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HOSPITALS "GO GREEN": A STUDY OF GREENING EFFORTS OF INDIAN HOSPITALS

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ABSTRACT

With environmental issues at the core, hospitals have realized the need for "Sustainable Practices" or "Green Practices". Hospitals are becoming more and more committed to environmental issues due to tougher environmental legislation, economic and other influences. The purpose of this paper is to find out the attitude and participation of Indian Hospitals in environmentally sustainable practices and what specific initiatives adopted by them in this regard. A survey, in person and online, was conducted in December 2010 and January 2011 to ascertain these objectives. Total of 88 respondents participated in the survey. Our survey revealed that Indian hospitals generally are starting to embrace sustainability for its environment and community benefits. The survey showed that the Indian hospitals are adopting greener ways in four core operational areas – energy, water, waste and cleaning. Significant savings in energy costs have been achieved by going green. Beyond energy conservation, hospitals are benefiting through measures of water management, waste management and cleaning methods. Survey results underscore that despite widespread acceptance, sustainability gains are not universal. Large numbers of Indian hospitals are yet to start their green efforts. However, in near future, more number of Indian hospitals are likely to participate in green movement due to their obvious benefits. Environmental operations have become extremely important to hospitals as they help make the link between public health and environment while allowing the hospitals to operate economically and efficiently.

INTRODUCTION

Hospitals worldwide are adopting measures to reduce their carbon footprints. Hospitals have realized the importance of "green operations", leaving positive impact on surroundings. More healthcare organizations are finding tangible ways to reap savings from green operations. Hospitals present both a challenge and opportunity in the development and implementation of green practices. Issues such as 24/7 operations, energy and water use intensity, chemical use, infection control requirements and formidable regulatory requirements pose significant opportunities to the implementation of green protocols.

India, being the 2nd most populous country in the world has scores of healthcare facilities. It's imperative that Indian hospitals should extract the benefits of green practices, both economic and environmental. We, therefore, conducted survey to find out participation of Indian Hospitals in green revolution and to understand the initiatives undertaken by Indian healthcare industry in this regard. The survey showed that the hospitals are adopting greener

practices into four core areas of operations—energy, water, waste and cleaning and are achieving tangible benefits. Yet it is clear that return on investment is being found more often.
Section 2 details the objectives of this study. Section 3 gives insight about the research methodology adopted to achieve research objectives. Section 4 presents the data analysis and results of the study. Section 5 describes the conclusion of this study with future scope.

OBJECTIVES OF THE STUDY

The research was conducted with the following objectives:

1. Awareness of green practices among Indian hospitals.
2. Reasons for adopting green practices by Indian Hospitals.
3. Specific green initiatives implemented in last 2 years or plan to implement in next 2 years in the areas of Energy, Water, Waste and Cleaning.
4. The economic savings achieved in these areas due to implementation of green practices.

METHODOLOGY

The Study

The present study explores the participation of Indian hospitals in green practices. The study also focuses on the green practices adopted in various operational areas by Indian hospitals.

The Sample

The samples comprised of Indian hospitals operating out of cities and are already operational for minimum of 2 years. It has a balanced mix of private, government, specialist and corporate hospitals of varying bed capacities. Thus our sample is good representative of Indian hospitals. We selected existing hospitals in our study because they outnumber upcoming hospitals and hence there becoming green will severely reduce India’s carbon footprints. The total of 88 participants participated in the survey, mostly private owned hospitals. The respondents were holding managerial positions in the hospitals. Figure 1 shows the sample distribution.

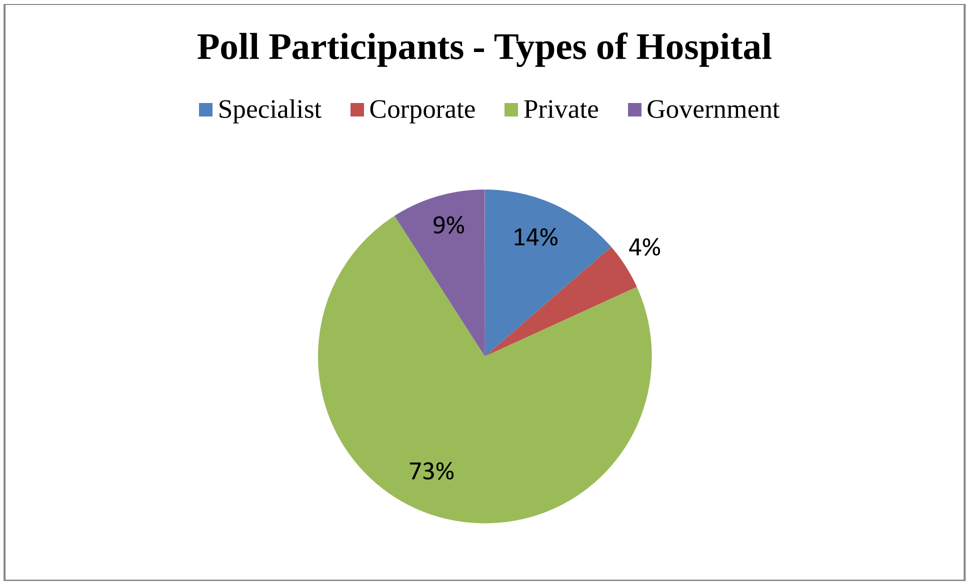

Figure 1

Tools For Data Collection And Analysis

A survey based on self designed questionnaire (Appendix 1) was conducted, in person and online, in December 2010 and January 2011 to collect the primary data for the study. The questionnaire contained questions to gather information about hospital, and various green initiatives implemented by them in last 2 years with specific relevance to areas of energy management, water management, waste management and cleaning. The questionnaire was also designed to understand what specific green initiatives they plan to implement in next 2 years. Percentage method was used for the purpose of data analysis.

ANALYSIS AND RESULTS

Awareness About Green Practices Among Indian Hospitals

Close to half of the respondents (45%) are aware of green practices whereas close to one quarter (23%) know them partially. Together they constitute a bigger pie, as compared to 32% of respondents who are unaware. Figure 2 summarizes the findings

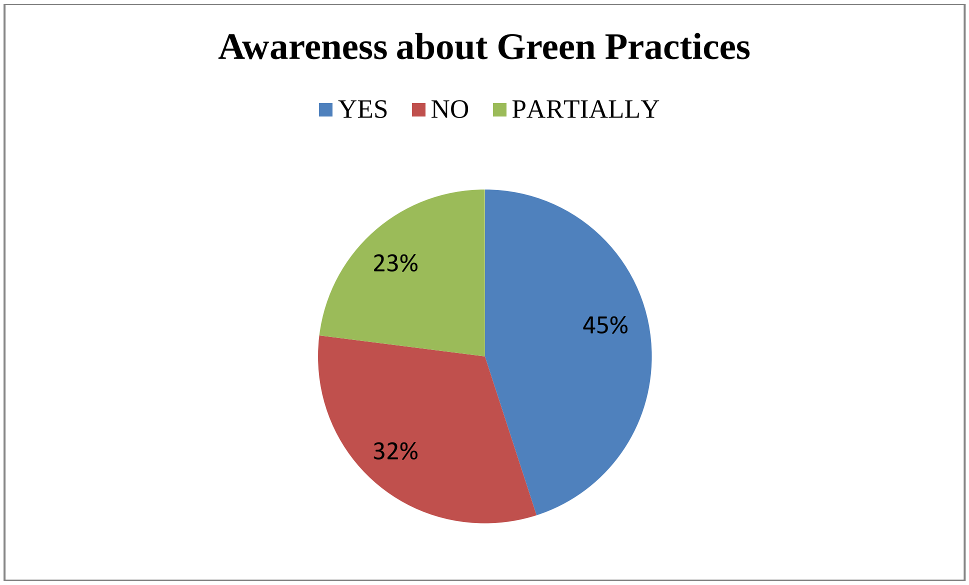

Figure 2

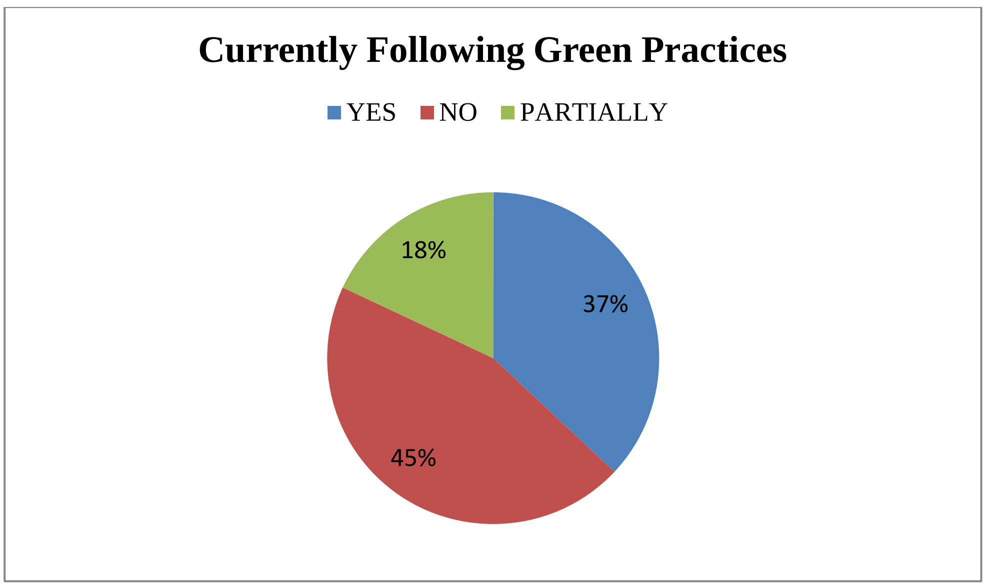

Figure 3

36% of respondents are already using green practices, while 18% are doing partially. 45% of the respondents are yet to start on green. Figure 3 gives the details.

Thus our survey reveals that Indian hospitals generally have started to embrace greener operations, though it's proving slow to take root nationwide.

Reasons For Indian Hospitals Going Green

The survey found that four factors were singled out by more than 70% respondents as very important in determining whether they should pursue environmentally sustainable operations. Most important reason mentioned is positive impact on surroundings (95%), followed by quality of indoor environment (86%). Cost savings (77%) and Long-term cost savings (77%) were the other most- mentioned reasons. Their environmental concerns came through very loud and clear when they cited awards, recognitions, financial incentives (14%) as the least preferred reason for going green. The only issue deemed a major challenge by most poll participants was competing investment and spending priorities. 45% of the respondents felt return on investment as an important determinant about their green decision. Figure 4 presents the results.

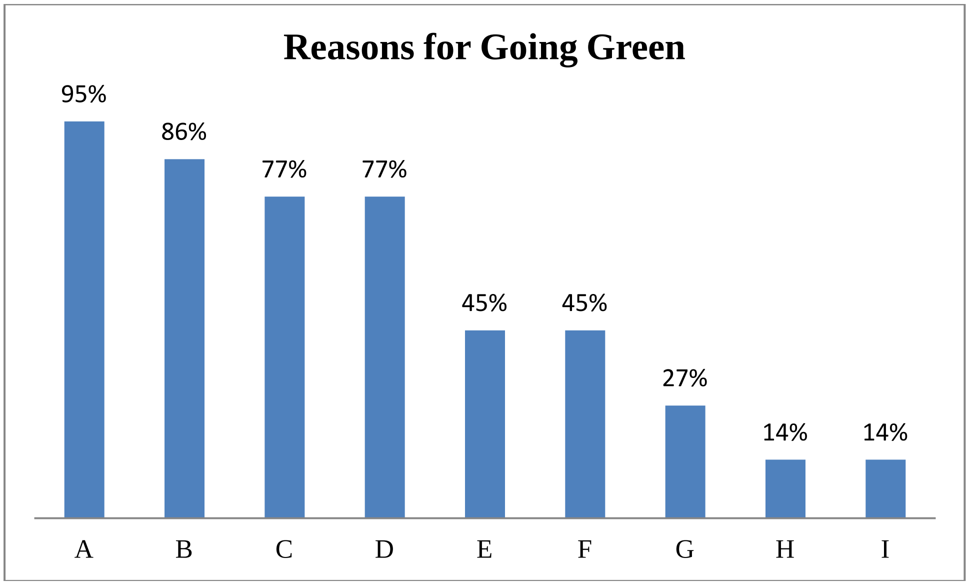

Figure 4

Where,

A - Positive Impact on Surroundings
B - Quality of Indoor Environment
C - Cost Saving
D - Long Term Cost Saving
E - Fit with Hospital Mission
F - Return on Investment
G - Required by Local/ State Authority
H - Access to Financial Incentive Program
I - Award, Recognition, Press Coverage

Energy Management Initiatives

When hospitals take the first step towards going green, it's often in energy efficiency. There's strong incentive to look for savings in this category. Indian hospitals are among the most energy-intensive commercial buildings.

Nearly 77% of respondents said their facility measures energy savings. Indian hospitals are seeing that energy efficiency is a good place to start. The savings are tangible, and they can then be used to increase further energy efficiency upgrades or fund other green initiatives going on at their hospital. Energy savings can prove substantial.

Indian hospitals are using a variety of energy management initiatives to reduce energy costs. A majority of those surveyed said they had implemented at least one of these in last 2 years: preventive maintenance plans, transition to energy efficient lamps, energy conservation program.

Renewable energy practices are less in use and are confined only to water heating. Majority of respondents are using solar water heaters, though solar energy is not popular when it comes to lighting. When asked, majority respondents favored installation of occupancy sensors and solar cells in next 2 years. Figure 5 summarizes the findings.

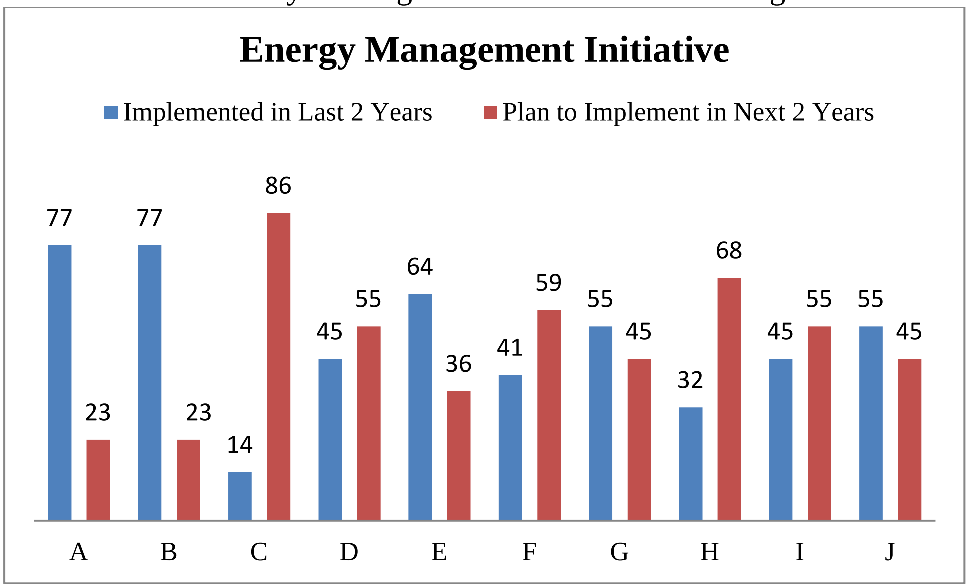

Figure 5

Where,
A - Preventive Maintenance Plan
B - Transition to Energy Efficient Lamps
C - Install Occupancy Sensors
D - Technology Upgrade for Plant Equipments
E - Energy Conservation Program
F - Digital Patient Records
G - Designate Internal Energy Manager
H - Measures for Preventing Heat Islands
I - Regulated Air Conditioning
J - Installed Renewable Energy Source

The poll respondents achieved 20% reduction in energy costs due to green practices.

Water Management Initiatives:

As with energy, Indian hospitals are remarkable users of water. They have moved aggressively to put water conservation strategies in place, water recharging in particular. Most hospitals are using water treatment and recycling plants to meet their non potable water requirements (e.g. Landscaping). Many facilities measure their water usage patterns and water performance. Scarcity of water has made it topmost priority among hospital sustainability programs. Water recycling plants are instituted considering strained supplies and growing demand. Healthcare facilities have many opportunities for water savings – from instrument reprocessing, environmental hygiene and patient care to on-premise laundry and ware washing. The most common water management initiative used by survey participants was “Rainwater recharging”. When asked, almost all expressed their plans to install low flow fixtures and flow control fixtures in near future. A majority of hospitals have no plans to initiate water conservation programs in kitchen and cafeteria, or water-efficient dish washing. These areas aren't seen as cost-effective for most part.

Having a water management plan, however, could prove economical for the majority that have either implemented water management plans in the past two years or intend to do so in the next two years. Figure 6 provides the details.

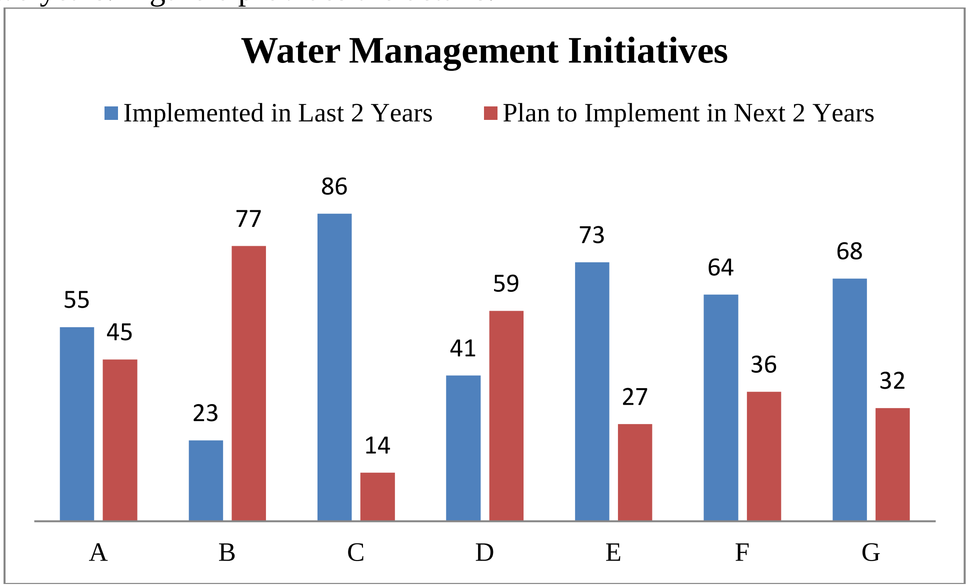

Figure 6

Where,

A - Install Low Flow Fixtures for Toilets
B - Install Flow Control Fixtures on Faucets
C - Conduct Water Use Audits and repairs leaks, drips and unnecessary flows
D - Use drought tolerant landscaping or native vegetation to reduce water requirement
E - Water Management Plan
F - Implement Water Conservation initiative in kitchen and cafeteria
G - Use Rainwater or gray water for landscape irrigation

Poll participants confirmed water cost savings of 10% due to implementation of green water management practices.

