criminal behavior.
- The strength of criminal behavior is a direct result of the amount, frequency, and probability of its reinforcement.

According to Akers (1985), differential reinforcement is best applied to behavior within groups from which individuals receive reinforcement. The individual learns criminal behavior from others and then this behavior is reinforced. The level of positive reinforcement will determine whether the behavior continues.

DISCUSSION

In the aftermath of a significant number of fraudulent financial reporting cases and related audit failures, Congress and regulatory agencies enacted legislation and regulations to reduce the likelihood of a re-occurrence. Many of these included provisions to require rotation of auditors. Most, like Sarbanes-Oxley, require only that individual auditors (typically partners and managers) be rotated off audit engagements every five-seven years.

While this approach can break up inappropriate relationships between individual auditors and management, it does not address the influence of the public accounting firm's culture on inappropriate auditor behavior. In short, rotating only individual auditors does not change the underlying culture and reinforcers of the audit firm.

Starting in the 1970's, the large public accounting firms began to increase the emphasis on client relations – employees who could generate and retain clients had a better chance of being admitted to partnership. The need to make clients happy was continually reinforced, even at the partner level. Junior partners, such as David Duncan at Arthur Andersen, were acutely aware of the need to service large clients in order to retain their partnerships.[2] As long as this reward structure is reinforced within the firm, it is questionable whether merely rotating

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[2] A description of this change in culture at Arthur Andersen can be found in Squires, et. al. (2003).

individual auditors while retaining the audit firm will be effective.

Mandating auditor rotation by firm has the advantage of lessening the influence of client retention as a reinforcer. Audit clients coming and going will become a normal process for CPA firms. Firms will expect that partners will "lose" clients. Further, the mandated shorter-term relationship will make each client less financially valuable to the firm. An auditor who "loses" a client will only cost his/her firm fees for the next several years, rather than losing an open-ended annuity. This, coupled with Sarbanes-Oxley prohibition against providing consulting services to publicly traded audit clients, means the loss of each audit client is less of a financial problem. In turn, this reduces client leverage and the potential for auditors to succumb to management pressures and increases the potential for audit firms to disagree with questionable client practices.

Mandatory audit firm rotation may also shape client behavior. Currently, if a client is unhappy with their audit firm, they change firms rather than continue to put up with the problem for the foreseeable future. However, if firm rotation is mandatory, the client is looking at a relatively short time before having to change audit firms. Given this, clients may be more likely to stay in to reduce auditor changes and transaction costs. This also serves to reduce client leverage and it may reduce the probability of creating a deviant subgroup in which fraud may occur.

Mandating audit firm changes may also increase audit quality. The current audit firm knows they will be replaced within a short period and that the successor firm will be more likely to detect and report predecessor errors. This could motivate CPA firms to emphasize audit quality, thereby making quality a reinforcer.

There are other advantages of mandatory audit firm rotation. It may reduce the opportunities for the development of friendships and coziness between auditors and client employees (Raiborn, et. al., 2006). Over time, auditors may become too comfortable with management and lose the ability to maintain an appropriate level of professional skepticism. While the auditor rotation provision of Sarbanes-Oxley addresses this at the manager and partner levels, mandatory firm rotation means that even staff auditors are replaced. It also may increase the public perception of auditor independence as on its face at least there would not be a permanent potentially deviant subgroup in which management might be able to reinforce deviant behavior. The importance of perception is clearly noted in Rule 101 – auditors are required to be independent in fact and appearance (a much higher standard).

CONCLUSION

The recent accounting and auditing scandals have renewed interest in public policy requiring mandatory rotation of audit firms.

An analysis of public policy experience with mandatory audit firm rotation is inconclusive. Of the ten countries that have mandated audit firm rotation, five no longer require it. The European Union allows its members to mandate firm rotation, but does not require it. The Sarbanes-Oxley Act mandates rotation of audit partners and managers, but not the firms. On the other hand, the IRS recently issued a guidance draft recommending the rotation of audit firms for non-profit organizations.

An analysis of the literature on voluntary auditor rotation is also inconclusive. While "opinion shopping" has been identified as one reason companies change audit firms; there are also a number of other, valid reasons identified such as lack of audit quality, audit fees, and client relationships.

The traditional arguments for and against audit firm rotation have been remained unchanged for almost 70 years and lack theoretical substance. Actual experience with mandatory and voluntary auditor rotation is inconclusive. However, the theory of differential reinforcement suggests that rotation of individual auditors may not be effective, and that mandatory rotation of audit firms may be necessary.

When only individual auditors are rotated off audit engagements, the audit firm's culture and reinforcers of potentially deviant behavior remain in place. Only the mandatory rotation of audit firms may lessen the amount, frequency, and probability of reinforcement of antithetical behavior by a) reducing the pressure of audit firms to retain clients no matter what it costs the firm in terms of audit quality, b) increasing the pressure to perform a quality audit (less the next audit firm find your mistakes), c) ensuring that client-firm relations at all levels are temporary (which reduces the time in which the client may teach the firm antithetical behavior), and d) incentivizing clients to stay with firms even if the clients are not happy with the "tough" auditors (as the relationship is temporary and the present value of the benefits of changing auditors who will change in a few years or less may not outweigh the transaction costs of changing auditors).

Future research may wish to employ the techniques, tools, and methods of research criminology theory to empirically examine whether deviant subgroups of accountants and auditors were created by the process of differential reinforcement.

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DESIGNING A LAPTOP SURVEY AT A PENNSYLVANIA COLLEGE: A PRECURSOR TO INTRODUCING INNOVATIVE TECHNOLOGIES

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ABSTRACT

How should one introduce an innovative technology into the classroom? This paper presents research that explores the introduction of innovative technologies such as laptop computers into the instructional environment of a college. A survey based upon Rogers' theory of innovation diffusion is proposed as a framework to initiate the process and to promote faculty acceptance of change in the classroom.

INTRODUCTION

How does one introduce an innovative instructional technology (IIT) such as laptop computers, handheld devices, a course management system, or a collaborative learning environment to an institution of higher education and enhance instructional effectiveness? An IIT is any technology that is novel, possibly transformative in nature, and is used by faculty for instructional purposes. Other examples of IIT include a math emporium, a prototype of a laptop classroom, a studio layout of a computer lab, student centered and hybrid learning spaces, and clustered or theatre-in-the-round classrooms (Dittoe 2002). Regrettably, IIT often are implemented without an assessment of the impact of the technology on instructional effectiveness.

This is an important question to institutions of higher education. First, the cost of information technology (IT) is a significant percentage of the institutional budget of higher education. IT is the basic infrastructure that supports IIT, such as networks, servers, and support staff. IT cost can range from $1 million to $3 million for almost one third of institutions to over $17 million for about 17 percent of institutions. In 2003 the median cost of IT was $3 million. See Table 1 for a breakdown of the costs of IT by type of educational institution (Goldstein 2004).

The second motivation for this question is the effectiveness of IIT. While there has been a great deal of research into the effectiveness of certain IIT such as long distance education (Russell 1999), research into digital forms of IIT is not unanimous in its effectiveness. There is research of positive effectiveness that indicates that students who use IT have beneficial educational experiences leading to student-centered learning and high faculty interaction (Laird & Kuh March 2005), that students' final exam grades increase when using a high quality, feature rich, sophisticated IIT (Gold July 2004), that students in a distance education course out perform those taking a traditional course (Shachar & Neumann October 2003), and that students using an online IIT made better first semester grades than those in a traditional course (Lynch January 2002). On the other hand, other studies report that students using web-based materials had the same outcome as those using a traditional textbook (Press 2005), that students in a web-based statistical course received similar grades as those in an online course (McLaren Spring 2004), that students in a microeconomics course did significantly worse in a virtual IIT environment than those in a traditional or live course, and that students learn better through human interaction and that computer-based feedback does not positively influence learning (Mandernach January 2005). In summary, many researchers question the effectiveness of IIT in delivering positive student outcomes (Russell 1999).

The last motivation for the question bears on the nature of the studies reporting on the effectiveness of IIT in higher education. According to Phipps and Merisotis (1999) many studies of effectiveness of IIT are flawed due to failure to control for extraneous variables, lack of random selection of subjects, the questionable validity and reliability of evaluation measures, and failure to control for the emotional reaction of both faculty and students to IIT. They state further that research designs emphasize individual courses at the expense of the outcomes of an academic program. Combine the poor design of some of the studies with the importance of properly assessing outcomes for reporting to accreditation organizations and one recognizes that this is an area rich in research opportunities (Characteristics of Excellence in Higher Education 2006).

DISCUSSION

The discussion has four sections. The first section presents an overview of research into the effectiveness of laptops in institutions of higher education. The second section discusses research in the adoption of innovative IT and a challenge to change the approach of that research. The third section describes Rogers' (2003) theory of the diffusion of innovation. The fourth section presents Rogers' model of the diffusion of technical innovations and makes a case that the elements of his definition can direct IIT research.

Research into Laptop Outcomes

Many institutions of higher education are adopting laptop computers at an astonishing rate. Weaver and Nilson report that about 180 universities were adopting laptops in 2005. Clemson University anticipated that faculty would devise methods to use the laptops in the classroom in an effective manner (Weaver & Nilson Spring 2005, p3). They report that faculty members were skeptical of the mandate to use laptops because of a negative perception of the utility of laptops. Even so, experience showed Weaver and Nilson that laptops can enhance student outcomes. For instance, 61% of students felt they were more engaged using laptops, 86% of faculty agreed students were more engaged, 48% of students reported learning more, and 75% of faculty agreed that students learned more. An important conclusion from this study is that faculty must be prepared for innovative technologies via a development program, for instance, in order for IIT to be successful.

There are examples of outcomes-based research in IIT that apply empirical techniques. Tan and Morris (2005) developed a usage metric using a survey of undergraduate students that showed that they can achieve lifelong learning behaviors. The behaviors included ongoing formal learning in business topics, time management, and managing family and careers; informal learning in personal development; and professional learning in career related subjects. Finn and Inman (Spring 2004) report a survey of alumni who had used laptops while in they were undergrads in college. They showed that the experience resulted in a positive change in attitude and that the digital divide based upon sex and professional discipline had diminished. Barak, Lipson, and Lerman (Spring 2006), however, had mixed findings. Students had a positive attitude about the use of wireless laptops, but had a less positive attitude about actively contributing to in-class activities. Overall, they felt that the experience enhanced student centered and exploratory learning, and interactions with students and teachers, but conceded that laptops could be a source of distraction. Finally, Sahin and Thompson (2006) provide a methodology to obtain information about faculty members' needs of instructional development prior to implementing IIT.

There are surprisingly good examples of outcomes-based empirical research in laptop effectiveness in k-12 education. Brooks, Miles, Torgerson and Torgerson (June 2006) examined the use of laptop software to deliver spelling literacy training to 11-12 year old students. While they found no significant difference between laptops and traditional techniques and that reading seemed to suffer from usage of the laptop software, the study is well-designed. Grant, Ross, Wang, and Potter (2005) report on ubiquitous computing using laptops in fifth grade courses. Results showed that teachers had a positive reaction to the technology and that teacher preparation facilitated student centered learning.

Much of the literature on laptop outcomes in higher education is constructive or exploratory in nature. For instance, Prescod (2003) shares the initial findings of a longitudinal study of undergrads using laptops while sharing no empirical findings. Lansari and Al-Rawi (2007) describe an outcomes based IT curriculum that used laptops. Tubaishat and Bhatti (2006) report on a laptop based learning environment that they felt alleviated cultural, gender-based barriers to education. They also felt that the IIT improved motivation, confidence, communication skills, and encouraged collaboration.

Research in Innovative IT

Research in the adoption of innovative IT is often based upon the Technology Acceptance Model (TAM) first proposed by Davis et al (1989). TAM describes how users come to accept a novel technology such as a software package, an operating system, or a computer device such as a laptop. TAM states the conditions under which a user will adopt an innovative IT. Thus, IT researchers who employ TAM to explore why users adopt an IT innovation assume they need to elicit explanations about two theoretical constructs:

1. Why the user believes the innovation is useful.
2. Why the user believes the innovation is easy to use.

Benbasat and Barki (April 2007) have criticized research in innovative IT for over reliance on TAM because it is too narrowly focused. In their article, they reference Rogers (2003) the originator of the theory of diffusion of innovation, i.e. diffusion theory to argue that this area of research should be expanded. For example, Rogers proposes that an innovation has at least five attributes or theoretical constructs. In addition, Rogers also describes the adoption process of an innovation. Benbasat and Barki's critique of Davis' TAM theory concludes that TAM too narrowly focuses a researcher of innovative IT on perceived usefulness and ease of use. The next section discussed Rogers' attributes of innovations in relation to laptops.

Rogers' Attributes of an Innovation

Rogers (2003) identifies five attributes of an innovation. A full consideration of these attributes has the potential to broaden the field of IIT research. The attributes follow.

- Relative advantage – the extent to which the innovation is better than prior practice.
- Compatibility – the extent to which the innovation fits the culture of a social system.
- Complexity – the extent to which the innovation is seen as difficult to learn or use.
- Trialability – the extent to which the innovation may be experimented with little or no negative consequences.
- Observability – the extent to which the innovation is transparent to peers in a social system.

Weaver and Nilson (Spring 2005) give examples where a laptop mandate when initially implemented violated the principles of Rogers' attributes of an innovation.

- Relative advantage – faculty perceived laptops as not much different than desktops, that laptops may be a passing fad, and that laptops were an unnecessary expense to students.
- Compatibility – faculty perceived that the laptop mandate was an administrative policy that did not arise from a clearly thought out educational objective, and that the laptops were a distraction in class when students surfed the internet or read email during lectures, or used the internet to cheat during exams.

- Complexity – faculty may not have felt prepared using laptops and that laptops would require additional hours for course preparation.
- Trialability – faculty may have been fearful of technical glitches that cause work to be lost.
- Observability – faculty did not see sufficient research by their peers that laptops enhance learning.

Weaver and Nilson recount several initiatives that were enacted to support the thoughtful adoption of laptops such as pilot studies, identification of early adopters and professional development of faculty who were enthusiastic of laptops, personal incentives and recognition. As a result, benefits were realized such as shifts in teaching style from traditional lectures to a student centered approaches that fostered in-class interaction, participation, collaboration, and hands on exercises. Faculty members were encouraged to share their experience and coauthor papers, create presentations for conferences, and collaborate to produce cross-discipline assignments. Students and faculty alike reported more engagement, improved faculty-student interaction, and more convenience to students in finding information from the network and uploading or downloading assignments to the network.

Finally, new forms of learning took place at Clemson. They included novel data collection techniques, student self-assessment via practice tests, student research opportunities via the internet, simulation exercises, and student collaboration. The next section continues the discussion of Rogers' diffusion theory of innovation to ask how one might introduce IIT.

Rogers' Diffusion Model

Rogers defines diffusion as "the process in which an innovation is communicated through certain channels over time among the members of a social system" (Rogers, 2003, p. 5). There are several implications for research into the adoption of an IIT such as laptops in this definition. Rogers focuses on four elements of diffusion: the innovation, the communication channel, time, and the social system.

The attributes of an innovation provide research opportunities in improving the rate of adoption of IIT. Administrators may ascribe to laptops a relative advantage for reducing the cost of lectern style presentation systems often called "smart classrooms." The laptop can replace the standalone computer in the smart classroom resulting in cost savings. According to Benbasat and Barki (April 2007), IT artifacts such as cost savings are an important element in IIT research. Also, the instructor may attribute a personal advantage to laptops in the classroom because the instructor will know where the files are located on the laptop, what programs are available on the laptop, and how the laptop will behave during lectures. Possibly more importantly, as the innovation is applied in practice and research confirms positive outcomes, opportunities to work smarter will become apparent. For instance, the first approach to integrating laptops into the classroom may be to use them as devices to enhance lecturing, especially if all of the students do not have laptops. However, Weaver and Nilson (Spring 2005) propose that the most beneficial impact of laptops occurs when the instructor changes the style of learning from traditional lecturing to collaborative, student-centered techniques. Rogers calls this process re-invention. This process would be of interest to a researcher in IIT.

The second theoretical construct in Rogers' definition is the communication channel. An area of research here might be the circumstances that cause an innovation to reach critical mass. Rogers' defines critical mass as the point where an innovation becomes self sustaining. He gives examples of innovations that matured slowly because the channel was not available to enough users to reach critical mass, such as the telephone and the fax. On the other hand, the cell phone reached critical mass quickly because they could connect to the existing hardwired network. A researcher interested in IIT and communication channels might be interested in the impact of advanced data communications topics such as wireless networks and protocols, IP enabled systems, or Internet 2.

The third construct in Rogers's definition is time. Rogers classifies adopters of innovations based upon when they adopt an innovation into five categories. The adopters from earliest to latest are innovators, early adopters, early majority, late majority, and laggards. See Figure 1. Obviously, a researcher in IIT would be interested in the characteristics of faculty who would be laptop innovators and early adopters. The researcher also may want to know what software they would want to use, what special needs they would have of the IT department, and what their perception of IT services are. A particularly interesting question might be how this group can assist the institution in achieving critical mass and lift the majority of faculty to a student-centered approach to teaching. Another question concerns the bumps along the way that might impede the early majority from adopting laptops.

The final construct of Rogers's definition of diffusion is the social system of the adopters. Rogers discusses social learning theory and compares it to aspects of diffusion theory. Both theories stress the importance of information interchange between peers concerning innovation in order to achieve faculty learning. Both theories examine the links between peers as important conduits for behavioral change. These theories provide IIT researchers with opportunities to explore the relationships between faculty members who experience laptops in the classroom with faculty who have not had those experiences. Other questions that might be explored are the nature of the experience of faculty members in the same department and faculty members in other disciplines. This could possibly result in novel interpretations and applications of concepts related to student-centered learning.

Finally, in light of diffusion theory one may consider strategies to enhance the adoption of laptop and new teaching strategies. Hall and Elliot (2003) cite the 1998 National Survey of Information Technology in Higher Education as a motivation for their paper. They state that many institutions face difficulty in supporting faculty who incorporate IIT such as the internet into their courses. Strategies which they report that speed the adoption of laptops and student-centered learning follow.

- Initially identify and appeal to opinion leaders and faculty with a technical background.
- Ease the transition between early adopters to early majority adopters.
- Convince late majority and laggards by peer pressure.
- Publicize and reward early laptop projects that achieve effective progress.
- Do not over-sell new IIT.
- Demonstrate that new IIT are compatible with many teaching styles, including traditional lectures.
- Provide training and course development using IT staff and peer faculty members.
- Ease slowly into IIT by means of pilot studies, demonstrations, and phased implementation.

CONTEXT AND SURVEY DESIGN

The college in this study is a medium sized liberal arts institution with a professional emphasis located in south central Pennsylvania. One of management's strengths at the college is consensus building and planning. This has resulted in long-range plans for the college, IT, library services, and other learning resources. In addition, the college has an Instructional Resources Committee (IRC) that is actively engaged in suggesting and evaluating plans, policies, and procedures to effectively apply learning resources in the academic curricula of the college. The college has an office of

Institutional Research and Outcomes Assessment.

The IRC was given the task to develop supporting materials for a pilot project to explore the effectiveness of laptop technology and the potential impact of laptop technology on institutional resources. Management will implement the pilot project in the fall semester of 2007. This paper was written in support of that task. The pilot project will have several components including a pre/post survey to explore the time dimension, a letter to faculty who will participate in the project, materials required by the Institutional Research Committee to do human research, and an analysis and written evaluation of the data collected. Given the research as reported above, the objectives of the survey were as follow.

- Recognize and publicize laptop and teaching innovations in the classroom.
- Identify potential IT support issues related to training and faculty development.
- Aid in planning and institutional research associated with teaching technologies.
- Provide experience to the IRC in outcomes assessment techniques.

A brief discussion of the survey follows. Two resources were found to be very helpful in the construction of the survey (Sahin & Thompson 2006, and Mitra et al 1999). Since the survey will track the change over time in use of laptops and the impact on teaching and institutional resources, it will be administered during the summer and fall of 2007 and again during the summer and/or fall of 2008. Since faculty members have a dedicated desktop computer in their office, a major change to explore is the experience of faculty who will convert from desktop computers to laptop computers. The survey can be found in Appendix B. Section 1 of the survey addresses faculty members current use of software applications on their desktop computers and Section 2 address their expected use of software applications on laptops. Both of these sections are designed to explore the potential innovative impact of laptops.

Section 3 asks the participant where computers are used. This section is designed to explore the mobile nature of laptops and the advantages or disadvantages that mobility might provide.

Section 4 asks whether the participant feels there are limitations to access to computers, software, and support. This section is designed to explore the level of access to instructional technology.

Section 5 asks what are the respondents' opinions regarding the impact computers have on instruction. This section is designed to explore the advantages or disadvantage that laptops as innovations might bring to the classroom.

Section 6 asks the participants how they feel about the support received from the IT department and colleagues. This section is designed to explore the IT support provided by management and the social support provided by their peers.

Section 7 asks the user to classify herself according to Rogers' categories of adopters. This section will classify respondents and possibly identify leaders who can serve as a fulcrum for introducing future innovations.

Section 8 asks for demographic information from the participant.

CONCLUSION

Indeed, the survey is long. Automation or online entry will be very important for data collection. However, the major question related to the success of this survey is faculty acceptance of the importance of this research. Hopefully, faculty will agree that this survey will be an important first step in the process of examining the impact of IIT in the classroom and using that experience to become better teachers and a better institution.

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APPENDIX A

Type of Institution	Cost of IT ($M)
Associate Degree	3.25
Bachelor	2.59
Master	5.76
Doctor	28.7
Specialized	6.59

Table 2 – Cost of IT by Type of Institution (Goldstein 2004, p44)

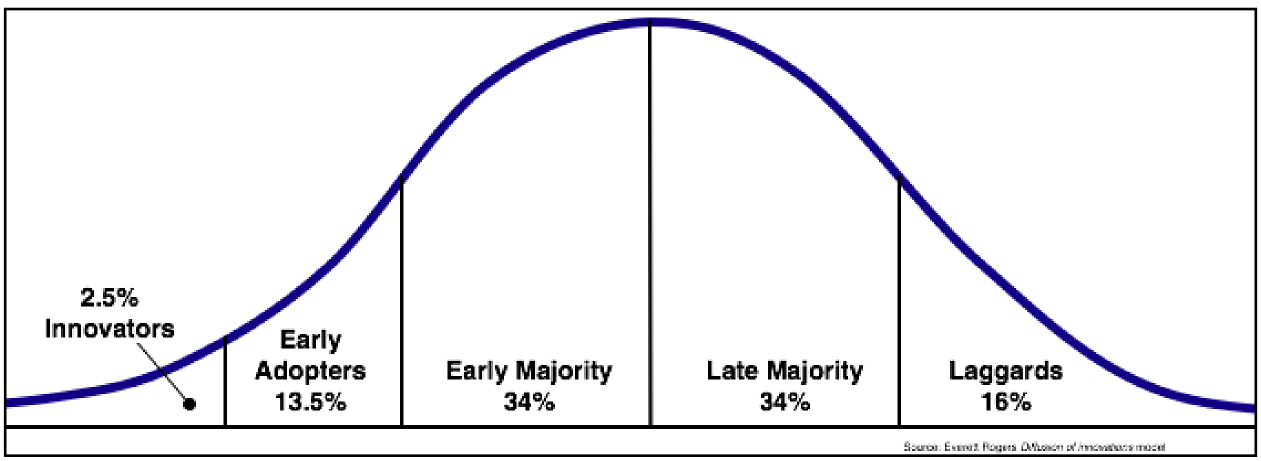

Figure 1 - Rogers' Adopter Curve (Wikipedia.org June 21, 2007)

APPENDIX B – LAPTOP/DESKTOP SURVEY

Please provide the last four digits of your employee identification number (or some other code that you can remember for the post survey):

|____|____|____|____|

Section 1: Level of Current Computer Desktop Use

Instructions: for each of the software applications below rate your current **level of computer desktop use** for instructional purposes (preparing lessons, delivering lessons, or to evaluate, communicate or keep grade records). Place your answer in one of the right-most columns by making an "X." Use the following definitions for your answers. **Never** means you do not use the software application. **Rarely** means you use it once a semester. **Sometimes** means once a month. **Often** means once a week. **Very Often** means daily use. Descriptions or uses of each application are given in parentheses next to the application.

I use the following application …	**Never**	**Rarely**	**Sometimes**	**Often**	**Very Often**
1) Word Processing (i.e., creating, storing, retrieving, formatting, spell-checking, and printing electronic text)					
2) Spreadsheets (i.e., manipulating, organizing, and entering formulae and numbers)					
3) Database Management (i.e., designing, creating, updating, and querying data stored in a relational format)					
4) Classroom Management (i.e., online grade books, and course management systems such as Blackboard and/or WebCT)					
5) Graphics (i.e., storing and/or manipulating picture, diagrams, graphs, symbols or other electronic images)					
6) Presentation (i.e., create or manipulate slide-based presentations for public consumption)					
7) Authoring (i.e., create interactive multimedia or computer-based training programs)					
8) CD-ROM, DVD, or Web-based Interactive Content (i.e., maps, dictionaries, or geographic information systems)					
9) Website Design Software (i.e., create and update html pages including text, graphics, or multimedia)					
10) Email (i.e., sending, receiving, and organizing electronic messages)					

11) Internet Content (i.e., browsing, searching, observing content on the World Wide Web)					
12) Data Analysis Software (i.e., using statistical techni-ques to describe, analyze, or interpret numerical data)					
13) Simulations and Games (i.e., creating an environ-ment that models a system or provides entertainment)					
14) Collaboration software (i.e., chat, discussion boards, and instant messaging)					
15) Tutorials (i.e., using software that explains concepts, or uses exercise and practice techniques)					
16) Discipline-specific Programs (i.e., software used primarily in your academic discipline)					
17) Windows Operating System					
18) Macintosh Operating System					
19) College portal					
20) Other:					

Section 2: Expected Level of Laptop Use

Instructions: for each of the software applications below rate your **expected level of laptop use** for instructional purposes.