Waste Management Initiatives

Hospitals generate so much waste that it tends to be a high priority in sustainability efforts. Almost everyone among the respondents monitor their waste performance. This is more so because of regulatory requirements, than the economic reasons. Waste reduction is well-embedded in healthcare operations and there is well-established and growing infrastructure to support these initiatives. Among their sustainable initiative most Indian hospitals give priority to segregation of regulated medical waste, training staff on waste reduction process. Very few hospitals consider environmental factors while purchasing and participate in manufacturer's take back programs, though majority expressed their willingness to participate in such programs if manufacturers provide them the opportunity. Recycling is another area where hospital engagement is missing. The reasons cited are: limited resources, staff and infrastructure (both internal and external). Figure 7 provides the details.

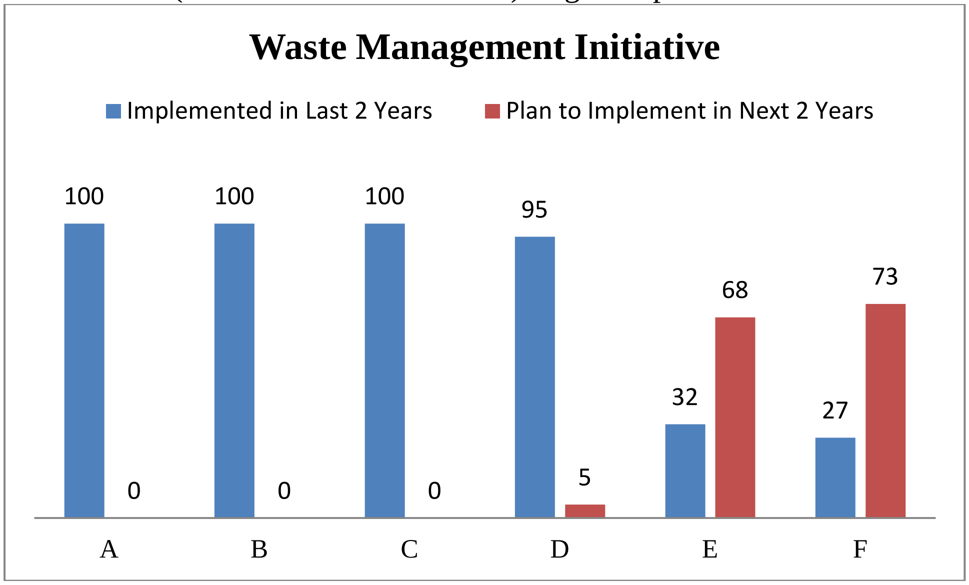

Figure 7

Where,

A	-	Defined processes to staff and users for waste prevention and reduction
B	-	Ongoing Process for tracking waste volume and cost for all waste streams
C	-	Segregation of Regulated Medical Waste
D	-	Contract for Waste Reduction
E	-	Environment friendly purchasing (Less Packaging, recycled content etc.)
F	-	Participate in Manufacture's take back programs

The waste cost savings due to green practices as narrated by participants is 3%.

Green Cleaning Initiatives

Facilities surveyed did not measured savings from environmental cleaning practices. But efforts in that area appear to be accelerating. Everybody is going for environmentally friendly cleaning materials or looking at them. With issues around air quality, the increase of asthma and other respiratory problems, people are just trying to stay away from those as much as they can.

Initiatives implemented most often involve limit exposure to occupants to hazardous chemicals, infection control risk assessment, and use of pre-diluted disinfectant. Indian hospitals are not giving any special significance to eco-labeled cleaning products – mostly because of unavailability of these products. Majority respondents have not registered significant savings from green cleaning initiative but agreed -- that's what is needed to demonstrate their value to patients. Figure 8 summarizes the findings.

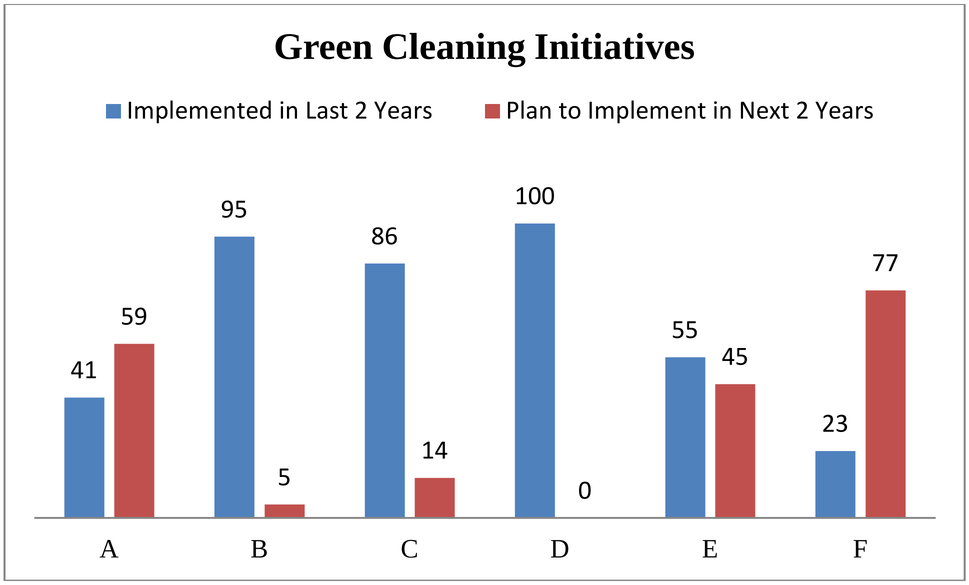

Figure 8

Where,

A - Use Microfiber mops and cleaning cloths to reduce water and chemical use

B - Conduct infection control risk assessment that identifies areas where disinfectant use is required

C - Use prediluted disinfectant systems for worker safety

D - Adopt operational policy which limits exposure of occupants, staff to potentially Hazardous chemicals

E - Adopt environmentally preferable cleaning policy for surfaces such as floors, walls, furniture and medical equipments

F - Use cleaning products labeled as greenseal or ecologo

The cost savings of 2% has been attained by respondents due to green cleaning initiatives.

CONCLUSION

The survey showed that Indian hospitals are incorporating greener ways of thinking in to core areas of operations – energy, waste, water and cleaning – and achieving measurable results from various initiatives. The survey results show that many Indian hospitals have begun using eco-friendly practices. Just about everyone is tuned in to the environmental push. Some of the greatest progress has come in energy cost savings, though hospitals are also seeing steps in water management, waste reduction and green cleaning proving fruitful. Indian hospitals will continue their gradual greening. Hospitals are realizing success in sustainability a program at a time, and we're seeing the effects of that. As the survey shows that we're just getting started and there's a lot of need for education around sustainability in health care.

REFERENCES

Kreisberg J.(2005), What is Sustainable Healthcare, *Journal of Ecologically Sustainable Medicine*,1-3

Jameton A., McGuire C., (2002), Toward sustainable health-care services: principles, challenges, and a process, *International Journal of Sustainability in Higher Education*, 3(2), 113 – 127

Kantabutra S., (2011), Sustainable leadership in a Thai healthcare services provider, *International Journal of Health Care Quality Assurance*, 24 (1), 67 – 80

Nasir U., David L., Darcey T., (2009), Toward More Sustainable Health Care Quality Improvement in Developing Countries: The Little Steps Approach, *Quality Management in Health Care: October/December 2009* –18 (4), 295-304

APPENDIX 1 (QUESTIONNAIRE USED FOR SURVEY)

Green Practices Followed in Indian Hospitals Survey

Hospital Information:

Hospital Name: ____

Type of Hospital (tick one): Specialist ☐ Corporate ☐

Private ☐ Government ☐

No. of Inpatients: ____________________/Day

No. of Outpatients: ____________________/Day

No. of Beds (Total): ____________________

Hospital Operating Since: ____________________Years

Are you aware of concepts of Green Practices: Yes ☐ ☐ Part ☐

Currently Following Green Practices: Yes ☐ ☐

Reason(s) why you opted for Green Sustainable Hospital:

☐ Cost Savings ☐ Quality of Indoo nment for staff, patients & families ☐ Long term cost g

☐ Fits with Hospital Mission ☐ Positive Impact on Surrounding Community ☐ Access to cial incentive Program

☐ Return on Investment ☐ Required by Local/state Authority ☐ Awards, Recognition, Press Coverage

Energy Management:

Energy Management Initiative	**Implemented in Last 2 Years**	**Plan to implement in next 2 years**
Preventive Maintenance Plans		
Transition to energy efficient Lamps		
Install Occupancy Sensors		
Technology upgrade for plant equipments		
Energy Conservation Program		
Digital Patient Records		
Designate internal Energy Manager		
Measures for preventing Heat Islands		
Regulated Air Conditioning		
Installed Renewable Energy Source (Solar energy etc.)		

Do you Monitor Energy Performance/ Management: Ye ☐ ☐ No

What % of total operating cost is constituted by “Energy Cost”:____

What % savings you have achieved by going Green on Energy: ____________________________

Water Management:

Water Management Initiative	**Implemented in Last 2 Years**	**Plan to implement in next 2 years**
Install Low Flow Fixtures for Toilets		
Install Flow Control Fixtures on Faucets		
Conduct Water Use Audit and repair leaks, drips and unnecessary flows		
Use drought tolerant landscaping or native vegetation to reduce water requirements		

Water Management Plan		
Implement Water Conservation initiative in kitchen and cafeteria		
Use rainwater or gray water for landscape irrigation		

Do you Monitor Water Performance/ Management: Yes ☐ ☐ No
What % of total operating cost is constituted by “Water Cost”:____
What % savings you have achieved by going Green on Water: ____________________________

Waste Management:

Waste Management Initiative	Implemented in Last 2 Years	Plan to implement in next 2 years
Defined processes to staff and users for waste prevention and reduction		
Ongoing Process for tracking waste volume and cost for all waste streams		
Segregation of Regulated Medical Waste		
Contract for waste reduction		
Environment Friendly Purchasing (less packaging, recycled content, EOL collection and recycling services)		
Participate in Manufacturer’s take back programs and/or post-consumption materials management		

Do you Monitor Waste Performance/ Management: Yes ☐ ☐ No
What % of total waste is constituted by “Regulated Medical Waste”:____
What % of total operating cost is constituted by “Waste Cost”:____
What % savings you have achieved by going Green on Waste: ____________________________
Do you recycle the materials: Yes ☐ No ☐
Items Recycled: (Cardboard, Paper, Beverages Containers, Plastic, Metal, Glass, Alkaline Batteries, Pillow and Seizure pads, eyeglasses, toner cartridges, Pallets, etc.)
____

Green Cleaning:

Green Cleaning Initiative	Implemented in Last 2 Years	Plan to implement in next 2 years
Use Microfiber mops and cleaning cloths to reduce water and chemical use		
Conduct and Infection Control Risk Assessment that identifies areas where use of disinfectants is required		
Use prediluted disinfectant systems for worker safety		
Adopt operational policy which limits exposure of occupants ,staff to potentially hazardous chemicals		
Adopt environmentally preferable cleaning policy for surfaces such as floors, walls, furniture and medical equipments		
Use cleaning products labeled as GreenSeal or Ecologo		

Do you Monitor Green Cleaning Performance: ☐ ☐ No
What % of total operating cost is constituted by “Cleaning Cost”:____
What % savings you have achieved by going Green on Cleaning: __________________________

WHY ONE SHOULD NOT RELY UPON THE COEFFICIENT OF DETERMINATION TO EVALUATE CAPM

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ABSTRACT

Regression studies of individual common stocks find the correlation of individual common stock returns with those of a proxy for the market portfolio to be poor. Two Presidential Address to the American Finance Association, Roll [1988] and Elton [1999], attribute such poor statistical performance to noise which is present in historical data sets. Perhaps this is so. But it is true as a matter of logical necessity that low correlation is evidence in favor of the Capital asset pricing model, CAPM. To the extent that systematic risk is less than total risk, the correlation of individual asset returns to returns on the market portfolio is reduced. This finding is important because it brings into question how one might evaluate empirical work where it is currently accepted by many that low R-square statistics are thought to be bad news for the CAPM theory.

INTRODUCTION

The (Sharpe, 1964) (Lintner, 1965) (Mossin, 1966) (Black, 1972) Capital asset pricing model, the CAPM, predicts that high-beta stocks are more risky than low-beta stocks but that these high-beta stocks also have higher expected returns than do low-beta stocks and *vice versa*. Is this really so? Those of the academy are now divided in their answers to this question. Most recently, it is the view of Levy and Roll [2010] that the right answer is yes, but if the history of our discipline is a reliable guide to the future then someone else will step forward to challenge their empirical data analysis by bringing other data or by employing different ways of analyzing the same data. For those interested in this back-and-forth historical controversy, see (Fama and French, 1996; 2004) and (Levy and Roll, 2010).

The central argument of this paper is that empirical data analysis can never settle this question of whether or not the CAPM works in the real world, not because of messy, intractable econometric problems, but because of the theory of the CAPM itself. If CAPM works as advertised in theory then the returns of individual common stocks will not be perfectly correlated with a portfolio of common stocks. For CAPM theory says, among other things, when common stocks are formed in a portfolio that the variance of the portfolio returns is less than that of the variances on the individual common stocks. The other side of this coin is that when one correlates common stock betas for every stock in a diversified portfolio to corresponding common stock average (expected if *ex ante*) returns in that same portfolio that the results will be unimpressive to one searching for high R-square, a result noted by (Roll,

1988) and by (Elton, 1999). Empirical researchers may have mistaken low correlation for lack of predictive power. Their disappointment with low R-square is misplaced. Should they find otherwise, a high R-square when correlating individual common stocks betas and average returns, they would find evidence that diversification produces little or no benefits to investors, a finding that would undermine the rationale for modern portfolio theory in general and the CAPM in particular.

LOGIC OF LOW CORRELATION

It may be true that a low correlation of *ex post* returns of a given issue of common stock with *ex post* returns of some proxy for the market portfolio may be caused by measurement problems. However, in addition to these well-known measurement problems, the nature of the CAPM theory itself prevents successful empirical testing. Such low correlation of betas and returns is consistent with what CAPM tells us about risk. If investors are in fact able to divide total risk into systematic and unsystematic components and if they may diversify away unsystematic risk, then, even in the absence of any of the measurement problems often associated with CAPM research, they should find less than perfect correlation of common stock returns with the returns on the market portfolio. If the CAPM prediction that only systematic risk is priced in capital markets is accurate, then this must entail that beta estimates of many individual common stocks cannot be attended by impressive correlation measures. For to the extent that systematic risk is less than total risk, the correlation of asset returns to returns on the market portfolio is reduced.

The key issue in this argument above is the reconciliation of terms used in simple linear regression with those of CAPM theory. The security market line of the CAPM theory is translated into a regression line explaining the differences between realized and forecasted returns by both (Stapleton and Subrahmanyam, 1983) and (Kwon, 1985). Given that a simple linear regression line is co-located with the CAPM security market line, one may identify total investment risk for any asset, an economic concept, as identical to a statistical measure B the variance of the possible asset rates of return for that asset. Likewise, the systematic risk for any asset, an economic concept, is made identical to a statistical measure which is the conditional variation of the dependent variable (common stock return) given the values of the independent variable (market portfolio return). This conditional variation is described by a scatter of data points about a simple linear regression line that shows the predicted common stock returns as a function of the possible rates of return on the market portfolio. Unsystematic risk is made identical to the variation which is not explained by the regression line.

So, the very familiar coefficient of determination, R-square, may be expressed in terms of its economic content: the ratio of systematic risk for some asset to that asset=s total risk. The equation below expresses the economic content of coefficient of determination in CAPM terms. For any asset contained within a portfolio or for any portfolio one can write both as a matter of CAPM definition on the one hand and simple linear regression definition on the other:

One may understand poor correlation in this way. From a CAPM perspective, to the extent that any individual common stock realized return is poorly correlated with its corresponding individual common stock predicted return, unsystematic risk is large, and *vice versa*. From a simple linear regression perspective, to the extent that any individual common stock realized return is poorly correlated with its corresponding predicted return, the variance of the error term is large, and *vice versa*.

Regression studies of individual common stocks find the correlation of common stock returns with those of a proxy for the market portfolio to be poor. Roll=s Presidential Address to the American Finance Association (Roll, 1988) attributes such poor statistical performance to noise which is present in historical data sets. And this could be true, for, by definition, the presence of noise in data reduces any measured correlation coefficients. But it could also be true that the CAPM is an accurate description of reality B that systematic risk for a given issue of common stock is only a fraction of the total risk of that common stock.

Low correlation of asset returns for individual common stocks with those of the market portfolio is not to be necessarily regarded as evidence against the CAPM. Poor correlation does not prove that the theoretical predictions of the CAPM do not hold in the real-world. Arguably, a finding of low correlation in these circumstances is statistical evidence that systematic risk is substantially less than total risk. Under the CAPM, the correlation of individual common stock returns with returns on the market portfolio must be reduced to the extent that diversification benefits are large.

A THEOREM AND A PROOF

Proposition I. Given both the validity of the CAPM and that returns for each asset within a portfolio can be described as a simple linear regression where the market portfolio is the dependent variable, then the coefficient of determination measures both the empirical fit of each regression equation that describes each asset returns and the relative quantities of systematic and unsystematic risk for each asset contained within a portfolio:

$$R - square = \frac{systematic\ risk}{total\ risk} = 1 - \frac{VAR\ error}{VAR\ total}$$

Proof. For any asset i contained within a portfolio write possible returns as a simple linear regression with possible market portfolio returns as the independent variable.

$$r_{i,s} = \mu_i + \beta_i(r_{m,s} - \mu_m) + \epsilon_{i,s}$$

Where for each asset i contained within a portfolio, $r_{i,s}$ is the possible rate of return on asset I in sate s; μ_i is the expected return of asset i; $\beta_i$is the regression coefficient, also the CAPM beta, of asset i and $\epsilon_{i,s}$ is the difference between the actual return of asset in state s and the corresponding predicted return of asset i in state s. Also, μ_m is the expected return on the market portfolio, and $r_{m,s}$ is the possible return on the market portfolio in state s.

It is permissible by the definition of the variance to take the variance of this regression equation written above. For each asset i contained within a portfolio one must find as a matter of definition that the variance of possible returns for asset i (the total variance) is equal to the sum of the variance of possible returns on asset i that is explained by regression and the variance of possible returns on asset i that is not explained by regression:

$$Var\ total = Var\ explained + Var\ error$$

By definition, the coefficient of determination, R-square, is defined as one minus the ratio of error variance to total variance:

$$R - square = 1 - \frac{VAR\ error}{VAR\ total}$$

Under that CAPM when one considers the linear regression of possible returns on asset i with the possible returns of the market portfolio, the explained variance of possible returns for asset i is identical with the systematic risk of asset i and the error variance of possible returns of asset i is identical with the unsystematic risk of asset i.

$$Var\ explained = Systematic\ Risk$$

To see this know that both systematic risk of CAPM theory and explained variance (in the context of a CAPM regression) can be written as equal to

$$\beta_i^2 Var(r_{m,s})$$

as a matter of definition. And also below as a matter of definition where a simple linear regression describes possible asset returns in the context of a valid CAPM:

$$Var\ error = Unsystematic\ risk$$

because both the unexplained variance and unsystematic risk can be written as equal to the same quantity found below –

$$Var(\epsilon_{i,s}) = Var(r_{i,s}) - \beta_i^2 Var(r_{m,s})$$

So the proposition must follow of necessity. QED. Corollary. For each asset within a portfolio, to the extent that the coefficient of determination is low, the ratio of systematic risk to total risk is low and *vice versa*.