I use the following application …	**Never**	**Rarely**	**Sometimes**	**Often**	**Very Often**
1) Word Processing (i.e., creating, storing, retrieving, formatting, spell-checking, and printing electronic text)					
2) Spreadsheets (i.e., manipulating, organizing, and entering formulae and numbers)					

3) Database Management (i.e., designing, creating, updating, and querying data stored in a relational format)					
4) Classroom Management (i.e., online grade books, and course management systems such as Blackboard and/or WebCT)					
5) Graphics (i.e., storing and/or manipulating picture, diagrams, graphs, symbols or other electronic images)					
6) Presentation (i.e., create or manipulate slide-based presentations for public consumption)					
7) Authoring (i.e., create interactive multimedia or computer-based training programs)					
8) CD-ROM, DVD, or Web-based Interactive Content (i.e., maps, dictionaries, or geographic information systems)					
9) Website Design Software (i.e., create and update html pages including text, graphics, or multimedia)					
10) Email (i.e., sending, receiving, and organizing electronic messages)					
11) Internet Content (i.e., browsing, searching, observing content on the World Wide Web)					
12) Data Analysis Software (i.e., using statistical techni-ques to describe, analyze, or interpret numerical data)					
13) Simulations and Games (i.e., creating an environ-ment that models a system or provides entertainment)					
14) Collaboration software (i.e., chat, discussion boards, and instant messaging)					
15) Tutorials (i.e., using software that explains concepts, or uses exercise and practice techniques)					
16) Discipline-specific Programs (i.e., software used primarily in your academic discipline)					
17) Windows Operating System					
18) Macintosh Operating System					

19) College portal					
20) Other:					

Section 3: Frequency of Computer Use

Instructions: for each of the items below rate **how often** you have computer access for instructional purposes.

I use computers for instructional purposes…	**Never**	**Rarely**	**Sometimes**	**Often**	**Very Often**
1) In my office.					
2) In most classrooms where I teach.					
3) In my home.					
4) In a computer lab.					
5) In a library or media center.					
6) Other:					

Section 4: Access Limitations to Computers

Instructions: for each of the items below rate the **extent** to which you think the following factors **limit your access** to computers for instructional purposes. Place your answer in one of the right-most columns by making an "X" under the option that most closely matches your level of agreement or disagreement.

I feel that I am limited in access to computers for instructional purposes because…	**Strongly Disagree**	**Disagree**	**Neutral**	**Agree**	**Strongly Agree**
1) Not enough computers.					
2) Not enough computer licenses.					

3) Outdated or incompatible computers.					
4) Outdated or incompatible software.					
5) Unreliable computers and/or software.					
6) Lack of appropriate instructional software.					
7) The Internet is not easily accessible.					
8) Lack of support regarding ways to integrate computers into the curriculum.					
9) Lack of technical support.					
10) Lack of time in schedule to use computers for instructional purposes.					
11) Lack of training on existing computers and software.					
12) Other:					

Section 5: Your Attitude to the Use of Computers

Instructions: for each of the items below rate your **attitude** toward computers as tools for instructional purposes.

	Strongly Dissagree	**Disagree**	**Neutral**	**Agree**	**Strongly Agree**
1) I think that using computers improves the quality of teaching I do.					
2) I think that using computers fits well with the way I like to teach.					
3) I think that learning to use computers is easy for me.					
4) I feel comfortable using computers.					
5) Computers make learning easier and more efficient.					
6) I prefer to deliver lessons using computers.					
7) The use of email gives me easier access to colleagues, administrators, and students.					

8) I am fearful about computer use.					
9) I expect all faculty members to use computers for instruction.					
10) Computer use increases my usual workload.					
11) My students expect me to use computers for instruction.					
12) Other:					

Section 6: Your Feeling Concerning the Support You Receive

Instructions: for each of the items below rate your **feelings** about the IT support that you receive to use computers for instructional purposes.

	Strongly Dissagree	**Disagree**	**Neutral**	**Agree**	**Strongly Agree**
1) I have had a great deal of opportunity to try various computers for instructional purposes.					
2) In the college, many people use computers for instructional purposes.					
3) I have access to consistent hardware and software updates.					
4) I receive timely technical support and maintenance of computers.					
5) I have access to workshops and/or training on computer use.					
6) Overall, the administration feels that computers are important for instructional purposes.					
7) My colleagues provide assistance with hardware and/or software updates and/or technical support.					
8) My colleagues discourage computer use.					
9) My colleagues share information and ideas about computer use.					
10) My colleagues make an example of a good model of computer use.					
11) When learning new uses of computers, I prefer one-on-one assistance from undergraduate students.					

12) The administration provides adequate support in terms of computer accessories.					
13) I feel that the current computer rotation policy which changes out computers every three years is appropriate.					
14) Other:					

Section 7: Your First Use of Computers for Instructional Purposes	
Instructions: choose one of the items below to describe your use of computers for instructional purposes.	
	Best Describes Me
1) I was using computer technology for instructional purposes before my colleagues were using computer technology for instructional purposes.	
2) I became one of the first faculty members to use computer technology for instructional purposes, because of the success of other colleagues.	
3) I was not one of the first faculty members in the college to begin using computer technology for instructional purposes, but used it ahead of most of my colleagues.	
4) I used computer technology for instructional purposes later than most of my colleagues.	
5) I was among the latest faculty at my institution using computer technology for instructional purposes.	
6) I have not used computer technology for instructional purposes.	
Please give a reason for the category you selected in the space below:	

Section 8: Your Demographic Information	
Instructions: please answer the following demographic or general questions by circling the best answer.	
1) What is your gender? Female Male	6) What is your age? 20-29 30-39 40-49 50-59 Over 59
2) What is your academic rank? Lecture/instructor Associate Prof. Assistant Prof. Full Professor	7) Including the current year, how many years have you been teaching in higher education? 1-5 6-10 11-15 16-20 Over 20
3) What is your department? 1 - Beh. Science 6 - His. & Poly. 2 - Bio. Science 7 - Mus. Art & Com. 3 - Bus. Admin. 8 - Nursing 4 - Education 9 - Phy. Science 5 - Eng. & Hum. 10 - Schmidt Lib.	8) Including the current year, how many years have you been using computers in general? 1-5 6-10 11-15 16-20 Over 20
4) Do you have a computer at home? Yes No	9) What is the average number of students that you teach in one semester? 1-50 51-100 101-150 151-200 Over 200
5) Do you have a computer in your office? Yes No	10) How many graduate students do you currently supervise? 0 1-2 3-4 5-6 7 or more
11) If you have any other comments regarding faculty use of computers for instructional purposes, please give them here.	

ASSESSING DIVERSITY OUTCOMES IN A COLLEGE OF BUSINESS MANAGEMENT CURRICULUM

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ABSTRACT

Standards for undergraduate education require assessment of learning outcomes for key objectives of the curricula. For business education, assessment of diversity competence objectives is required by the AACSB, the premier accrediting body for Colleges of Business. This paper reports on the results of one College of Business's efforts to understand self reported, diversity competent conduct in a work setting. The analysis compares results from students taking a course dedicated to managing diversity with those from students taking another course at approximately the same level. We have published a paper reporting an analysis of data collected in 2001 on measures taken before and at the end of the courses. The data were student self-perceptions of their likely actions in the workplace. The results of that assessment appeared to confirm that the students in the diversity course experienced changes directly connected to the course goals and that all students showed modest improvement in self reported diversity competent actions. The data reported here are results of a replication of that earlier design in later semesters of 2001, 2002 and 2006. The overall results replicate the results of the earlier study for the effects of the diversity course. In addition clear changes were observed when gender was introduced as a variable. In this dataset, men's initial scores were lower than women's scores without exception. At the end of the semester, men's scores increased while women's scores remained the same or decreased. Analysis of the data over the full time period suggests that the student populations were comparable at the beginning of the semesters, thus there did not appear to be effects due to changes in the larger culture from 2001 to 2006. It appears that the variables, gender, course and year, each affected different items in the survey.

INTRODUCTION

Diversity training in business in the United States has become an ordinary part of employee orientation and development (Holladay et al., 2003, 246). About two-thirds of employers provide diversity training. (Compensation and Benefits for Law Offices, 2006) Since the turn of the century, the training has expanded from an emphasis on equal opportunity themes, typical of diversity training in business since the 1960's, to include an emphasis on diversity competencies necessary for effective business strategy and on assessing effects for business outcomes. (Holladay et al, p. 246) Diversity competence (at both the system and individual levels) is seen as essential to being competitive in an increasingly global market place and in diverse employee labor markets. (De Anca and Vazquez, 2007)

Diversity education in colleges of business mirrors the developments in business practice. Accrediting agencies such as AACSB explicitly include criteria addressing diversity issues. Increasingly, those criteria specify assessing outcomes in preference to measures of attitude and satisfaction. There does not appear to be any standardization of diversity education in Business Schools in the U.S., nor is it typical to have a dedicated course in this area. Many programs now require explicit curricula coverage of globalization and strategy, but human resource strategies and diversity strategies are still somewhat underdeveloped in business curricula. Assessment of diversity competence tends to emphasize inclusion of various demographic groups among employees and students, as well as inclusion of perspectives by representatives of those groups in instructional materials. Diversity skill outcomes are not commonly assessed. Frequently, diversity assessment aims at identifying changes in attitudes towards others who are different. (Hogan and Mallott, 2005; Malkin and Stake, 2004)

Assessment in both business practice and business education tends to involve non-causal research designs. Business education and business practice have not yet created research alliances addressing the processes of change related to diversity intervention. (Paluck, 2006, p.579) As a result, diversity assessment is largely non-theoretical. Not much is known about the process of change involved in diversity training or education. (Malkin and Stake, 2004) Research designs do not separate the effects of the course from larger societal process effects. Thus gross statistical effects about attitude changes, prejudice reduction or satisfaction with the training/educational experience tend to be modest and short lived. (Hogan and Mallott, 2005, 122) Results across studies are often not comparable. The literature, then, does not yet yield cumulative results, emergence of common tools or strategies, or information about effects over time. (Paluck, 2006)

ASSESSING DIVERSITY CHANGES IN A MANAGEMENT CURRICULUM

In response to accrediting criteria and in an effort to understand what, if any, impact a course in Managing Diversity might have, the authors undertook a causal research design involving before and after measures of student reports about actions they might take in an organization in which they work. Responses of students in the Managing Diversity Course were compared with those of students in a comparable course that did not emphasize diversity. The authors used a tool that asked students to report on 40 possible items about actions they might take in a work organization. (Stinson, 1991) Although still an indirect measure, the tool avoids the practice of asking about beliefs and attitudes toward particular groups of people. The course did not have explicit prejudice reduction goals; rather it set goals for competencies in work settings. The main results of the study reported earlier indicated that both groups of students were comparable on their initial responses prior to their courses, and that both groups changed over the course of the semester. (McMahon et al., 2002; McMahon and Sellaro, 2005) The results demonstrated that students in the Managing Diversity course changed more than those in the comparison group and on different items, ones judged to be related to the course objectives. Those results also suggest that students change due to factors outside the Managing Diversity course. That initial assessment did not identify results by demographic characteristics of the respondents. Only gender permitted such analysis, since representation by other demographic groups was too small. Unfortunately, gender data were not collected at that time

The same tool and courses were again used to replicate the assessment in the following semester of 2001, again in 2002 and in 2006. Those results are the subject of the analysis reported here. In response to the literature, we included gender as a variable to be analyzed. The population of students in the courses did not permit statistical analysis of other demographic groups. The objectives of the analysis are to address the following three topics:

- Are the results of the earlier initial assessment robust? The initial assessment analysis showed high reliability of the tool. Nevertheless, over the time frame of the data reported here, the culture at large may have changed. In addition, the literature suggests that assessment of attitude change due to diversity education and training are modest and short lived. (Hogan Marvin and Bryons, 1999; Malkin and Stake, 2004) It is possible that the earlier results were a one-time artifact of the moment due to unknown factors.
- Is there evidence of change over the years in the initial responses of students? Do the students appear to be different prior to taking the course over the years?
- Does gender impact the pattern of results?

causal factor attributable to discrimination. (McMahon 2007; Brush et al. 2004)

Mavin and Bryans (1999) argue that Business/management schools replicate those patterns in the structures and culture of their education programs. At the turn of this century, men dominated the status and reward structure of U.S. business education institutions (Shirley, 1998). Business Education assumes students are homogeneous with regard to their educational needs and expected outcomes. The educational content, culture and practices emphasize the male experience. They are aimed at high level corporate jobs in large, for-profit systems. The classroom culture tends to be gender neutral or follow norms for successful men's experience. Mavin and Bryans (1999) found in a study of top level CEO's that the few women in those positions mirror their male counterparts in several ways. They are taller and speak more loudly than others around them, including men. They also acknowledge that their success required that they come to terms with and compete in a culture dominated by male to male norms. Management education tends not to acknowledge gender based patterns in the business world and does not include gender issues in such areas as human resource strategy, differential career behavioral norms, small business strategies, and social responsibility courses.

It is not surprising, then, that there is some evidence that men and women approach diversity training and education with different attitudes. (Hogan and Mallott, 2005; Malkin and Stake, 2004). Holladay et al found that men approach descriptions of diversity training more negatively than do women. (2003). Concern about initial white male backlash and beliefs about "reverse discrimination" is common place today. In the data reported here, we included gender as an analysis variable. It allows us to learn about the possible effect of demographic differences on our results (gender being the only one available to us), and it may allow us to interpret changes, if any, due to the managing diversity course. It may be that students in all the courses view the measurement tool through "gendered" perspectives. However, we would expect the Managing Diversity Course to

Understanding change in student responses over time

Causal designs of the sort used here do not automatically generate results that have clear interpretations. Our initial study involved efforts to document the tool used as highly reliable. Since the results showed high reliability, we then expected that changes in student responses in later semesters for the data reported here can be interpreted as real changes in the populations of students in our courses. That interpretation entails some assumptions. The design does not actually specify or test any claims about the connections of course events to a change process that might account for differences between groups over time or between before and after results within groups. Our efforts here are exploratory and formative in intent. That is, we hope to learn something through replication about how to understand our assessment results over time and to inform use of those results in curriculum and assessment revisions.

Investigating effects of student gender

Men and women have different experience in the U.S. labor force (Bell, 2007, Chapter 9). They generally work in gender-segregated jobs. They work in different industries and occupations. Economists refer to a dual labor force describing the relationship between jobs and the labor market. Women's work is significantly less well paid than men's work. Even though MBA graduates in the U.S. start out with comparable incomes, within a year a gap appears and widens each year there after. Studies document the significance of gender in gaining access to top positions in corporate boards and hierarchies. Women leave the labor force more than men do and are the largest, most successful group of small business owners. Women's small businesses do not have access to the same level of capitalization as do those owned by men. Studies investigate many explanations for the gender differences, but there always remains a "residual" impact the effect of gender at the end of the course, whereas that would not be expected for the other classes. It is possible, however, that the gendered perspectives reflect the overall curriculum, not the measurement tool or the topics of the Managing Diversity Course.

THE DESIGN

The research design replicated that of the initial study already published. (McMahon et al., 2002; McMahon and Sellaro, 2005) The tool consists of a 40 item survey that asks students to rank how likely they are to take particular actions in a work organization. (Stinson, 1991) Four response categories range from "almost never" to "almost always." In every case, the almost always category is the more competent response, Analysis and interpretation did not follow that suggested by Stinson (1991). Instead, the initial responses were compared by gender of respondent and year. In addition, responses before and after the course for each group were compared for changes. Effects of the managing diversity class were analyzed by comparing changes reported by students in that class with those by students in a comparable level course in the management curriculum. The courses were taught by the same teachers (both female) who taught the same classes used in the initial study. Both teachers use pedagogy that engages students with each other in ways that create a high rate of interaction among them, likely creating cohesion among them. (Malkin and Stake, 2004; Holladay et al, 2003) Data analysis was performed using SPSS version 15. Descriptive statistics were obtained, and Chi-square Tests for homogeneity, logistic regression, and Sign Tests were conducted to provide exploratory data and to answer the research questions associated with this investigation.

RESULTS AND DISCUSSION

The data were collected from three waves of assessment surveys in years 2001, 2002, and 2006. Out of total 228 surveys collected, 193 of them are valid for pre- and post- analysis. Gender information was available for 181 of those cases. Gender was evenly distributed in the collected data for each year with overall rates of 53.6% for the 97 female subjects and 46.4% for the male 84 subjects from all the valid cases. Among these subjects, 79 (44%) of them were from diversity courses and 102 (56%) were in non-diversity courses.

Change over years during which data were collected:

The chi-square test of homogeneity was performed on all 40 items for comparing the initial responses from all three years of data. There were no evidence of significant change over the years in initial responses except for items 4 (Refuse to participate in jokes that are derogatory to any group, cultures, sex, or sexual orientation) and 6 (Check out reality before repeating statements or rumors or assumptions about anyone).

Table 1.a. The Count and Percentage Distribution for Question 4.

4. Refuse to participate in jokes that are derogatory to any group					
Year	Almost Never	Seldom	Usually	Almost Always	Total
2001	4 | 7%	13|22%	**28|47%**	14 | 24%	59| 100%
2002	2 | 4%	**26|52%**	15|30%	7 | 14%	50| 100 %
2006	8 | 11%	17|24 %	**33|46 %**	14 | 19%	72| 100%

Table 1.b. The Count and Percentage Distribution for Question 6.

6. Check out reality before repeating statements or rumors about any one					
Year	Almost Never	Seldom	Usually	Almost Always	Total
2001	0 | 0%	6|10%	**29| 49%**	**24 | 41%**	59| 100%
2002	0 | 0%	12|24%	**24| 48%**	14 | 28%	50|100 %
2006	0 | 0%	9| 13 %	**46| 66%**	15 | 21%	70| 100%

These results suggest that, for the most part, the students' diversity competence, as self reported on this survey, remained about the same over the time studied. It may be that there has been little change in the larger community in which the university functions. There has been a significant increase in diversity-related programming on campus over since 2001. It does not appear to impact the students on these items prior to taking the class. It may be that students use their work culture more than the campus culture in reporting actions on the survey. Certainly the survey asks them to do that. Informal observations by the teachers, based on other assignments and class discussions, suggests that virtually all the students work, they report a wide range of diversity cultures in their work settings, and they tend to be resistant to diversity messages when seen as possibly constraining employers' actions.

Effects of the Gender Variable:

In the process of this analysis, the response categories were rank-scored with 1, 2, 3, and 4, from Almost Never category to Almost Always. When examining the responses from all 40 assessment items, the initial response (pre-survey) average rank-scores from male students were consistently lower than female students without exception.

To model the change in response from pre-survey to post-survey, a variable was created to identify decrease, increase, or unchanged in the pre- and post-survey responses. This variable indicates the change of responses between pre- and post- survey responses. The issue of change was then modeled by multinomial logistic regression with year, sex, and diversity course student (or not), as the explanatory variables. The explanatory variables are all indicator variables and there were no significant multicollinearity from the collinearity analysis. The model fits the data well, and passed the Pearson's goodness of test at 5% level for modeling almost all survey questions except for question 24 that has a p-value of 0.038. The adjusted odds ratios and the p-values for the significant factors are reported in Table 2 in the Appendix. The adjusted odds ratios were calculated for the odds of having increase versus decrease in response rank on the survey questions. An increase response rank indicates improved diversity competence as measured by this survey. The statistics for the comparison with the unchanged category are not reported in the table.

To understand Table 2, for Q1, the odds of male subjects having an increase in post-survey response rank score is more than 3.8 times the odds of female subjects. That means male subjects were more likely to have an increase in post-survey response rank score than female. Subjects from year 2002 were less likely to increase in post-survey response rank score than subjects from 2001, since the odds ratio (0.266) was less than 1. Gender significance was found in seven survey questions with all having male with higher odds of having increase in response rank scores. Most of the significance from year variables also indicated increase in response rank comparing recent year with the past. Three of the questions showed that subjects in diversity course had an increase in response rank scores. For question 38, significance was found for both year 2002 and 2006; the odds of increase in response rank scores in both years were higher than year 2001.

Table 2 shows that the various variables, gender, year and course, impact different items of the survey. This suggests that our initial study may have confounded such effects, attributing them all to the effects of the diversity course.

Course Effects on change in competence:

Table 3, also in the Appendix, shows the items that were significant in the study for both groups of subjects, i.e., subjects in diversity courses and subjects not in diversity courses. These two groups were understood as experimental and control groups.

The results are very similar to the outcomes from the initial study already reported. The sample size in this study is larger than the sample size in the initial study. Therefore, it is reasonable that this study picked up a few more significant items. Five out of the seven items in the non-diversity course group had the same outcomes as the diversity course group.

When comparing the pre-course responses between diversity versus non-diversity groups year by year using Chi-square test of homogeneity for each of the three years 2001, 2002, and 2006, only three items were found significant at 5% level for year 2001. They are question 23 (p = 0.002), question 31 (p = 0.015), and question 33 (p = .024). This means the subjects in this study most likely had the same the baseline situation. In the initial study reported earlier, there were 6 items that had significant differences between diversity and non-diversity course groups in pre-course responses. The difference between diversity and non-diversity course groups on their responses prior to taking the course was significant on items 33 for both this study and the data from the initial study reported earlier. In the combined data, only two items, questions 16 and 33, were significant at 5% level.

These results do replicate the earlier study in that they do show that the Managing Diversity appears to positively affect change in diversity competent self-reported conduct. Similarly, students in the non-diversity course also experience some modest change. The changes are modest but persistent, a pattern that is reported as typical in the literature. Both students whose results are reported here and those in the initial study, tended not to use the entire response range of the tool; responses clustered around "seldom" and "usually," with "almost always" coming in third in frequency of being selected. The responses indicated that the students and their responses were not statistically different from each other prior to the courses, except for a couple of items. When gender was introduced, the results showed that men and women students responded differently. Men's initial scores were lower than women's scores. At the end of the semester, men's scores increased for all groups while women's scores remained the same or decreased.

Since the changes are modest and because they are so strongly influenced by gender, the meaning of our earlier results regarding the effects of the managing diversity course (and of our data here) is uncertain. In addition, we cannot tell whether the gender effects are impacted by the Managing Diversity course more than a possible gendered orientation of the larger curriculum and the regions business culture.

RECOMMENDATIONS

Selecting Tools for Assessment: *Switch from attitude measurement and from self responses to hypothetical events to measures of direct assessment of skills.*

Since our results are consistent over time and since they report gender effects as well as course effects, we are persuaded us to move away from the tool used in this study as well as other such tools. The literature suggests that findings from all such tools are generally modest and may be short lived. Replicating this design will not be needed for 5 years. It is, however, increasingly important to identify direct measures of at least some action competencies and to gain some sense of the stability of changes related to the course. At the moment we are experimenting with listening skills and use of non-inclusive and other language patterns.

Conceptualizing the change process*: Move from complex pedagogy models and dynamics of prejudice models to models of direct connections between course material and skill outcomes.*

No causal statistical design replaces the importance of a strong conceptualization of the change process being claimed. As in our situation here, introduction of new variables (e.g. gender) can change apparently clear outcomes to ambiguous ones. In our situation, since pedagogy had strong similarities across the diversity and non-diversity courses, since our population of students appear comparable over time, and since the tool used so far indicates high reliability and consistent results over time, it now seems appropriate for us to expand our assessment efforts at clarifying skill outcomes connections to properties of the course content and assignments

Challenges with longitudinal assessment: *Decompose the components of longitudinal assessment assumptions.*

That a pattern of results repeats over many years does not confirm that those results are long lived for any of the respondents in any one of those years. Finding that the respondents in three groups over 6 years are comparable at the onset of the assessment experience does not tell us how to understand why that is so and what might cause that pattern to change. In the absence of conceptual work, interpreting longitudinal data is not straightforward. Effects of change external to the training process are hard to separately identify. Our results do suggest that the population served in the classes studied have remained fairly homogeneous over half a decade with regard to the diversity items in the tool used, even when gender is statistically controlled. This result affirms the need for diversity education and that such education can have continued relevance over a period of years.

Business Education Systems and Diversity Outcomes: *Assess gender dynamics in all further assessment efforts. Put gender on the agenda for program assessment as well.*

Further assessment should investigate patterns that reflect institutional effects of the entire program. We know that the experience of women and men in business, for example, is very different. Since other minorities often participate in the labor force through the female labor market, it is possible that business education is systematically white male oriented. This will impact students' responses to curricula, course material, pedagogy, and perceptions of relevance.

The model of assessment consistent with that possibility and with our results here is not new to higher education. Health Care education has addressed institutional dynamics related to health care gaps and professional education for some time. (Nelson et al 2003) The new consensus is that reducing disparities in care and service requires strategies that address health care systems, providers and their patients. The structures and culture of health care education require comprehensive change based on evaluation of the educational culture and setting, curriculum content, and the settings in which care is delivered. The same may be true for business education (Mavin, and Bryans, 1999). Business education tends not to serve the needs of small businesses. Indeed, the emphases in business education may well create a culture about "success" in business defined on big size, big profit, and manufacturing. Business educators may not have good awareness of gender issues, and perhaps diversity issues in general. Indeed, they may not have strong competence in the many areas in which many business professionals lead success defined by other criteria. This might be apparent to those whose work experience and goals don't fit the normative preferences of business education.

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Appendices

Table 2. Significant Factors for the Increase In Response Rank and Odd Ratios.

Question	**Diversity Course OR**	***p***	**Gender (M) OR**	***p***	**2002 OR**	***p***	**2006 OR**	***p***
Q1	-	-	3.822	.023	0.266	.049	-	-
Q3	-	-	2.318	.080	-	-	-	-
Q4	-	-	2.437	.064	-	-	-	-
Q5	-	-	2.229	.077	-	-	-	-
Q6	0.380	.039	-	-	3.415	.059	-	-
Q12	-	-	3.083	.023	-	-	-	-
Q17	-	-	-	-	3.386	.046	4.963	.006
Q22	-	-	-	-	-	-	2.601	.084
Q23	-	-	-	-	-	-	4.212	.005
Q24	-	-	-	-	-	-	0.345	.038
Q26	-	-	2.170	.068	2.853	.056	-	-
Q27	2.169	.087	-	-	-	-	-	-
Q33	2.384	.046	-	-	-	-	-	-
Q35	2.829	.027	-	-	-	-	-	-
Q36	-	-	-	-	-	-	2.710	.091
Q38	-	-	2.279	.077	6.170	.005	4.854	.003

The odds ratios are the odds of increase in response rank in the post survey.

The "*p*" column contains p-values for indicating statistical significance.

This table displays the statistics only for factors that are significant at 10% level.

Baseline for Odds Ratios:

Table 3. Sign Test (Pre/Post) *p*-values for Statistical Significant Changes.

Question		Diversity Course (n = 79)	*Non*-Diversity Course (n = 102)
Q1	Challenge others†	.000***	.000***
Q2	Speak up	.001**	.004**
Q3	Think about impact†	.049*	-
Q4	Refuse to participate	.025*	.001**
Q6	Check out reality	-	.026*
Q7	Recognize bias†	.029*	-
Q15	Learn about other cultures†	.024*	-
Q16	Ask for and plan social events	.025*	-
Q17	Encourage protected-class members to speak up	-	.037*
Q18	Encourage protected-class members to take risks†	.010*	-
Q33	Confront policies that lead to exclusion†	.001**	-
Q35	Make extra efforts to educate myself†	.000***	-
Q36	Protest a bias or prejudice†	.000***	.000***
Q37	Refuse practices that are biased	.015*	-
Q38	Participate in change-agent efforts	.001**	.015*
Q40	Say, I think that's inappropriate†	.009**	-

* Significant at 5% level; ** significant at 1% level, *** significant at 0.1% level.