CONCLUSION

In the case of CAPM theory, finding a low R-square is not a death sentence for a theory. Finding a low R-square must follow if systematic risk is substantially less than total risk. A finding that systematic risk is substantially less than total risk is plausibly believed and widely taught because such a result is consistent with the notion that diversification of risk achieves significant risk reduction. One might think otherwise. One might think that empirical evidence in support of the CAPM is found if R-square is large and vice versa that empirical evidence against CAPM is found if R-square is small. But this is not so. One should not be impressed (depressed) one way or another about R-square as a measure of empirical fit in the case of the CAPM.

REFERENCES

Black, Fisher (1972). Capital Market Equilibrium with Restricted Borrowing. *Journal of Business*, 45(3), 444-454.

Elton, Edwin J. (1999). Presidential Address: Expected Return, Realized Return, and Asset Pricing Tests. *Journal of Finance*, 54(4), 1199-1220.

Fama, Eugene F., and Kenneth R. French (2004). The Capital Asset Pricing Model: Theory and Evidence. *Journal of Economic Persectives*, 18(3), 25-46.

Fama, Eugene F., and Kenneth R. French (1996). The CAPM is Wanted, Dead or Alive. *Journal of Finance*, 51(5), 1947-1958.

Kwon, Young K. (1985). Derivation of the Capital Asset Pricing Model Without Normality or Quadratic Preferences: A Note. *Journal of Finance*, 40(5), 1500-1509.

Levy, Moshe, and Richard Roll (2010). The Market Portfolio May Be Mean/Variance Efficient After All. *Review of Financial Studies*, 23(6), 2464-2491.

Levy, Haim, and Marshall Sarnat (1984). *Portfolio Investment and Selection: Theory and Practice*. Englewood Cliffs, New Jersey: Prentice-Hall.

Lintner, John (1965). The Valuation of Risk Assets and the Selection of Risky Investments in Stock Portfolios and Capital Budgets. *Review of Economics and Statistics*, 47(1), 13-37.

Mossin, Jan (1966). Equilibrium in a Capital Asset Market. *Econometrica*, 34(4), 768-783.

Roll, Richard (1988). Presidential Address: R-square. *Journal of Finance*, 43(3), 541-566.

Sharpe, William F. (1964). Capital Asset Prices: A Theory of Market Equilibrium Under Conditions of Risk. *Journal of Finance*, 19(3), 425-442.

Stapleton, R.C. and M. G. Subrahmanyam (1983). The Market Model and Capital Asset Pricing Theory: A Note. *Journal of Finance*, 38(5), 1637-1642.

A GIS-Based Analysis of the Spatial Diversification of the Investment Strategies of Rival Shopping Center Developers: Simons Realty Group and General Growth Properties

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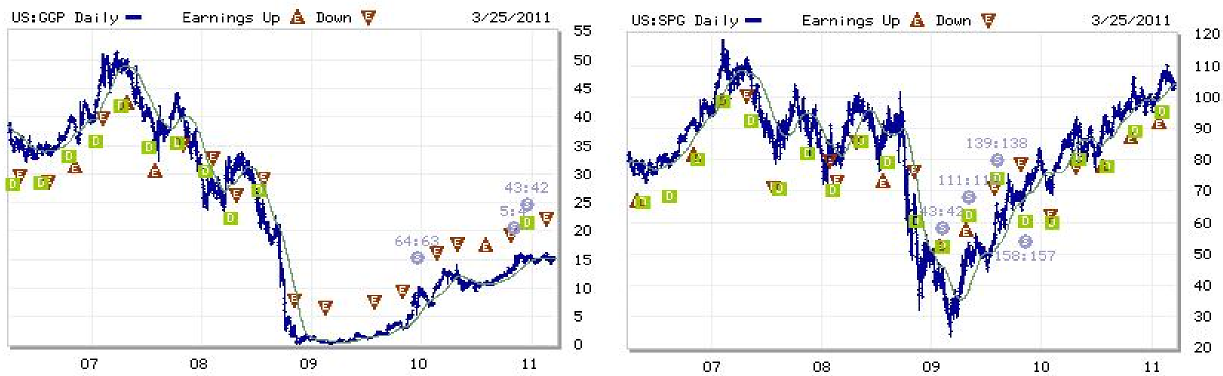
Abstract

The spatial diversification of the shopping malls of two leading mall developers will be analyzed. Then considered in relation to other economic factors in the local markets involved. Also the analysis will be adjusted to take into account the magnitude of the investment in each property. The Mall developers are Simon Property Group with 354 Properties in the USA and General Growth Properties with 219 properties. The analysis will be based on comparison of the spatial distribution of the properties of both developers. The significance of this analysis is that General Growth Properties just emerges from bankruptcy protection after struggling in the past two years while Simon remains healthy enough to be considered as a leading contender to acquire GGP (or at least its more profitable properties) (Retail Traffic, 2010). The comparison of the stock prices of these two firms shown in figure 1 reflect the relative performance of the firms. The analysis indicated that Simon not only was a larger firm with more units and longer established units but that its properties were less spatially clustered than those of GGP which had a high concentration of properties in what had previously been rapidly growing states such as Nevada but which were hard hit in the recession of 2008-2010. Thus by measuring spatial diversification it may be possible to determine one factor that impacts the risk associated with investment decision in spatially fixed assets such as a shopping mall and by extension other less intensive types of real-estate investments.

INTRODUCTION

Spatial diversification is a term that refers to the concept that features of interest such as retail units are well distributed spatially rather than clustered or clumped together. Spatial diversification can be measured quantitatively using the spatial analysis tools of a Geographic Information System (GIS) by measuring the average distance apart of nearest neighbors as well as the total aggregate distance separating all possible pairs of features, also the spatial auto-correlation as measured by Moran’s I can be computed (Environmental Systems Research Institute (ESRI), 2008). This analysis requires that the location of a feature such as a retail unit be geocoded. The process of geocoding large numbers of features is rather onerous. In the present case, the retail units under consideration are very spatially extensive (in terms of the acreage of their footprints) and of a limited number so as to facilitate the analysis. They are the shopping malls of the two leading U.S. shopping mall development companies Simon Property Group (Simon henceforth in this paper) and General Growth Properties (GGP hence force in this paper).



GGP Simon

Figure 1. GGP and Simon’s stock charts for the past five years. (www.marketwatch.com)

METHODS

The reason for selecting shopping malls is that the data is easily publically available and it is a very easy process to obtain the X-Y coordinates for each shopping mall and check the accuracy of that coordinate. Simon has a Google map mashup (Figure 1) that maps the location of each mall in Google maps using the Google maps function of identify feature (*What’s here*) it is possible to extract a latitude and longitude for each mall. GGP has a list of all 219 of their shopping malls. By entering the name of each shopping malls into Google maps and doing a search it is possible to find the location of each mall (the Navteq and Teleatlas data sets of “points of interest used in Google Maps contain all of the 219 GGP shopping malls. That fact that 100% of the shopping malls show up as points of interest in Google maps demonstrates the advantage of geocoding a major feature such as a shopping mall. A data set of tire stores for example would often not geocode better than 60% and the loss of numerous units that did not geocode from the analysis limits its value. This data is copied to a spreadsheet which also contains a field that contains the name of each mall. Then in the ArcGIS GIS software from ESRI the X and Y values are used as an “Event Theme” to create a layer of data consisting of points representing the spatial location of each shopping mall (Figure 2). To confirm the accuracy of this geocoding two methods are employed. First satellite imagery is added under the Google maps layer. A shopping mall is a distinctive feature on the 1 meter resolution imagery typically available (Figure 3). If the point representing the geocoded location of each mall falls inside (especially in the approximate center) of the building footprint of the main building in the mall then the geocoding is more than adequate precision. Once a point layer has been created in ArcGIS then other layers such as streets, place boundaries, census data, and aerial imagery from ArcGIS on-line can be added and the location of each point in a projected ArcGIS map document can also be checked. In addition to the physical location of a geocoded point representation each shopping mall other attribute data is desirable. These additional variables include the date the mall was established, the acreage of the mall and the square footage of the retail units within the mall and the book value of the shopping mall. These latter numbers are derived from the SEC filings of each mall developer.

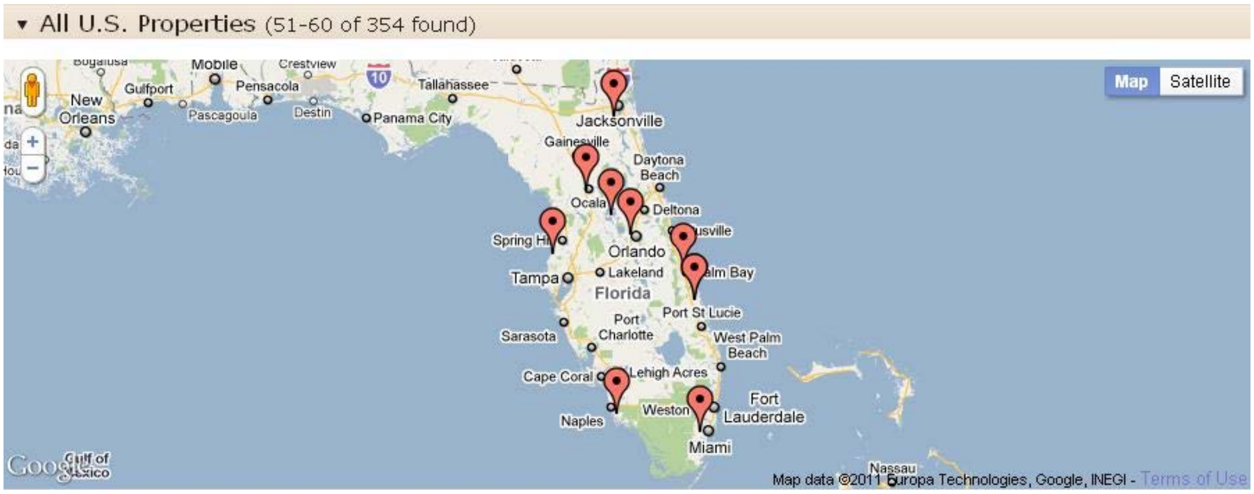


Figure 2. Simon's Google mashup showing store locations (www.simon.com)

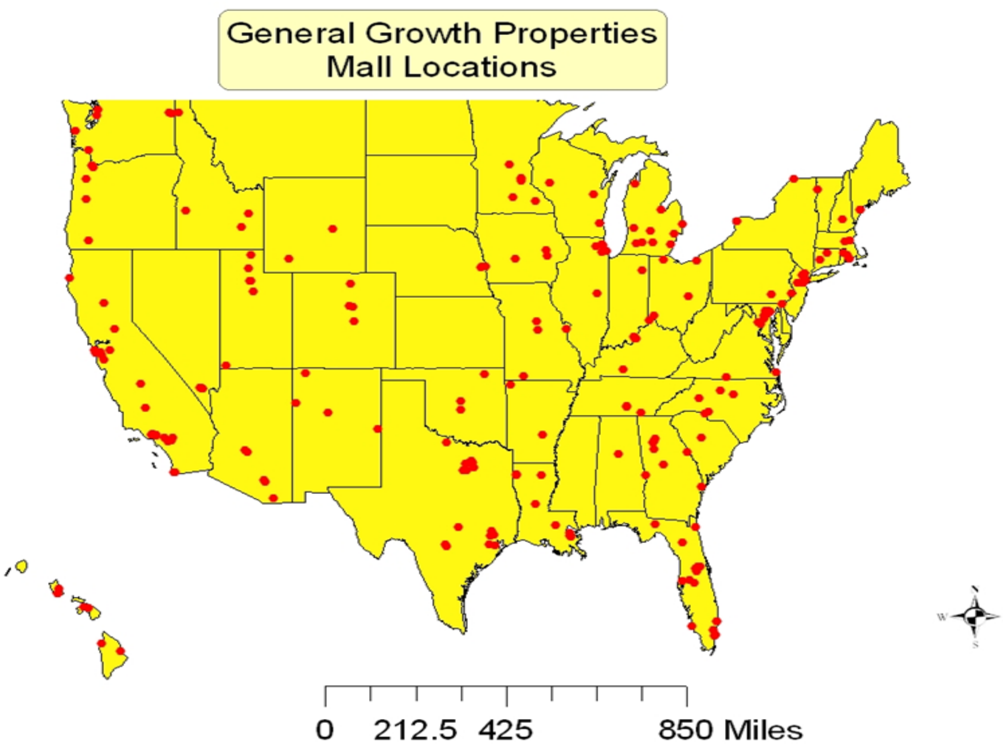


Figure 3. GGP mall locations.

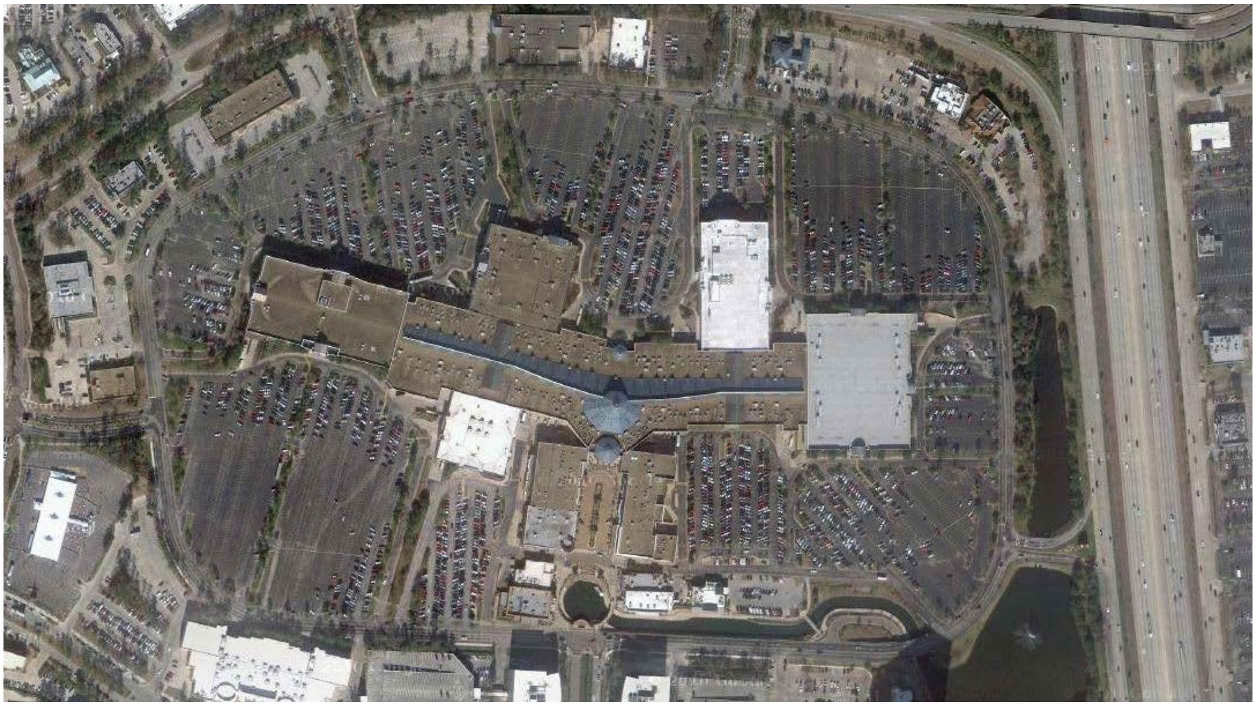


Figure 4: Google image showing the Woodlands Mall in the Woodlands, Texas

RESULTS

The geocoding of the GGP shopping mall locations indicates that GGP investments were concentrated (clustered) quite heavily in only a few states, in particular California, Nevada, Arizona, Florida, Maryland, Texas, Michigan and Ohio as well as Hawaii (Figure 4). Of these states 7 were among the 10 states hardest hit by the recession. In particular GGP controlled all the major shopping malls in both Hawaii and Nevada (Las Vegas) two of the hardest hit states while GGP's investments in Texas will numerous were not in proportion to the population of the state while GGP's investments in Las Vegas and Hawaii were far out of proportion to the population of those states (Figure 5). At a more regional level of analysis GGP bought and/or developed high dollar properties in the Orlando Florida, Anaheim California and Branson Missouri Resort areas in addition to the high dollar resort vacation areas of Hawaii, and Las Vegas. In contrast Simon controlled malls in numerous smaller and less rapidly growing markets such as Sioux City and Kokomo Indiana and Wichita Kansas. GGP did not have a single mall in Kansas a state that weathered the recession very well while Simon had three malls and GGP had only two low value malls in Iowa another state in generally good shape in the current recession and one in which Simon had 5 malls. One area that GGP did invest in disproportionately to population was Maryland. GGP owns 10 malls in that state and it has fared far better than average during the current downturn due to growth of the federal government. However Simon also owns 10 properties in Maryland which is less disproportionate than GGP but is still disproportionate to the population of the state and would also seem to have been a wise investment strategy.

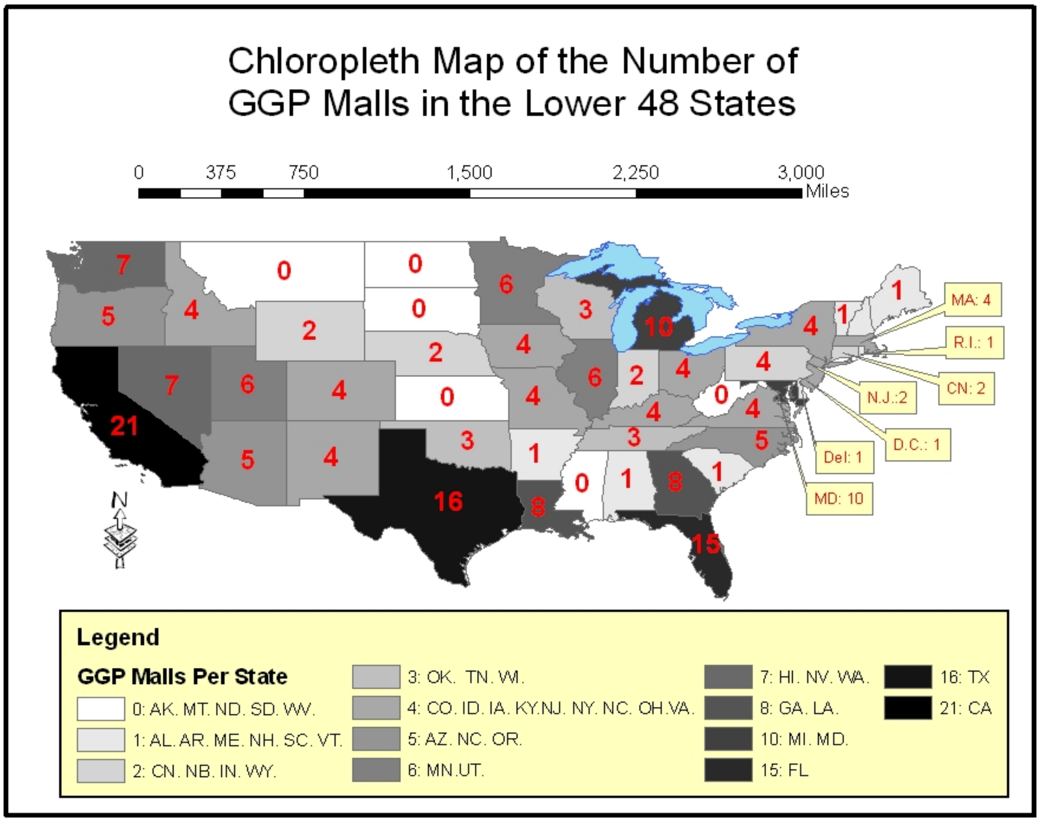


Figure 5. Distribution of GGP properties.