† Items that were significant in 2001 study. It covers 9 out of 12 items that were significant for the experimental group.

KNOWLEDGEABLE DECISION MAKING: DOES SOURCE OF KNOWLEDGE IMPACT EFFECTIVE USE OF INFORMATION TECHNOLOGY?

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ABSTRACT

The purpose of this research is to establish whether or not the type or number of sources of knowledge used by the decision maker about information technology impacts how effectively an organization utilizes information technology. A one sample chi-square test showed that organizations that used local consulting firms for their knowledge or read print or web publications used technology more effectively. Decision makers who relied on the advice of friends and family did not utilize technology as effectively. On the other hand, there was no difference in the effectiveness of technology use among organizations where the decision maker used top research vendors (such as Gartner Group, Meta Group, Forest, etc.) for their knowledge or directly from the technology vendors themselves.

INTRODUCTION[33]

In the research, debate rages on about whether or not information technology is a good strategic investment for a corporation. Early research (from the 80s and early 90s) failed, time and time again, to find any relationship between the amount of money spent on technology and the benefits obtained from technology (Dehning & Richardson, 2002; Schrage, 1997; Strassmann , Paul A., 1999; Tallon, Kraemer, & Gurbaxani, 2000). This lack of empirical support for IT investment had been dubbed the "Productivity Paradox"(Black & Lynch, 2001; Lucas, 1999; Strassmann , Paul A., 1999; Thorp, 2003; Willcocks & Lester, 1999).

However, during the height of the dot com boom much of the research turned positive again. In 2001 Brynjolfsson (Brynjolfsson, Hitt, & Yang, 2002) conclude that for each dollar of installed computer capital in a firm, the market value of the firm rises at least five dollars (although they admit that the increase is disproportionate to the cost). (Frank Bannister, Dan Remenyi, 2000; Plotnick, 2000; Poston & Grabski, 2000; Remenyi, Money, & Sherwood-Smith, 2000) Dedrick, Kraemer, and Gurbaxani (2003) conducted a review of more than 50 empirical research articles on IT and its economic performance between 1985 and 2002 (Dedrick, Gurbaxani, & Kraemer, 2003). They acknowledge that earlier research failed to establish a strong correlation between IT spending and economic benefits for a company. Dedrick et al, however, feel that newer research strongly supported productivity gains of IT. Furthermore, they found that the gains came not just from the newer technologies such as the Internet, but rather from the capital investments of a decade earlier. Rather than conclude that earlier IT implementations were not successful, Dedrick et al considered the possibility that new econometric techniques combined with firms learning to measure IT expenses more accurately and apply IT capital more productively was the cause for the change. Dehning and Richardson (Dehning & Richardson, 2002)came to the same conclusion in their research synthesis. To quote them, "The question changed from 'Is there a payoff?' to 'When and why there is a payoff?'.

Bucatinsky (Bucatinsky, 1996) noted that the biggest key was not in spending money on technology, but in using it effectively - especially in small businesses. Tallon (Tallon et al., 2000) surveyed 304 business executives and concluded that firms with IT that pays

[33] I thank Mike McCarthy from the Berks County Chamber of Commerce and John Weidenhammer from Weidenhammer Systems, as well as the Reading Eagle Company for their help, support, and funding for this project

off economically for the company have more focused goals and utilize the technology more effectively.

Intuitively, one of the keys in using technology effectively has to be the knowledge of the decision maker regarding which information technologies to purchase and how to implement them within the organization. The question is: How do decision makers get their knowledge about information technology?

The leadership in most organizations are experienced executives - which requires that they've been in business for a number of years. Often, executives went through school and were well into their careers when information technology was still behind glass windows and touched only by systems specialist. Those days are gone, and decision makers in every organization must learn enough about information technology to make good decisions about business strategy - which is inexorably linked to information technology. But where do they go for IT knowledge? Do they rely upon free advice from their family and friends? Do they pay top dollar for information technology research groups such as Gartner Group, Meta Group, Forrester, McKinsey, IDG, and many others? Do they trust the vendors such as Microsoft, Hewlett-Packard, Dell, Gateway, Oracle, SAP, Intuit, or any other manufacturer or publisher of information technology? Do they read publications such as Computerworld, CIO magazine, Optimize, Informationworld, Informationweek, or any one of hundreds others? Do they obtain knowledge via the web either through sites related to the publications, or through any one of the hundreds of consumer product comparison sites such as Consumer Reports or Tech Republic? And does the source of their knowledge have any relationship at all with whether or not they are using information technology effectively?

LITERATURE REVIEW

There have been quite a few studies on decision making that includes IT influences. O'Donnell and David (2000) studied 15 journals and came up with 57 articles on decision making being influenced by information technology. (O'Donnell, E. and David, J. S., 2000)

Bergman and Feeser (2001) finds that cultural communication preference impacts the use of information technology within the decision making process. They identify and study 17 decision attributes that are related to IT usage. (Bergman & Feser, 2001)

- Decision speed
- Information overload
- Routinization of decision making
- Forecast accuracy
- Decision time horizon
- Problem formulation
- Data quantification
- Decision effectiveness
- Alternatives generated
- Extent of analysis
- Problem identification
- Data availability
- Job complexity
- Timeliness of data
- Data accuracy
- Decision communications
- Decision participation

Benamati (2001) includes decision making styles as a factor on the level of technology knowledge transfer (which could be construed as highly correlates with reported use of technology). Benamati finds that corporations with more formalized mechanistic structures and more stable direction-oriented cultures are associated with higher levels of knowledge transfer of technology. Conversely, research organizations with more organic structures, more flexible change-oriented cultures, and more customized university policies for intellectual property rights, patent ownership, and licensing are associated with higher levels of technology transfer. Another major impact is the partnership between the corporation and research organization. A trusting relationship in its university research center partner increases technology transfer.(Benamati & Lederer, 2001).

One research project studied the effects of using a hypermedia-based prototype of collective memory (i.e. a virtual meeting collaboration system called *VisionQuest*) on cognitive-conflict type of decisions (in this case, investigating MBA programs). The results indicate that the use of collective memory information provides the study participants focused attention on the cognitive-conflict task domain and leads to faster decision-making. One of the factors studied was how thorough the analysis was prior to making the decision, which included how many web pages of information were read and how many attributes were identified. The study found that the control group (the one that did not use the collaboration system) read more web pages and investigated more attributes before making the decision. However, the study restricted the source of information to web sites, however, and did not allow other sources of information. (Paul, Haseman, & Ramamurthy, 2004)

Yu and Chang (2002) were interested in how information technology can help decision makers, and so they investigated the decision making process itself. One of the issues they noted was in agreement with top issue listed by Bergman: information overload. The fact that although information technology may be able to make the process of making a decision easier, the existence of too much information has caused a problem. Yu and Chang define information overload as *"a perception by a person that the information associated with work task is greater than that can be managed effectively, and a perception that such overload creates a degree of stress for which the coping strategies are ineffective."* They felt using information technology may help mitigate the effects of information overload, but they did not discuss how decisions about the information technology were made. They mentioned various sources of information utilized by decision makers, friends and family, professionals in the field, personal experience (in the buying a house example, they mentioned touring the house), but they did not include the number or types of sources of information in their research. (Yu & Chiang, 2002)

While it was relatively easy to find studies on the use of information technology within the decision making process, what seems missing from *academic* publications is research on where decision makers go for information on information technology, although there is a proliferation of this type of research in industry magazines. This is also one of the research topics that is available for a price from any one of the numerous research organizations catering to the vendors of information technology products and services (so that they can sell more products and services, of course). In addition to the basic problem of bias, the biggest difficulty with these studies is the source of the sample. In general, they pull from the readers of technology publications or buyers of the vendor's technology. Furthermore, the most common methodology itself (web based surveys involving a URL sent out in email) introduces another bias. There have been studies that identify ways to decrease the impact that the technology bias produces on the results (Burkey & Kuechler, 2003). However - when the topic of study is the source of information in technology decision making or effective technology use, web-based surveys would have a tendency to attract more answers from technology-literate organizations, introducing an inherent bias within the sample itself. In any case, the existing information on where decision makers go for information on information technology is for the most part unusable.

Lack of unbiased empirical research on the use of various sources of knowledge within the decision making process may be a side effect of the relative newness of information technology. However, the existence of the same problem in more established fields such as healthcare might refute that claim. Clancy and Cronin (2005) noted that, despite a proliferation of sources of information, getting access to information to enable evidence-based decision making in health care decisions was difficult.(Clancy & Cronin, 2005) One can envision the same difficulty in operations, or sales, or finance. Sources of unbiased information are rare, and it is difficult to know where to turn. The problem, however, is especially acute in the information technology field due to the magnitude of the impact of a wrong decision along with the lack of standards and general level of "hype" in the information technology field.

This study, therefore, attempts to apply scholarly rigor to a topic that seems to generate an easily bought and sold opinion from many, but seems to have little published specifically on this topic: Where do decision makers go to obtain knowledge about information technology? Is there a relationship between their sources of knowledge and whether or not they utilize technology effectively?

RESEARCH METHODOLOGY

Data was gathered over a two year period. The questionnaires were mailed to the top decision maker in all businesses listed as members of the local Chamber of Commerce, and all the businesses listed in the database of the local newspaper. The results could be faxed back, although the address was included if the respondent wished to send the response in the mail. The response rate was 10% the first year, and 7% the second year (reflecting a different and larger sample population than the first year).

Data Preparation

There were 584 responses received. The responding organizations were compared to national averages based upon company size, number of employees, and types of industries. No significant differences were found. It was therefore determined that the sample adequately represented a typical population of business organizations. The breakdown of industries can be found in Figure 1.

Figure 1. Type of Industry Breakdown

Type of Industry	# in Sample
Education	19
Healthcare	29
Manufacturer	80
Media & Publication	6
Non Profit	53
Retail	51
Service	333
unknown	13

Nineteen responses were eliminated (3.3%) due to duplication. Missing data was filled in utilizing the mean, and accounted for less than .5% of the responses.

The data was screened for multicolinearity, and was found to fulfill orthogonality assumptions. Tolerance is greater than .1 for all variables, and variance inflation factor is less than 10 for all variables. Data was also screened for outliers using Mahalanobis Distance analysis, and 10 outliers were eliminated (χ^2= 67.66 with 34 degrees of freedom). A chi-square analysis was done on each of the questions from each of the years to assess whether or not there was a significant difference between the responses based on which year the survey was completed and no difference was found. After eliminating duplicates and outliers, the cases were combined for a total of 555 responses.

Effective Use of Technology

Effective use of information technology is difficult to operationalize. Any self-assessment of technology effectiveness would introduce bias into the answer. Building upon an earlier study, (Rhoads, 2005) effective use of information technology was defined utilizing a number of component responses from the questionnaire.

Figure 2. Information Technology Related Questions Used in Effectiveness of Use Assessment

Email: What percentage of your employees have a business Internet email address
1. 1 - 5%
2. 6-25%
3. 26-50%
4. 51-75%
5. 76 - 100%

Web: Do you currently have one or more domain name(s) registered in your companies' name and only used by your company?
1. Yes
2. No

Ecommerce: During the next 12 months, do you plan to implement transaction processing (e-commerce) on your web site?
1. Yes
2. No
3. Already doing

WebDevel: To whom do you turn for web site development?
1. Local developer
2. Non-local developer
3. In house developer
4. No web page

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Connection: What kind of connection to the
Internet do you have at your company?
        1. Dialup
        2. T-1 (full, fractional,framerelay)
        3. DSL
        4. Cable (i.e. - Comcast)
        5. Wireless (Satellite)
        6. None

InfilteredSpam: If you receive unfiltered
email, what percentage do you consider to be
spam? (spam is unwanted bulk email)
        1.  1 - 5%
        2.  6-25%
        3.  26-50%
        4.  51-75%
        5.  76 - 100%