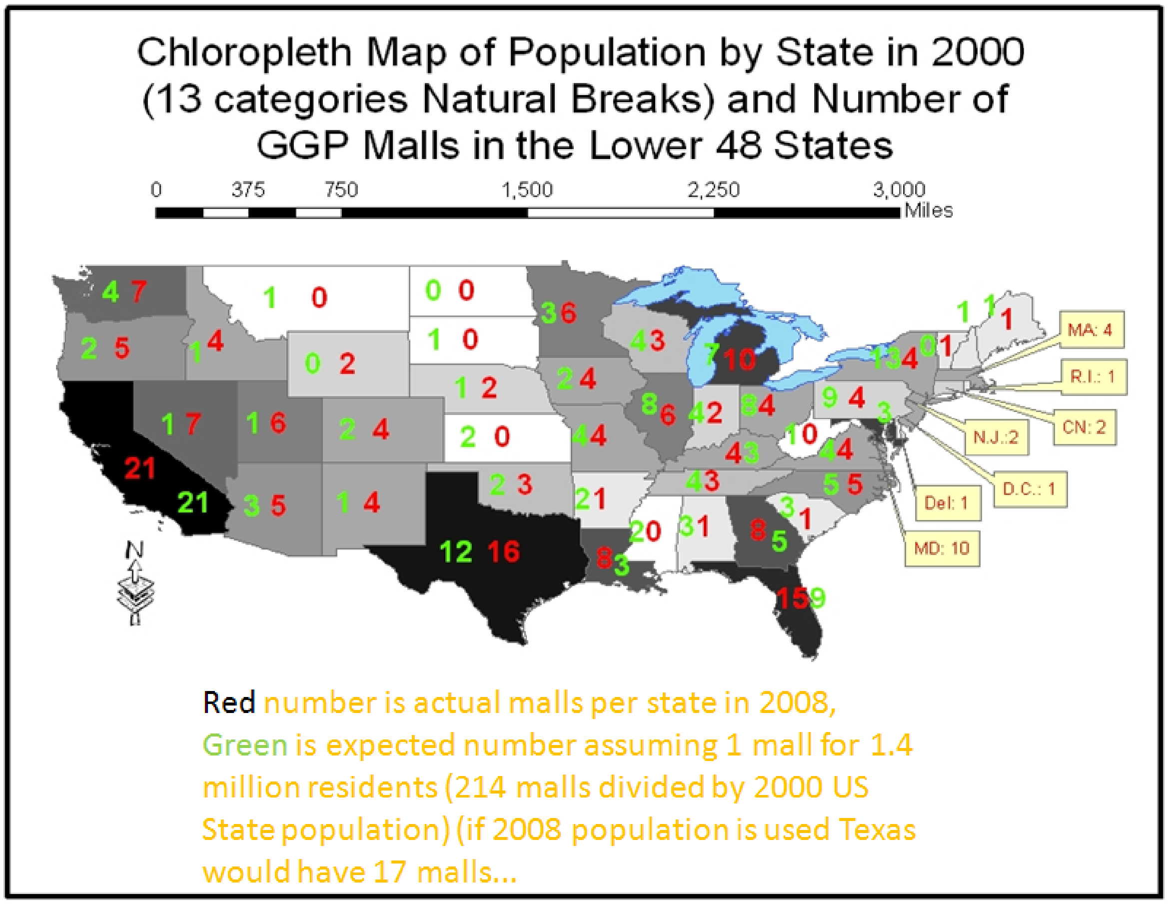


Figure 6. Actual vs. expected GGP malls by state.

ADJUSTMENTS

The most important adjustment to the analysis is to take into account the magnitude of the investment. To illustrate this point one need only compare the Fashion Show mall on Las Vegas Boulevard with the White Mountain Mall in Rock Springs, Wyoming. Both of these properties are owned by GGP. In one case GGP imputes (a possibly spurious) book value in its SEC 1)K filings of 1.3 Billion dollars to the Fashion Show mall and a book value of 5 million to the White Mountain mall. Thus the Fashion show is worth 260 times the White Mountain mall. If in analyzing investment strategies and in particular the degree to which the investments were spatially concentrated or conversely diversified giving equal weight to the Wyoming and Nevada malls would tend to show a greater degree of diversification than in fact exists. One way of visually taking this factor into account is to change the dot distribution map into one that is proportional (or graduated). It is also possible to effectively weight the spatial analysis by multiplying the number of malls present at each location by some factor reflecting their value *such as units of 1 million in investment. Since the lowest value mall (one in Idaho Falls Idaho has a value of $1.3 million it would get 1 mall unit and the fashion show would be 1,300 mall units. Another important adjustment is created by the problem of malls in Hawaii and Alaska. Simons has a mall in Alaska and one in Hawaii and GGP has 5 malls (all the major ones) in Hawaii. Since it is not possible to have any malls in the ocean and in the US in the area between the conterminous USA and Alaska it is a distortion to measure the nearest neighbor distance from the one Simon mall in Hawaii and Alaska back to a mall in California and Washington State. Thus a clear picture of spatial diversification might be obtained by leaving out the malls in Hawaii and Alaska. In point of fact by investing several billion dollars (based on book values) into the limited market of Hawaii GGP did not diversify its investment strategy spatially or otherwise.

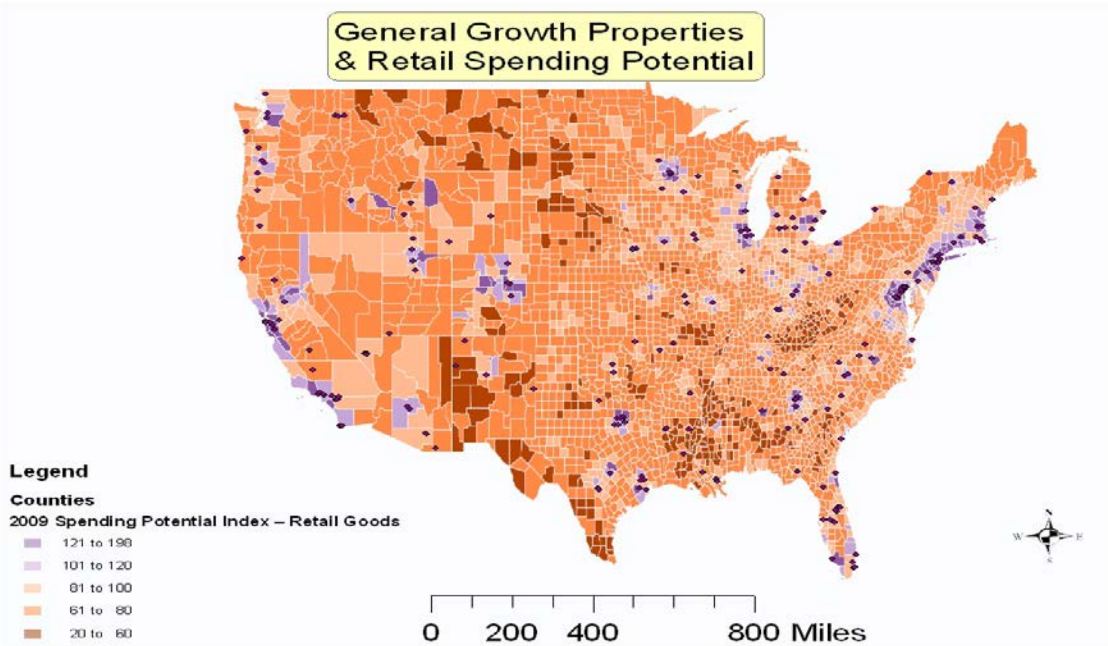


Figure 7. Comparison of GGP mall locations with county level unemployment rate in 2009 during the period of GGP bankruptcy.

CAVEATS

While the geocoding precision is far higher than needed for the analysis in this paper other issues exist. These include the issue of timing of investments. In point of fact both GGP and Simon have added and discarded malls from their investment portfolio. Picking a similar point of time such as the date of GGP's bankruptcy filing in April 2008 might make a better basis for comparison but the changes in number and location of malls between 2008 and 2011 has been minor, seemingly shopping malls and not particularly fungible commodities and few new malls have been added since 2008. Another issue clouding the analysis of the impact of mall location and spatial diversification on the overall wisdom of the investment strategies perused by GGP and Simon is that both Simon and GGP have investments internationally and also in other areas than shopping malls. Nevertheless although these two firms are not "pure Players" in US shopping malls the vast majority of the two firms investments are in domestic shopping malls and it is losses on the part of GGP in these malls and continued viability in Simons investments in this hard hit investment area that help differentiate these two firms situation returning profitability from bankruptcy and likely liquidation.

CONCLUSION

It seems clear that GGP followed a highly concentrated investment strategy with respect to its domestic US shopping malls putting most of its largest and most costly eggs into only a few baskets including Nevada, Hawaii, and Florida resort areas that had high growth through most of the 1990's and mid 2000's but also high investment costs and were devastated by the economic downturn starting in 2007-2011. In contrast Simon followed a more conservative and also incidentally more spatially diversified investment strategy with a larger number of on average smaller properties which included a significant number of properties in New England, Mid Atlantic and Upper Midwest moderate sized cities which experienced neither the boom of the early to mid 1990s and 2000's. The result of these contrasting strategies is the continued viability of one form and the loss to stockholders of billions due to the drop in price of GGP shares from $48 to 49 cents before trading was suspended. Whether GGP can emerge as a leaner and viable form or if it ultimately with liquidated remains to be seen. The particularly ironic outcome would be for Simon to acquire the remnants of GGP; this is a quite likely outcome of the differing investment strategies of these two firms which can be measured by their differing spatial diversification. This in turn argues for the potential importance of measure g the spatial diversification of investment portfolios of similarly situated firms such as these two largest shopping center developers.

REFERENCES

ESRI, 2008. Spatial Auto Correlation/ Moran's I http://edndoc.esri.com/arcobjects/9.2/net/shared/geoprocessing/spatial_statistics_tools/spatial_autocorrelation_morans_i_spatial_statistics_.htm

Retail Traffic. 2010. http://retailtrafficmag.com/finance/reits/ggp_bankruptcy_watershed_11162010/. Last accessed on March 25, 2011.

STRATEGIES TO PROMOTE SUSTAINABLE DEVELOPMENT OF INDUSTRIAL PARKS IN VIETNAM'S NORTHERN KEY ECONOMIC ZONE

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ABSTRACT

Industrial Parks (IPs) in the Northern Key Economic Zone of Vietnam (NKEZ) have been making significant contributions to the development of the zone since the first 2 industrial parks – Noi Bai in Hanoi and Nomura in Hai Phong - were established 15 years ago. So far, there have been 51 IPs in the zone, covering a total area of 13,000 ha. Such IPs play a crucial role in mobilizing capital from domestic and international investors for investments in infrastructure enhancement, trade and production aimed at promoting the economic structure transition. However, besides the above benefits, there are a number of unstable factors preventing further development of the IPs. Thus, the objectives of this study are two-fold. The first is to analyze the unstable factors and the second is to map out strategies to enhance sustainable development of industrial parks in Vietnam's northern key economic zone.

UNSTABLE FACTORS AGAINST THE DEVELOPMENT OF INDUSTRIAL PARKS IN THE NORTHERN KEY ECONOMIC ZONE

IPs' Location

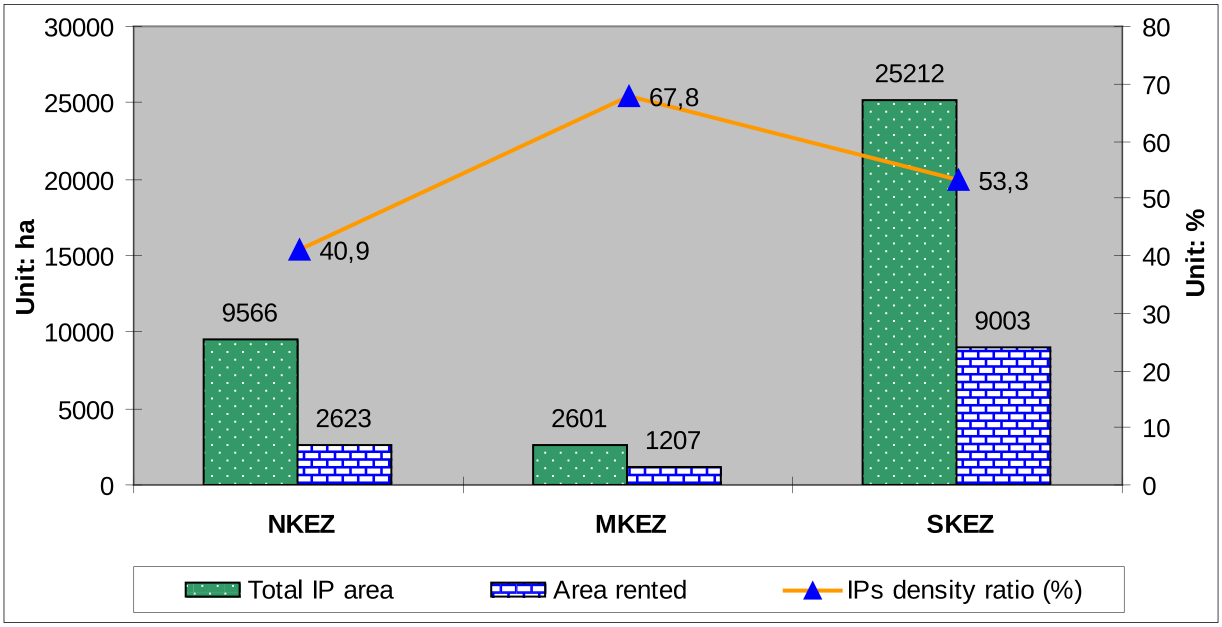
Most IPs in NKEZ are in the best locations for transportation. For example, they are located along National Highway No.5 (Hanoi – Hai Phong), Thang Long – Noi Bai Expressway, National Highway No.2 and National Highway No.18 (Bac Ninh – Mong Cai). This can be considered a good condition for IPs' enterprises to transport goods and materials, especially for those specializing in import – export business activities (Key Economic Zone Coordinator Board of Vietnam, 2009). Nevertheless, according to preliminary statistics, the area of farming land which has been transformed into industrial land in IPs in NKEZ makes up 30% of the total area of unused land (Nguyen, 2006). This ratio is a lot higher than that of the South – Eastern region and Mekong Delta, which is only 7% - 8%. In the long run, this is likely to affect food security of the region as well as the country as a whole. In fact, that IPs are too crowded and close to major traffic points has blocked the traffic to and from many places and National Highway No.5 is a particular case in point. There have been 80% of all IPs residing no farther than 30 meters from the roadside of National Highway No.5. Although efforts have been made to avoid constructing the traffic work through urban areas, local government agencies keep leveling and granting land to IPs rising along the roadside.

Accordingly, houses are built as soon as the road work is finished. National Highway No.5 is probably becoming “Five Street” sooner than expected (Nguyen, 2006).

IPs Density Ratio

Whether enterprises involved in infrastructure development operate efficiently or not depends largely on the IPs density ratio.

Figure 1. Scale and Density Ratio of Operating IPs in Key Economic Zones
(At the end of the year 2008)



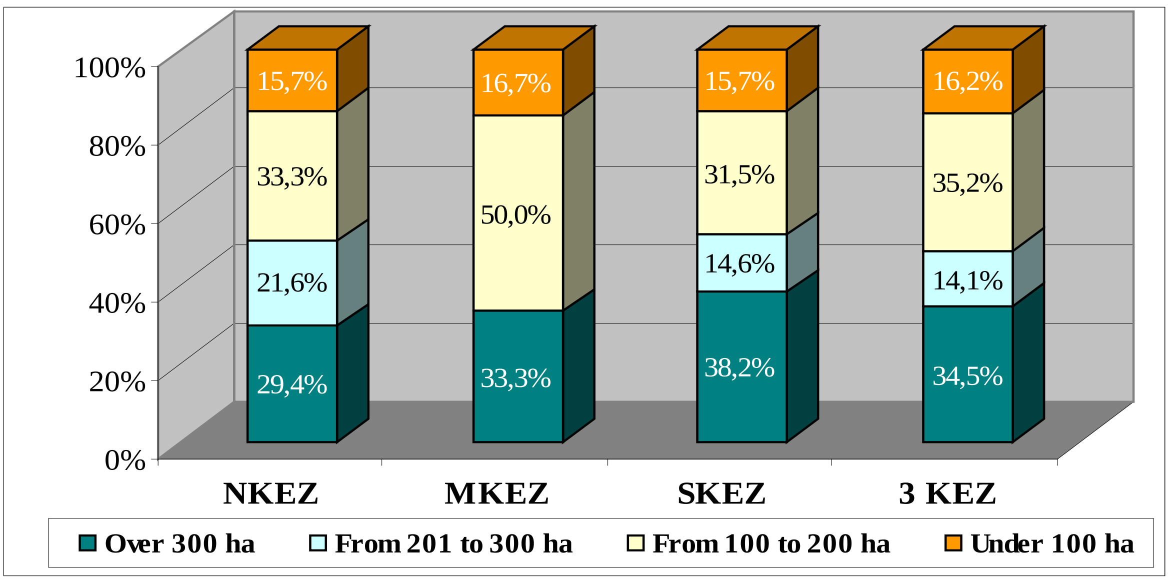
Source: Ministry of Planning and Investment of Vietnam, 2009.

As seen from the above figure, the IPs density ratio of NKEZ had been rather low in comparison with that of the other two Key Economic Zones. Specifically, the IPs density ratio of NKEZ stayed at 40.5% whereas that of the Southern Key Economic Zone (SKEZ) and Middle Key Economic Zone (MKEZ) were as high as 53.3% and 67.8% respectively. At present, the IPs density ratio of NKEZ remains modest since a pretty large number of IPs in the region are under the stage of infrastructure development. The number of IPs set up in 3 years between 2006 and 2008 has reached 30 out of 51. According to Provision 5, Chapter 2 – Resolution 29/2008/ND-CP released on 14th March 2008 by the Vietnamese Government, conditions for establishing a new Industrial Park are as follows: *"At lease sixty per cent (60%) of the total aggregate area of industrial land of industrial zones which have already been established in the locality of the province or city under central authority has been leased or sub-leased to projects for which investment registration has been made or which have been issued with an investment certificate"*. Although the IPs density ratios of 3 provinces: Hai Duong, Hai Phong and Hung Yen stay at 31.6%, 37.4% and 33% respectively which are much lower than 60%, new IPs continue to be set up and expand all over their territories. Moreover, the majority of their IPs reside on agricultural land, which causes a massive waste of land as a national resource.

IPs' Development Scale

The determination of IPs' development scale in NKEZ depends mainly on the possibility of local land allocation. Therefore, the number of IPs with no more than 200 ha area accounts for nearly 50% (25/51). It is noted that there have been up to 8 IPs covering an area of less than 100 ha, 4 in Hanoi, 3 in Hai Duong and 1 in Quang Ninh. The number of those occupying an area of more than 300 ha area is 15 out of 51 making up 29.4%, largely accumulating in Bac Ninh with 6 quarters. It is pretty clear that the area scale of IPs in NKEZ is generally smaller than that of the other two. Specifically, the ratio of IPs with over 300 ha area in SKEZ is 34 out of 89 quarter equivalent to 38.2% and it is 4 out of 12 equivalent to 33% in MKEZ (Nguyen, 2006).

Figure 2. IPs in Key Economic Zones Sorted by Scale



Source: Ministry of Planning and Investment of Vietnam, 2009.

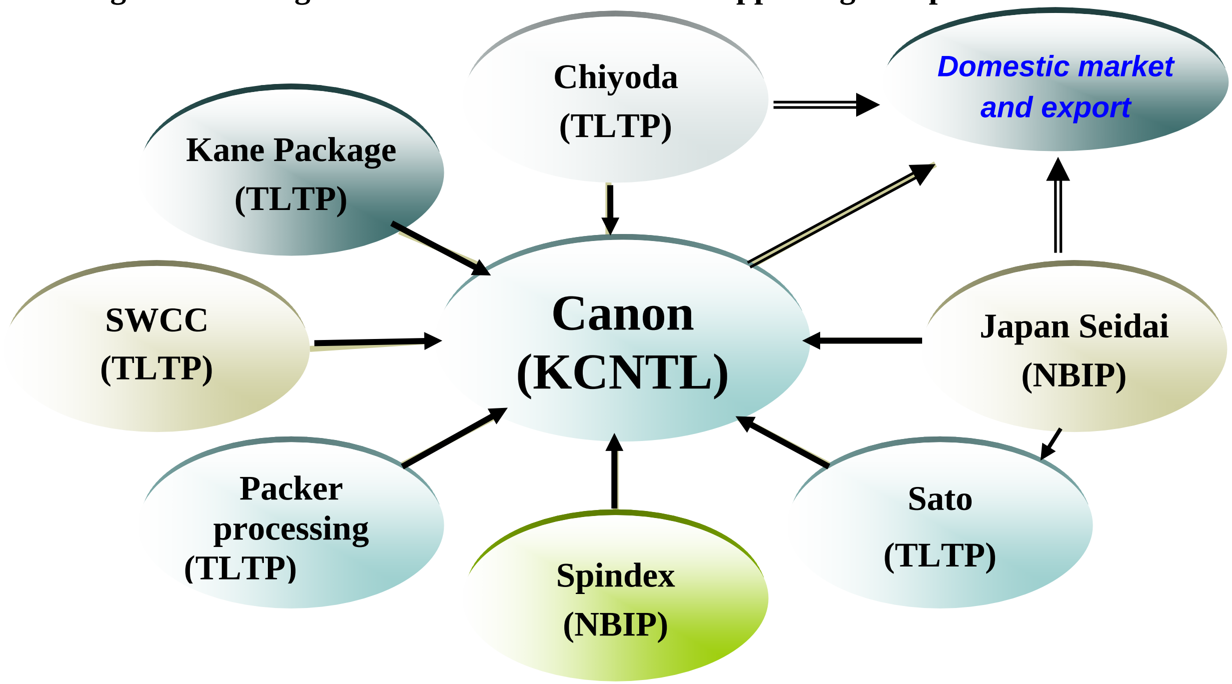
Furthermore, by looking closely at a 200 – 300 ha IP in a Key Economic Zone in comparison with a 300 – 400 ha IP in a province, it is seen that the former's scale is even more lamentable. This affects the efficiency of operation and management, infrastructure development, especially the sewage treatment system and enterprises' capability of coordinating.

IPs' Internal and External Coordination

In Vietnam, economic collaboration is conducted in several IPs with some foreign companies investing in infrastructure development. The bond gets stronger when there is a participation of big companies with foreign investments. Some typical examples in this case are Taiwanese enterprises in Ho Nai – Dong Nai, Canon and Japanese me-too enterprises in Thang Long IP (see the map below), Yamaha Motor Cooperation and a number of enterprises surrounding in Noi Bai IP – Hanoi (Government of Socialist Republic of Vietnam, 2008).

Particularly, the latest appearance of Foxconn, an Electronic Cooperation from Taiwan, in Bac Ninh and Bac Giang is highly attractive to Taiwanese me-too enterprises which are meant to support Foxconn. These allies surely help enterprises in the IP to increase productivity thanks to savings in transportation; in turn this cooperation for the sake of involved enterprises is placed in a very close relation with the rest. Evidently, when equipments by me-too suppliers are state – of – the – art, the finished products' quality will be ensured and vice versa (MPI & Bac Ninh People's Committee, 2009).

Figure 3. Linkage between Canon and Other Supporting Companies in the IP



[(*)] *Note:* - *TLIP: Thang Long industrial park*
- *NBIP: Noi Bai industrial park*
Source: Adapted from Nguyen (2008)

Nevertheless, there have been a small number of similar models in 29 out of 51 IPs in NKEZ. This partially results from the main goal of IPs' Managing Board which is to attract as many investors as possible and as sooner as possible in order to enhance cash flow efficiency. As a result, enterprises operating in many different areas of production in each IP face with difficulties specializing in production and establishing the so-called economic allies. Sai Dong B Industrial Park is a typical model with plenty of dissimilar fields of production. Exceptions are just Orion – Metal, Orion – Hanel, Daewoo – Hanel, Sil – Hanel. Most of products manufactured in the park are of no relation with one another, for instance: textiles, animal foods, jewelries, and confectionery.

Businesses' Technology Level

It would be a mistake if not to mention massive contributions to technological transformation from foreign enterprises. Up to date, there have been more than 40 countries and territories investing in IPs in Vietnam, among which 80% projects and 85% capital are from either Chinese or South-Eastern investors. The core areas of operation are traditionally light industries utilizing tense manual labor such as garment, footwear, electric and electronic assembling. Investors from countries with advanced technologies like the US or EU are so scare that those projects with a positive amount of advanced technologies are rather limited. Consequently, this phenomenon leads to a slowdown in industrialization, thus puts the course of modernization a long way ahead. FDI projects in IPs are fundamentally limited in capital; on average, the amount of capital injected into a project in 2000, 2003, 2005 and 2008 are $2.87 million, $3.62 million, $5.97 million and $15 million respectively. Further details are as follows:

Table 1. The Average Capital Scale of a Registered Project in an IP for 2008

Zone	Number of Registered Projects		Registered Capital		Average Capital Scale Per Project	
	FDI	*DDI*	*FDI, (million USD)*	*DDI, (billion VND)*	*FDI, (million USD)*	*DDI, (billion VND)*
Northern Key Economic zone	675	619	10.119	47.326	15,0	76,5
Middle Key Economic zone	71	417	538	11.471	7,6	27,5
Southern Key Economic zone	2.385	1.469	24.010	102.683	10,1	69,9
Country	3.350	3.405	36.195	224.789	10,8	66,0

Source: Ministry of Planning and Investment of Vietnam, 2009

However, it can be seen from the above table that the average capital scale of a FDI project in NKEZ is ranked the biggest all over the country, which is 1.5 times, 2 times and 1.5 times as big as those in SKEZ, MKEZ and the country respectively. In detail, the average capital scale of a FDI project in Hanoi is $15.8 million and $22.8 million in Vinh Phuc. This fact somehow shows the technology level of projects in NKEZ to be higher than those in the others. Although some of Japanese enterprises like Honda, Yamaha, and others from Taiwan and Korea have invested in new and modern technologies. These technologies are actually classified as either basic or advanced, not state of the art. This is because for many enterprises, these technologies are merely adopted to perform several simple procedures like assembling, electro static power coating, etc. Canon, To Ho, and Brother are the only examples of leaders in applying state of the art technologies. Although Vietnam has long determined to build 2 High – Tech Parks in Hanoi and Sai Gon with many distinct advantages, there have been unsatisfactory outcomes due to a number of subjective and objective factors. Up to present, Hoa Lac High Tech Park with no less than 549.5 ha area has just finished building basic infrastructure and issued 48.3 ha to 10 companies. The majority of these companies have not been put in operation owing to half-done infrastructure and some of them are not making use of state of the art technologies.

With regards to domestic enterprises, there have been 619 projects with total registered capital of up to 47.326 million VND in which 412 have been brought in operation with total active capital of 13.819 million VND equivalent to 29.2% of total domestic registered capital. In terms of capital, it can be seen that domestic projects' capital scale is not smaller than any

FDI projects; however, products are only of low or average quality due to lack of knowledge of management skills and production technologies. Some enterprises import new technologies from the US or EU, but they are limited in number, patched – up and Chinese – like.

STRATEGIES TO PROMOTE SUSTAINABLE DEVELOPMENT OF IPs IN NKEZ

Improve Quality of Structure Planning

First and foremost, the development of structure planning must be ahead of time. In order to put this into practice, the plan needs to outline the future in a long enough term to ensure strategic intentions. The distribution of IPs should be oriented in a manner that motivates projects to be located surrounding National Highway No.21 and No.18 to stop the overload of IPs in the Red River Delta. Besides, strict rules of supervision and assessment should be enforced to ensure the implementation of some important ideas on structuring: keep control of the ratio of used industrial land, administer rigorous punishments to actions against the government's structuring regulations, especially the law on IPs' density ratio according to the Government's resolution 29/2008/ND-CP on establishing a new IP or expanding the current IP. Based on that, plan of structuring adjustments should be made in accordance with the development requirements in each specific time.

Second, planning the location of an IP must ensure sustainable development. Locating many IPs near big cities and crowded residential areas has posed many problems; for example, environmental pollution, traffic jams, etc. Therefore, it is essential that the location of an IP be clearly indentified and restrictions on areas of operation be properly made. To be more specific, locating an IP must not affect the development corridor of prospect cities. In addition, IPs should be placed near major traffic points and not exert any negative impacts on the permanent existence of natural resources such as water, forest, and landscape.

Third, there should be laws on the minimal scale of different types of IP. The operation of either too big or too small IPs probably harnesses their own sustainability. Regarding too big IPs, the density ratio is very low, which leads to a huge waste of land. Whereas in too small IPs the development of infrastructure, waste treatment system and me-too services will be likely to be hindered with difficulties, thus the operational efficiency might be low. Based on investigating many countries' experience in developing IPs in combination with practical analyses of NKEZ's IPs, the authors recommends that the area scale of an IP be at least 200 ha and no more than 500 ha in provinces blessed with limited advantages in attracting investments.

Promote Coordination and Cooperation between IPs in NKEZ

It is necessary that ministries, departments and local agencies work closely together in carrying out the Regulation on Coordination introduced by the Government in Resolution 159/2007/QD-TTG. Close monitorization and timely guidance should be made to solve arising problems during the time of implementing this resolution. Several core areas that need increased coordination and cooperation among IPs to ensure their sustainable development are as follows: (i) Exchange information among local provinces, (ii) Build and attach cooperation programs to the annual socio – economic development plan of each province and department, (iii) Constitute and expand economic organizations, encourage regional economic cooperation activities in order to enhance scale and competitive competence, actively indulge in regional and international economic integration, set up regional investment promotion centers and improve coordination in this field.

Enhance Cooperation among Enterprises and Develop Supporting Industries

It is vital that there be appropriate policies to reduce costs and gain competitiveness for FDI and DDI enterprises in establishing economic allies so as to improve productive efficiency and spread out the knowledge of state of the art technologies, techniques and skills from FDI enterprises to local companies. The authors suggest following policies: allow a tax deduction for FDI enterprises' accompanying expenses on setting up economic cooperation with local entities, provide timely encouragement like Certificate of Merit to Multi-national Companies (MNCs) on their efforts and achievements in developing supporting industries, avoid adopting inappropriate measures used before such as levy high import tax, provide a clear statement claim of origin, request a certain amount of internalization, ask for cooperation in the form of joint-venture or certain export ratio. These merely imperative petitions are no longer suitable at the age of regional and global integration.

Better Investment Environments in IPs

To start with, it is highly recommended that the legal environment be perfected as well as simplify administration procedures by quickly making and passing law on IPs, completing "One-door Mechanism" and making it an important tool to build up a friendly administrative environment, creating favorable conditions for investors to come up with strategic and long-term plans through stabilizing the policies and mechanisms. In order for investors to cut down spending budget, direct and indirect policies can be carried out; for example, reduce the cost of using public services, infrastructure maintenance by charging the real operation cost according to density ratio, revenues, and export turnover.

Investment promotion activities should be focused by central governmental bodies, NKEZ coordinators and especially the communication panels of industrial parks within NKEZ. The above agencies can show their efforts in participation and support the activities through establishing information centers such as websites, investment promotion campaigns, investment motivation delegations and constant linkages with international investment organizations. It is emphasized that these activities should be controlled by a specified agency which is capable of accessing to the state budget. In addition, images of industrial parks within NKEZ as well as over the country can come to the world by increasing their international participation in associations of industrial parks within regions and/or in the world

In the current globally economic recession, countries in the area are conducting severe solutions to attracting investments such as delaying the raise of minimum level of wage and salary, applying favorable tax rate to specified sectors and industries which are benefited from some law on time limitation. In the case of Thailand, there are also three most favorable tax sectors which are tax rate beneficial in a time course similar to Vietnam. However, at the end of 2008, the Thai government has decided to apply the favorable tax rate during a similar time course for all the sectors, exception for the Bangkok 1st zone until 2014. Hence, in the authors' opinion, in addition to the current investment demand stimulation package by supporting interest, lowering corporate income tax rate and extending VAT execution time, there are also many other applicable solutions such as applying favorable conditions for companies investing in industrial parks within NKEZ, exactly similar to what were applied to investments in regions with special difficulties in the nation.

REFERENCES

Key Economic Zone Coordinator Board of Vietnam. (2009*). Data of Socio-economics of Key Economic zones and whole country.*

MPI and Bac Ninh People's Committee. (2009). The Conference on *"Attracting investment program on IPs and Econonmics zones in Northern provinces 2009"*.

Government of Socialist Republic of Vietnam. (2008). *Decree 29/2008/ND-CP date March 14, 2008 on IP, EPZ and Economic Zone.* Hanoi.

Nguyen. V.T. (2006). Developing *IPs* and EPZs towarding enhancing linkage between enterprises and supporting industries. Website of Vietnam Industrial Zones.

U.S. BUSINESSES AND THE WAR ON DRUGS IN MEXICO

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ABSTRACT

The southern border of the U.S. is linked to one of the country's greatest business interests. Mexico has played a large role in the U.S. economy, just as the U.S. has contributed significantly to the development of Mexico as well. U.S. companies have great interest for expansion into this emerging country; however differences in political, social and economic standings have posed new threats for businesses to thoroughly analyze.

Mexico has been involved in a fight against powerful drug organizations or, cartels. Since 2006, current president Calderon waged a full on battle against these cartels which has been the focus of Mexican authorities. The drug cartels have taken power over regions along all coasts of Mexico. Some such as, the Zetas, have highly threatened the entire coast, even causing violence to spill over to the United States as well. Since the declaration of these focused efforts; death toll numbers have well surpassed the 28,000 mark. These drug cartels have attained much power, through the illegal acquisition of weapons from the United States. The great fear they have instilled amongst the Mexican community, has only strengthened their forces.

This report will outline a brief history of the war on drugs, the power the cartels have over territories of Mexico (including its influence in the United States), some of the major areas taken over by cartels, and their use of violence as a tool of domination. It will also focus on the effect the Mexican Drug war has had on U.S. businesses operating in Mexico. The drug war has influenced many U.S. corporate boards to ask their management to take a harder look at their companies' exposure to risks in Mexico- mainly focusing on risks, operating and manufacturing costs, as well as investments.

INTRODUCTION

Just across the southern borders of the United States of America, lies one of the nation's most accessible business interests. Mexico has become an important part of the U.S. economy. Many U.S. based businesses have expanded to this neighboring country, assisting with the expansion of their economy, and also gaining a global client base. Expansion to a nation of different cultural, political, and economic standing can pose major risks. Within the past four years, Mexico has been involved in what is known as the Mexican Drug Wars. This Drug War has brought to local communities and businesses, as well as U.S. businesses. There is no doubt that Mexico has a great appeal for U.S. businesses to expand in to, but with the recent violent events, businesses are carefully evaluating risks.

THE MEXICAN DRUG WAR

The Drug War in Mexico consist of a battle between several drug cartels and the Mexican government. In December of 2006, Mexican President Felipe Calderón began to focus military efforts on clearing out violence between drug cartels.[1] This crackdown on the drug issue has become a major focus of President Calderón during his administration. He has emphasized, extradition will be an important approach to fighting these drug organizations. Calderon has also sought assistance from the U.S. in this issue. The drug cartels, however, have only responded with more violence geared towards the Mexican government and public authorities. Incidents such as one of a Chief Financial Officer getting carjacked on a trip to Reynosa, as well as another who has had several of their bodyguards 'picked up' over a several months, are examples of the danger mentioned in Vargi's article on the U.S. businesses feeling the effects of the drug war.[2]

POWER OF CARTELS

Over time, drug related organizations in Mexico have become prosperous and powerful. They maintain much control and high security over their business. They have also come to be heavily armed for protection, and they are not afraid to use it. Their daring attitudes are clearly reflected in the death toll numbers that have now surpassed the 28,0003 mark, and increasing.[4] Some of these organizations have also joined forcing to work together within their claimed regions. Their strength is a major outcome of the fact that Mexico is the leading channel for the illegal drug flow into the United States. Mexico produces and supplies methamphetamine, heroin, cocaine, and marijuana amongst other illegal substances to the United States. It is believed that ever since the inflow of illegal substances entering the U.S. through Florida has been significantly decreased, the amounts of substances entering through Mexico have increased. There are several connections established between the drug cartels and gangs established outside of Mexico. In specific, ties to notorious gangs such as Mara 18 and the Mara Salvatrucha, as stated in Colleen Cook's Report for Congress on Mexico's Drug Cartels.[5] Figure 1 on the following page allows us to see the drug routes established by the cartels.