FilteredSpam: If you receive email already
filtered for spam, what percentage of spam
do you still get?
       1.  1 - 5%
       2.  6-25%
       3.  26-50%
       4.  51-75%
       5.  76 - 100%
```

Based on the answers, an organization is characterized as “Savvy, Blossoming, Base, or Unversed” in the effectiveness of their use of information technology. The rules utilized to characterize an organization are listed in Figure 3 in the Appendix.

The dependent variable, Effective Use of Information Technology, therefore, is not a self assessment of effective use, but an independently derived variable based upon quantitative responses. The results of this variable did not differ significantly from the judgment of the researchers based upon personal experience with 23 of the organizations.

The question is whether or not there is a relationship between this variable (effective technology use) and either the number or sources or the type of sources of knowledge used by the decision maker about information technology. The decision maker was asked which were trusted sources of information, or how they kept up to date with technology. The choices were (more than one could be chosen): Top Consulting Firm (Gartner, Giga, Meta, Forrest, other); Friends & Family; Publications & Web; Vendors (Microsoft, Oracle, CompUSA, Staples, Dell, Gateway, etc.); or Local Consulting Firm. Each one gives rise to a null hypothesis:

H1: Decision makers who seek and trust knowledge from Top Consulting Firms will not use information technology more or less effectively than those who didn't.

H2: Decision makers who seek and trust knowledge from Friends & Family will not use information technology more or less effectively than those who didn't.

H3: Decision makers who seek and trust knowledge from Publications & Web will not use information technology more or less effectively than those who didn't.

H4: Decision makers who seek and trust knowledge from Vendors will not use information technology more or less effectively than those who didn't.

H5: Decision makers who seek and trust knowledge from Local Consulting Firm will not use information technology more or less effectively than those who didn't.

Furthermore, it may be that rather than the actual source of information, there might be a relationship between the number of sources of information and effective technology use. It might be posited, for example, that decision makers who use more sources of knowledge might use information technology more effectively than a decision maker who uses fewer sources of knowledge. On the other hand, it may be that information overload takes place with too many sources of knowledge, and decision makers who use fewer sources of knowledge will be the more effective information technology users.. The null hypothesis in this case would be:

H6: Decision makers who seek and trust information from a variety of sources will not use information technology more or less effectively than those who only used one source.

All hypothesis were subject to two tailed tests of significance. A chi-square analysis was conducted for each hypothesis.

RESULTS

Descriptive Results

One of the interesting results surrounding who within the company made the information technology decisions. This aspect was more fully investigated in another research paper (Rhoads, 2005), but the descriptive statistics regarding which roles were part of the decision making team is included here for informational purposes. In over fifty percent of the cases, the owner, President, or CEO made the technology decisions, perhaps leading us to the conclusion that decision makers on technology decisions cannot be said to always have a technology background. The person in the technology-experienced role was involved in the decision only 19% of the time. In only 20 organizations were both the CEO/President/Owner and the CIO/IT Director/IT manager involved in technology decisions. This lends additional importance to the sources of knowledge for the decision. The percentage of all answers is shown in Figure 4 and the number of organizations including each role in the decision making team for technology is shown in Figure 5.

Figure 4. Decision making Percentage

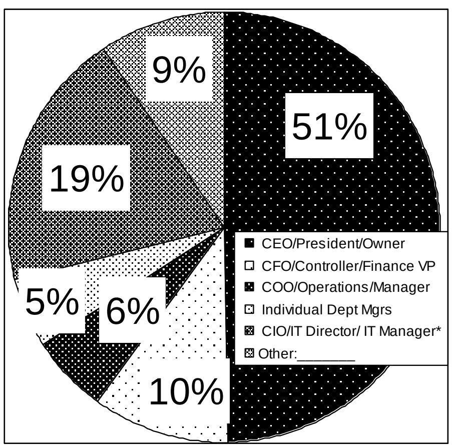
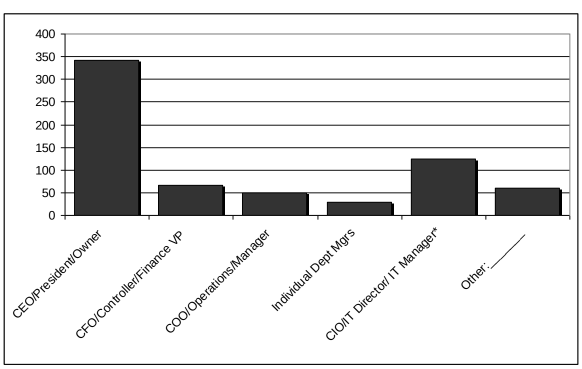
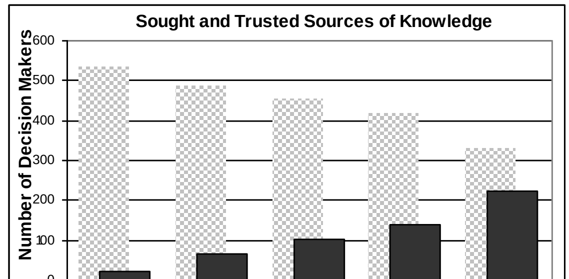


Figure 5. Number of Organizations Including Role in Decision Making Team (Not mutually exclusive)



The graph and table in Figure 6 shows how many respondents included each of the choices in their list of trusted sources of knowledge about information technology.

Figure 6. Response Count for Sources of Knowledge



	Top Consulting	Friends and Family	Publications & Web	Vendors	Local Consulting
No	534	488	452	416	330
Yes	21	67	103	139	225

Clearly the most common trusted source of knowledge are local consultants, with almost half of the decision makers including Local Consulting among the most trusted sources of information. Surprisingly, vendors are the second most listed, while publications and the web coming in third. Not surprisingly, few companies paid for the top consulting firms.

The question, of course, is whether or not the source of knowledge is related to whether or not the organization has been classified as Savvy, Blossoming, Base, or Unversed in the effectiveness of their use of Information Technology.

Inferential Results

The results show that decision makers who listed Local Consulting Firms as their trusted source of knowledge about information technology were significantly (chi-square = 16.9, p = .001, df = 3) different in a two tailed test. Review of the data shows that more organizations were classified as Savvy in the effectiveness of their use of information technology. Publications and Web also showed as significantly different (chi-square = 12.7, p = .005, df = 3), with a higher-than-expected number of Savvy and Blossoming among decision makers who sought information from either publications or the web.

Decision makers who sought and trusted the advice of family and friends were also significantly different (chi-square = 13.3, p = .004, df = 3), but the results showed the exact opposite effect. Decision makers who relied upon family and friends were more likely to be classified as Base or Unversed, and much less likely to be in the Savvy or Blossoming group. In all three of these cases, the null hypothesis was rejected.

Neither Top Consulting Firms, nor Vendors showed a statistical difference, indicating that decision makers who relied upon vendors or paid top consulting firms were not likely to be classified as either more or less effective in their information technology use. The null hypothesis was accepted in this case.

All the results of the chi-square analysis for each source are shown in Figure 7.

Figure 7. Summary of chi-square results

Source of Knowledge	Pearson Chi-square	Significance (p)	# cells with <5
Top Consulting Firms	6.2	.102	3
Friends and Family	13.27	.004	2
Publications & Web	12.731	.005	1
Vendors	2.076	.557	0
Local Consulting Firms	16.891	.001	0

**N = 555 and df = 3 for all tests*

The last hypothesis, the number of sources identified by the decision maker, was also accepted. How many sources of information the decision maker utilized did not impact the effectiveness of their use of information technology. Furthermore, the frequency chart clearly shows that the majority (494 out of 555, or 89%) of the organizations trusted only one source of knowledge. Due to this fact, 8 cells (50%) have an expected count less than 5, which would have forced us to question the results even if it had been significant, since a high number of small values tends to inflate the chi-square and constitutes a too-liberal test of significance.

The 2 X 2 contingency tables of the chi-square analysis clearly indicate which direction the difference occurred. The table for the Local Consulting Firm source shows a higher than expected count (60 instead of 44) for the Yes column for groups classified as Savvy, and a lower than expected count (6 instead of 9) in the Yes column for the group classified as Unversed in the effectiveness of their information technology use. This can be seen in Figure 8.

Figure 8. Local Consulting Firm By IT Use Effectiveness Crosstab

		No	Yes	Total
Savvy	Count	49	**60**	109
	Expected	64.8	44.2	109
Blossoming	Count	28	8	36
	Expected	21.4	14.6	36
Base	Count	236	151	387
	Expected	230.1	156.9	387
Unversed	Count	**17**	6	23
	Expected	13.7	9.3	23

Figure 9 shows the contingency table for the Publications and Web group - with a higher than expected count in Savvy and Blossoming, and a lower than expected count in Base and Unversed.

Figure 9. Publications & Web By IT Use Effectiveness Crosstab

		No	Yes
Savvy	Count	85	**24**
	Expected	88.8	20.2
Blossoming	Count	22	**14**
	Expected	29.3	6.7
Base	Count	**326**	61
	Expected	315.2	71.8
Unversed	Count	**19**	4
	Expected	18.7	4.3

In Figure 10, the Friends and Family contingency table shows a higher count than expected in the Yes column for both Base and Unversed, while showing a lower than expected count for Savvy and Blossoming.

Figure 10. Friends and Family By IT Use Effectiveness Crosstab

		No	Yes
Savvy	Count	**105**	4
	Expected	95.8	13.2
Blossoming	Count	**33**	3
	Expected	31.7	4.3
Base	Count	333	**54**
	Expected	340.3	46.7
Unversed	Count	17	**6**
	Expected	20.2	2.8

The next two contingency tables show a fairly close to expected count. Figure 11 shows the results for using Vendors as a trusted knowledge source.

Figure 11.Vendors By IT Use Effectiveness Crosstab

		No	Yes
Savvy	Count	83	26
	Expected	81.7	27.3
Blossoming	Count	27	9
	Expected	27.0	9.0
Base	Count	286	101
	Expected	290.1	96.9
Unversed	Count	20	3
	Expected	17.2	5.8

For the Top Consulting Firms, shown in Figure 12, the counts and the expected counts for each group of technology use are also fairly close.

Figure 12. Top Consulting Firm By IT Use Effectiveness Crosstab

		No	Yes
Savvy	Count	108	1
	Expected	104.9	4.1
Blossoming	Count	36	0
	Expected	34.6	1.4
Base	Count	369	18
	Expected	372.4	14.6
Unversed	Count	21	2
	Expected	22.1	.9

In Figure 13 in the Appendix we can see that eight of the cells had values of less than five.

DISCUSSION

Our findings display solid empirical evidence that decision makers who effectively use information technology more often seek the advice of local consultants as well as doing their own reading of web and print publications. This is not surprising unless taken in the context of the lack of support for seeking the advice for top consultants and vendors information. There is obviously a qualitative difference in the usefulness of these three different sources of knowledge.

Nor is it surprising that decision makers who trust friends and family tend to do less well in effectively utilizing information technology. Friends and family are the "easy" route to obtain knowledge, and chances that the friends or family happen to have the specific information technology knowledge needed by the decision maker are remote. The lack of support for Top Consultants having an impact on effective IT use may be a factor of the low incidence for seeking this source. After all, top consultants are very expensive, and our sample matches the typical population of businesses, 85% of which are on the smaller side. However - one would think that even among the non-significant findings there would be a higher than expected count to Top Consultants among the Blossoming and Savvy, and that does not seem to be the case.

It also does not appear that effective IT use has any relationship with seeking or trusting information from Vendors, and this source does not suffer from low incidence. It would appear that obtaining IT knowledge from vendors does not help in becoming a more effective IT user.

Seeking additional sources of knowledge also does not seem to impact IT effectiveness. It may be, especially among the organizations who utilize technology more effectively, that a single source of knowledge, if trusted, is good enough.

LIMITATIONS

Before itemizing our conclusions and implications of our results, it should be noted that there are several limitations to this study.

What we **cannot** establish with this research design is whether the surveyed decision makers utilize technology more effectively *because* they seek out and trust local consultants as sources of knowledge, or if they seek out and trust local consultants as their source of knowledge *because* they utilize technology more effectively. Similarly, we cannot say that reading print and web publications about information technology **cause** more effective use of information technology. Both of these findings could be explained by a third variable for which we have not controlled. One example might be simply good leadership or decision making skills. It would make intuitive sense that good decision makers spend time and energy seeking out information on topics before making decisions, and therefore become more effective at utilizing that knowledge. Not so successful decision makers don't tend to expend the effort, and therefore would not be as effective at utilizing the knowledge. The fact that not all sources of knowledge were found to have a significant impact, however, leads credence to the idea that there is something qualitatively different about these two sources of knowledge.

Another limitation could be the localization of the sample. Even though our sample seemed representative in terms of size and industry of the nation's business as a whole, these businesses were all from one geographic location, a region of about 100 square miles in southeastern Pennsylvania just northwest of Philadelphia. There may be some unseen geographic or cultural element that would limit the generalizability of our findings.

Secondly, the operationalized definition of Effective Information Technology Use has not been heavily validated beyond the judgment and experience of the researcher's personal knowledge of a small sample of the companies. The variable was not defined prior to the study - but rather indirectly established using existing questions and responses. Although we feel this method is superior to more subjective assessments of the decision makers being surveyed, it may limit our ability to infer more broadly based conclusions.

Lastly, although multiple sources of knowledge were possible and encouraged in the instructions, respondents may have interpreted the question to be looking for one primary source. This limits the usefulness of the sixth hypothesis, and may be the reason for the large number of decision makers who only reported one source of trusted knowledge.

CONCLUSIONS AND IMPLICATIONS

There are several implications for researchers based upon this study. The relatively high chi-square value of the impact of using local consultants as a trusted source (Pearson chi-square 16.89, p = .001) provides strong empirical evidence that seeking the advice of local consultants makes a difference. The fact that there is an impact on effective IT use when decision makers use print and web sources of knowledge is also an important finding. Both directions would benefit by more specific research. As noted in the limitations, our research cannot adequately determine whether effective IT users use local consultants or if local consultant cause more effective IT use. This finding may spur future research of many questions. Which is the cause and which is the effect? What characteristics of decision makers led them to these sources of knowledge? What type of help did the local consultants provide which impacted the effectiveness of IT use the most? The same questions could be asked of web and print resources.

It would also be useful to reproduce the results of this survey among a more geographically disbursed sample of businesses. Further validation of the effective information technology use variable would also be helpful. Finally, observation of a number of actual decision makers in the midst of the decision making process would provide more direct insight into the number and type of sources used, which may correlate with effective use of information technology.

Perhaps the most important aspect of this research, however, is the practical implications. Pending future contradictory studies, it would not seem to be a good idea to invest in expensive top consultants. Local consultants seem to do a measurably better job. This research would imply that decision makers should do their own readings of print and web information about the IT they are considering using.

Even more specifically, asking friends and family for advise would seem to be contraindicated. Doing so may lead the decision maker astray, leading to less effective IT use within their organizations.

Further implications from this research is that once a decision maker has a trusted source, they don't necessarily need to find many other confirmations of that source. It doesn't appear to be necessary to obtain further knowledge from the vendor or from the top consultants.

In conclusion, it does appear to make a difference which sources of knowledge are used by decision makers regarding information technology. Local consultants as well as print and web sources of knowledge seem to have the best impact on utilizing information technology effectively within the organization. Friends and family impact effective IT use negatively, and should probably be avoided. Seeking advice from top consultants and vendors had no impact on effective IT use.

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APPENXICIES

Figure 3. Rules for Use of Technology Index Score

Effectiveness of Technology Use Category	**Description**	**Operational Definition**
Savvy	Utilizes technology well. Pays attention to both end user and infrastructure needs. Not afraid to try new technologies, but not on the bleeding edge either.	Email >=4, Web = 1, Ecommerce <>2, WebDevel <> 4, Connection <>1 or 5, Unfilteredspam > 0 or FilteredSpam > 0
Blossoming	Pays attention to technology - both end user and infrastructure needs. Just learning about it - doesn't jump in, but doesn't shy away either.	Email >2, Web = 1, Ecommerce =1, WebDevel <> 4, Connection <>5, Unfilteredspam > 0 or FilteredSpam > 0
Base	Uses technology when necessary, but doesn't always pay attention to both infrastructure and end user needs. Resists new technologies.	Email <4 and >1, Web = 1, Ecommerce =1, WebDevel <> 4, Connection <>2, Unfilteredspam > 0 or FilteredSpam > 0
Unversed	Does not generally use information technology in business planning and operation beyond the bare minimum.	Email <=1, Web = 2, Ecommerce 2, WebDevel = 4, Connection = 1 or 5, Unfilteredspam = 0 or FilteredSpam = 1

Figure 13. Number of Sources By IT Use Effectiveness Crosstab

		No Sources	Few Sources	Some Sources	Many Sources	Total
Savvy	Count	3	98	7	1	109
	Expected Count	6.3	97.0	5.1	.6	109
Blossoming	Count	5	28	3	0	36
	Expected Count	2.1	32.0	1.7	.2	36
Base	Count	22	347	16	2	387
	Expected Count	22.3	344.5	18.1	2.1	387
Unversed	Count	2	21	0	0	23
	Expected Count	1.3	20.5	1.1	.1	23

CORPORATE DISINFORMATION & BUSINESS SOCIAL RESPONSIBILITY: THE CASE OF CLIMATE CHANGE DENIAL

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ABSTRACT

Do corporate issue advertising, public relations campaigns, and the funding of supposedly "independent" think tanks and "public interest" front groups create a false sense of uncertainty in matters of important public interest? Do they go too far, or are they a legitimate means of profit maximization? Starting with the example of the fifty year campaign of the tobacco companies to misrepresent the addictive and cancer causing nature of tobacco, this paper looks at the tactics of Exxon Mobil, the Western Fuels Association and others to fund and disseminate "doubt" about the science and risks associated with global warming and climate change. Through the lens of the Supreme Court's approach to commercial speech (*Virginia Board of Pharmacy*) and corporate political speech (*First National Bank of Boston v. Bellotti*) the paper examines how changes in the law have enabled corporations with deep pockets and tax deductions for their public relations expenditures to so distort the "marketplace of ideas" that there is little room for democratic deliberation based on the merits of proposed policy options and objective science. The paper takes into account James Boyd White's critique of the Court's commercial speech doctrine, and recommends a turn towards a more responsible, humane approach to corporate participation in public policy discourse.

INTRODUCTION

Corporations are artificial persons, having only those powers expressly granted to them under our Constitution and laws, or those implied powers which, as Chief Justice John Marshall ruled, are necessary to their very existence: *Dartmouth College v. Woodward*, 4 Wheat. 518, 636 (1819). The word "corporation" appears nowhere in the Constitution or its amendments. If, as some Supreme Court decisions assert, corporations have any constitutional "rights" at all, apart from the rights of their individual creators and owners, those rights are purely a result of judicial legislation, most of it lacking in any plausible justification. This is well illustrated in the case of *Santa Clara Co. v. Southern Pacific Railroad*, 118 U.S. 394 (1886), where Chief Justice Waite noted "The Court does not wish to hear argument . . . whether the provision in the Fourteenth Amendment . . . which forbids a State to deny to any person . . . the equal protection of the laws, applies to these corporations. We are all of the opinion that it does." (396)

Jeffrey Nesteruk comments on this holding: "Such a bald assertion of the corporation's status as a person is striking because of what it leaves out. Why, for instance, assert the corporation's status as a person rather than as property? Certainly, the corporation's susceptibility to ownership would have allowed a contrary assertion." (Nesteruk, 1999)

The consequences of selective application of various Constitutional provisions to corporate entities have unfolded in various ways over the course of our legal and political history, although not without controversy. See, for example, the call to abolish corporate personhood by the grassroots organization Reclaim Democracy (http://reclaimdemocracy.org/).

Substantive due process used to strike down economic regulation under the doctrine of *Lochner v. New York*, 198 U.S. 45 (1905) was discredited during the New Deal, but may see a revival with the increasing influence of Federalist Society lawyers appointed to the bench by President George W. Bush, particularly Chief Justice Roberts and Justice Alito. The Supreme Court early on ruled that the Fifth Amendment privilege against self-incrimination did *not* apply to corporations, *Hale v. Henkel*, 201 U.S. 43 (1906) at 74, and *U.S. v. White*, 322 U.S. 694 (1944). In a recent book, however, libertarian scholar

John Hasnas has argued that this ruling has resulted in unfair treatment of corporations and professional partnerships when taken together with the U.S. Sentencing Commission's sentencing guidelines. Hasnas cites the Department of Justice's Thompson (and now McNulty) Memoranda guiding Department of Justice evaluations of the degree of completeness of corporate cooperation when under investigation (Hasnas, 2006). Corporations have been held to have the attorney-client privilege available for the communications of all their employees with counsel made in contemplation of litigation since the unanimous decision in *Upjohn v. U.S.*, 449 U.S. 383 (1981), but these DOJ guidelines include carrot and stick efforts by the DOJ to encourage "voluntary" waivers of the privilege to avoid indictment of the firm.

The application of the First Amendment to corporate speech has evolved in much the same way over the past century, with stops and starts as circumstances and prevailing judicial ideology dictated. As James Boyd White notes in introducing his discussion of *Virginia Board of Pharmacy*:

> "The crucial question for the Court, then, is the bearing, if any, of the First Amendment upon the case, on the grounds that the conduct regulated here takes the form of 'speech.' . . . [T]his speech is commercial in character, simply a way of doing business. While there are many proposed rationales for the First Amendment, most of them conceive of it as protecting political speech, or the discovery of socially valuable truth, or the autonomy and dignity of the speaker, not purely economic processes. Not surprisingly, when first presented with the question decades ago, the Court held that commercial speech was simply beyond the protection of the First Amendment." (White, 2006 at 78)

Giving an expansive reading of the commercial speech rights of corporations in *Virginia Board of Pharmacy v. Virginia Citizens Consumer Council*, 425 U.S. 748, 96 S. Ct. 1817 (1976), Justice Blackmun emphasized the consumer's interest in truthful information about prices rather than the corporation or business's interest in talking about its commercial activities. Indeed, White points out that many professional pharmacists might have preferred the existing economic regulations which precluded price advertising, while the Court's decision in effect compels them to engage in a kind of speech whose benefits were at least debatable. White argues that given the normal deference of the Court to economic regulations adopted by the legislature, Blackmun felt compelled to base his decision on First Amendment grounds that were at best formal and ill considered, concluding "It is hard to regard Blackmun as actually meaning what he says about the First Amendment here." (White, 2006, at 80-83)

In 1978, the U.S. Supreme Court took the law one step further, and decided the case of *First National Bank of Boston v. Bellotti*, 435 U.S. 765, 98 S. Ct. 1407 (No. 76-1176) by a vote of 5 to 4, holding for the first time that corporate persons had the same "free speech" rights in the political sphere that flesh and blood individuals hold under the Constitution's First Amendment. Building on its expansion of corporate speech rights in *Virginia Board of Pharmacy*, the Court plausibly argued that speech rights ought not to depend upon the identity of the speaker. Presciently, however, then Justice William Rehnquist noted in dissent that there could be problems for society with this result:

> "Although the Court has never explicitly recognized a corporation's right of commercial speech, such a right might be considered necessarily incidental to the business of a commercial corporation. . . . It does not necessarily follow that such a corporation would be entitled to all the rights of free expression enjoyed by natural persons. Although a newspaper corporation must necessarily have the liberty to endorse a political candidate in its editorial columns, it need have no greater right than any other corporation to contribute money to that candidate's

> campaign. Such a right is no more 'incidental to its very existence' that it is to any other business corporation.
>
> It cannot be so readily concluded that the right of political expression is equally necessary to carry out the functions of a corporation organized for commercial purposes. . . . A State grants to a business corporation the blessings of potentially perpetual life and limited liability to enhance its efficiency as an economic entity. It might reasonably be concluded that those properties, so beneficial in the economic sphere, pose special dangers in the political sphere. Furthermore, it might be argued that liberties of political expression are not at all necessary to effectuate the purposes for which States permit commercial corporations to exist. So long as the Judicial Branches of the State and Federal Governments remain open to protect the corporation's interest in its property, it has no need, though it may have the desire, to petition the political branches for similar protection. Indeed, the States might reasonably fear that the corporation would use its economic power to obtain further benefits beyond those already bestowed. . . . I would think that any particular form of organization upon which the State confers special privileges or immunities different from those of natural persons would be subject to like regulation, whether the organization is a labor union, a partnership, a trade association, or a corporation." (825-827)

CORPORATE SPEECH ABUSES

When Justice Rehnquist wrote his dissent in *Bellotti*, it was already apparent that corporations were prepared to abuse their existing financial and strategic planning powers, including their powers of communication, to insulate their actions and their assets from the financial consequences of the externalities their profit seeking activities imposed on society as a whole. A primary example is the fifty year campaign of the tobacco industry to conceal the harmful effects of their product while continuing to manipulate its content for nicotine (for its addictive qualities) while marketing it to minors, women and minorities and while reassuring consumers generally that their health related fears were misplaced.

While there are some in the law and economics movement (Viscusi, 2002) who argue that the public overestimates the risks and costs of smoking to the states, there is no question that the stories of many lives ruined by smoking cannot be accurately reduced to a number in a cost-benefit analysis spread sheet. But for suppression of information and the complicity of tobacco lawyers in the misuse of their attorney-client privilege (Hazard, 1998), many lives would have been saved and many of these losses avoided. Corporate free speech, commercial or political, has imposed considerable costs on our society and now, with reduced U.S. smoking, is helping to further spread the plague overseas.[1] (Rabin & Sugarman, 1993 & 2001; Kluger, 1997; Glantz & Balbach, 2000; Slovic, 2001; Kessler,2001; Pertschuk, 2001; Schapiro,2002; Viscusi, 2002; Curriden, 2007; "An Evil Weed," Economist, 2007).

Shortly after *Bellotti* was decided, Mobil (now part of ExxonMobil) began regular issue-advertising on matters of national energy policy in an effort to counteract pressures for "soft energy" alternatives to reliance on oil and other fossil fuels during the Carter Administration such as solar, wind power, geothermal, conservation, and other strategies that are being revisited now in response to the climate

[1] The World Health Organization's Framework Convention on Tobacco Control may help reduce the adverse impact of increased tobacco marketing and consumption internationally. Corporate Accountability International (formerly INFACT) has done excellent work in this field, and has A/V materials available on the story: *Making a Killing*; and *Overcoming the Odds: A Story of the World's First Global Health & Corporate Accountability Treaty*, both available at: http://www.stopcorporateabuse.org/cms/

crisis (Lovins, 1977; Kolbert, 2007).[2] These included video clips formatted to look like news items which were distributed free to local television stations (I have a set they kindly sent me at the time).

At about the same time, national trade groups and industry spokesmen used their "free speech rights" to advocate for reduced government supervision of their activities, leading to the rise of deregulation in the Reagan years and the subsequent collapse of the Savings & Loan Industry as a result of inadequate supervision (Rockwood, 1989). This was followed more recently by a move to privatize many basic government functions, including prisons and even the military, as we see in the current scandal over the use of Blackwater contractors in Iraq (Klein, 2007b). Opponents of wholesale deregulation and privatization of course had the same First Amendment rights in principle, but in practice corporate funding, both directly in issue advertising and lobbying, and indirectly through the funding of conservative think tanks and advocacy front groups, overwhelmed public debate. (Brock, 2005; Kaplan, 2004; Mooney, 2005; Rich, 2005; Rogers & Harwood, 1995)

The imbalance in the claimed "free marketplace of ideas" was clear in the assault on the Clinton Health care proposals in 1992-1994, as documented by the work of Bill Moyers in cooperation with the Annenberg Center (Moyers, 1994).[3] If only certain viewpoints are widely expressed, how can public policy be rationally determined in a democracy? Professor White articulates this concern clearly: "[T]here is a deep opposition between advertising --- the world it creates, the assumptions on which it works, the activities of mind and imagination and feeling that it stimulates --- and what I call living speech: speech that rewards attention and affirms the value of the individual mind and experience" (White, 2006, at 84).