1 http://www.historyguy.com/mexico_drug_war.htm

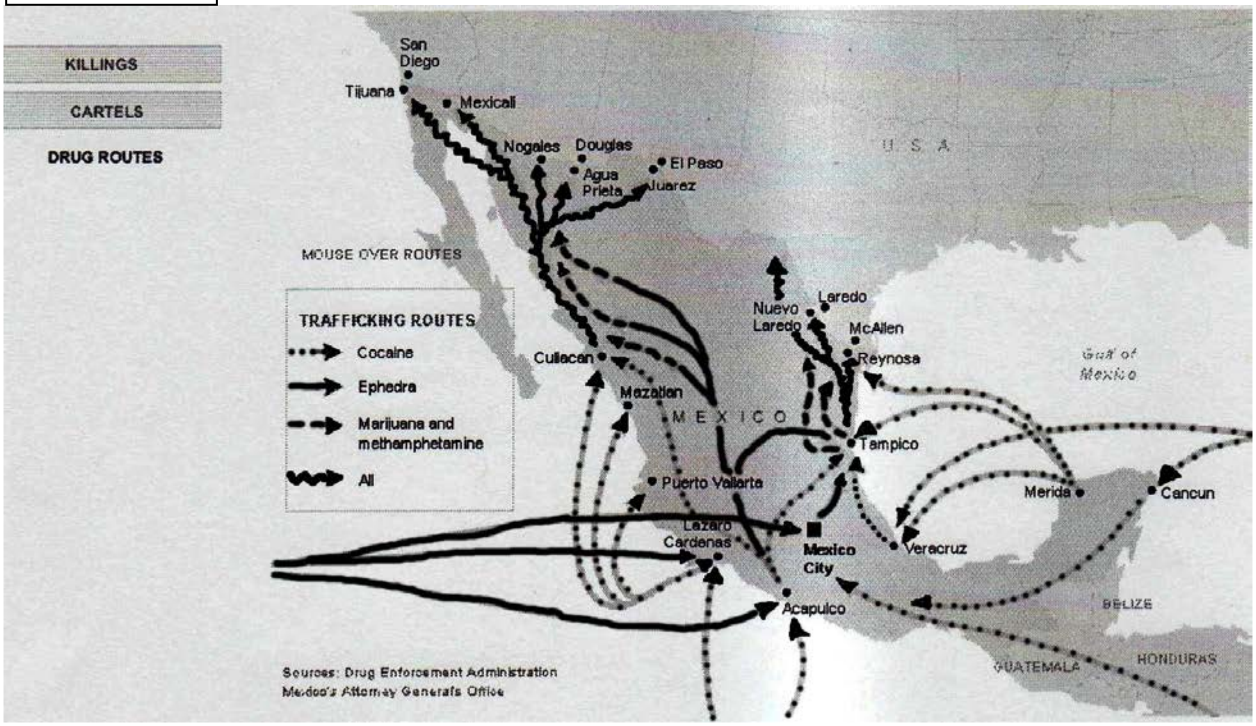
2 http://www.forbes.com/2010/05/20/calderon-drug-war-business-washington-mexico.html

3 http://www.bbc.co.uk/news/world-latin-america-10681249

4 As of January 2011, death toll numbers have increasingly surpassed the 34,000 mark. http://www.bbc.co.uk/news/world-latin-america-12177875

5 http://www.fas.org/sgp/crs/row/RL34215.pdf

Figure 1



Connections have not only expanded to the United States, but also throughout many smaller countries in Central America.6 **"'The presence (of the cartels) has worsened violence as they dispute trafficking routes in Central America and the Caribbean,'" said Alfredo Landaverde, a former advisor to the Honduran ministry of security.** Zetas are using rural farmlands and ranches in Guatemala, El Salvador and Honduras as areas to hide weapons, money, and also train recruits. These connections only strengthen the inflow of drugs and outflow of weapons between the two nations. "The Mexican government has previously stated that 90 percent of the weapons it confiscates come from the United States. In 2009 testimony before Congress, the ATF director gave that same figure." [7] The cartels obtain their weapons through people in the U.S. who are legally able to purchase weapons. These weapons are purchased by such people in the U.S. and then smuggled over the borders to Mexico. Many of the firearms are said to be of military design, however only few have been traced to actually once have been property of the U.S. military. 8

Attempts to discontinue the smuggling of weapons, such as the Project Gunrunner, have been put into effect. Project Gunrunner focuses on bringing together Mexican and U.S. law enforcement. This project was initiated by the U.S. and through the Bureau of Alcohol, Tobacco, Firearms and Explosives (ATF). E-Trace (used by Mexican authorities) and automatic license plate scanners are also used along the southwest borders to scan any outgoing shipments and vehicles traveling across borders. Such attempts have been doubted and criticized because the cartels have a drive to obtain power and do whatever it takes to

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6 http://www.msnbc.msn.com/id/38866035/ns/world_news

7 http://www.washingtonpost.com/wp-dyn/content/article/2010/10/06/AR2010100607003.html

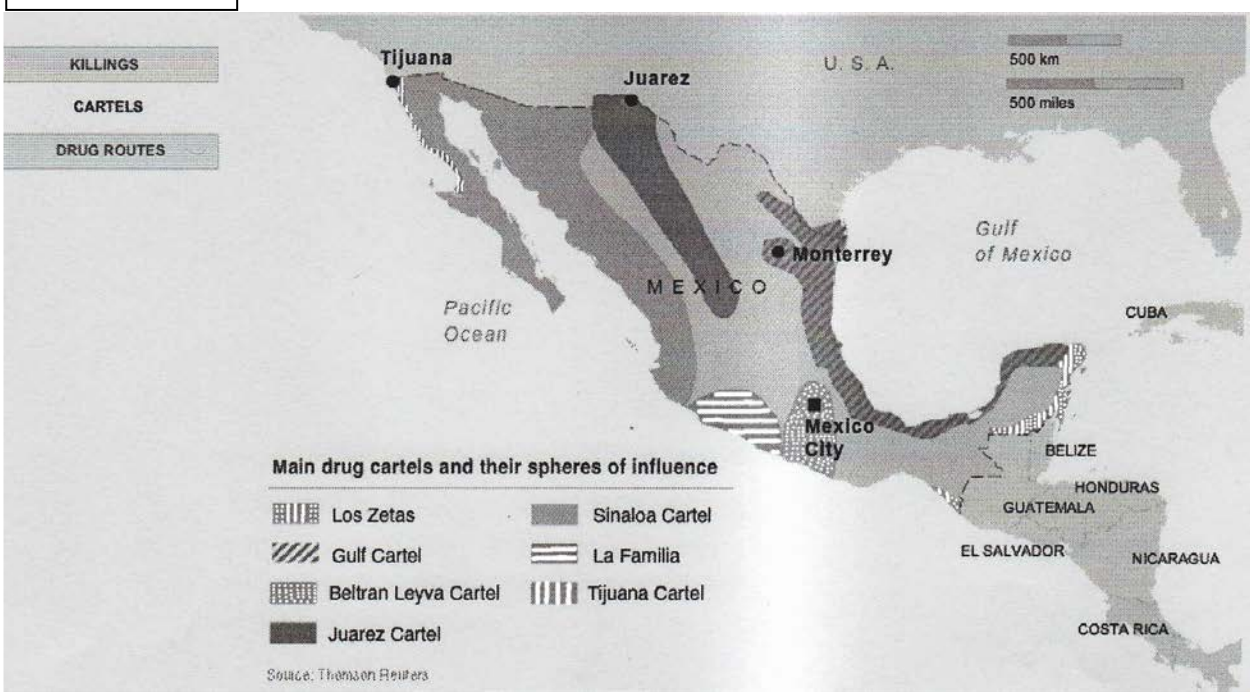
8 http://www.policyarchive.org/handle/10207/bitstreams/19832.pdf

obtain these weapons and anything else to strengthen their presence. Bottom line is the war against these cartels will not get any easier until the cartels are broken apart and ties involving trade of illegal goods between the U.S. and Mexico have been broken.

MEXICAN CARTELS CLAIM TERRITORY WITH VIOLENCE

The drug cartels have drastically claimed their areas of influence through many regions in Mexico. For the most part, many areas bordering the United States, the Gulf of Mexico, and the Pacific coast are all dominated by these powerful organizations.[9] Los Zetas/Gulf Cartel, have claimed almost the entire Gulf coast, within areas from Monterrey all the way to Veracruz. The Zetas, now separate from the Gulf cartel, were once, in a sense, the hit men for the them. “Reports indicate the Zetas were once comprised of members of special forces, they now consist of civilians, local, federal, and state personnel.” Monterrey is the industrial capital of Mexico, holding much significance to the Mexican economy. The presence of drug cartels in that area has created a great fear to the locals. The community fears engaging in night life

Figure 2



entertainment and dining and businesses are forced to pay protection money to cartels.10 Figure 2 illustrates the territories claimed by the cartels.

Although, the cartels have connections all over the U.S., the borders of Mexico and U.S. are experiencing extreme violence and threats.[11] For the most part the violence remains in Mexico, neighboring cities in the U.S., like El Paso, are highly affected by the heightened

9 http://news.bbc.co.uk/2/hi/8001009.stm

10 http://www.reuters.com/article/idUSTRE69E4S820101015?pageNumber=1

11 http://www.nytimes.com/2009/03/23/us/23border.html?_r=1

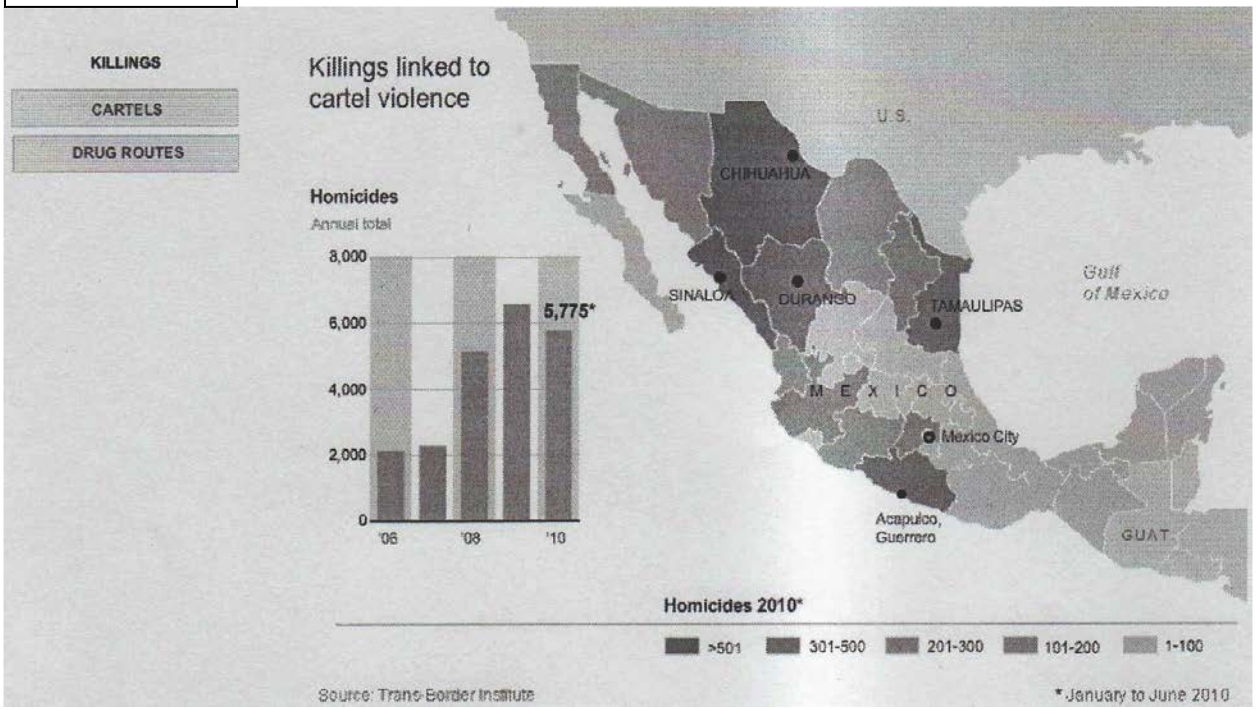
violence.[12] Ciudad Juarez, south of El Paso and directly across the U.S./Mexico border, is one of the bloodiest cities in Mexico. Over 500 have been killed between the months of August and September 2010. A setback to fighting this war on drugs is the lack of authority by public "authorities" themselves. In the city of Nuevo Laredo, no police chief was present for over one year. The most recent one resigned, and the one before him was assassinated. Another incident, in a small city- Los Ramones, Nuevo Leon had its recently inaugurated police headquarters attacked. Nuevo Leon experiences constant battles between the Gulf and Zetas cartels. After the attacks like these many of their officers simply quit.13 Cartels fear law enforcement and authority the most, so they must rid of anything that can weaken their presence. Figure 3 illustrates the cartel related killings This year alone, Ciudad Juarez has had 2,500 reported deaths related to the drug violence. [14]

If public authorities were to succeed in the elimination of these drug organizations and cutting illegal trade practices, the cartels would be insignificant. Their defeat over law enforcement allows them to remain in business and to continue making substantial profits. Attacking and eliminating law enforcement figures has been a great way for cartels to maintain and gain strength.

THE BUSINESS PERSPECTIVE OF THE DRUG WAR

The U.S. is Mexico's biggest trade partner thus it is evident that major economic and

Figure 3



12 "Six killed at family event in Mexican border city," CNN report, October 2010.

13 http://www.msnbc.msn.com/id/39863570/ns/world_news-americas/

14 "20-year-old women becomes top cop in violent Mexican municipality," CNN report, October 2010.

political issues will affect business relations between the two. When Felipe Calderón assumed presidential office in 2006, he stressed the importance of waging a fight against the powerful drug cartels in Mexico. From December 1, 2006 to the end of July 2010, 28,353 people have been killed as a result of the fighting between state forces and organized crime cartels. As a result, pressure on local and foreign business operations there has increased. Yet, the dramatic rise in violence in the past few years has generated tension and pressure for businesses in both nations. An analysis of U.S. Companies operating or doing business in Mexico along with the current situation, will allow for a firsthand look at how some U.S. companies are being affected as a result. The figure below shows the killings linked to cartel violence.

One example of the current U.S. business issue is that of the northern Mexican "business capital", Monterrey. Generating 8 percent of Mexico's gross domestic product, the Mexican business capital is only located 140 miles from the U.S. Mexico border of Laredo, Texas. Monterrey is a haven for U.S. business operations in and out of Mexico which is a result of the prosperous business opportunities and transactions that take place there. Large U.S. companies such as General Electric, Hershey's, Mary Kay, Coca Cola, Ford, Pepsi, General Motors, Nokia, and Whirlpool, conduct a majority of their assembly and manufacturing operations in Monterrey. There, workers build exhaust systems for General Motors, another plant produces manifolds for Ford, down the street GE's new line of refrigerators are assembled, and another plant has employees finishing tail pipes for Volkswagen. This shows a few of these companies' operations and the scale at which they conduct business there.

The recent spurs of drug cartel violence in Monterrey have contributed to an increase in safety, risk, and investment concerns for U.S. Companies who currently operate and conduct business there. While Monterrey is not the only city in this position, the situation in Mexico mainly affects Mexican and American businesses in or near border states where the majority of the violence is taking place. Companies aspiring to shift production, build new plants, or expand into Mexico are very aware of the situation. Pulling out of Mexico is a decision some companies may face in the future if the violence escalates to the extreme that companies cannot conduct business. There are no reports of any companies pulling out or considering pulling out of Mexico in response to the drug cartel violence.15

RISK

The drug war has influenced many U.S. companies to ask of their corporate board managers to take a harder look at their companies' exposure to risks in Mexico. Companies looking to set up operations in Mexico for the first time are considering locations further south in the country or away from the violent crime hotspots. Another option companies have is conducting business in Mexico from their U.S. based location. Yet that could be a "compromise position" which is not the optimal way to operate. An August 2010 survey of nearly 400 Mexican executives by Deloitte found that 57% believed the violence there was the biggest threat to the economy, up from 22% at the end of 2009.[16] Over the years U.S.-Mexico business relations have improved and as a result strong business partnerships have developed.

Despite the improved relations and partnerships, companies that specialize in risk management have helped many U.S. businesses enter Mexican markets. These risk

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15 ***Mexico's Drug War Impacts Business***, Latin Business Chronicle. *Thursday, September 16, 2010.*

[16] http://www.deloitte.com/view/en_US/us/index.htm

management companies have played a key role in the survival of companies who aspire to operate Mexico. NAPS, a highly specialized risk management company, offers professional administrative expertise and strategic business plan models for U.S. businesses desiring to expand into Mexico.[17] Many companies that have used NAPS business models become successful in the Mexican market and have allowed them to remain that way. Testimonials from top companies such as Toyota and Monster Cable Products, support and better explain what it is NAPS does. NAPS mainly works with companies operating in Baja California, Juarez, and Chihuahua, which are a few of the border states affected by drug cartel violence.

> ***Client Centered Services Pave the Way for Long-Term Success***
> *We performed an extensive due diligence period of selecting a Mexico-shelter partner, with the assistance of Mexican government provided sources as well as recommendations from long-tenured local experts in the region. The NAPS team had the best combination of customer service orientation, deep Mexican accounting, customs, labor and environmental regulatory knowledge and a sense of long-term partnership disposition. After almost three years of starting our relationship we are extremely pleased with their service. The NAPS team has become an integral part of our success in Mexico.*
> *Raul Corella, VP of Global Supply Chain Operations*
> *Monster Cable Products*

> ***A Well Informed and Reliable Partner Insures Your Success***
> *To do well in business outside the U.S., where regulations, laws and business practices are very different, it is crucial to have a well-informed and reliable partner. ACK was very fortunate in establishing this partnership with NAPS.*
> *Mr. M. Najeeb, President and CEO*
> *ACK Controls Inc. – A Division of Toyota Motor Corporation*

Figure 4 depicts a general plan of how many companies go through the process of evaluating projects in foreign markets involving high risks.[18]

In general, the way in which companies handle major risk business decisions, comes down to an analysis of the risks and rewards of important decisions, whether they take place in Mexico or anywhere else on the globe. Most companies begin by analyzing the top 10 or 15 major risks that they may face in a certain region of the country they wish to operate in. They then gather information on how likely those risks are, and if any risks are to be encountered, they come up with ways to mitigate or reduce the potential risks.19 For U.S. businesses aspiring to operate in Mexico, this final step is difficult to execute within the drug war prone areas as far as control.

However, U.S. Companies as well as other multinational firms, are taking some heightened security measures to lessen potential risks triggered by the drug war. Some precautions many U.S. companies are taking include the prohibition of overnight stays by their U.S. based personnel. In past years this was a very common practice for U.S. businessmen and women. Instead, they now fly or drive in and out of their Mexican destinations in one day, as well as being chauffeured by a security-trained driver when driving around as opposed to taking a taxi. Another measure implemented by employers is that of regularly scheduled check-in procedures at hotels. These check-ins consist of employees signing in and out with

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[17] North American Product Sharing is focused on offering unparalleled service designed to meet U.S. business standards. The NAPS business model ensures success on a long- term basis for both clients and NAPS. While clients are free to become independent after an initial contract, most elect to stay with the company.