Each of these and many other possible examples would require many books and a separate course or conference to fully address all their implications. But in each case the power of corporate speech ensured that *one simplistic, skeptical and self-interested viewpoint was dominant*: fully and regularly presented to the public without much criticism or analysis, whether in the print or telecommunications media, and usually without the public being aware of who was funding that viewpoint (Moyers, 1999). The rise of the Internet as a means of providing alternative views since the 1990s has created new means of counter-acting these trends, but also led to increased polarization of views and confusion as to the reliability of information presented on web sites whose provenance is often difficult to ascertain. (Sunstein, 2001) And the FCC appears ready to lift restrictions on the combined ownership of newspapers and television stations in the same community, further contributing to the corporate dominance of the mass media most people rely upon. (Labaton, 2007)

The most significant continuing example of the abuse of corporate speech rights and budgets since the tobacco case is that of disinformation in the matter of global warming (Rockwood, 2006 & 2007). There has been a long-term, widespread use of corporate funds to promote confusion and doubt in the face of the scientific consensus on global warming (McKibben, 2005; Mooney, 2005; Gelbspan, 1995, 1998, 2001, 2004; Flannery, 2005), a strategy that only recently has received serious attention in the corporate-owned mass media. (Begley, 2007). The Union of Concerned Scientists (USC, 2007) report that between 1998 and 2005 Exxon Mobil provided

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[2] Amory Lovins continues to be an important thinker, author and consultant on energy strategy, from his base at the Rocky Mountain Institute in Colorado. His on line lecture "Imagine a World" from the 25th anniversary of RMI is well worth watching at their web site: http://www.rmi.org/

[3] Bill Moyers. (1994, October 7). Ads and Health Care. PBS.Org. The VHS is not available on the web site of PBS or the Annenberg Public Policy Center, but I own a copy. The PDF for a subsequent report on issue advertising by the Center is available on line at their cite: Deborah Beck, Paul Taylor, Jeffrey Stranger and Douglas Rivlin, *Issue Advocacy Advertising During the 1996 Campaign*, Annenberg Public Policy Center, University of Pennsylvania, Philadelphia, Pa (1997).

over $16 million dollars to 43 front groups to fund climate science skeptics. The summary of the report on their web site notes that Exxon Mobil's tactics:

- raised doubts about even the most indisputable scientific evidence
- funded an array of front organizations to create the appearance of a broad platform for a tight-knit group of vocal climate change contrarians who misrepresent peer-reviewed scientific findings
- attempted to portray its opposition to action as a positive quest for "sound science" rather than business self-interest
- used its access to the Bush administration to block federal policies and shape government communications on global warming

Despite this exposure, Fox News continues to provide skeptical coverage of climate change issues, but CNN's fall, 2007 series of reports "Planet in Peril" provides a positive counter-example.

The fact that the mass media is actually beginning to take climate change seriously is due in part to the overwhelming scientific evidence supporting it, well documented in the peer reviewed literature (Oreskes, 2004a & b, 2006, 2007), and to the work of the UN Intergovernmental Panel on Climate Change (IPCC) in articulating that consensus. Al Gore's film and book, "An Inconvenient Truth," brought the broader public into the conversation (Gore, 2006), and both Gore and the IPCC were recognized with the Nobel Peace Prize this month, much to the chagrin of remaining climate change skeptics (Byrne & Monastersky, 2007; Gore, 2007; Gibbs, 2007). Even the evangelical religious community, long thought to be united in skepticism of science as a result of debates over creation science and stem cell research, has recently begun to support an affirmative response to the challenge of anthropogenic global warming as part of religious stewardship.

This scientific, ethical, and international consensus (Rockwood, 2006; Stern, 2006) means that after the November, 2006 elections, only the White House and Executive branch of the U.S. government remains committed to continued denial of the real crisis that climate change poses, and the need for prompt and serious action by the United States (Kolbert, 2006).

As an example of the White House's intentional denial of the reality of anthropogenic climate change, take Thomas Friedman's comments earlier this year:

> Sometimes you read something about this administration that is just so shameful that it takes your breath away. For me, that was the March 20 article in this paper detailing how a House committee had just released documents showing 'hundreds of instances in which a White House official who was previously an oil industry lobbyist edited government climate reports to play up uncertainty of a human role in global warming or play down evidence of such a role.' The official, Philip A. Cooney, left government in 2005, after his shenanigans were exposed . . . and was immediately hired by, of course Exxon Mobil. Before joining the White House, he was the 'climate team leader' for the American Petroleum Institute, the main oil industry lobby arm." (Friedman, T, 2007)

In conjunction with its conservative base in the media, and remaining corporate deniers, the Bush administration continues to downplay the seriousness of the situation and to promote its own alternatives, which fall far short of what is necessary to meet the crisis, refusing "to embrace mandatory measures" called for by many other countries. (Broder, 2007)

This persistent denial continues even though revenue neutral carbon tax proposals and proven technologies exist that could, with planning and investment, be brought on line quickly to mitigate the crisis. (Pacala & Socolow, 2004; Lovins et. al., 2000; Lovins et. al., 2006; FCNL, 2007) A good example of what technically proven possibilities are available is the Carbon Mitigation Initiative (CMI) stabilization wedge game available at the Princeton University CMI web site: http://www.princeton.edu/~cmi/ . The case for a carbon tax as a solution for creating market incentives to address the problem is made at the Carbon Tax Center, http://wwwcarbontax.org/

MILTON FRIEDMAN'S ROLE

Why do so many conservative politicians and conservative journals like *National Review, The Weekly Standard,* and the *Wall Street Journal* (now moving into the fold of Rupert Murdoch, whose FOX News continues to bait Al Gore and deny the scientific consensus) feel they can get away with their down-playing of the seriousness of the climate change situation when many corporations are already beginning to take steps to respond to the challenges of climate change mitigation even without American participation in Kyoto? [4] (Fialka, 2006; Keehner, 2006; Kunreuther & Michel-Kerjan, 2006; Sustainable Business, 2007)

I would argue that there are two reasons for this continued official denial and private sector disinformation. One is the close political connection between the U.S. fossil fuel industry and their lobbies, and the current administration, particularly through the highly secret activities of Vice President Richard Cheney (NYT Edit., 2005). Many in that industry continue to fund, directly and indirectly, the limited number of climate change "deniers" whose work serves a similar function to that of the small group of scientists subsidized by the tobacco industry for so many years, whose main goal was to suggest that anything other than tobacco was the cause of disease, and that if tobacco were addictive, so was drinking Coke and jogging. Christopher Buckley's satirical novel *Thank You for Smoking,* made into a movie in 2006, reflects the audacity of the old time tobacco spokesmen, whose litigation against California's anti-smoking commercials shows they are still in denial about the nature of their product and industry (Kaye, 2003). A similar story informs the climate change debate. It is conceivable that some of these few remaining "true disbelievers" are firmly committed to their views in the face of all evidence (Schendler, 2007), and thus willingly seize on any discrepancy in, or modification of, the data in the continued operations of the scientific method to cast doubt on the overall consensus. (Samuelson, 2007; Hansen, 2007) They are truly "smoking their own dope."

The second reason is the continued negative impact of the theory of the late Milton Friedman that the only obligation of the corporation is to make profits for shareholders, while operating (grudgingly, it is always obvious in his analysis) "within the law." (Friedman, M., 1970; De George, 1986 at 92-93; Thorne, Ferrell & Ferrell, 2008, at 5 & 45) The law since *Virginia Board of Pharmacy* and *Bellotti* opens the door to widespread corporate self-interested influence on the shape of the law and national policy, while Friedman's primary, indeed only legitimate, corporate goal always was, and remains, shareholder profit. Profit can only be measured in the *short term*, since taking into account the long-term risks cutting dividends to shareholders (owners) and depressing quarterly earnings results, while also taking into account social concerns that Friedman discounts in the first place. These are the sort of concerns he rejects as merely window-dressing in the interests of public relations and corporate self-interest. Friedman has no interest in stakeholder theory or the obligations of the corporation as a citizen (White, 1985). While Friedman has his many defenders (Summers) it is clear that his career and many publications give ideological cover to the advocates of private self-interest as the only legitimate motivation for business. Any calls for business investment in addressing the broad social and economic consequences of global climate change are thus seen by his disciples as a potential threat to short term profits, which must be disputed, denied, and ignored, using the Friedman ideology as "moral cover" and an excuse to do nothing (Greider, 2006; Klein, 2007a; Sachs, 2007)

[4] The web site of CERES: Investors & Environmentalists for Sustainable Prosperity, http://www.ceres.org/ provides a wealth of documentation about corporations currently engaged in disclosure of their carbon & other greenhouse gas liability risk and the steps they are taking to mitigate this risk. Global re-insurance companies like Swiss Re are also promoting corporate audits and efforts at mitigation, as a condition of continued coverage and reasonable rates.

For Friedman and his followers corporate investment in the future of society has no value, as they are only interested in the story of money. With that mind set, the demands of climate change mitigation, which entail expending great sums on R&D for new technologies, and possibly creating wholly new industries that will head-off large scale disasters in the years to come, without generating profit in the short term to existing companies, are simply too comprehensive and uncertain to entertain. Short of an immediate climate disaster that would dwarf Hurricane Katrina[5], corporations invested in the current energy mix and the Friedman mindset may see little reason to change business as usual. But unless we abandon business as usual, the future of business in a world with a doubling of atmospheric greenhouse gases by 2055 is bleak indeed.[6] The rash of fires in California in the fall of 2007 may add to the realization that something seriously is wrong with the climate, and that human influences are responsible. But the Bush Administration, while rushing to provide disaster declarations for that state, is continuing to practice censorship of government reports on climate change (Revkin, 2007), and has yet to grant California's request to regular CO2 emissions under the Clean Air Act, now that the Supreme Court has ruled that CO2 is subject to EPA regulation under the Clean Air Act. *Massachusetts v. EPA* (No. 05-1120) decided by the Court 5-4 on April 2, 2007.

FINAL THOUGHTS

The history of corporate disinformation in the tobacco case, and the exposure of the similar campaign in the climate change case, might lead one to doubt that the media, the public and industry itself will ever learn not to repeat the mistakes of the past. Relying on objective science, and adapting to the lessons of evidence in the short term can avoid huge damage awards, expensive litigation, and an enormous hit on public image in the long term. An ounce of prevention is worth a pound of cure, and even a lot more than an ounce is worth the enormous losses that recalling millions of toys with lead paint can entail, or the impact that the recall of thousands of pounds of beef with salmonella can entail for a meat-packing firm's survival.

One can also argue that a commitment to intergenerational ethics, of not imposing excessive costs on our grandchildren by avoiding more reasonable solutions now, ought to play a role in ethical corporate decision-making as well as in the public policy tools government adopts to encourage ethical corporate choices. Conservatives often make such an argument in calling for privatization of social security; it certainly applies to the case for immediate response to the far more certain risks of climate change.

Despite these lessons of history and ethics, individual businesses, trade associations and lobbies continue to game the system, seeking to use funding of front groups and legitimate charities alike to pursue their self interest while remaining under the radar. As an example, it is reported that the National Healthy Mothers, Healthy Babies Coalition announced on October 4, 2007 that "women of childbearing age should eat at least 12 ounces of seafood each week, including tuna and mackerel, which can have high levels of mercury." It turns out that the recommendation, *which contradicts FDA and EPA recommendations in place since 2004*, was based on a study by the Maternal Nutrition Group, and that a member of that group had got the "National Fisheries Institute to provide $1,000 honoraria to each of the group's 14 members, with an extra $500 each to the group's four executive committee members." The

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[5] A disaster such as the flooding of Washington, D.C. and cessation of the Gulf Stream might do, as portrayed in Kim Stanley Robinson's trilogy *Forty Signs of Rain, Fifty Degrees Below, and Sixty Days and Counting.* See my review of the third book, in the SFRA review #280, April-June, 2007.

[6] Arguably supporters of Friedman's theories would welcome a climate crisis as yet another opportunity to impose their free market "solutions" on a unwilling by shell-shocked society. See: Naomi Klein, *The Shock Doctrine: The Rise of Disaster Capitalism*, and the video at her web site: http://www.naomiklein.org/main

Fisheries Institute also gave the coalition $60,000 "for its educational campaign." [7]

The funding source here raises doubts about the legitimacy of the recommendations made, even if it turns out that the underlying science stands up. Keeping the funding source quiet initially only makes matters worse. Similar issues arise in the kinds of disclosures to be made when publishing findings on proposed new drugs in *JAMA* or *The New England Journal of Medicine*. Corporate funding for, and influence upon, university research is another source of concern, particularly as public support for faculty research has declined in recent decades. Climate change deniers sometimes claim that scientists in the peer reviewed journals are only going along with the consensus to get their grants funded, yet when it comes to paying the piper and calling the tune, the role of corporate funding in getting short-term desired policy results should be a major concern for all of us.

James Boyd White argues that "Law depends upon a belief in the reality of other people, in the possibility of meaningful speech in the heightened circumstances it provides, and in the kind of justice that consists of real attention, honest thought, and doubt. This belief is made express and manifest in writing that calls the reader into life. It ultimately takes the form of love, a love of other and a love of justice." (White, 2006, at 217). White's insight is comparable to Martin Buber's distinction between treating people as subjects (I-Thou) rather than objects (I-It) in their interrelationships (Buber, 1923, 2006). It is not surprising that artificial, legal corporate persons under the framework of our legal system objectify many issues that have the effect of denying human values and stories in the interests of "shareholder" profit, and at the expense of human values and human life. It is up to us in the field of corporate ethics and social responsibility to call attention to this, and try to change it.[8]

[7] Marian Burros, "Industry Money Fans Debate on Fish," *New York Times*, October 17, 2007. The October 4, 2007 Press Release is entitled "For Pregnant Women, Benefits of Eating Ocean Fish Outweigh Concerns from Trace Levels of Mercury," and is currently, at least, available at the Coalition's web site: http://www.hmhb.org/oceanfishpr.html See also: Media Matters for America, "October 12, 2007, "Wash. Post reported coalition's findings on seafood consumption without noting ties to industry," http://mediamatters.org/items/200710120003?f=h_latest

[8] Many MBA programs are already taking steps in this direction with respect to sustainable development. See the report, "Beyond Grey Pinstripes, 2007-2008: Preparing MBAs for Social and Environmental Stewardship," prepared by the Aspen Institute Center for Business Education, available at their web site: http://www.aspeninstitute.org/

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USE OF REALWORLD EVENTS TO TEACH PRINCIPLES OF ECONOMICS

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ABSTRACT

Many students of principles of economics find the subject very difficult to understand at first and do not find interest in the subject even though economics is a part and parcel of their life. Frequent use of real world examples involving current events to explain economic theory may be very helpful to improve motivation by showing the application of economic theory in everyday life. Assignments of finding newspaper articles relevant to teaching materials in class may also be helpful in this regard.

INTRODUCTION

Understanding and applying economic concepts and thinking may be very difficult for the vast majority of our principles students at first. It is our responsibility as faculty members to make them understand the relevance of economics to their lives. In order to do that, we need to motivate them to learn the subject and show them the use of economics in their lives. There has been a renewed emphasis in the teaching and learning of undergraduate economics during the last few years. Various studies have been done on the appropriate goals of principles of economics courses and the effective ways of teaching economics (Walstad and Saunders 1998, Becker and Walts 1995, 1996, and Benzing and Christ 1997). One of the main goals is to train students to be able to understand the economic concepts, analyze them, and apply them in the real world. A recent survey done by AA C@U covering recent graduates and employers found out that recent college graduates need more team work ,communication and analytical skills and more opportunities for real world application of knowledge including knowledge of global economy. Two-thirds of employers surveyed say that too many of today's graduates lack the skills to succeed in our global economy. This will definitely require us as faculty to play the responsible role of teaching the students the right way and the right materials. This requires the student to learn higher order cognitive skills which puts even more responsibility on us to motivate our students. Even though some innovative techniques are being used in teaching economics, lecture paradigm still dominates the classroom. "As a group, college economics teachers rarely use innovative teaching techniques," (Becker and Walts, 1995, Page 449). However, more and more instructors are using overhead projectors, VCRs, tapes, computer games, and the internet for instruction. A nationwide survey of economics faculty indicated that students learn best when they are actively engaged in or out of class. By active engagement faculty surveyed used terms like participation in class discussions and asking questions, active learning by doing cooperative learning. When asked how their teaching methods had changed in the last five years, fifty percent of the respondents indicated a movement away from straight lecture style toward increasing use of question, discussion, in-class worksheets, and group activities (Benzing and Christ, 1997).

Echoing the sentiment of other economics faculty, I feel the need for more student involvement in and out of class to keep them motivated. Traditional lecture method does not reach out to many students in need of getting involved and is inadequate for motivating a majority of them.

It is relatively easy to motivate the students majoring in economics since they already have a purpose for being in class. But the vast majority of our students are non-majors who take economics as an elective. "Learners motivation is a crucial variable in determining how much people learn and interest in the material to be learned and intent to learn are powerful motivating tactics and the ability to use it stimulates students' interest and intent to learn," (Saunders, Page 92). Saunders defines "learning as the acquisition and retention of knowledge and habits of thought in a way that permits them to be employed in a useful way after initial exposure has been terminated." Saunders emphasizes four components of learning: acquisition, retention, transfer, and evaluation. For a comprehensive familiarity of the cognitive domain of knowledge one good reference is 'Taxonomy of Educational Objectives: Cognitive Domain' by Ben Bloom, 1956. One can pose the question regarding motivation by asking: What can I do to arouse interest of my students in what I am teaching? Along with using the methods of active engagement mentioned above, use of cases or stories can be very helpful to bring relevance and usefulness of the material. "To develop and maintain informative and captivating examples involves watching for them in reading material that ranges from scholarly journals to out-of-town newspapers," (Elzinga, 1998).

Use of cases as a method of teaching is a powerful motivating tool. It enables students to apply the knowledge into practical examples and generates a context for new ideas and connects new material with information already in students' memories (Shulman, 1992). It also allows students to become actively involved with the information presented by analyzing them. Case studies can make abstract theories life like by bringing real world connection. We want our students to think like economists. Case method may enhance our ability to teach our students to think like economists and make them able to understand the real world. Two excellent studies using case method to teach intermediate economics and developmental economics are: "The Case Method as a Strategy Teaching Policy Analysis to Undergraduates: by Ann D. Velenchik, 1995, and "Beyond the Lecture: Case Teaching and the Learning of Economic Theory" by John A. Carlson and David W. Schodt, 1995. In both these studies, attempts were made to teach economic theory by case method to upper level students of economics majors. My attempt in this paper is to share my experience, how I use current events and stories to teach freshman students in my principles class who take economics as an elective.

LESSON

As I have mentioned above, using cases to teach economic principles and theories to upper level students is not as much of a challenge as it is for the freshman level principles course. Here I am sharing with you how I have been using current newspaper articles to explain economic theory. I do it in two steps in both of my micro and macro classes.

a. First, I require my students to do journals. They have to look for a newspaper article which has the most connection with the chapter being covered in class that week. For example, in chapter one, we teach three basic fundamental questions of economic choices regarding allocation and scarcity: what, how, and whom. We teach opportunity cost, production possibility curve, law of increasing opportunity cost, economic growth and shifting of PPC, mixed economy, market economy, and planned economy. I ask students to look for a recent article in the newspaper, underline some words or ideas in that article that also appear in chapter one of the book, make a summary of the article and share it with the class and explain to the class as to why he/she picked that article by showing the connection. Each student talks for a minute or two in sharing.

b. The second step is for the class to make comments on their fellow students' connection. If the student sharing the article failed to show a connection, his fellow students attending the class and listening to his presentation try to bring out more connections. This creates a lively discussion and application and analysis of economic theory. My class size is relatively small, having twenty-five to thirty students. So I can spend one class meeting of fifty minutes or one hour and fifteen minutes very easily. I roughly do this four to five times during the semester. The first journal on chapter one and three covers the market system with demand and supply as well as the Invisible Hand. This is common for both macro and micro classes. The second journal they do in macro is from GDP, business cycle, inflation and unemployment. The third one is on fiscal policy and Keynesian stabilization policy. The fourth one and fifth one are from monetary policy, the role of

Federal Reserve board, and/or supply side policy. In micro classes, the second journal is from cost production and efficiency, variable cost, and fixed cost. The third one is from perfect competition and imperfect competition. The fourth one is from labor market and hiring decision. The fifth one is from regulation and government intervention. Once they get some experience on the first assignment, the subsequent assignments become relatively easy. It is a learning experience. Even the students who struggled to find a suitable example relevant to chapter one, become comfortable and confident in their work on the subsequent chapters.

SOME RECENT EVENTS THAT WERE PICKED & SHARED BY STUDENTS (DURING SPRING AND FALL OF '07)

1. Hurricane Katrina and its effect on New Orleans and our economy: (Some wanted to discuss September 11, 2001 event too. But since that was widely known; I asked them to look for more recent ones.) In the aftermath of Hurricane Katrina, among other things, gas prices went up. There were many articles published on it. Some students picked this event to explain loss of resources and an inward shift of PPC for New Orleans, opportunity cost of rebuilding efforts and even some attributed it to the rising cost of gasoline because of shutting of some refineries due to lack of power and relating it to a leftward shift of the supply curve. That was the time when GM and Ford announced layoffs of about 25,000 employees and GM was losing money on their SUV sales, whereas Toyota had rising sales of hybrid cars and made profits. Some students connected it to the concepts of complements and substitutes affecting demand and also the low elasticity of demand for gasoline. So as you can see, you can use one event to explain many relevant concepts we cover from the book. My students could pick on the right news items appearing at the time.

2. There is always some news on the War in Iraq. Students go on the internet or read stories about Iraq War and its cost and impact on our economy. Some students picked stories about Iraq War and the rebuilding effort to explain opportunity cost. There are different numbers about cost of the War in Iraq. Some students brought the study of Linda Bilmes and Joe Stiglitz. This was about the cost of the War in Iraq exceeding $2 trillion (quoted in an article by Kevin Hill). One fascinating observation I am going to share with you now is one shared by a student about the Law of Increasing O.C. (I do not know if some of you will agree with this observation!). On May 1, 2003 our President declared victory in the War in Iraq by declaring "Mission accomplished." The total number of casualties was 139 soldiers. That was a monumental job done by our forces. As the rebuilding effort and insurgency dragged on we lost more than 3900 soldiers' lives so far. This is a clear case of Law of Increasing Opportunity Cost (source: Williamsport Sun Gazette). I had to agree.

Other relevance to the War in Iraq is its impact on the oil market, gold prices, general rise in the cost of production, and supply side inflation, and the resulting rise in interest rates pursued by the Fed in the recent past. Also some related it to efficiency, and more recently in the later part of the semester, some students related it to rising government expenditure causing huge deficits and national debt. Some of them pointed to the connection of rising gas prices and fuel costs to major airlines losing money. US Air has a commuter shuttle service operating two flights every day to Williamsport from Pittsburg which was closed last November. Some students related it to MC and MR concepts of running a flight in addition to efficiency. Sometimes, one event was picked by more than one student. What made it more interesting was that different students used the same article but had a slightly different connection and reason for choosing it. That created a lively discussion. The GM story about its trouble was picked mainly by micro students. President Bush's budget plan and spending on war were picked to show a connection to stabilization and opportunity cost.

3. The recent Housing market crisis can be used as a spring board for a variety of policy discussion. Many students picked this news to discuss government intervention with monetary policy, how one event can ripple through out the economy in the form of low appliance demand , ,how foreclosures lead to

lower income for some and how expectation can affect the demand curve and supply curve of houses . This news also was used by some to show connection to ARMs and Fixed Rate Mortgages and real and nominal interest rates and real balance effect. Some showed this as a possible reason for slow down in our economy as shown by lower GDP growth. So as you can see ,finding a nice real world event can facilitate student understanding of rather technical and theoretical issue .

STUDENT SATISFACTION & GRADING/ASSESSMENT

Students are asked to submit all their journals at the end of the semester. Initially when they share the journals in class, I also observe their presentation and attempt in making the relevant connection. When they submit the final report, they write out the summary of the article in one paragraph and in another paragraph clearly give reasons for collecting the article by showing how that article relates to the chapter. They attach this report on one side of a two-sided binder and on the other side they attach the article or a copy of the article after highlighting or underlining the concepts that appear in the article and also appear in the chapter being discussed in class. The articles can be from *Wall Street Journal* or any local paper or periodicals. Fifteen percent of their final grade is from these journals. I am going to increase the weight of the grading on these journals next semester in view of the positive response I have received during this spring semester. I give unofficial midterm evaluations of my courses to get student feedback half-way through the semester. One of the questions asked was about the journals and how these journals improve their understanding. Out of ninety students in three sections, three students had a negative comment about the journals. They thought that the journals were too time consuming and it was hard to find good articles with clear connections to the reading materials. The rest had very positive responses about this assignment. They explicitly indicated that they can clearly see the real world connection of what they are studying in the classroom. They also indicated that this assignment forces them to read outside materials like the *Wall Street Journal* and other papers which help them to keep abreast of what is going on in the economy. Few made remarks like they found news about Ben Bernnake succeeding Alan Greenspan on February 1, 2006 and when the first FOMC meeting presided by him occurred. Obviously, this exercise helps them improve their information literacy and critical thinking ability.

CONCLUDING REMARKS