[18] FIGURE http://www.weforum.org/pdf/Global_Competitiveness_Reports/Benchmarking.pdf

19 http://knowledge.wharton.upenn.edu/article.cfm?articleid=2589

the front desk when leaving from and returning to the hotel, so that companies may keep a better track of employees who do happen to stay in Mexico.[20] Figure 5 illustrates the ranking of costs incurred by U.S. and Mexican businesses based on costs of organized and violent crime for 2010-2011.[21]

Figure 4

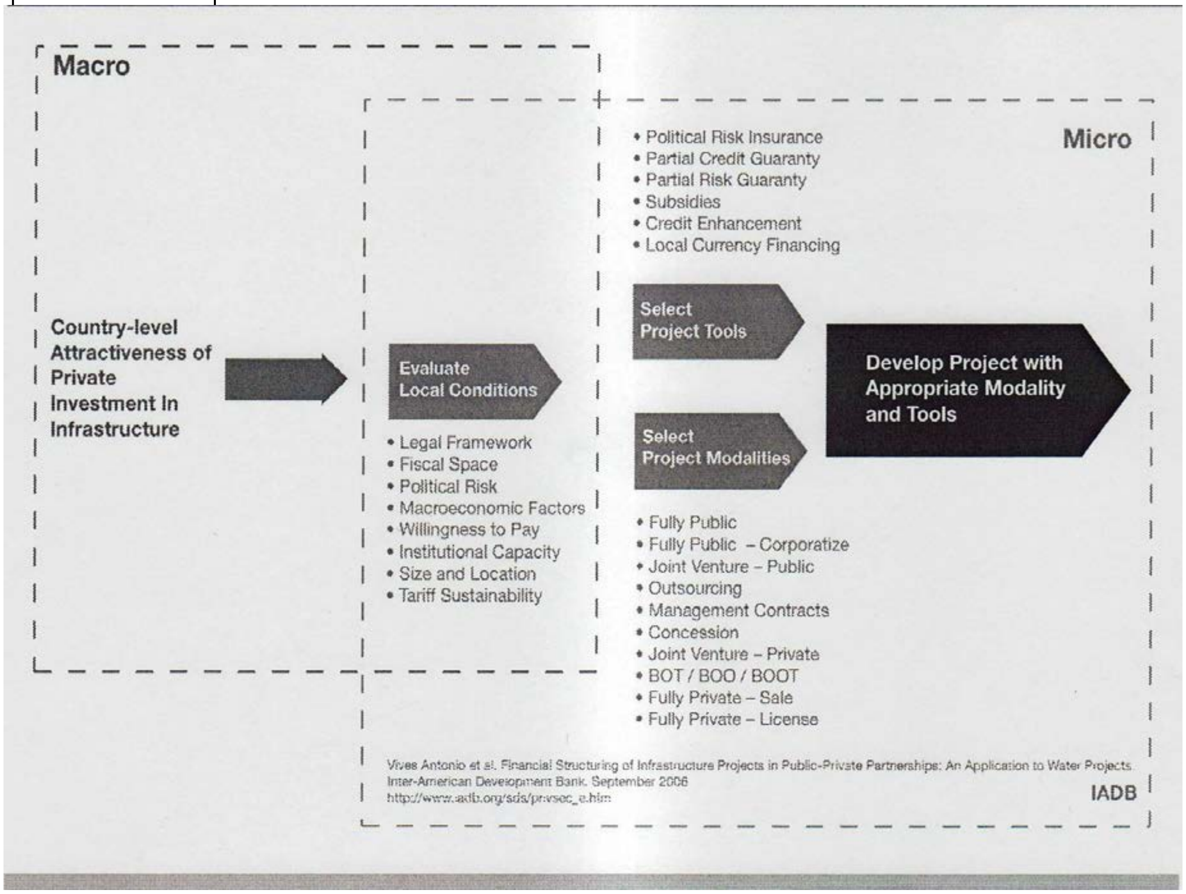
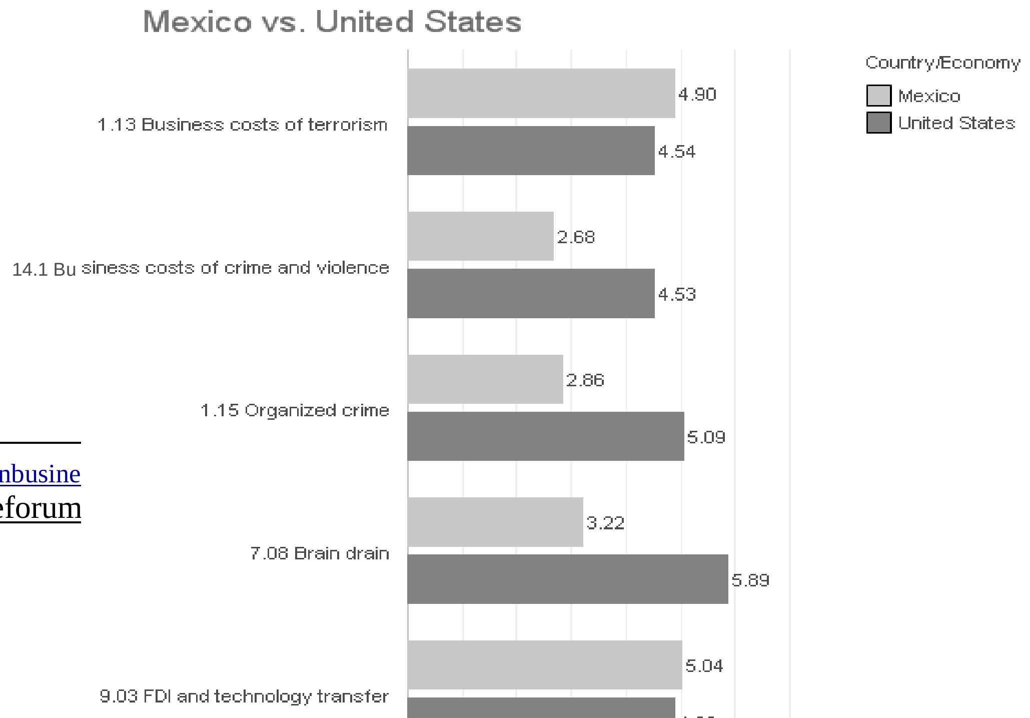


Figure 5



[20] http://www.latinbusine
[21] http://gcr.weforum

Despite the drastic appearance of these measures, some companies have had no choice but to adapt certain or new travel alternatives. Companies dependent of travel to Mexico have switched to one day trips into Mexico by land or air in lieu of overnight stays. Road trips serve as alternatives that may be of economic benefit for businesses if transportation for their employees is less expensive than flying and their destination is within a reasonable distance. As a result employees feel safer if their companies prohibit overnight stays since this policy eliminates any risks they may face if sent to Mexico. The adaptation of such policies only signal that companies still see the benefit of operating in Mexico despite the slight increase in costs. The increase in risks as a result of the drug war are all leading to elevated costs by companies in Mexico, as well as U.S. Businesses at an even greater cost in high violence areas. Despite the facts "Mexico is perceived as a good diversification of risk versus other low labor cost countries like China, because it is a competitive destination for U.S. manufacturers and corporations." said Luis De la Calle.22 The key issue for Mexico now, is at what point those added headaches and higher costs will deliver a serious financial blow to the advantages U.S. companies see in operating there.

INCREASING OPERATING COSTS

We are aware that higher operating costs incurred by U.S. businesses in Mexico are mainly the consequence of elevated security costs. Form this, are the overall costs and disadvantages for U.S. companies in Mexico outweighing the profit and multiple advantages they still enjoy despite the drug war? The answer to this question is no. Fred Burton, vice-president of counter-terrorism and corporate security at Strafor, states that companies are still generating profit there, but the cost of production is increasing, which doesn't result in positive figures for Mexico.[23] There are key advantages to being a local there, which are, knowing the people, market, and customs. Although Mexico offers favorable labor competitiveness to U.S. Businesses, David Reibstein, (professor at the University of Pennsylvania's Wharton School of Business), warns that when it comes to low-cost manufacturing, Mexico faces growing competition.

"There are much less expensive places than Mexico, such as Vietnam, China, Pakistan, and India, which are all practical alternatives without nearly the risk." One may distinguish that key advantages for U.S. Companies operating in Mexico include a good inexpensive workforce, lower transit costs into the U.S., the ability to deliver goods quickly to many points in North America, competitiveness in the global market, reducing costs without reducing quality, and a young educated workforce. Mexico is preferred to these other low cost manufacturing countries due to the previously stated advantages, and despite growing competition in the low cost labor sector, Mexico remains a good alternative to the many U.S. markets.

The American Chamber of Commerce in Mexico City conducted a survey of 286 of its corporate members of which nearly 60% said they felt less secure in 2009 than they did a year earlier. The states of major concern to the ACC were Baja California, Chihuahua, Durango,

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22Luis De la Calle is a former Mexican negotiator for NAFTA, and today he is a partner at a Mexico City-based business adviser, De la Calle Madrazo Mancera SA.

[23] Stratfor is a global intelligence firm. http://www.stratfor.com/about_stratfor

Sinaloa and Sonora, all near the US-Mexico border in areas with high trafficking activity.24 From the 286 companies surveyed, these stated spending 3% of their operating costs on security, in correspondence with the rest of Latin America but behind the 7% spent in the US.25

INVESTMENT

Surprisingly investment has increased and one indicator that the drug war is not affecting investment by US companies. Some firms have decided to temporarily halt investment due to fear, increased risks, and operating costs of the drug war.26 Statistics prove that investment will continue to grow and Mexico's positive economic growth may even help U.S. business to jump back on its feet from the economic downturn. Firms are spending more of their income on security but despite the increase in security costs, other operational costs such as utility, land, and labor remain low. Firms selling alarms, locks, cameras, and other security products in Mexico have risen by about 20 percent in annual profits in three years. As a result of the escalating violence and global economic crisis, Mexico's GDP decreased 6.5 percent. This year, Rafael Amiel, director for Latin America at IHS Global Insight, an economic and financial analysis firm, expects Mexico's GDP to grow 5.1 percent.

No signs of a major outpour of foreign dollars from the country have been recorded. Foreign direct investment averaged $1.6 billion per quarter in the four quarters ending March 2010.27 In the second quarter there was a $6.1 billion hike in FDI, which is the result of one major business deal, an acquisition by Heineken of FEMSA (Mexican brewing company).28 On April 30, 2010, FEMSA made public the closing of the business deal in which FEMSA agreed to exchange 100% of its beer operations for a 20% economic interest in the Heineken Group. Through this transaction FEMSA aspires to increase their operational scale and geographic reach by competing more fiercely. This strategic move will benefit both parties but also goes as far as demonstrating that despite the drug cartel situation, even major companies like the Heineken Group are conducting business in Mexico.29 The effect of drug-related crime in Mexico ultimately impacts U.S. and Mexico businesses depending on how multinational firms respond. While foreign-owned firms are spending more on safety, the drug war has yet to be a major deterrent to investment. The violence is "absolutely not an obstacle to the development of our business," Carlos Ghosn, CEO of Nissan Motor Co (7201.T), said during a visit to Mexico City last month.30 Auto manufacturing is Mexico's largest export economy and other firms like Volkswagen AG have recently increased investments in Mexico as well.31

24(ACC) American Chamber of Commerce

25 http://www.guardian.co.uk/world/2010/oct/13/mexico-drugs-war-security-business

26 http://knowledge.wharton.upenn.edu/article.cfm?articleid=2589

27 http://knowledge.wharton.upenn.edu/article.cfm?articleid=2589

28 (FDI)Foreign Direct Investment is any form of investment earning interest in enterprises which function outside the country of the investor. http://www.economywatch.com/foreign-direct-investment/definition.html

29 http://www.femsa.com/en/press/news/femsa-agrees-to.htm

30 Nissan plans on investing $600 million usd to upgrade plants in Mexico and produce three, new, low-cost cars at a plant in northern Mexico.

31 http://www.reuters.com/article/idUSN2312911920100823

CONCLUSION

Contrary to assumptions in regards to how the drug war negatively affects U.S. business, economic reports and statistics demonstrate that the drug war is not having a negative impact on either Mexican or U.S. businesses. The costs of the drug war in Mexico are slowly increasing and as the situation evolves, things may take a turn for the worse. Companies will feel the economic impact with a greater force if the situation does not improve. Meanwhile, big U.S. companies will continue to seek profitable business opportunities with their southern neighbors, even if it means spending a few more millions from their major profits. The cost of organized crime and violence is lower in Mexico than in the U.S. Which is shown by figure on page. The diagram makes one think about the future of U.S companies. U.S. companies
For now, the business field is not blemished. U.S. businesses will continue to see a decline in profits if costs continue to rise due to the violence. This will cause U.S. businesses to leave or move their operations elsewhere because the elevated costs may reach a level that will result in negative profits for companies operating in Mexico. Nonetheless, Mexico’s economic recovery has also been affected a result of the drug violence, which results in the same effect for the U.S. economy. This leaves us without a certain or clear picture of this issue but one thing is certain, the drug war has not greatly impacted or prevented successful business transactions and operations.

REFERENCES

Archibold, Randal C. "Mexican Drug Cartel Violence Spills Over, Alarming U.S." *New York times*. 22 Mar. 2009. Web. 28 Feb. 2011. <http://www.nytimes.com/2009/03/23/us/23border.html?_r=1>.

"BBC News - Mexico Updates Four Years of Drug War Deaths to 34,612." *BBC - Homepage*. 13 Jan. 2011. Web. 28 Feb. 2011. <http://www.bbc.co.uk/news/world-latin-america-12177875>.

"BBC News - Q&A: Mexico's Drug-related Violence." *BBC - Homepage*. 1 Feb. 2011. Web. 28 Feb. 2011. <http://www.bbc.co.uk/news/world-latin-america-10681249>.

"BBC NEWS | Americas | US Blacklists Mexico Drug Cartels." *BBC News - Home*. 15 Apr. 2009. Web. 28 Feb. 2011. <http://news.bbc.co.uk/2/hi/8001009.stm>.

Beaubien, Jason. "Drug War Hurts Mexican Business Center's Revival : NPR." *NPR : National Public Radio : News & Analysis, World, US, Music & Arts : NPR*. National Public Radio, 26 July 2010. Web. 28 Feb. 2011. <http://www.npr.org/templates/story/story.php?storyId=128774243&ps=rs>.

Booth, William. "U.S. Struggles to Stop Flow of Guns to Mexico." *Washington Post - Politics, National, World & D.C. Area News and Headlines - Washingtonpost.com*. The Washington Post, 07 Oct. 2010. Web. 28 Feb. 2011. <http://www.washingtonpost.com/wp-dyn/content/article/2010/10/06/AR2010100607003.html>.

Brice, Arthur. "20-year-old Woman Becomes Top Cop in Violent Mexican Municipality - CNN." *Featured Articles from CNN*. CNN, 20 Oct. 2010. Web. 28 Feb. 2011. <http://articles.cnn.com/2010-10-20/world/mexico.female.police.chief_1_police-force-ciudad-juarez-municipality?_s=PM:WORLD>.

"Congressional Record - 111th Congress (2009-2010)." *THOMAS (Library of Congress)*. Web. 28 Feb. 2011. <http://thomas.gov/cgi-bin/query/z?r111:H20MY0-0010>.

"Doing Business in Mexico - Mexico Business Development." *NAPS Mexico - Manufacturing Services and Operations*. NAPS Company Website. Web. 28 Feb. 2011. <http://www.napsintl.com/about_us_mex.php>.

Drug Violence In Mexico. Digital image. *Reuters*. Michoacan State Government, 13 Oct. 2010. Web. 28 Feb. 2011. <http://www.reuters.com/article/interactive/idUSTRE69B6KF20101013?view=large&type=worldNews>.

Emmott, Robin. "Drug War Bloodshed Tarnishes Mexico's Richest City| Reuters." *Business & Financial News, Breaking US & International News | Reuters.com*. Reuters, 13 Oct. 2010. Web. 28 Feb. 2011. <http://www.reuters.com/article/2010/10/13/us-mexico-drugs-idUSTRE69B6KF20101013>.

Harif, Tal Barak, and Jonathan J. Levin. "Mexico Boom Leads Americas as Drug War Loses to Nafta - Businessweek." *BusinessWeek - Business News, Stock Market & Financial Advice*. Bloomberg Business Week, 04 Oct. 2010. Web. 28 Feb. 2011. <http://www.businessweek.com/news/2010-10-04/mexico-boom-leads-americas-as-drug-war-loses-to-nafta.html>.

"México Competitivo a Pesar De Crisis Mundial :: Noticieros Televisa." *Esmas.com - Home*. NOIMEX (News For The Mexican State), 01 Sept. 2010. Web. 28 Feb. 2011. <http://www2.esmas.com/noticierostelevisa/mexico/nacional/200718/mexico-competitivo-pesar-crisis-mundial>.

"Mexico's Drug War Impacts Business." *Latin Business Chronicle â€“ Latin American Business News and Intelligence*. Latin Business Chronicle, 16 Sept. 2010. Web. 28 Feb. 2011. <http://www.latinbusinesschronicle.com/app/article.aspx?id=4526>.

"Mexico's Drug War: The Battle to Remain Safe, Low-cost and Competitive." *Knowledge@Wharton*. Wharton School of the University of Pennsylvania, 15 Sept. 2010. Web. 28 Feb. 2011. <http://knowledge.wharton.upenn.edu/article.cfm?articleid=2589>.

"Mexico Drug War - as Violence Spirals, So Does Spending on Security." *Puerto Vallarta Mexico News on Banderas Bay's Liveliest Website*. PVNN. Web. 28 Feb. 2011. <http://www.banderasnews.com/1010/nz-violencespirals.htm>.

Mia, Irene, Julio Estrada, and Thierry Geiger. *Benchmarking National Attractiveness for Private Investment in Latin American Infrastructure*. Rep. World Economic Forum, 2007. Web. 28 Feb. 2011. <https://members.weforum.org/pdf/Global_Competitiveness_Reports/Benchmarking.pdf>.

"Private Investors | World Economic Forum-Private Investors." *The World Economic Forum | World Economic Forum-The World Economic Forum*. Web. 28 Feb. 2011. <http://www.weforum.org/en/initiatives/gcp/InfrastructurePrivateInvestmentAttractivenessIndex/index.htm>.

Rucker, Patrick, and Jason Lange. "UPDATE 2-Mexico Foreign Investment Climbs despite Violence| Reuters." *Business & Financial News, Breaking US & International News | Reuters.com*. Ed. Andrew Hay. Reuters, 23 Aug. 2010. Web. 28 Feb. 2011. <http://www.reuters.com/article/idUSN2312911920100823>.

Seelke, Clare R. *Mexico-U.S. Relations: Issues for Congress*. Rep. no. RL32724. Congressional Research Service, 2 Sept. 2010. Web. 28 Feb. 2011. <http://www.policyarchive.org/handle/10207/bitstreams/19832.pdf>.

"Six Killed at Family Event in Mexican Border City - CNN." *Featured Articles from CNN*. CNN Wire Staff, 16 Oct. 2010. Web. 28 Feb. 2011. <http://articles.cnn.com/2010-10-16/world/mexico.juarez.shooting_1_mexican-border-city-ciudad-juarez-mayor-jose-reyes-ferriz?_s=PM:WORLD>.