So as you can see, one event or story can be used to explain so many issues that we cover theoretically in class. Traditional lecture paradigm may not reach out to every student. Instead of considering “how smart are you,” we should emphasize “how are you smart” approach. As Siegfried and Walstad put it, the best instructional response is to “offer a variety of course assignments, use alternative teaching methods, and adopt multiple types of assessment,” (Teaching Undergraduate Economics, Page 149). If the students see the real world connection of what they are learning, they become more motivated. One challenge I face sometimes during the sharing time is that if the student has speech problems or if he or she is shy to speak before the class, he or she feels a little discomfort. I tell them ahead of time to see me if they have any problems like that. I am sure some of you here in the audience also do similar assignments. I personally think that this approach of teaching economics may be very motivational for the vast majority of our non-majors. I may consider increasing the number of journals by a few more and allocate a bigger weight on the journals in their grade in the future to give students an added incentive to devote more time in finding even more suitable articles for the journals.

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CONTRACT DESIGN FOR QUALITY CONTROL IN SUPPLY CHAIN MANAGEMENT

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ABSTRACT

Cost reduction has been a major driver of outsourcing. However, recent recalls suggests that purchasing cost reduction alone is not enough. We need to take into account the total cost of ownership (TCO), which not only includes purchasing cost and transportation cost, but also the quality cost. In this paper, we consider a supply chain composed of one supplier and one buyer. From the buyer's perspective, we study how to design the contract to ensure the supplier to provide quality products. The model has a two-stage sequential move framework. We compare the case when the buyer has complete information about the supplier's efficiency level with incomplete information case. Our major findings are 1) optimal quality chosen by the supplier is increasing in his own cost efficiency, in the buyer's profit margin and in the wholesale price offered by the buyer; 2) the optimal wholesale price set by the buyer is decreasing in the supplier's cost efficiency level and in his own profit margin; 3) With asymmetric information about cost efficiency level of the supplier, the buyer must increase the wholesale price to induce cost information and quality level desired; and the price increase depends on how dispersed the cost efficiency distribution is in the industry. Our model also sheds light on further integrated study of supply chain management and total quality management.

1. Introduction

In supply chain management, product quality management recently has drawn great attention of both researchers and practitioners. Mattel's toy recalls due to lead paint incurred huge recall cost for the Mattel.

Supply chain management and total quality management are two important topics; however they used to be fragmented in research. Recently extensive research has been done to interlink supply chain management with quality management. In this paper, we consider a supply chain composed of one supplier and one buyer. We assume due to global outsourcing, e.g., the supplier is located in China, while the buyer is in USA, the supplier's information can be incomplete to the buyer (sometimes the supplier also subcontracted some tasks to its suppliers). From the buyer's perspective, we study how to design the quality into the contract, i.e., to design the contract to ensure the supplier to provide quality products.

The major driver of outsourcing is the cost reduction. However, recent recalls suggests that purchasing cost reduction alone is not enough, we need to take into account the total cost of ownership (TCO), i.e., not only purchasing cost, transportation cost, but also the quality cost. Quality costs include inspection costs, warranty costs, and even potential recall cost due to quality defects. Therefore the buyer's objective should minimize its total cost of ownership, in this paper; we specifically consider the purchasing cost and quality cost.

Several papers are closely related to our paper in literature. Robinson and Malhotra [2005] argue that quality practices must advance from traditional firm centric and product-based mindsets to an inter-organizational supply chain orientation involving customers, suppliers, and other partners. They used a case study to show that quality management across inter-organizational supply chains is sorely needed in delivering value to customers in often globally scattered supply chains. Their study offers a good concept framework from which we established our theoretical model.

Bond [1984] presents a model of international trade in which consumers are unable to determine the quality of individual products until after the purchase has been made. It finds that origin labels can play important role in improving the welfare for the country producing higher quality products. In the absence of origin labels, the higher quality domestic producer can be worse off if the country imports lower quality products because the lower quality reduces average quality in the market. In our model, the quality is observable to the buyers and the final consumers. The uncertainty only lies in the production costs for producing certain level quality products.

Reitzes [1992] examines quality choices in a duopoly with one foreign and one domestic firm, where consumers have similar preferences for quality but different preferences for brands. Firms make quality commitments prior to choosing price. It finds that in the absence of set-up costs and with complete information, both domestic and foreign firms make socially optimal quality choices. In the presence of set-up costs, the foreign firm, and often the domestic firm, sets quality below the socially optimal level. Our model focuses on quality issue in supply chain settings and the decisions of price and quality are made separately.

Kehoe [1996] studies a monopoly firm's pricing strategy in a market in which consumers have varying and imprecise estimates of the quality of the firm's product. It finds that the firm's price declines in response to an increase in the level of consumer uncertainty about quality when consumer tastes for the product are sufficiently similar and their uncertainty about quality is sufficiently small. When one or both of these conditions fails to hold, however, the monopoly's price is positively related to the level of consumer uncertainty about quality. In our model, consumer respond to quality change; but their taste is kept as exogenous and constant.

This paper will proceed as follows: in section 2, the case with complete information is analyzed; section 3 introduce asymmetric information about cost efficiency level between the buyer and the supplier; and we conduct a comparison of equilibria between the two cases and analyze the quality management strategies implied by the model. Section 4 concludes.

2. Model with complete information:

We consider a scenario where a domestic buyer outsources its production to a cheaper location to cut its cost. For example, toy-maker Fisher-Price or Mattel have their product supply chains in China and earn a profit for their design and brand name. The suppliers, on the other hand, have their control on cost and quality. We model a simple game with only one buyer, denoted by B, and one supplier, denoted by S. It's a two-stage game; the sequences of moves are as follows:

(1) The buyer sets wholesale price to maximize its profit. The mark-up is exogenously given in our model.

(2) The supplier sets quality of order to maximize its profit. The quality is measurable and observable to consumers. The buyer and the supplier will share any quality loss according to a conventional rule.

Before describing the model in detail, we listed our key notations as follows:

p: the wholesale price set by the buyer

q: the quality of order set by the supplier

λ: the mark-up, or the profit margin of the product earned by the buyer, treated as exogenous variable in our model.

θ: proportion of quality loss shared by the supplier.

d: the market demand of the final product.

2.1 Elements of the model

2.1.1 Demand function

In our model, consumers care both price and quality. The final price P is the sum of the whole sale price and mark-up. The demand on the final product is a linear function of $p+\lambda p$ and q: $d=\alpha-\beta(p+\lambda p)+\gamma q$.

Where, α measures the potential market base for the product, and β denotes the own price elasticity on demand. $\alpha > 0$ and $\beta > 0$. Our main interests lie in γ, the marginal effect of quality on demand. Since customers favor higher quality product, all else equal,

.

We also make two assumptions about these parameters in the demand function:

(1) For simplicity and without loss of generality, we will assume that $\alpha = 1$ and $\beta = 1$. Thus, we can rewrite the demand function as: $d = 1 - (p + \lambda) + \gamma q$.

(2) We assume that the quality effect is not greater than the price effect, thus, $\gamma \in (0,1)$.

2.1.2. Supplier's production cost function

The unit cost borne by the supplier is strictly convex in quality. We use the commonly adopted form as below:

$$c(q) = \eta \frac{q^2}{2}$$

This function has the properties of $\frac{dc(q)}{dq} > 0$ and $\frac{d^2c(q)}{dq^2} > 0$. η is the efficiency parameters of the supplier's cost structure. The smaller the η, the more efficient the supplier is. In this section of the paper, we assume that the buyer has the full information about η. In the later section, this assumption will be relaxed and only the supplier itself knows about its cost efficiency level.

2.1.3. Taguchi quality cost function

Taguchi cost function is typically used to measure quality cost function in total quality management (TQM). According to Taguchi cost function, any deviation from the target value represents poor quality, thereby incurring cost. The farther away from the target the deviation is, the larger the cost. In this paper, we assume the quality $q \in [0,1]$ and 1 is the quality target. Any deviation from the target may incur quality costs (e.g., warranty costs or even possible recall costs). We assume the quality cost per unit is described as follows:

$$C(q) = \frac{k(1-q)^2}{2}$$

This function is also strictly convex and has the properties of $\frac{dC(q)}{dq} < 0$ and $\frac{d^2C(q)}{dq^2} > 0$. Parameter k is loss coefficient and measures the severity of the quality problem and the magnitude of the related costs. For example, lead painting hazard in toys may only incur recall costs to the buyers, but laptop battery exploding will cost the seller more for compensation and penalty. Thus, parameter k is determined by the characteristics of the potential quality issue relating to different products.

When quality related problems occur, the buyer and the supplier will share the cost. Assume that the supplier will share a proportion of θ and the buyer share $(1 - \theta)$. The reason that we will treat θ as an exogenous variable instead of a control variable is due to the potential unverifiability of the quality loss.

2.1.4. Profit functions:

For the buyer, although it must incur some costs for designing and marketing the products, we assume that the marginal production cost is zero. The only cost term matters in the objective function for the buyer is its quality cost share. Thus the buyer's profit function can be written as:

$$\pi_B = (\lambda p - (1-\theta)C(q))d$$

The supplier has two cost terms, the unit production cost and the quality problem cost sharing. Its profit function is as follows:

$$\pi_S = (p - c(q) - \theta C(q))d$$

Next, we solve the game using backward induction.

2.2. Equilibrium analysis

2.2.1 Stage 2: Supplier's equilibrium

In the second stage, after receiving the wholesale price offered by the buyer, the supplier chooses its optimal quality level to maximize its profit. That is,

$$\underset{q}{Max}\ \pi_S = (p - \frac{\eta}{2}q^2 - \theta\frac{k(q-1)^2}{2})(1-(p+\lambda p)+\gamma q)$$

Solving the model, we get the following proposition:

Proposition 1: There exists unique equilibrium quality for the supplier:

$$q^*(p) = \frac{tv + 2k\gamma\theta + \sqrt{(tv - k\gamma\theta)^2 + 3\gamma^2(2pv - vk\theta + k^2\theta^2)}}{3v\gamma}$$

where
$$t = p + \lambda p - 1$$
$$v = \eta + k\theta$$

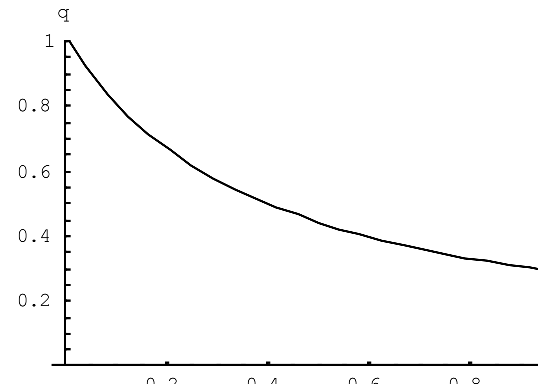
Proof: it can be directly solved from the first order condition of the objective function.

The implication of the proposition 1 is: the supplier has a unique optional choice of quality level, given a contract with the buyer about the loss sharing and the wholesale price. The optimal quality is also a function of the supplier's own cost structure and severity of potential quality problem.

Conducting comparative static analyses, we obtain following results.

Lemma 1: The supplier's optimal quality, $q^*(p|k,\theta,\gamma,\lambda,\eta)$), is decreasing in its cost efficiency coefficient, η, all else equal.

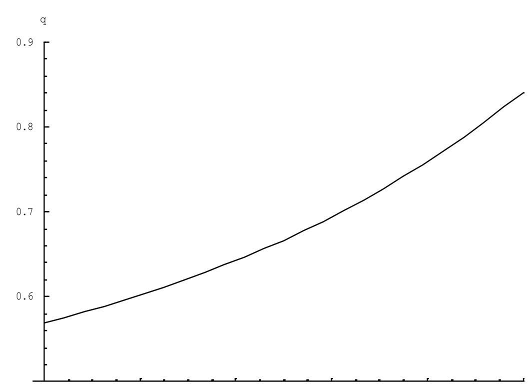
Proof: see the appendix. A simple graph is drawn below from Mathematica:



Intuitively, the more cost efficient the supplier is, the higher the product quality it chooses to produce. If cost efficiency acts as an essential factor that influences the quality choice, then the implication for the buyer is to pick an efficient supplier to achieve better quality control. The problem is, very often, cost efficiency information is only known to the suppliers themselves. We will address this quality control issue with asymmetric information in the next section.

Lemma 2: The supplier's optimal quality, $q^*(p|k,\theta,\gamma,\lambda,\eta)$), is increasing in the product mark-up λ, all else equal.

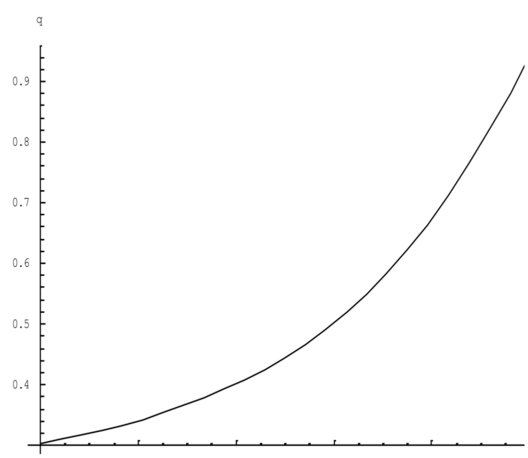
Proof: see the appendix. A simple graph is drawn below from Mathematica.



This result seems to counter intuition. Why could the quality level chosen by the supplier be increasing in the buyer's profit margin? Notice that the parameter λ has the chance to influence the supplier's decision only through the demand function: $d = 1-(p+\lambda)+\gamma q$. Given *p* and *γ*, increasing λ will reduce demand; to compensate the loss of market size, the supplier will have more incentive to improve the quality. In other words, when a company wins a contract doing business with Wal-mart, its low margin business model implies a larger market and also provides more flexibility in quality choices. For example, when Jim Wier, the lawn mower maker Snapper's CEO, said no to Wal-Mart and sold his products through high-margin independent lawn-equipment dealers, he had determined to lead Snapper to focus on quality, i.e., performance and longevity. On the other hand, the lawn mowers staying in Wal-Mart may be cheap enough to be disposable.

Lemma 3: If $\eta(1+\lambda) \le 2$, the supplier's optimal quality, $q^*(p|k,\theta,\gamma,\lambda,\eta)$, is increasing in the wholesale price, *p*, all else equal.

Proof: see the appendix.



The wholesale price affects the supplier's quality choice through two ways. First, wholesale price provides direct reward to the supplier to cover its production cost for producing high quality product. Second, it has similar effect as λ, that is, higher wholesale price implies higher retail price, all else equal; thus it gives incentives to the supplier for higher quality to make up for the lower demand. They both result in and reinforce a positive relationship between *q* and *p*.

As for other parameters, *k*, θ and γ, their influences on the optimal quality are much more complicated and cannot be expressed by simple relationship founded in above lemmas. The reason is, all these three parameters are coefficients of the quality variable, *q*. Thus, their effects are tangled together and hardly detected.

2.2.2. Stage 1: Buyer's equilibrium

In the first stage, the buyer decides the wholesale price, p, to maximize its profit. The objective function is:

$$\underset{p}{Max}\ \pi_B = (\lambda p-(1-\theta)\frac{k(q-1)^2}{2}))(1-(p+\lambda p)+\gamma q)$$

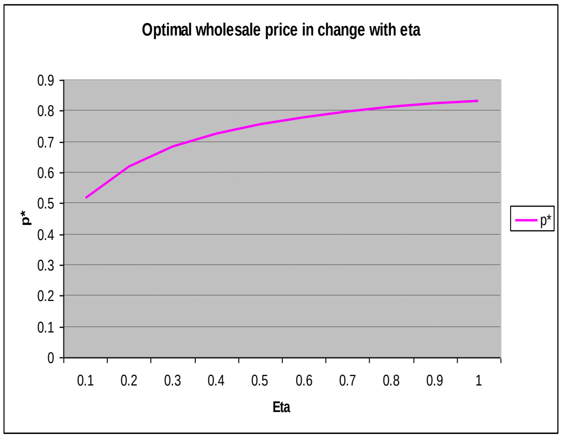
Proposition 2: There exists a unique equilibrium wholesale price choice *p** for the buyer.

Proof: Results can be obtained from Mathematica simulation. Proof can be provided upon request.

The buyer's purpose is to set the wholesale price that induces the optimal quality from the supplier so that he can maximize the profit. Proposition 1 indicates the existence and the uniqueness of the equilibrium wholesale price. We further derive two lemmas from evaluations on specific sets of parameters to analyze the factors that affect the equilibrium.

Lemma 4: Optimal wholesale price is increasing in the supplier's cost efficiency coefficient, η, all else equal.

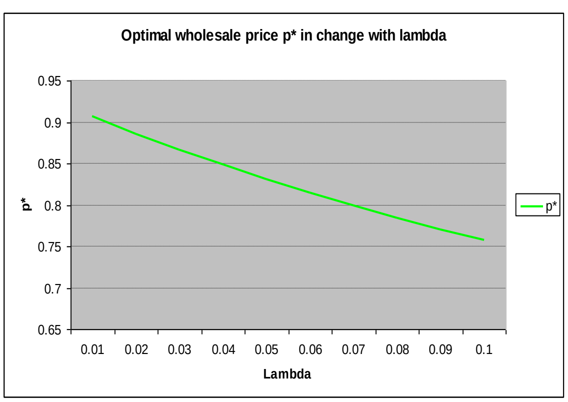
Proof: Results can be obtained from Mathematica simulation. Proof can be provided upon request.



This is to say that the buyer will offer higher wholesale prices to the producer with lower cost efficiency level. Combining with Lemma 1, the finding is rather surprising: when the supplier improves its cost efficiency level, it will choose to produce higher quality products, but the buyer will lower the offer. The implication is, since higher efficiency is to be punished, the supplier always has the incentive to understate his real cost efficiency level.

Lemma 5: Optimal wholesale price is decreasing in the buyer's profit margin, λ, all else equal.

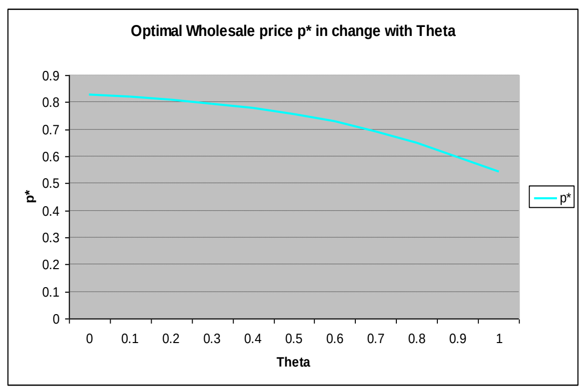
Proof: Results can be obtained from Mathematica simulation. Proof can be provided upon request.



The buyer's pre-quality-cost profit is λp. If λ increases, then he has more room to lower the wholesale price and still maintain the profit level. According to lemma 3, lower wholesale price will induce lower quality level; then it is contradictory with Lemma 2 that states that quality is increasing in profit margin λ. Here are our explanations. First, Lemma 5 itself does not indicate any causal relationship between λ and p; λ is treated as an exogenous variable in our model and measures the average profit margin. If firms adjust λ according to the wholesale prices, then the finding in Lemma 5 is purely theoretical. Second, it could be that λ does have positive effect on quality directly and have negative effect on quality through the wholesale price. The net effect might be found through empirical studies, which calls for further research on the topic.

Lemma 6: The buyer's optimal wholesale price is decreasing in θ.

Proof: Results can be obtained from Mathematica simulation. Proof can be provided upon request.



Notice θ denotes the share of quality loss of the supplier. So Lemma 6 is equivalent to say that they buyer's optimal price is increasing in his own share of quality loss. The intuition is, when the buyer's potential cost on quality loss is reduced, he is more likely to lower the wholesale price. Combining with Lemma 3, the further implication is, if the supplier bears more quality loss, he will choose to produce at lower quality level. In other words, it is the buyer who ultimately needs to choose between profit and quality where the intrinsic conflict exists.

3. Model with asymmetric information

With complete information, lemma 1 concludes that the supplier's optimal quality is decreasing in its own cost efficiency level, η, all else being equal. The question is, what if cost efficiency level is private information and unknown to the buyer. In this section, we introduce asymmetric information into our model regarding cost parameter η. We still use following cost function:

$$c(q) = \eta \frac{q^2}{2}$$

The buyer does not know the supplier's efficiency level, but he can estimate the probability distribution of the parameter from the whole industry's information. For simplicity, we assume η is uniformly distributed, i.e., $\eta \sim U\,[\bar{\eta} - \varepsilon, \bar{\eta} + \varepsilon]$. ε denotes the deviation of cost structure; the larger the ε, the more dispersed the industry. The buyer now needs to estimate the average cost coefficient $\bar{\eta}$ and the deviation ε.

Since the supplier has the same information as in the earlier section, his maximization problem is kept as before. The buyer now faces the following objective function:

$$\underset{p}{Max}\ E[\pi_B]$$
$$= \int_{\bar{\eta}-\varepsilon}^{\bar{\eta}+\varepsilon} (\lambda p - (1-\theta)\frac{k(1-q)^2}{2}))(1-(p+\lambda p)+\gamma q)\, f(\eta) d\eta$$

Given the uniform distribution of η, we can rewrite the maximization problem as:

$$\underset{p}{Max}\ E[\pi_B] =$$
$$\frac{1}{2\varepsilon}\int_{\bar{\eta}-\varepsilon}^{\bar{\eta}+\varepsilon} (\lambda p - (1-\theta)\frac{k(1-q)^2}{2}))(1-(p+\lambda p)+\gamma q)\, d\eta$$

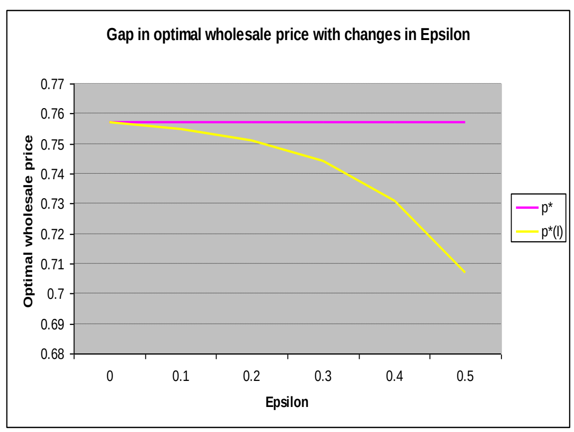
Solve the maximization problem, we get:

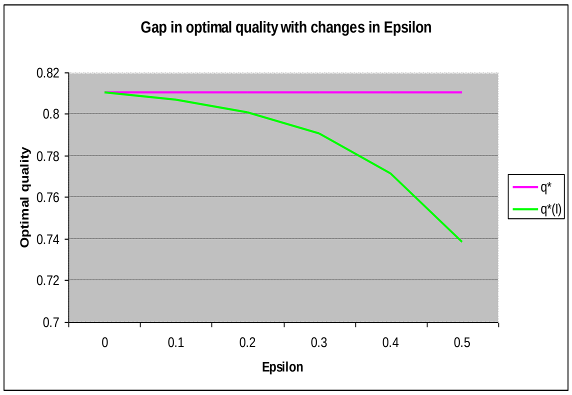
Proposition 3: The optimal wholesale price and quality are lower in equilibrium when the buyer has incomplete information about the supplier's cost efficiency level.

Proof: Results can be obtained from Mathematica simulation. Proof can be provided upon request.

The intuition is, when the buyer does not have enough information about the supplier's cost, it will be more likely to lower the price to cover the potential quality costs, which results in lower quality level in equilibrium. Another explanation is, unknown value of the cost coefficient causes a typical adverse selection problem. That is, the more efficient suppliers are paid as an average producer and it will reduce the incentive of being efficient and quality level in the market will deteriorate unavoidably.

From quality management point view, the effectiveness of the buyer's quality management strategy relies on how it can induce more information about cost efficiency level from the supplier. To achieve this goal, increasing wholesale price and or reduce the quality loss share borne by the supplier are the possible ways to maintain the original quality level when full information is available.





Proposition 4: To fill the quality gap between full information and the incomplete information, wholesale price increase needed is increasing in ε.

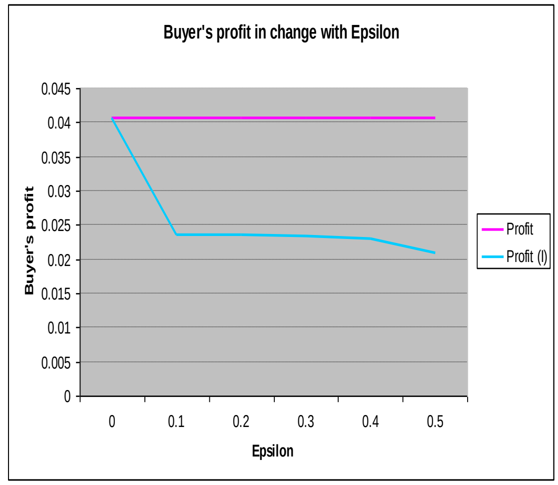
Proof: Results can be obtained from Mathematica simulation. Proof can be provided upon request.

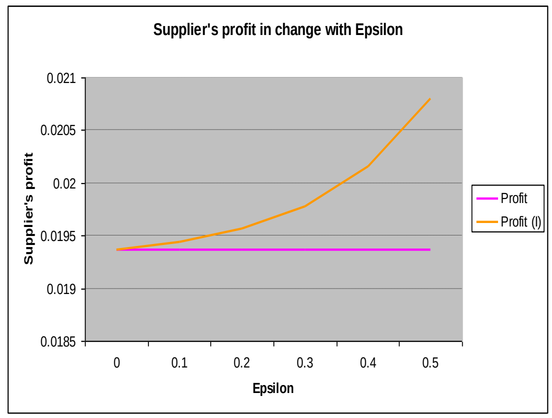
ε measures the dispersal of the cost efficiency level of the supplier in an industry. The more dispersed the cost structure the industry is, the lower the new equilibrium wholesale price and the more price increase is needed to provide enough incentive to maintain the quality level of the industry.

Proposition 5: The difference in profit between the buyer and the seller is decreasing in ε.

Proof: Results can be obtained from Mathematica simulation. Proof can be provided upon request.

The implication of the proposition 5 is, the supplier always has the incentive to keep the information about their efficiency level to himself, even at the cost of lower final product quality. Thus, how to provide incentive to the supplier to share cost information with the buy is the major challenge when asymmetric information exists.





4. Concluding Remarks:

In this paper, we use a simple two-stage sequential move game to study quality control issue in a supply chain system. We compare the case when the buyer has complete information about the supplier's efficiency level with incomplete information case. We found that the optimal quality chosen by the supplier is increasing in his own cost efficiency, in the buyer's profit margin and in the wholesale price offered by the buyer; the optimal wholesale price set by the buyer is decreasing in the supplier's cost efficiency level and in his own profit margin. With asymmetric information about cost efficiency level of the supplier, the buyer must increase wholesale price to encourage cost information sharing and to maintain the desired quality level; and the price increase depends on how dispersed the cost efficiency distribution is in the industry. Also, the profit gap between the supplier and the buy decreases in the distribution interval of the cost efficiency coefficient.

Further researches may generate interesting results after relaxing the major assumptions we have made. First, since we assumed a one-buyer, one-supplier, one round game setting, it is unclear to us how competition between two or suppliers or a repeated game may change the optimal quality level chosen by the supplier and the corresponding quality management strategies for the buyers. Second, in our model, the cost sharing proportion between the buyers and the sellers are exogenous. If either the buyer or the supplier can endogenously determine or they can negotiate about θ, the model can have more strategy implication to the supply chain management. Third, our model ignored uncertainty issue regarding quality, either the quality resulted in the supplier chain or the quality perceived by the consumers. But uncertainty exists on both of the aspects. We believe any further research on the above three directions can have important discoveries for practice in quality contract design.

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APPENDIX

Lemma 1:

Proof:

$$\frac{\partial q^*}{\partial \eta} = \frac{\begin{array}{l}(2pv(k\theta(1+\lambda)-3\gamma)-k\theta((2-3\gamma)\eta+k(2+5\gamma)\theta+\\ 4\sqrt{(\eta t+k\theta(t+2\gamma))^2-3\gamma v(k\theta(\gamma-2)+2p(k\theta(1+\lambda))))})\end{array}}{6v^2\sqrt{(\eta t+k\theta(t+2\gamma))^2-3\gamma v(k\theta(\gamma-2)+2p(k\theta(1+\lambda)))}}$$

It can be shown that as long as $q<1$, $\frac{\partial p^*}{\partial \eta}<0$

Lemma 2:

Proof:

$$\frac{\partial q^*}{\partial \lambda} = \frac{p(v+\frac{v(t\eta+k\theta(t-\gamma))}{\sqrt{(\eta t+k\theta(t+2\gamma))^2-3\gamma v(k\theta(\gamma-2)+2p(k\theta(1+\lambda)-\gamma)))}})}{3\gamma v}$$

$$>0$$

Lemma 3:

Proof:

$$\frac{\partial q^*}{\partial p} = \frac{(1+\lambda)v+\frac{v(3\gamma^2+(tv-k\gamma\theta)(1+\lambda))}{\sqrt{(\eta t+k\theta(t+2\gamma))^2-3\gamma v(k\theta(\gamma-2)+2p(k\theta(1+\lambda)-\gamma)))}})}{3\gamma v}$$

It can be proved that if $\eta(1+\lambda)\leq 2$, $\frac{\partial q^*}{\partial p}\geq 0$

JOURNAL OF THE NORTHEASTERN ASSOCIATION OF BUSINESS, ECONOMICS AND TECHNOLOGY: CONTENT AND PROCESS ISSUES

Kevin J. Roth, Clarion University Of Pennsylvania

ABSTRACT

The Journal of the Northeastern Association of Business, Economics and Technology (JNABET) is a scholarly publication designed to provide opportunities to a diverse group of faculty and professionals with a common interest in the business discipline. The Journal has recently (2007 publication) undergone a name change from the Pennsylvania Journal of Business and Economics. This change reflects the expanded nature and scope of authors, review board and reviewers. Contributions are encouraged on both a regional and national scope. The primary target of the Journal continues to be placed on business and economics faculty although practitioner contributions are also welcome. The Journal is sponsored by the Northeastern Association of Business, Economics and Technology (formerly APUBEF).

The Journal is currently under the leadership of Dr. Kevin J. Roth of Clarion University serving as editor. A new co-editor will be joining soon to facilitate the review process. This document describes recent changes and enhancements to the publication process surrounding the journal. It addresses both the initial and final submission guidelines for submission of an article. In addition, the paper highlights editor expectations and identifies several emerging issues. Several areas of Journal administration are identified and discussed to continue the improvement and quality of the manuscript review process. In addition modifications have been implemented to facilitate communication flow among participants, and direct efforts towards continuous quality improvement of the Journal.

THE JOURNAL OF THE NORTHEASTERN ASSOCIATION OF BUSINESS, ECONOMICS AND TECHNOLOGY: CONTENT AND PROCESS ISSUES

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INTRODUCTION

The Journal of the Northeastern Association of Business, Economics and Technology is published by the Northeastern Association of Business, Economics and Technology (NABET). The target audience consists of but is not limited to business or business related faculty and professionals. The Journal seeks manuscripts from a diversity of business topics including the functional areas of business and pedagogical topics of both a conceptual and empirical nature. Most recently, the Journal has extended its geographic scope beyond the traditional emphasis on Pennsylvania Faculty and the State System of Higher Education in Pennsylvania. This has occurred in both accepted articles and reviewers.

EDITOR CHANGES

Dr. Kevin J. Roth, Professor of Administrative Science at Clarion University will continue his role as co-editor. He will coordinate all matters relating to final editing and facilitating the production and publication of the Journal itself. The Journal is currently seeking a co-editor who will have responsibility for coordinating the manuscript submission and review process. I would like to thank Dr. Leon Markowicz from Lebanon Valley College for his work as past co-editor who has held this position for several years. Discussion is under way to add an associate editor who will have responsibility to screen papers both in terms of specific content and presentation style and clarity. It is the hope of the executive board that this individual will be in place for the next publication of the journal.

CONTINUED EXPANSION AND FORMALIZATION OF THE EDITORIAL REVIEW BOARD

It is the intent to continue (but not limit) our development with the inclusion of additional Colleges/Universities who actively participate in NABET and our annual conference. The overall objective is to create a diverse review board both in terms of geographic location and interest area.

Review Board responsibilities continue to include receiving a manuscript submission from the editors and personally reviewing or distributing the paper to an appropriate colleague at that school. The intent is to try to match the Journal content with a reviewer that has expertise in that subject area. Members will thus be responsible for coordinating the review process for a given paper and ensuring the process is completed in a timely fashion with a target of eight to ten weeks). Reviewers will ultimately be responsible for submitting review materials to the editors. Throughout the review process, all correspondence with the author(s) will be handled directly by the editors.

Each year at the NABET conference, (normally October) review board members will be able to provide input from their colleagues. Members will also coordinate posting of requests for papers each year. Editorial board members will serve annual renewable terms and be requested each fall to continue or recommend a colleague to serve. Members will be listed as the "editorial review board" in each Journal publication.

CONTINUOUS IMPROVEMENT

The journal continues to appear in Cabell's Directory accenting the commitment to maintaining a journal of the highest possible quality. This directory listing not only helps to ensure such quality but promotes a broader recognition of our publication. Our acceptance rate is currently 30-35% reflecting our consistent move towards higher quality. The Journal and NABET have adopted a continuous improvement philosophy. The next edition of Cabell's will reflect any name changes and enhancements recently made to our publication.

INITIAL SUBMISSION REQUIREMENTS

For initial submissions to the journal, please provide **four** copies of your paper with a title page containing complete author information on **one copy only**. With your paper copies, please enclose a check or money order, made out to NABET, for $20 as a submission fee. This fee goes directly to help defray the costs of producing and distributing the Journal. Initial submissions are subject to a blind review process by two different reviewers and the Journal editors. Authors will be informed of the results of this process when reviews are complete. Keep in mind that our editors and reviewers serve strictly on a volunteer basis and that the review process can take some time.

FINAL SUBMISSION REQUIREMENTS

Authors will be notified directly from the editor(s) upon acceptance, rejection or necessary revision of a paper. Any final recommendations made by reviewers/editors shall be incorporated into the final document submission. Final submissions generally will follow APA guidelines and submitted on disk along with a hard copy. The requirements for final submission are shown in Exhibit-A. In addition to the final submission, an author biography information form shall be submitted upon acceptance. This form is shown in Exhibit-B.

ARTICLE REVIEW PROCESS

The Journal exists due to the voluntary contributions of many individuals. We will continue to rely on volunteers to coordinate a double blind review process for each paper. Because we exist as an instrument specifically dedicated to serving NABET members, we suggest that reviews be constructive and positive where possible and comments be directed toward producing a publishable product. While comments can be made directly on a submitted manuscript, we will continue the use of the completed review forms to provide consistent and sufficient feedback to the authors. Any comments along with the review form will be anonymously sent directly to the author. A copy of the reviewer evaluation form is provided in Exhibit-C.

EXPECTATIONS AND OUTCOMES

The editors anticipate several direct benefits from the changes and enhancements identified above. These modifications are specifically designed to facilitate more efficient and effective communication between editors and reviewers, review board members and reviewers, editors and authors, and editors and the general target audience. In terms of the review process with the proposed editorial board structure, we anticipate more concise matching of papers with expertise and improved turn-around time for our authors. The intent is to achieve increased participation in the process and the publication of the Journal itself (editors, authors, editorial review board, reviewers, book review authors, invited article authors, etc.). We continue to move towards the consistent publication of one to two journals each year with an emphasis on continuous quality improvement.

Kevin J. Roth is a professor of administrative science at Clarion University where he teaches strategic management, entrepreneurship graduate management courses. His present research interests primarily include quality, location strategy and community planning.

APPENDIX-A

JOURNAL OF THE NORTHEASTERN ASSOCIATION OF BUSINESS, ECONOMICS AND TECHNOLOGY FINAL SUBMISSION REQUIREMENTS

SUBMISSION:	Submit as a Word attachment.
FONT:	Times New Roman 10
MARGINS:	Set to 1” all around. The Word default is 1.25” and you will have to change the left and right margins to 1”.
TABS:	Use the default tab stops of 0.5”. The first line of every paragraph should be tabbed. See attached example.
JUSTIFICATION:	Full block.
FOOTER:	Line across the top of the footer and typed directly under that line: Journal of the Northeastern Association of Business, Economics and Technology. The page numbering will be entered at a later time. Do not enter page numbers. See attached example. The footer definition should be 0.5. To verify this, click on File; Page Set Up; Layout. The setting should read 0.5” for the header and footer.
COLUMNS:	Use the default two-column setting which will be 0” to 3” and 3.5” to 6.5”.
REFERENCES:	References should be part of the paper and put into columns.
HEADINGS:	Major headings are bolded, capitalized and centered within the column. Secondary headings are positioned at the left margin, bolded, but not capitalized.
TABLES/GRAPHS:	If possible, tables and graphs should be located in the paper where referenced. See attached example. If the table or graph is too large, place at the end of the paper after the references.
BIOGRAPHY:	Biographies are placed after the references, but before any tables/graphs or appendices. See attached example.

Begin the paper by typing the title. Center, bold and caps the title of the paper. Double space. Center the author(s) name(s). Double space. Enter an underline from the left to the right margin. Double space. Center and type in bold and caps the word abstract. Double space. Type in the abstract. Single space and enter another underline from left to right margin. Double space and begin your columned paper. See attached example.

EXAMPLE

THE IMPACT OF THE TAX REFORM ACT OF 1986 ON THE REAL ESTATE AND SAVINGS AND LOAN INDUSTRIES

Jerry Belloit, Clarion University of Pennsylvania
Anthony Grenci, Clarion University of Pennsylvania

ABSTRACT

The Tax Reform Act of 1986 dramatically restructured many aspects of the taxation of income, particularly income from real estate rentals. Among the unintended consequences of this tax reform was a dramatic reduction in the most probable sales prices of income-producing properties. As a consequence of that reduction in prices, many investment properties experienced situations where the value decline was sufficient to leave a mortgage on the property that was greater than the price the property was likely to sell for. Many property owners in that situation chose to default on their loans. Since the value of the property was less than the mortgage value, significant losses for the lenders occurred. During the years immediately following the legislation, there was a near collapse of the savings and loan industry resulting from these loans' loses.

INTRODUCTION

The Tax Reform Act of 1986 (TRA) had a profound impact upon the real estate industry and as a result, the Savings and Loan Industry. It has often been suggested that the collapse of the industry during the late 1980s and early 1990s was a result of poor management, fraud and incompetent appraisals. This paper will suggest that another substantial reason for the Savings and Loan difficulties during the late 1980s and early 1990s were the losses incurred through the default of real estate loans caused by the loss in values of the properties used as collateral for those loans.

This paper will show how the values decreased by about 29-31% as a result of the reduction in after-tax income from the implementation of the 1986 Tax Reform Act. With typical loan-to-value ratios of 80%, this reduction left little or no equity in many properties. In addition, where there were market weakness from overbuilding and a decline in the oil industry, many property owners found that they were unable to collect as much rent as they had forecast. When faced with little or no equity in the properties and negative cash flows, many defaulted. These defaults had an even more negative impact as they began a downward spiral in values as the supply of properties increased. As the lenders sold more properties in an attempt to recover on the defaulted loans, prices were driven downward even more. As prices fell further, more owners found themselves paying on mortgages that were greater than the values of the properties that secured them. This spiraling decline became so severe in some markets that prices dropped as much as 75%.

To understand how this occurred, it is important to return to the end of the Carter Administration in 1980. At that time, the top marginal tax bracket was very high (70%). Taxable income losses from real estate operations could be used to offset earned income without significant limitation. Many doctors and other high income earners sought out real estate investments and structured them so that they would have a positive cash flow but a negative taxable income primarily because of the depreciation deduction.

Depreciation allowances allowed the taxpayer to elect any class life for their real estate property provided that the life was justified. This might allow a depreciable life for a convenience store

EXAMPLE

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EXAMPLE

Three groups were chosen to facilitate the comparison of relative positions: (1) Hispanics high in acculturation, (2) Hispanics low in acculturation and (3) Anglos. In order to get a strong response from a variety of geographic regions, telephone surveys were conducted over two weekends. A telephone bank from a local university was rented for survey administration. The survey administrators were given, on average, one hour of training in which the survey was explained. The administrators were allowed to practice until they felt comfortable with the survey and recording of the information. Calling took place from 2 p.m. – 10 p.m., which accommodated the various time zones. The survey took, on average, 15 minutes to complete and most survey administrators completed an average of two surveys per hour. A total of 316 surveys were completed. Of those, 292 were usable (i.e., could be classified as either Hispanic or Anglo).

Of the 292 usable surveys, 148 were Hispanic and 144 were Anglo. The Hispanic group was divided into high and low acculturation groups by using the median of the acculturation score. Based on the acculturation score, each individual was categorized into either the high level (HHIA) or low level (HLIA) of acculturation. A respondent with an acculturation score greater than the median (17) was included in the HHIA and those with acculturation scores less than or equal to the median were placed in the HLIA category. Acculturation scores ranged from 3 to 28. The result was 73 respondents in the high acculturated group (HHIA) and 75 in the low acculturated group (HLIA).

Dependent Variable

The question used to measure hypotheses one and two was, "Where are you most likely to get information on paint? I'll read a list and you tell me the ones that apply to you." Each item was read to the respondent, who then indicated a yes or no in response to each source. The following information source choices were provided: (1) newspaper, (2) sales circulars, (3) television, (4) neighbor or friend, (5) at a store that sells paint, (6) internet, (7) radio, (8) magazine, (9) other.

RESULTS

There were no significant differences between Anglos (mean=.1214) and Hispanics (mean=.1489) in their reported usage of television as sources of information on paint, F(1, 279)=.452, p>.05. Radio usage showed no significant differences for the groups studied: Anglos (mean=.0286); Hispanics (mean=.0213); F(1, 279)=.153, p>.05). Further analysis revealed no differences between Hispanics high in acculturation (HHIA) (mean=.0282) and those low in acculturation (HLIA) (mean=.0143); F(1, 279=.322) p>.05. for radio as a source of information. There was marginal significance for differences between Hispanics high in acculturation (HHIA) (mean=.0986) and Hispanics low in acculturation (HLIA) (mean=.20) on television usage F(1,279)=2.878, p<.1. These results are summarized in Table 1.

Table 1 also shows a breakdown of how many people indicated they used television and radio as sources of information on paint. As can be seen, only 17 out of 140 Anglos (12%) indicated using television as a source of information on paint. There were 21 out of 141 (14.8%) Hispanics that stated they used television as a source of information on paint. The percentages were even smaller for radio with 4 out of 140 (2.9%) indicating they used the radio as a source of information on paint. Of Hispanics, 3 out of 141 (2.1%) used the radio.

Table 1
ANOVA Summary for Hypotheses 1 and 2

H1 Television	N	No	Yes	Mean	F	Sig.
Anglo	140	123	17	.1214	.452	.502
Hispanic	141	120	21	.1489		
H1 - Radio						
Anglo	140	136	4	.0286	.153	.696
Hispanic	141	138	3	.0213		
H2- Television						
HHIA	71	64	7	.0986	2.878	.092
HLIA	70	56	14	.2		
H2- Radio						
HHIA	71	69	2	.0282	.322	.571
HLIA	70	69	1	.0143		

APPENDIX-B
AUTHOR INFORMATION FORM
JOURNAL OF THE NORTHEASTERN ASSOCIATION OF BUSINESS, ECONOMICS AND TECHNOLOGY

Information is needed to provide a footnote about each author of the form:

> Kevin J. Roth is a Professor of Administrative Science at Clarion University where he teaches Strategic Management, Entrepreneurship Graduate Management Courses. His present research interests primarily include quality, location strategy and community planning. This work was supported in part by a grant from the University Fellows Program at Clarion University.

Thus, please provide for each author:

Author's Name -

Position -

University from which highest degree was obtained -

Present research interests -

Courses commonly taught -

Funding Source for this research (if applicable) –

APPENDIX-C
REVIEWER EVALUATION FORM
JOURNAL OF THE NORTHEASTERN ASSOCIATION OF BUSINESS, ECONOMICS AND TECHNOLOGY

Paper Number________________________ Date Mailed for Review________________________

Reviewer Number______________________ Date Review Needed___________________________

Circle the appropriate number by each evaluation statement that is relevant to this manuscript. Omit the statements that are inappropriate. Please add other items that would be appropriate in evaluating this manuscript. After completing all appropriate statements, calculate the "average" in the space provided.

	Strongly Agree				Strongly Disagree		
With reference to the subject of this manuscript:							
1. The subject is conceptually and technically sound.	7	6	5	4	3	2	1
2. The subject of the manuscript is timely.	7	6	5	4	3	2	1
3. The subject of the manuscript is important.	7	6	5	4	3	2	1
4. Treatment of the subject is innovative.	7	6	5	4	3	2	1
5. The subject would be interesting to PJBE readers.	7	6	5	4	3	2	1
With reference to the overall presentation:							
6. The manuscript is well written.	7	6	5	4	3	2	1
7. The purpose and objectives of the manuscript are clear.	7	6	5	4	3	2	1
8. The purpose and objectives of the manuscript are successfully achieved.	7	6	5	4	3	2	1
9. The manuscript is well organized.	7	6	5	4	3	2	1
With reference to the presentation of the subject material:							
10. The manuscript is practically-oriented, or highly theoretical. It is high quality research.	7	6	5	4	3	2	1
11. The manuscript is appropriate for the PJBE (useful and understandable to business and economics faculty).	7	6	5	4	3	2	1
12. The manuscript indicates a thorough understanding of previous research and/or publications in this area.	7	6	5	4	3	2	1
13. The manuscript indicates a thorough understanding of current practices in this area.	7	6	5	4	3	2	1
14. Adequate supporting data and/or examples are properly presented.	7	6	5	4	3	2	1
15. The manuscript indicates how its findings can be used in business practice.	7	6	5	4	3	2	1

see back of form

16. The manuscript contributes to the reader's understanding of the subject as it applies to business.	7	6	5	4	3	2	1
17. The manuscript contributes new information to the body of knowledge on business or economics.	7	6	5	4	3	2	1
For Quantitative Manuscripts Only:							
18. Statistics used are appropriate.	7	6	5	4	3	2	1
19. The level of presentation is appropriate to the PJBE, i.e. not overly statistical or complex.	7	6	5	4	3	2	1
20. Sampling methodology is sound.	7	6	5	4	3	2	1
21. The research methodology is conceptually and technically sound.	7	6	5	4	3	2	1
22. Findings are appropriate given the research.	7	6	5	4	3	2	1
23. Findings are clearly presented.	7	6	5	4	3	2	1
Other statements (that help with evaluation):							
24. ____	7	6	5	4	3	2	1
25. ____	7	6	5	4	3	2	1

Sum of all scores from above ratings: ______________________

Number of statements evaluated: ______________________

Average score (sum of scores/number of statements) ______________________

What is your overall evaluation of the paper? (Note: Acceptance with revisions will require further review by editorial board members or editor).

____________________________ Accept as is

____________________________ Revise and resubmit, minor revisions

____________________________ Revise and resubmit, major revisions

____________________________ Reject

Send your written comments and this form (an original and one copy of each) to me. Your critique should be constructive (civil) and in sufficient detail so that the author can follow your line of reasoning. It would be helpful if the critique were related to specific evaluation statements (where applicable). Your comments should include an overall summary of your evaluation, strengths and weakness of the manuscript, and suggested changes. The intent of the comments is to give the editor a more complete appraisal of the manuscript and to provide useful information to the author for use in revising the manuscript. One copy of the evaluation form and comments will be sent to the author without your identity. DO NOT IDENTIFY YOURSELF BY NAME ON THIS FORM OR IN THE COMMENTS. Please return this form with your comments.

LURKERS AND PARTICIPATION INEQUALITY IN SERVICE ELECTRONIC WORD OF MOUTH

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Dr. Erin M. Steffes, Towson University

ABSTRACT

A lurker is a person who reads discussions on blogs, rating sites, message boards, chat rooms, or other interactive systems, but rarely participates. Lurking is now the norm and is not viewed as negatively as it was in the past. Almost all bidirectional websites are lurker-dominant which results in a silent majority. The ratio of 90% lurkers, 9% infrequent contributors, and 1% high participation (regular contributors) has been found to be the most common participation type distribution. Lurking is accepted as part of the typical information gathering process. However, lurking results in participation inequality whereby a tiny minority of users account for a disproportionately large amount of content. We recently collected survey data from 482 current college students in which they rated the importance of various factors, including Service Electronic Word of Mouth (through RateMyProfessors.com), on their selection of university courses and professors. Our study yielded only 64% lurkers, with 9% infrequent contributors, and 27% regular contributors (64-9-27 ratio). This is a dramatic difference from the normal 90-9-1 ratio. We attribute this difference in lurker concentration between RateMyProfessors.com users and existing online community standards to many factors including the intangibility of services and great risk to students of a poor choice. Additionally, our research investigates what motivates students to be an active participant in a SeWOM website.

LURKERS AND LURKING

A *lurker* is a person who reads discussions and feedback on blogs, rating websites, message boards, chat rooms, online communities, or other interactive systems, but rarely or never participates (Nonnecke & Preece, 2001). The concept of lurking has been studied for some time and is made possible by the passive viewing of web-based materials by individuals that choose not to get actively involved in the communication process.

Lurkers remain silent for a variety of reasons. They may be reluctant to state a public opinion even if they know it will remain anonymous (Mason, 1999). Some lurkers have a desire to understand the online community or rating medium (Gunnarsson, 1997; Whittaker, Terveen, Hill, & Cherny, 1998) and may need to be convinced of the value of the medium before possibly making a contribution. Oftentimes there is a belief that there is no reason to post (Nonnecke, 2000). For instance, if the number of published responses or feedback is deemed accurate and sufficient by the reader, then there may be no need for additional contributions. It may not be necessary or even desirable for large numbers of online community members to post as it could lead to information overload (Whittaker & Sidner, 1996). Lurking is accepted as part of the typical information gathering process and many times meets the personal and information-seeking needs of the lurker (Nonnecke & Preece, 2001). Beaudoin studied the "invisible learner" and discovered that students lurk in an online learning environment to gather information from the more active "high-visibility" contributors in the class (Beaudoin, 2002).

The term lurker has evolved with a somewhat negative connotation. In the non-Web world, to lurk is to "to lie in wait in a place of concealment especially for an evil purpose, or, to move furtively or inconspicuously and to persist in staying" (Merriam-Webster, 2007). The lurker is seen as a spy or even possibly a villain. Lurking online has been compared to the similar real-world situation involving politics, where all citizens can participate equally if they so choose, but only a few actually do (Berelson, Lazarsfeld, & McPhee, 1954). Lurkers on the Web have been characterized as free-riders (Kollock & Smith, 1996), free-loaders, and societal benefit-takers who offer nothing in return (Ebner & Holzinger, 2005).

However, lurking is so prevalent on the Web, that over time the negative attributes have been lessened and it is the norm in nearly all online environments (Nielsen, 2006). Lurkers are the masses that consume the blogs and other personal statements so popular in today's Web 2.0 community-focused sites. Bloggers publish for the benefit of lurkers so that the blogger can be heard. Marketers know that every lurker is a potential customer. Amazon.com thrives in the retail environment in which lurkers can examine customer-submitted comments about what others have purchased in the past in order to shape opinions about potential purchases. Perhaps lurkers should be re-labeled as *silent participants* in order to reduce the negative stigma associated with the word.

When a lurker contributes to an online community or forum for the first time, this process is referred to as *delurking* (Soroka & Rafaeli, 2006). There are many reasons why a lurker may eventually choose to contribute. One reason may stem from the personal desire to add value to an online community through the sharing of opinions (Nonnecke & Preece, 2001). A participant in an online forum or community who contributes comments, rebuttals, ratings, or other feedback is a *poster*. There is very little published in the literature about what sparks a lurker to delurk and become a poster. However, Soroka reports a correlation between a positive first posting experience followed by active participation in an online community (Soroka, Jacovi, & Ur, 2003).

PARTICIPATION INEQUALITY

Several studies have shown lurkers to be the majority of members in online communities (J. Katz, 1998; Mason, 1999; Nonnecke & Preece, 2000). Today, almost all bidirectional websites are lurker-dominant which results in a *silent majority* (Nielsen, 2006; Nonnecke & Preece, 2001). These lurker-dominant environments result in *participation inequality* (PI) whereby a small minority of users account for a disproportionately large amount of content. PI in the realm of computer-supported cooperative work was first examined in the early 1990's by Will Hill who observed the phenomenon (Hill, Hollan, Wroblewski, & McCandless, 1992).

Through the examination of various research studies focused on online communities, it has been shown that about 90% of users are lurkers who never contribute, 9% of users contribute a small amount, and 1% are regular posters that account for nearly all contributions and interactions This lurker to rare (or one-time) contributor to active poster PI ratio is known as the 90-9-1 rule (Nielsen, 2006). Newsgroups were studied in the 1990s and it was found that nearly 90% of the communication was carried out by less than 10% of the members (Mason, 1999). Recent estimates show the PI ratio for blogs to be 95-5-0.1 and for Wikipedia to be 99.8-0.2-0.003 (Nielsen, 2006). The problem with PI in online communities is that the posted information is contributed by such a small fraction of the viewers that the website is possibly not representative of the majority of Web users. This could lead to a biased understanding of the community. Information posted by users about products and services on ratings websites may need to be viewed with suspicion since the viewer doesn't know the poster and what basis was used for comments and opinions. The motives of the poster may be unclear.

SERVICE ELECTRONIC WORD OF MOUTH

Word of mouth communication, which can be defined as "all informal communications directed at other consumers about the ownership, usage or characteristics of particular goods or their sellers" is well established in academic literature (Westbrook, 1987). Over the years, numerous studies have shown that word of mouth communication has a significant impact on consumer choice as well as post-purchase perceptions (Bone, 1995; Engel, Blackwell, & Kegerreis, 1969; Hennig-Thurau & Walsh, 2004; E. Katz & Lazarfeld, 1955). Various forms of word of mouth include both traditional word of mouth (WOM) and electronic word of mouth (eWOM).

Regardless of the form of word of mouth, the focus of the communication is the sharing of information regarding individuals' experiences with various products and services. eWOM, much like e-mail communication, is an asynchronous process whereby sender and receiver of information are separated by both space and time. eWOM harnesses the bidirectional communication properties and unlimited reach of the Internet to share opinions and experiences on a one-to-world platform rather than a one-to-one platform (Dellarocas, 2003). The electronic nature of eWOM eliminates the receiver's ability to judge the credibility of the sender and his/her message. In eWOM, the possibility of non-altruistic or profit motivated communication exists.

With the apparent differences between traditional WOM and eWOM, there has been an renewed interest in researching word of mouth communication with a specific focus on the uses and impact of eWOM (Dellarocas, 2003; Fong & Burton, 2006; Goldsmith & Horowitz, 2006; Hennig-Thurau & Walsh, 2004). Many of the eWOM applications focus on product ratings on the Web. Consumers appear to have a high level of comfort using websites like eBay, Amazon, CNET, and Epinions to look for products information from other users. To date, most of the academic research into eWOM has focused on product related eWOM or PeWOM. There is a developing trend in online ratings towards the ratings of services, SeWOM. Websites such as RateMyProfessors.com, The Ratingz Network, RateMyEverything.com and myrateplan.com have begun to emerge as forums for rating the otherwise intangible services, from professors and teachers to laptop service to cell phone and cable service. Services differ from products in that the quality level delivered by each professor varies by course and over time as opposed to books, music CDs, and other non-changing products. Our current research focuses on perhaps the most developed and widely utilized SeWOM forum, RateMyProfessors.com (RMP), to gain a better understanding of how SeWOM fits into the mix of information students seek prior to consumption and how SeWOM influences the students' ultimate choice of both course and professor in the university setting.

RATEMYPROFESSORS.COM

RateMyProfessors.com was started in 1999 and is the first major application of SeWOM. The website allows students to rate their professors on a number of dimensions including helpfulness, clarity, easiness, and overall quality. RMP dominates the competition such as Pick-A-Prof, Professor Performance, RateMyEverything, and the MySpace Professor Ratings Forum.

RMP is the Internet's largest listing of collegiate professor ratings. There are nearly seven million student-generated ratings of over one million professors from more than 6,000 schools across the United States, Canada, England, and Scotland. Furthermore, RMP claims more than nine million student users (www.ratemyprofessors.com).

RMP is an interesting form of online rating service in that students have no need to ever visit the website again after completing college. It provides no value after graduation. It has not been studied as to whether incoming college students are aware of RMP and if they use it as part of their college selection process.

EXPERIMENT AND RESULTS

We recently collected survey data from 482 current college students in which they rated the importance of various factors, including Service Electronic Word of Mouth (through RateMyProfessors.com), on their selection of university courses and professors. The demographics of the students are shown in Table 1. More than 75% of the test subjects described themselves as heavy Internet users (see Table 2). Nearly 97% of the students were aware of RateMyProfessors.com. Nearly 94% of the students that were aware of RMP had visited the website. Nearly 94% of the students that visited RMP have used the website to help them select a professor for a class (see Table 3). All of the students attend the same university and it is quite clear that RMP is a heavily used SeWOM website.

Table 1
Demographics

Average Age	21.54 years
Freshmen	0.21%
Sophomore	14.1%
Junior	58.2%
Senior	28.4%
Male	56.4%
Business Major	70.8%
Non-Business Major	29.2%
Average GPA	3.1
Average # of Friends	9.9

Table 2
Internet Usage

Heavy User	75.4%
Moderate User	23.0%
Light User	2.1%

Table 3
RateMyProfessors.com Usage

Aware of RMP	96.7%
Visited RMP	93.7%
Used RMP to select prof	93.9%
Rated a prof on RMP	35.8%
Not rated a prof on RMP	64.2%

We were very interested to see what level of lurkers existed in our test group. One of our hypotheses involved determining the participation inequality ratio (if it in fact existed) and was stated as follows:

H-6: The percentage of RMP lurkers will be lower than the standard 90-9-1 rule.

We suspected that students would be much more participative on the RMP website than in the lurker scenarios previously discussed. Today's students spend a great deal of time on highly collaborative online community websites such as MySpace and Facebook. Additionally, they are used to interactive websites that require feedback in order to use the site. A good example of this type of website would be the immensely popular Hot or Not (www.hotornot.com).

Our study yielded only 64% lurkers, with 9% infrequent contributors, and 27% regular contributors (64-9-27 ratio). We defined a lurker as a student who has rated no professors in their entire college career, an infrequent contributor as having rated one professor, and a regular contributor as having rated two or more professors (see Table 4). This is a dramatic difference from the normal 90-9-1 ratio and thus supports our hypothesis.

Table 4
Number of professors rated on RateMyProfessors.com

# Profs Rated	*Frequency*	*Percent*
0	274	64.2
1	38	8.9
2	38	8.9
3	22	5.2
4	12	2.8
5	15	3.5
6	3	0.7
7	2	0.5
8	1	0.2
9	1	0.2
10	11	2.6
12	2	0.5
15	4	0.9
20	4	0.9
Total	**427**	**100.0**

We attribute this difference in lurker concentration between RateMyProfessors.com users and existing online community standards to multiple factors. The intangibility of services invites more subjective ratings (than products) and inspires the poster to rate professors for the benefit of their fellow students (such as to save another student from a bad experience or to encourage them to seek out highly-regarded professors). Most universities do not publish professors ratings and students are seeking to make informed choices on the selection of their teachers. There is great risk to students if they make poor choices of professors. The typical semester is three to four months long and an *improper* choice of professor could have dramatic impact on the student. Additionally, the RMP ratings and feedback form that students fill out is very simple and takes very little time to complete. The website is visually-appealing and very easy to use and is a useful reference tool for students attempting to make important decisions. The very high ratio of contributors lends credibility to the information that the students are seeking.

CONCLUSION

This study is the first known investigation of lurkers and participation inequality in service electronic word of mouth. Our hypothesis is supported that RMP as a SeWOM vehicle yields a much different PI ratio than the 90-9-1 rule with a PI ratio of 64-9-27. Further study of RateMyProfessors.com and other SeWOM websites is certainly warranted as there are emerging marketing, e-Business, and social ramifications. It would be interesting to repeat this study across several universities to see if similar PI ratios are generated. As SeWOM websites gain prominence, it would also be beneficial to conduct similar experiments that apply to them.

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THE EFFECTS OF SERVICE ELECTRONIC WORD OF MOUTH IN ACADEMIA

Erin Steffes, Towson University
Lawrence Burgee, Towson University

ABSTRACT

There has been considerable academic research on word of mouth (WOM) and electronic word of mouth (eWOM). WOM is defined as informal communication between consumers sharing their experiences with products and services. eWOM, a form of WOM, is a collection of online feedback that harnesses the bidirectional communication capabilities of the Internet. The existing body of academic research with respect to eWOM has focused nearly exclusively on products. There is a paucity of eWOM research with respect to services. In this study, we seek to understand the effect of service electronic word of mouth (SeWOM) in a university setting with a focus on RateMyProfessors.com. We recently collected survey data from 483 current college students in which they rated the importance of various factors, including SeWOM, on their selection of university courses and professors. We found that students rate the importance of SeWOM to be equal to that of their own primary experiences, and superior to traditional WOM.

INTRODUCTION

Word of mouth communication, which can be defined as "all informal communications directed at other consumers about the ownership, usage or characteristics of particular goods or their sellers" is well established in academic literature (Westbrook 1987). Over the years, numerous studies have shown that word of mouth communication has a significant impact on consumer choice as well as post-purchase perceptions (e.g. Katz and Lazarfeld 1955, Engel et al 1969, Bone 1995, Hennig-Thurau and Walsh 2004). Additional studies have shown the power of word of mouth over other forms of advertising. In certain circumstances, word of mouth has a greater influence over actual consumer behavior than personal selling, print advertisements, and radio (e.g. Katz and Lazarfeld 1955, Engel et al 1969, Goldsmith and Horowitz 2006). Various forms of word of mouth include both offline communication (traditional) word of mouth (WOM) and online communication (electronic) word of mouth (eWOM). Regardless of the form of word of mouth, the focus of the communication is the sharing of information regarding individuals' experiences with various products and services.

Despite the fundamental similarities in purpose between traditional WOM and eWOM, significant differences also exist. While WOM is an immediate intimate conversation between two or more individuals, eWOM, much like e-mail communication, is an asynchronous process whereby sender and receiver of information are separated by both space and time. Second, while WOM is generally a process of sharing information between small groups of two or more interested parties, eWOM harnesses the bidirectional communication properties and unlimited reach of the Internet to share opinions and experiences on a one-to-world platform rather than a one-to-one platform (Dellarocas 2003). Third, traditional WOM emanates from a sender that is known by the receiver of the information, thereby the credibility of the sender and the message contents are known to the receiver. The electronic nature of eWOM eliminates the receiver's ability to judge the credibility of the sender and his/her message. The sharing of traditional WOM relies heavily on the altruistic nature of the sender to pass information on which the sender believes will be beneficial the user. Furthermore, the traditional framework for WOM communication is without a profit motivation. When the known source of information found in WOM is replaced by the unknown anonymous source of information in eWOM, the possibility of non-altruistic or profit motivated communication exists. For example, authors of books could write favorable reviews of their own manuscripts on Amazon.com. Yet another difference between most traditional forms of WOM and eWOM is the print factor; do consumers lend more credibility to some opinions just because they are in print rather than verbal communications?

Perhaps because of these apparent differences between traditional WOM and eWOM, there has been a renewed interest in researching word of mouth communication with a specific focus on the uses and impact of eWOM (e.g. Dellarocas 2003, Hennig-Thurau and Walsh 2004, Goldsmith and Horowitz 2006, Fong and Burton 2006). Many of the eWOM applications focus on product ratings on the Internet. Consumers appear to have a high level of comfort using websites like eBay, Amazon, CNET and Epinions to seek products information from other users. Not surprisingly, most of the academic research into eWOM focuses on product related eWOM or PeWOM. There is an emerging trend in online ratings towards the ratings of services, SeWOM. Websites such as RateMyProfessors.com, The Ratingz Network, RateMyEverything.com and myrateplan.com have begun to emerge as forums for rating the otherwise intangible services, from professors and teachers to laptop service to cell phone and cable service. Our current research focuses on perhaps the most developed and widely utilized SeWOM forum, RateMyProfessors.com (RMP), to gain a better understanding of how SeWOM fits into the mix of information students seek prior to consumption and how SeWOM influences the students' ultimate choice of both course and professor in the university setting.

RateMyProfessors, which began in May 1999, is the first major application of SeWOM and allows students to rate their professors on a number of dimensions including helpfulness, clarity, easiness, and overall quality. Students may also rate the professor as "hot" or "not hot" based on physical attributes of the professor and record their overall comments on the professor. RateMyProfessors dominates the competition such as Pick-A-Prof, Professor Performance, Campushopper, and Reviewum. As stated on their website, "RateMyProfessors is the Internet's largest listing of collegiate professor ratings, with more than 6.8 million student-generated ratings of over 1 million professors from 6,000 schools across the United States, Canada, England, and Scotland". Furthermore, RateMyProfessors boasted more than 9 million student users (www.ratemyprofessors.com). The emergence of SeWOM as a viable source of information on services has just begun to attract academic attention and research. Studies by Felton, Mitchell and Stinson 2004, Felton et al. 2006, Kindred and Mohammed 2005, Davison and Price 2006, Riniolo, Johnson, Sherman, and Miso 2006, and Coladarci and Kornfield 2007 have studied the correlation among the factors of helpfulness, clarity, easiness, overall quality and hotness in addition to the relationship between RMP ratings and student evaluations of teaching (SET).

Despite its substantial size and apparent student popularity, there is a perception among faculty that RateMyProfessors is simply a joke or a game played by students for the sole purpose of entertainment. There are numerous conversations on any given day occurring on the Chronicle of Higher Education Forums related to the topic of RateMyProfessors.com. The common themes which emerge from the postings are as follows: 1) most students really don't use RMP ratings to choose their classes, 2) students realize it is all fun and games, 3) students who do rely on these rating systems are dumb, 4) if you (the professor) don't like your own rating on RMP, simply rate yourself a number of times or get a colleague to do it and you will feel better about yourself. These beliefs held by academics do not seem to be supported by the sheer number of postings and users currently on RateMyProfessors.com.

STUDY – Stage 1

To better understand the students' usage of RateMyProfessors.com and the effect of SeWOM on student choice of course and professor, we administered a survey to 482 students enrolled in either Principles of Marketing or Principles of eBusiness in spring 2007 at Towson University. The survey contained 24 questions related to RateMyProfessors.com usage, course selection, professor selection, and demographic information. A summary of demographic information can be found in Table 1. As seen in the table, the "average" respondent was a junior, 21.5 years old, declared business major, male, with a 3.13 grade point average and approximately 10 friends. We felt that capturing the number of close friends could give us an indication of whether the respondent was a particularly solitary or social individual which may prove useful when investigating information seeking behavior. Additionally, we captured overall Internet usage behavior, found in Table 2. The majority of our sample, 75.4%, classifies themselves as heavy users, another 23% moderate users and only 2% light users of the Internet. This distribution is not surprising, given the sample's age distribution and student status.

Table 1: Demographics

Average Age	21.54 years
Freshmen	0.21%
Sophomore	14.1%
Junior	58.2%
Senior	28.4%
Male	56.4%
Business Major	70.8%
Non-Business Major	29.2%
Average GPA	3.1%
Average # of Friends	9.9%

Table 2: Internet Usage

Heavy User	75.4%
Moderate User	23.0%
Light User	2.1%

STUDY – Stage 2

The goal of the next stage of our investigation was to determine to what extent our sample was using RateMyProfessors.com. We asked students whether they were aware of RateMyProfessors.com, whether they had ever visited RateMyProfessors.com, whether they had ever used RateMyProfessors.com to aid their selection of professor for a class, and finally whether they had ever personally rated a professor on RateMyProfessors.com and if so, how many. The results are summarized in Table 3. Not surprisingly, more than 96% of our sample was aware of RateMyProfessors.com; of that nearly 94% had visited RateMyProfessors.com and 94% of those who had visited used RateMyProfessors.com to select a class. What was more surprising was the fact that only 36% of the students had ever themselves rated a professor, and of those that had rated approximately half of the students had rated two or fewer professors. Accounting for the fact that by junior year spring, most students have had 25-30 professors, one can see that students are only rating between 3% and 8% of their total professors.

Table 3: RateMyProfessors.com Usage

Aware of RMP	96.7%
Visited RMP	93.7%
Used RMP to select prof	93.9%
Rated a prof on RMP	35.8%
Number of profs rated	1.5

STUDY – Stage 3

The next stage of our investigation, perhaps the most important stage, was to determine how students were using the information they obtained on RateMyProfessors.com and how the students weighted that information in their decision process. We divided the process of registering for classes into two discrete steps. First, we asked the students about their information gathering process for choosing which course to take and second, we asked the students about the information gathering process for choosing which professor to take. We asked the students to rate on a five point scale with 1=Very Important, 2= Somewhat Important, 3=Neutral, 4= Somewhat Unimportant, and 5=Very Unimportant the following factors related to course selection: 1) Necessity of course for degree plan, 2) Day of week configuration, 3) Time of class meeting, 4) Availability of preferred professor, and 5) Academic advisor recommendation. We also allowed the students to write in another factor if necessary. Table 4 summarizes the results which indicate that necessity for degree plan was the most influential factor, followed by time and day of class meeting, and then availability of preferred professor and advisor recommendation. Table 5 summarizes the ANOVA results for the course selection factors. We then used the Student-Newman-Keuls Test for equality of means to confirm at an α=0.05, the factors are significantly different. Finally, we asked students to report which factor was the most influential factor over their selection of courses, 50% of students indicated that necessity of course for degree plan was the single most important factor, followed by availability of preferred professor at 23%.

Table 4: Factors of Influence: Course Selection

Factor	**Mean Value**	**Rank**
Necessity to Degree Plan	1.34	1
Time of Day	1.72	2*
Day of Week	1.83	2*
Preferred Professor Teaches Course	1.97	3*
Advisor Recommendation	1.97	3*

* = tie

Table 5: Summary of ANOVA Results for Course Selection

F value	Pr>F
36.32	<.0001

The second part of this investigation was to determine how the various factors influence students with respect to selection of individual professors. Again, we asked students to rate with 1=Very Important, 2= Somewhat Important, 3=Neutral, 4= Somewhat Unimportant, and 5=Very Unimportant, the following factors: 1) Talking with friends in person, telephone or e-mail, 2) Professor teaches in preferred time slot, 3) Academic advisor recommendation, 4) RateMyProfessors.com, 5) Taken the professor for a previous class, and 6) No choice of professor for given course. Again, we also allowed the students to write in another factor if necessary. Table 6 summarizes the results for the choice of professor decision. We find that, contrary to professors' beliefs, students are heavily relying on RateMyProfessors.com to make their choice of professor each semester. RateMyProfessors.com was tied for most important factor with primary experience with the professor and was more important than speaking to friends in person, phone or e-mail regarding professors. This finding is most surprising given the fact that students know their friends and presumably are able to assign a level of source credibility to these conversations, yet students rely more heavily on information from an unknown source through RateMyProfessors.com. Table 7 summarizes the ANOVA results for the professor selection factors. Once again, we used the Student-Newman-Keuls Test for equality of means to confirm at an α=0.05, the factors are significantly different as noted in Table 6. Finally, we asked students to report which factor was the most influential factor over their choice of professors. We found that 41% of students indicate that RateMyProfessors was the single most important factor, followed by time slot at 21%, talking with friends at 17% and taken the professor previously at 15%. Clearly we find evidence that many students are utilizing RateMyProfessors.com to help them choose professors and that RateMyProfessors.com is a highly influential factor in these decisions.

Table 6: Factors of Influence: Professor Selection

Factor	**Mean Value**	**Rank**
Taken for a Previous Course	1.7	1*
RateMyProfessors.com	1.76	1/2*
Time of Class	1.87	2*
Talk with Friends	2.14	3
No Choice of Professor	2.45	4
Advisor Recommendation	2.72	5

* = tie

Table 7: Summary of ANOVA Results for Course Selection

F value	Pr>F
96.93	<.0001

CONCLUSION

In conclusion, our research shows that students are relying heavily on SeWOM through RateMyProfessors.com in their choice of professors. Interestingly, they rate the importance of the information they acquire through SeWOM as superior to that they gather through conversations with their friends. The vast majority of the sample is aware of the existence of SeWOM in the category of college professors and sought out SeWOM, at least to some extent, to facilitate their purchase decision.

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Program

Northeastern Association of Business Economics and Technology (NABET)

30th Annual Meeting
October 25th & 26th, 2007

Day's Inn
240 South Pugh St.
State College, PA 16801
(814) 238 - 8454

NORTHEASTERN ASSOCIATION

of

Business, Economics and Technology

(NABET)

Thirtieth Annual Meeting

PROGRAM

NABET
Annual Meeting
October 25th & 26th, 2007

NABET Conference Presenters and Attendees,

On behalf of the Executive Board of NABET, welcome to our thirtieth annual meeting. We are very pleased that you have come to join us. Even though this is our thirtieth annual conference, it is our first conference as a truly regional organization.

Over the two days of this conference, there will be a mix of 87 presentations of scholarly papers and workshops from 53 colleges and universities from eight states (Pennsylvania, Ohio, New York, New Jersey, Delaware, Maryland, Virginia and West Virginia). The topics of the papers cover a wide range within the business disciplines and Economics.

Please note that the Conference will start each day with breakfast and a common session. After the first session there will be a refreshment break and then there will be concurrent sessions involving four meeting rooms. The last session on Thursday will be a common session wherein the Faculty Best Paper Award winner will present his/her paper.

If you are not a presenter this year, please consider presenting next year.

I hope that you enjoy your experiences at the NABET Conference.

Dean Frear
NABET Conference Chair

THURSDAY, OCTOBER 25, 2007: SYLVAN ROOM

7:30 am - 9:00 **Registration** **Breakfast Linden Room**

8:00am - 8:15am **Norman Sigmond,** President **Welcome**

8:15 am – 9:15 am **Session 1**
Session Chair: …………………………….. **Sanjay Paul**

Operational Profile and the Behavior of the Small Enterprises: Reflections from the Urban Child Care Centers

M. Ruhul Amin	Bloomsburg University of Pennsylvania
Ahmed Zaman	Borough of Manhattan Community College

Educating Entrepreneurs: Lessons from the Fine Arts

James Donaldson	Juniata College
Karen Rosell	Juniata College

Researching the Survival and Growth of Small Businesses in Northeastern Pennsylvania: Some Conceptual Issues and Preliminary Findings

Akinola O. Fadahunsi	Penn State University – Scranton
Parminder Parmar	Penn State University – Scranton
Kim Neesan-Johnson	Penn State University – Scranton

9:15 am – 9:30 am **Coffee Break Linden Room**

9:30 am – 10:30 am **Session 2**
Session Chair: …………………………….. **Marlene Burkhardt**

Entrepreneurship, Bankruptcy Laws and Economic Activity

Sanjay Paul	Elizabethtown College
Sean Melvin	Elizabethtown College

The Need For Hispanic-Owned Businesses To Target Non-Hispanic Customers, Vendors And Service Providers

Roger Hibbs	Kutztown University of Pennsylvania
Scott Schaeffer	Kutztown University, SBDC

Entrepreneurship: Business's Liberal Art

Donald R. Mong	Slippery Rock University of Pennsylvania

THURSDAY, OCTOBER 25, 2007: SYLVAN ROOM

10:30 am – 10:45 am	**Coffee Break Linden Room**

10:45 am – 11:45 am	**Session 3**
Session Chair: ……………………………..	**Roger Hibbs**

A Comprehensive Exercise Using Video Podcasting

Gary Armstrong — Shippensburg University of Pennsylvania

We Are Who We Meet

Marlene Burkhardt — Juniata College

Weaving Storytelling into an Organizational Behavior Curriculum: Building Competencies

Joan Blewitt — Kings College
Ftr. John Ryan — Kings College

12:00 pm – 1:00 pm	**Lunch Linden Room**

1:15 pm – 2:15 pm	**Session 4**
Session Chair: …………………………………	**Alan Brumagim**

A Study of Advising Resources Perceived by First-Year Students and Transfer Students

April Bailey — Shippensburg University of Pennsylvania
Margaretha Hsu — Shippensburg University of Pennsylvania

Does Friendship Matter? Ethical Decision Making And Undergraduate College Students

Carol C. Cirka — Ursinus College
Justin Traino — Ursinus College

THURSDAY, OCTOBER 25, 2007: SYLVAN ROOM

2:15 pm – 3:15 pm **<u>Session 5</u>**

Session Chair: …………………………….. April Bailey

Simulating A Business Operation In The Classroom

Alan Brumagim University of Scranton

Curricular Response to Global Aging

Elizabeth Elmore The Richard Stockton College of New Jersey

Do You See What I See? Desired Learning Outcomes And Achieved Learning Outcomes In International Strategic Alliance

Steven X. Si Bloomsburg University of Pennsylvania
Minuddin Afza Bloomsburg University of Pennsylvania

3:15 pm – 3:30 pm Coffee Break Linden Room

3:30 pm – 4:30 pm **<u>Session 6</u>**

Session Chair: …………………………….. Carol C. Cirka

A Comparison Of Three Assessment Tools For Business Schools

Carl J. Chimi Bloomsburg University of Pennsylvania
Carolyn Lamacchia Bloomsburg University of Pennsylvania
David Martin Bloomsburg University of Pennsylvania

Freshman Seminar in Business: A Report on a Field Experiment

Eileen A. Hogan Kutztown University of Pennsylvania

4:30 pm – 5:00 pm

Winner of NABET Best Faculty Paper Award

Fertility, Money Holdings, and Economic Growth: Evidence from Ukraine

Svitlana Maksymenko University of Pittsburgh

5:15 pm – 6:00 pm Executive Board Meeting

6:00 pm - 7:00 pm NABET Social Hour I Windsor Suite Rm 208**

7:00 pm Dinner Linden Room

8:00 pm - ?? NABET Social Hour II Windsor Suite Rm 208**

THURSDAY, OCTOBER 25, 2007: WILLOW ROOM

9:15 am – 9:30 am	**Coffee Break Linden Room**

9:30 am – 10:30 am **<u>Session 2</u>**

Session Chair: …………………………….. Jerry D. Belloit

Patented Tax Loopholes-Policy And Practical Considerations

John D. Grigsby Lebanon Valley College

The Association Between Corporate Governance And Audit Fees

Cindy K. Harris Ursinus College

Horses, Real Estate and the Hobby Loss Debate

Barry Williams Kings College

10:30 am – 10:45 am	**Coffee Break Linden Room**

10:45 am – 11:45 am **<u>Session 3</u>**

Session Chair: …………………………….. Barry Williams

Rate Of Employer Contribution For The Alternate Retirement Program

Monayem Chowdhury Cheyney University of Pennsylvania

Alternative Energy Tax Subsidies:An Analysis of Costs and Benefits to the Taxpayer and Public

Jerry D. Belloit Clarion University of Pennsylvania

Does the Sale of Subdivided Land Create Capital Gain or Ordinary Income?

Anthony Grenci Clarion University of Pennsylvania
Jerry D. Belloit Clarion University of Pennsylvania

12:00 pm – 1:00 pm	**Lunch Linden Room**

THURSDAY, OCTOBER 25, 2007: WILLOW ROOM

1:15 pm – 2:15 pm **Session 4**

Session Chair: ………………………………… **John S. Walker**

A Binary Choice Model For Predicting Bank Acquisitions

Henry F. Check, Jr.	Kutztown University of Pennsylvania
John S. Walker	Kutztown University of Pennsylvania

Investment Returns and Performance Attribution in Public Pension Systems

Karen L. Randall	Ursinus College
Alexander J. Miron	Ursinus College

Estimating Toll Plaza Flow Performance Using Computer Simulations: Designing and Managing Plaza Performance

Jonathan R. Peters	The City University of New York-Staten Island
Jonathan K. Kramer	Kutztown University of Pennsylvania
Michael E. Kress	The City University of New York-Staten Island

2:15 pm – 3:15 pm **Session 5**

Session Chair: …………………………….. **Jonathan K. Kramer**

An Income Tax Explanation for "Irrational" Early Exercises of Exchange-Traded Stock Options: A Note

Stephen L. Liedtka	DeSales University
Nandkumar Nayar	Lehigh University

Does Yearend Portfolio Restructuring By Community Banks Boost Shareholder Returns ?

John S. Walker	Kutztown University of Pennsylvania
Henry F. Check, Jr.	Kutztown University of Pennsylvania

The Influence Of U.S. Presidential Elections On Exchange Rates

Dean F. Frear	Wilkes University
Jennifer Edmonds	Wilkes University

3:15 pm – 3:30 pm **Coffee Break Linden Room**

Activities resume in Sylvan Room

THURSDAY, OCTOBER 25, 2007: HOLMES/FOSTER ROOM

9:15 am – 9:30 am **Coffee Break Linden Room**

9:30 am – 10:30 pm **Session 2**

Session Chair: …………………………….. **W. R. Eddins**

Corporate Speech, Ethics & Disinformation:From Tobacco to Global Warming

Bruce L.Rockwood Bloomsburg University of Pennsylvania

Code Of Ethics Under Construction: A Blueprint For A National Professional Organization

Carol C. Cirka Ursinus College

Carla M. Messikomer Ursinus College

The Constitutional, Arbitration, and the Rule of Law

Garry Wamser Bloomsburg University of Pennsylvania

10:30 am – 10:45 am **Coffee Break Linden Room**

10:45 am – 11:45 pm **Session 3**

Session Chair: …………………………….. **Bruce L.Rockwood**

Lurkers and Participation Inequality in Service Electronic Word of Mouth

Larry Burgee Towson University

Erin Steffes Towson University

Hospitality Industry's Perceptions of Hospitality Management Graduates' Preparedness

Donna Albano The Richard Stockton College of New Jersey

Michael Scales The Richard Stockton College of New Jersey

12:00 pm – 1:00 pm **Lunch Linden Room**

THURSDAY, OCTOBER 25, 2007: HOLMES/FOSTER ROOM

1:15 pm – 1:55 pm **Session 4**

Session Chair: ………………………………. Monica Zimmerman Treichel

Knowledgeable Decision Making: Does Source of Knowledge Impact Effective Use of Information Technology?

CJ Rhoads — Kutztown University of Pennsylvania

The Effects of Service Electronic Word of Mouth in Academia

Erin Steffes — Towson University
Larry Burgee — Towson University

1:55 pm – 2:40 pm **Session 5**

Session Chair: ………………………………… Erin Steffes

Workshop 1

The Importance of Effective Communication in Business Education: How to Incorporate Effective Business Communication in Business School Curriculum

Monica Zimmerman Treichel — Temple University
Janis Moore Campbell — Temple University

2:40 pm – 3:25 pm

Workshop 2

Session Chair: …………………………….. CJ Rhoads

Visible Product: Projects, Posters and Power Point

Karen L. Randall — Ursinus College
Marlene Burkhardt — Juniata College

3:15 pm – 3:30 pm **Coffee Break Linden Room**

Activities resume in Sylvan Room

THURSDAY, OCTOBER 25, 2007: LOGAN/HARRIS ROOM

9:15 am – 9:30 am **Coffee Break Linden Room**

9:30 am – 10:30 am **Session 2**

Session Chair: …………………………….. **Farhad Saboori**

Three High Risk Health Characteristics And Their Consequences On Employees

Marc C. Marchese Kings College
Bernard Healey Kings College

Designing A Laptop Survey At A Pennsylvania College: A Precursor To Introducing Innovative Technologies

W. R. Eddins York College of Pennsylvania

10:30 am – 10:45 am **Coffee Break Linden Room**

10:45 am – 11:45 am **Session 3**

Session Chair: …………………………….. **Marc C. Marchese**

The Impact of Rising Oil Prices on the U.S. Economy: An Empirical Analysis

Farhad Saboori Albright College

12:00 pm – 1:00 pm **Lunch Linden Room**

THURSDAY, OCTOBER 25, 2007: LOGAN/HARRIS ROOM

1:15 pm – 2:15 pm **Session 4**

Session Chair: …………………………………… **Edward J. Fox**

Environment, Income Inequality and Health in US Counties.

Martina Vidovic. Bloomsburg University of Pennsylvania
Neha Khanna Bloomsburg University of Pennsylvania

South Central Pennsylvania: Tracking the Regional Economy

Ken Slaysman York College of Pennsylvania

Economic Espionage Today And The Economic Espionage Act Of 1996

Vince Luchsinger University of Baltimore

2:15 pm – 3:15 pm **Session 5**

Session Chair: …………………………….. Martina Vidovic

Why Is Selling Not Taught In The Pennsylvania University Environment

Edward J. Fox South University

Barking Up The Wrong Ethnic Tree: Ethnic Marketing Needs An Emic Definition Of Ethnicity

Ed Chung Elizabethtown College

Models Describing Loyalty and the Apparent Mismatch Between the Marketer and the Consumer

Jefrey Woodall York College of Pennsylvania

3:15 pm – 3:30 pm **Coffee Break Linden Room**

Activities resume in Sylvan Room

FRIDAY, OCTOBER 26, 2007: SYLVAN ROOM

7:30 am – 9:00 am **Registration** **Breakfast Linden Room**

7:45 am - 8:15am **Norman Sigmond,** President **Welcome Day 2**

NABET Annual Fall Business Meeting
All conference participants may attend
*Norman Sigmond, **President***

8:15 am –9:15 am **Session 1**
Session Chair: …………………………….. **Charles Walton**

Determinants of Class Participation: A Preliminary Investigation
Justin C. Matus — Wilkes University
Robert D. Kuschke — University of Missouri

Start Your Own Business: A Synthesizing Final Group Project in the Introductory Business Course
Leon Markowicz — Lebanon Valley College

Assessing Writing Across the Business Core
Nancy Coulmas — Bloomsburg University of Pennsylvania
Stephen Markell — Bloomsburg University of Pennsylvania

9:15 am – 9:30 am **Coffee Break Linden Room and Hotel Checkout**

9:30 am – 10:30 am **Session 2**
Session Chair: …………………………… **Eric L. Blazer**

College Trustee Governance: Augmenting Carver's Policy Governance with Accepted Control and Planning Systems
Charles Walton — Gettysburg College
Spring Walton — University of Maryland, University College

Teaching Online & Hybrid Accounting Courses: Experience at a Mid-Atlantic University
Faye Bradwick — Indiana University of Pennsylvania

Evaluating the Impact of Integrated Business Curricula on Student Outcomes: Implications of Curriculum Transformation to Make Students More Marketable
John Buttermore — Slippery Rock University of Pennsylvania

10:30 am – 10:45 am **Coffee Break Linden Room**

Friday, October 26, 2007: Sylvan Room

10:45 am – 11:45 am **Session 3**

Session Chair: …………………………….. **John Buttermore**

A Case Study Augmenting Carver's Policy Governance with Accepted Control and Planning Systems in a Community College

Charles Walton	Gettysburg College
Spring Walton	University of Maryland, University College

An Attitudinal Survey of Classroom Response Systems

Eric L. Blazer	Millersville University of Pennsylvania

WiLife's Indoor Surveillance Camera and Its Contract Manufacturers in China

Gabriel Jaskolka	Tiffin University
Al Mudrow	Tiffin University

12:00 pm – 1:00 pm **Lunch Linden Room**

1:15 pm – 2:15 pm **Session 4**

Session Chair: ………………………………… **James Talaga**

Couponing Strategies in Location-based Advertising

Prashant Bellur	Ithaca College

Customer Satisfaction Measurement and the Effective Management of Customer Services

Jonathan Silver	Alvernia College

Income Density and Market Potential in Pennsylvania Small Towns

William Bellinger	Dickinson College

2:15 pm – 2:30 pm **Coffee Break, Linden Room**

2:30 pm – 3:30 pm **Session 5**

Session Chair: …………………………….. **Jonathan Silver**

Data Warehouse Development: Is There A "Best Practice"?

Mary Williams	Widener University
Robert G. Jones	Widener University

Fantasy Sports and Sports Marketing

James Talaga	La Salle University
Christopher Orzechowski	Cardiology Consultants of Philadelphia

Arguably, No One Knows More About Candy or Technology Than Teens

Arlene Peltola	Cedar Crest College

FRIDAY, OCTOBER 26, 2007: WILLOW ROOM

9:15 am – 9:30 am	**Coffee Break Linden Room and Hotel Checkout**

9:30 am – 10:30 am **Session 2**

Session Chair: …………………………… **Gary Leinberger**

The Ambiguities of Neo-Classical Globalization???

Mohammed Sidky	Point Park University
Dimitris J. Kraniou	Point Park University

10:30 am – 10:45 am	**Coffee Break Linden Room**

10:45 am – 11:45 am **Session 3**

Session Chair: …………………………….. **Mohammed Sidky**

An Empirical Study of Undergraduate Student's Basic Finance Management Achievement Relative to Student Background and Prerequisite Timing.

Gary Leinberger	Millersville University of Pennsylvania
Douglas Frazer	Millersville University of Pennsylvania

Impact Of Strategy On Firm Performance In An Emerging Market: An Empirical Examination Of Turkish Insurance Industry

J Rajendran Pandian	Youngstown State University
Ilyas Akhisar	Marmara University

Market Efficiency in the Post-Lockout NHL: Eliminating the Reverse Favorite-Longshot Bias

Rodney J. Paul	Saint Bonaventure University
Andrew P. Weinbach	Coastal Carolina University
Mark Wilson	St. Bonaventure University

12:00 pm – 1:00 pm	**Lunch Linden Room**

FRIDAY, OCTOBER 26, 2007: WILLOW ROOM

1:15 pm – 2:15 pm **<u>Session 4</u>**

Session Chair: …………………………………… Mark L. Usry

An Empirical Analysis of the Determinants of Foreign Direct Investment with a Focus on Asia

Katarina Keller	Susquehanna University
Andrew Gilbert	Price Waterhouse Coopers, LLP
Anne Stankiewicz	Goldman Sachs Group Ltd.

A Correlation Analysis of Price of Corn and Price of Gasoline

Joseph Cheng	Ithaca College

Comparative Analysis on the Major Determining Factors for the Performance of PGA and LPGA Golfers

Jonathan Ohn	Bloomsburg University of Pennsylvania

2:15 pm – 3:15 pm **<u>Session 5</u>**

Session Chair: …………………………….. Joseph Cheng

Is there a Relationship between Corruption and Job Creation in Resource Rich Oil and Gas Developing Countries?

Olumide Ijose	Slippery Rock University of Pennsylvania
Jesus Valencia	Slippery Rock University of Pennsylvania

Negligent Hiring

Mark L. Usry	Bloomsburg University of Pennsylvania

Execution, the Secret to Great Performance

David E. Vance	Rutgers University

FRIDAY, OCTOBER 26, 2007: HOLMES/FOSTER ROOM

9:15 am – 9:30 am **Coffee Break Linden Room and Hotel Checkout**

9:30 am – 10:10 am **<u>Session 2</u>**

Workshop 1

Session Chair: …………………………… Anne McMahon

Technology in the Classroom: Improving Class Participation

Justin C. Matus — Wilkes University

10:10 am – 10:20 am Setup time for next workshop

10:20 am – 11:00 am

Workshop 2

Session Chair: …………………………… Justin C. Matus

Assessing Diversity Outcomes in a College of Business Management Curriculum

Anne McMahon — Youngstown State University
Andy Chang — Youngstown State University
Carol Mikanowicz — Youngstown State University
C. Louise Sellaro — Youngstown State University

11:00 am – 11:10 am Setup time for next workshop **<u>Session 3</u>**

Workshop 3

11:10 am – 11:50 am

Session Chair: …………………………….. Brian J. Petula

A Serendipitous Walk to Investing Literacy: Engaging College Students to Think Critically About Investing Using a Collaborative Teaching Model

Patricia Weaver — Juniata College
Paula Beckenbaugh — Juniata College

12:00 pm – 1:00 pm **Lunch Linden Room**

FRIDAY, OCTOBER 26, 2007: HOLMES/FOSTER ROOM

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1:00 pm – 1:10 pm Set up time for next workshop **Session 4**

1:10 pm – 1:50 pm

Workshop 4

Session Chair: …………………………………. Patricia Weaver

Enhancing the MBA Learning Experience with Service Learning

Brian J. Petula	Marywood University
U. Rex Dumdum	Marywood University
Paula Ralston Nenish	Penn Security Corporation
Cindy Lewis-Kessler	Sanofi, Pasteur

1:50 pm – 2:00 pm Set up time for next workshop **Session 5**

2:00 pm – 2:40 pm

Workshop 5

Session Chair: …………………………….. Brian J. Petula

Using Computerized Simulations in Accounting Courses

Stanley J. Yerep	University of Pittsburgh at Johnstown
Deborah Smiach-Zakrawski	University of Pittsburgh at Johnstown

FRIDAY, OCTOBER 26, 2007: LOGAN/HARRIS ROOM

9:15 am – 9:30 am **Coffee Break Linden Room and Hotel Checkout**

9:30 am – 10:30 am **<u>Session 2</u>**

Session Chair: …………………………… **John A. Kruglinski**

Beyond Statistics: Data Mining in the 21st Century Curriculum

Deborah Gougeon University of Scranton

Contract Design for Quality Control in Supply Chain Management

Nanyun Zhang Towson University

10:30 am – 10:45 am **Coffee Break Linden Room**

10:45 am – 11:45 am **<u>Session 3</u>**

Session Chair: …………………………….. **Deborah Gougeon**

Selling a Government Owned Enterprise in China

Dan Benson Kutztown University of Pennsylvania
Roger Hibbs Kutztown University of Pennsylvania

Effectively Addressing Enterprise Compliance Risk

John A. Kruglinski Kutztown University of Pennsylvania

Toward an Understanding of Auditor Rotation as Public Policy:
Theories of Deviant Behavior

A. Blair Staley Bloomsburg University of Pennsylvania
Wilmer Leinbach Bloomsburg University of Pennsylvania
Mark L. Usry Bloomsburg University of Pennsylvania
Mike Shapeero Bloomsburg University of Pennsylvania

12:00 pm – 1:00 pm **Lunch Linden Room**

FRIDAY, OCTOBER 26, 2007: LOGAN/HARRIS ROOM

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1:15 pm – 2:15 pm **Session 4**

Workshop 1

Session Chair: ………………………………… Henry Barker

Accounting Educators Dialogue

Panel Members

Faye Bradwick	Indiana University of Pennsylvania
Scott Cairns	Shippensburg University of Pennsylvania
Joyce Middleton	Frostburg State University
Ann Servey	Cabrini College
Gail Wright	Villa Julie College

2:15 pm – 3:15 pm **Session 5**

Session Chair: …………………………….. Faye Bradwick

The Transition from Online Learning to the Virtual Classroom

Henry Barker — Tiffin University

Why Most New Product Usually Fail and Why Only Some Succeed

Okan Akcay — Kutztown University of Pennsylvania