The Global Competitiveness Index Analyzer 2010-2011. Rep. World Economic Forum. Web. 28 Feb. 2011. <http://gcr.weforum.org/gcr2010/>.

United States of America. Congress. Congressional Research Service. *Mexico's Drug Cartels*. By Colleen W. Cooke. 16 Oct. 2007. Web. 28 Feb. 2011. <http://www.fas.org/sgp/crs/row/RL34215.pdf>.

United States of America. U.S. Commercial Service. *Home -- U.S. Commercial Service Your Global Business Partner*. U.S. Commercial Service, 18 June 2010. Web. 28 Feb. 2011. <http://www.buyusa.gov/mexico/en/doing_business.html>.

United States of America. U.S.-Mexico Chmaber of Congress. *United States-Mexico Chamber of Commerce*. U.S.-Mexico Chmaber of Congress. Web. 28 Feb. 2011. <http://www.usmcoc.org/usa/cha4d.html>.

"U.S. Firms Feel Bite Of Mexican Drug War - Forbes.com." *Information for the World's Business Leaders - Forbes.com*. 20 May 2010. Web. 28 Feb. 2011. <http://www.forbes.com/2010/05/20/calderon-drug-war-business-washington-mexico.html>.

Vardi, Nathan. "U.S. Firms Feel Bite Of Mexican Drug War - Forbes.com." *Information for the World's Business Leaders - Forbes.com*. Forbes, 20 May 2010. Web. 28 Feb. 2011. <http://www.forbes.com/2010/05/20/calderon-drug-war-business-washington-mexico.html>.

IS CONSTRUCTIVE DIVIDEND A QUALIFIED DIVIDEND?

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ABSTRACT

Re-characterization of payments as constructive dividend, a qualified dividend, is an economic benefit directly or indirectly conveyed by a corporation to its shareholders without formally declaring or designating the benefit as a dividend. Some examples of constructive dividends include, but are not limited to: 1) excess compensatory payments, 2) excess rent or lease payments for leased property from shareholder, 3) corporation loans money to its shareholder at interest rates below the market rate for similar loan; and, 4) reimbursement of shareholders' personal expenses. The differentiation between ordinary dividend and qualified dividend is both necessary and very important because of the tax treatment afforded the two types of dividends. Under the code, ordinary dividends are taxed at taxpayer's ordinary income tax rate, where, qualified dividends are taxed at maximum rate of 15% percent.

INTRODUCTION

IRS Defines Constructive Dividend As

Re-characterization of payments as 'constructive dividend', a qualified dividend, is an economic benefit directly or indirectly conveyed by a corporation to its shareholders without formally declaring or designating the benefit as a dividend. Some examples of constructive dividends include, but are not limited to: 1) excess compensatory payments, 2) excess rent or lease payments for leased property from shareholder, 3) corporation loans money to its shareholder at interest rates below the market rate for similar loan; and, 4) reimbursement of shareholders' personal expenses.

The constructive dividends are usually identified as a result of an Internal Revenue Service (IRS) audit. In general, IRS may re-characterize an excessive corporate payment to a shareholder as constructive dividend in order to recognize transfer of economic benefit to the shareholder. As a result, the corporation is denied a deduction for constructive dividend by the IRS. Consequently, the denial increases corporate taxable income, and results in additional taxes owed by the corporation. The denial will result in the distribution being classified as ordinary dividend income to the shareholder, resulting in additional income tax liability to be paid by the shareholder. These types of re-characterizations are limited to closely held corporations because the transactions between corporation and shareholders are less formal.

Ordinary Dividend versus Qualified Dividend

The differentiation between ordinary dividend and qualified dividend is both necessary and very important because of the tax treatment afforded the two types of dividends. Under the code, ordinary dividends are taxed at taxpayer's ordinary income tax rate, where, qualified dividends are taxed at maximum rate of 15% percent. Under the Jobs and Growth Tax Relief Reconciliation Act of 2003, the tax rates for qualified dividend are reduced to 5% for taxpayers with ordinary income rates at 10% and 15% for the periods from 2003 to 2007. The bill further reduces the qualified dividend rate to zero for taxpayers whose ordinary income rate is 10% or 15% for tax years 2008, 2009, and 2010.
The issue arises during an Internal Revenue Service (IRS) audit when the auditor may deny some corporate expense deductions by re-characterizing the payments as constructive dividends to shareholders. As a result, the question arises whether the constructive dividend is a qualified dividend, subject to lower tax rates, or, is it an ordinary dividend subject to taxation at taxpayer's ordinary income tax rate?

Arguments seem to be divided on this issue. Taxpayers audited by IRS complain that re-characterization of payments as constructive dividend results in higher tax payments because the dividend is taxed at the ordinary income rates instead of the lower qualified dividend tax rate of 15 % maximum (Tax Almanac, 2010). In one case, IRS auditor re-characterized compensatory payments as constructive dividend because the payments were deemed to be unreasonable compensation payment. The auditor clearly indicated that the excessive compensation is constructive dividend to shareholder and taxed at ordinary income tax rates. IRS auditor wrote "if the constructive dividend is given a dividend treatment due to an audit, the classification as a qualified dividend is no longer available to taxpayer. The constructive dividend is not treated as a qualified dividend. Had the taxpayer made the decision to treat the amount as a dividend when filing the return originally, the dividend may be considered a qualified dividend, if all other aspects of this law are met. "(Unpublished IRS Audit Reports, Form 4549, Dallas).

REVIEW OF AUTHORITATIVE LITERATURE

Internal Revenue Code (IRC) defines qualified dividend:

(i) The term of qualified dividend income means dividends received during the taxable year from
   a) domestic corporations, and
   b) qualified foreign corporations.
(ii) Certain dividends excluded. Such term shall not include
   a) Any dividend from a corporation which for the taxable year of the corporation in which the distribution is made, or the preceding taxable year, is a corporation exempt from tax under section 501 or 521,

b) Any amount allowed as a deduction under section 591 (relating to deduction for dividends paid by mutual savings banks, etc.), and

c) Any dividend described in section 404(k).

(iii)Coordination with section 246©. Such term shall not include any dividend on any share of stock

a) with respect to which the holding period requirements of section 246 (C) are not met (determined by substituting in section 246(c) “60 days” for “45 days” each place it appears and substituting “121-day period” for “91-day period”) or

b) to the extent that the taxpayer is under an obligation (whether pursuant to s short sale or otherwise) to make related payments with respect to positions in substantially similar or related property (Publication 550, IRS, 2010).

Qualified dividends are ordinary dividends that meet above specific criteria to be taxed at the lower long-term capital gains rate rather than the taxpayer regular higher ordinary income tax rate. The definition of qualified dividend in the IRC is simple enough that a distinction between ordinary dividend and constructive dividend is not made.

David M Fogel, EA, CPA served as an Appeal Officer for the IRS for 18 years, he wrote an article indicating “if the IRS prevails in treating the excessive compensation as a constructive dividend, then the shareholder’s individual return will needed to be adjusted to reclassify the excess compensation from wages (taxed at normal tax rates) to dividends (taxed at a 15% rate) ”(4)

In the recent court case, an IRS auditor found that distribution of property to its shareholder is constructive dividend. The amount of constructive dividend shareholder received is the fair market value of the property. The constructive dividend is a qualified dividend and should be taxed at 15% rate. The tax court sided with the IRS Auditor (RVJ Cezar Corporation, 2010).

CONCLUSION

It seems to be clear that the constructive dividend is a qualified dividend, and should be subject to 15% maximum rate based on the authority such as IRC, expert opinion, and court case. However, one should note the dividend distribution must be distributed from current corporate earnings and profits (IRC 316 (a)).

Finally, the lower qualified dividend tax rate will expire on December 31, 2010 unless Congress extends the law. However, the distinction between ordinary and qualified dividend will need to continue for taxpayers filing returns for Tax Year 2010 or before.

REFERENCES

Tax Almanac :Discussion: Constructive Dividends IRS Audit. Feb 24, 2010

Unpublished IRS Auditor Report, Form 4549, Income Tax Examination Changes, Constructive Dividend Lead Sheet, work paper 501, 1-2. Dallas District, IRS.

IRC Sec. 1(h)(11)(B), also see Publication 550, IRS, 2010, pp20-21

David M Fogel (2005). “When is a constructive dividend not a dividend?” *California Enroll Agent*, Nov. 2005, pp16-19.

RVJ Cezar Corporation et al v. Commissioner, TC Memo 2010-173.

IRC 316 (a).

MODELING THE IMPACT OF IT LEVERAGED SUPPLY CHAIN CAPABILITIES ON COMPETITIVE MARKETING PERFORMANCE

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ABSTRACT

This study examines the impact of Information technology (IT) leveraged supply chain capabilities on competitive marketing performance. A structural model has been developed by including the constructs- level of IT usage, supply chain capabilities, operational benefits, strategic marketing benefits and competitive marketing performance. Findings are drawn from the analysis of the primary data collected from 307 respondent supply chain managers working in Indian manufacturing companies, who are facing increased competitive pressure and are leveraging the use of IT in supply chain management (SCM) to retain their competitive position in the market.

The results reveal that the level of IT usage leads to creation of supply chain capabilities which generate operational and strategic marketing benefits which positively impact competitive marketing performance. The findings suggest that the IT leveraged supply chain capabilities improves competitive marketing performance indirectly through creating a positive impact on operational and strategic marketing benefits. In addition, strategic marketing benefits have a higher impact than operational benefits on competitive marketing performance of organizations.

INTRODUCTION

Competing successfully in any business environment today requires companies to anticipate market trends and changes in customer needs (Stalk, Evans & Schulman, 1992). Making and distributing products to meet customer needs is becoming an effective and efficient way for businesses to stay successful – and is central to the practice of supply chain management (Wisner, Leong & Tan, 2005). IT is a tool that can speed up the information flow and make the supply chain more robust and resilient without undermining its efficiency (Pereira, 2009). IT has revolutionized SCM and enabled a paradigm shift from inventory to information, from competition to collaboration and from cost to value (Boone & Ganeshan, 2002).

The role of Information Technology has received increasing attention from researchers as a potential enabler of competitive advantage for firms (Humphreys, Lai & Sculli, 2001; Sanders & Premus, 2002). Supply chain capabilities are the building blocks for supply chain strategy and a source of competitive advantage for firm success (Morash, 2001). Organizations have been leveraging IT in creating capabilities in their supply chains to enhance their business competitiveness since the era of Information systems in the 1980s. Indian manufacturers have in recent years therefore made substantial investments in IT in the supply chain though investing in applications like enterprise resource planning (ERP), supply chain management (SCM), customer relationship management (CRM) and in electronic linkage of their branch offices. This study aims at studying the impact of Information technology on firm competitive marketing performance in their downstream supply chains. The downstream supply chain refers to the organization's out-bound processes - from the company through its distribution channels to its consumer. The objective of this study is to examine a structural model of SCM and the relationship between IT leveraged supply chain capabilities and competitive marketing performance. This assessment is expected to provide valuable insights both to supply chain researchers and practitioners.

The rest of this paper is organized as follows. In section 2, the theoretical background is briefly reviewed and the related hypotheses pertaining to the constructs analyzed are offered. Section 3 describes the research methodology. The structural model test results are presented in Section 4. The relevant findings and discussion are presented in Section 5 and Section 6 concludes the paper.

THEORETICAL BACKGROUND AND RESEARCH HYPOTHESIS

The research literature on supply chain management has consistently identified four dimensions that have been positively affecting firm performance - information sharing, coordination, collaboration and responsiveness. These four dimensions have been discussed individually in past literature (e.g., Frohlich, 2002; Leek, Turnbull & Naude, 2003; Sahin & Robinson, 2002; Sriram & Stump 2004).

Tracey, Lim & Vonderembse (2005) have empirically tested the impact of supply chain management capabilities on business performance. In their research they have used three types of SCM capabilities – outside-in capabilities (e.g. inbound transportation, warehousing), inside-out capabilities (e.g. packaging, outbound transportation) and spanning capabilities (e.g. customer order processing, information dissemination) and have thus typically used logistic capabilities. It is proposed to go with the four capability dimensions identified across the literature reviewed – Information sharing, Coordination, Collaboration and Supply chain responsiveness - for the present research. Wu, Yeniyurt, Kim & Cavusgil (2006) referred to these four dimensions together as Supply chain capabilities - a higher order construct encompassing all these four capabilities. The previous research on the constructs in the structural model is presented below.

Supply chain capabilities

Information sharing refers to the ability of a firm to share knowledge with its supply chain partners in an effective and efficient manner (Wu, Yeniyurt, Kim & Cavusgil, 2006). Information sharing can significantly improve the performance of a supply chain. Many studies demonstrate the positive impact of information sharing on the supply chain (Zhao,Xie & Zhang, 2002; Kaipia & Hartiala, 2006; Lumsden & Mirzabeiki, 2008, Barratt & Barratt, 2011).

Coordination in this study is about the inter-firm coordination that is the ability of a firm to coordinate transaction-related activities with supply chain partners Coordination is needed to be brought about in the areas of production planning, forecasting, replenishment, ordering management, inventory management and operations management with sharing data (inventory, point of sales, end customer demand, capacity, and production schedule) to achieve mutually defined goals (Kanda & Deshmukh, 2007). Accordingly supply chain coordination is seen as an important capability to increase supply chain performance.

. Mentzer, Min & Zacharia, (2000) define supply chain collaboration as a long term relationship among organizations actively working together towards common objectives. Collaboration between organizations can facilitate strategic and operational foci, allowing individual members supply chain members to exploit their core competencies. Researchers have emphasized the importance of collaboration and identified significant inter-organizational gains that can be realized from such collaborative efforts (Angerhofer & Angelides, 2005; Zacharia, Nix & Lusch, 2009; Cao & Zhang, 2011).

Supply chain responsiveness has been defined as the capability of promptness and the degree to which the supply chain can address changes in customer demand (Lummus, Duclos & Vokurka 2003; Holweg, 2005). Today's complicated marketplace requires reliable, efficient, and collaborative response from the entire supply chain (Rogers Daugherty & Stank, 1993).

Operational Benefits

In recent years, a number of organizations have realized the potential of using IT in SCM in their day to day operations and have made investments in Information Technology in the supply chain operational practice. Evaluating such companies' performance against their IT investments has become an important theme not only among researchers but also in business practices (Kwon, 2003).

According to Neely (2005) a process cannot be managed if its performance cannot be measured. Many researchers have stressed the importance of using the right metrics to manage a supply chain efficiently and effectively (Gunasekaran, Patel & Tirtiroglu, 2001; Lambert & Pohlen, 2001; Neely, 2005). The development of suitable metrics is however becoming a tough task as the list of potential benefits appears to be inexhaustible ((Lapide, 2000; Hoffman, 2004; Shepherd & Gunter, 2006; Sambasivan, Nandan & Mohamed, 2009). The operational benefits - increased forecast accuracy, increased delivery performance on due date, increased perfect order fulfilment, reduction in order fulfilment cycle time, reduction in excess stock and reduction in percentage of stock outs, used in this research have been identified from studies by these researchers.

Strategic Marketing Benefits

The implementation of IT in the downstream supply chain is expected to yield strategic marketing benefits to the selling organization, which should impact competitive marketing performance of the firm positively. Researchers have identified these benefits in the marketing context. Grawe, Chen & Daugherty (2009) have done an empirical research to confirm service support positively impacts market performance. Christopher & Lee (2004) have recommended 'end- to- end' visibility to mitigate market risks. Zhang & Krishnamurthi (2004) and Chatterjee & McGinnis (2010) have found that customising pricing and promotion offers have led to significantly higher purchase intent than universal offers. Fleischmann (2001) has identified the consumer as an important source of new product ideas. Story, Susan & O'Malley (2009) have confirmed that within-firm competencies are not sufficient for product innovations and there is a need to tap external relational resources for new product development. The use of IT in the supply chain facilitates the capture of such strategic information from customers and downstream supply chain channel partners. Hilletofth & Eriksson (2010) have confirmed that new product development activities need to be coordinated with supply chain management to gain competitiveness. Accordingly, better service support to customers, improved information and inventory visibility, customizing pricing and promotion activities and identifying opportunities for new products are the variables in the strategic marketing benefits construct.

Competitive Marketing Performance

Investment in IT is a strategic issue in organizations as they are trying to gain competitive advantage through its deployment. Researchers and managers in organizations are therefore interested in seeking evidence that such investments produce better firm performance (Armistead & Mapes, 1993; Stratopoulos & Dehning, 2000). Ever since Srivastava, Shervani & Fahey (1999), developed a framework to understand the integration of marketing with business processes and identified supply chain management as one of the three core business processes that generate value for customers, there has been an increased interest to evaluate the marketing performance of investments in IT in the supply chain. A number of researchers (Wisner, 2003; Byrd & Davidson, 2003; Wu Yeniyurt, Kim & Cavusgil, 2006; Li, Ragu-Nathan, Ragu-Nathan & Rao, 2006; Kim, Cavusgil & Calantone, 2006; Fawcett, Magnan & McCarter, 2008) have included measures of competitive marketing performance benefits in assessing the impact of IT in the supply chain. Following Venkataraman & Ramanujam (1986), the measures that have been included in the Competitive Marketing Performance construct are sales growth, market share and customer satisfaction along with product and market development.

In summary, the constructs in this research study have been developed based on the review of the previous literature in the area of IT investment in supply chain. The objective of the study is to assess the impact of such IT investments on supply chain capabilities and its impact on competitive marketing performance of Indian manufacturing companies in their downstream supply chains.

The above discussion leads us to the following hypotheses which are tested in this study:

- *H1* *Level of IT usage influences supply chain capabilities positively.*
- *H2* *Supply chain capabilities impact operational benefits positively.*
- *H3* *Supply chain capabilities impact strategic marketing benefits positively.*
- *H4* *Operational benefits have a positive impact on strategic marketing benefits.*
- *H5* *Operational benefits have a positive impact on Competitive marketing performance of firms*
- *H6* *Strategic marketing benefits have a positive impact on competitive marketing performance of firms.*

RESEARCH METHODOLOGY

The study has adopted single cross sectional survey research design.In keeping with the scope of the research framework a questionnaire was designed to capture the responses of supply chain managers on the perceived impact of IT leveraged supply chain capabilities on competitive marketing performance. The questionnaire was mailed to 975 manufacturing organizations across various industry segments in India having an asset base of Rs.500 crores and above (Information obtained from Centre for Monitoring Indian Economy Prowess Data Base) which is used as the sampling frame for this study. A total of 307 complete responses were obtained from the downstream supply chain managers. These respondent managers belong to eight broad industry segments. The respondents were asked to fill out the questionnaire where quantitative responses were measured using a five-point Likert scale. The data has been analyzed through Structural Equation Modeling with the help of Amos 18.0 package.

ANALYSIS AND RESULTS

Structural equation modeling (SEM) is a popular statistical data analysis technique to develop and test theory as well as construct validation. SEM takes a confirmatory (i.e., hypothesis-testing), rather than an exploratory, approach to the data analysis. Confirmatory factor analysis (CFA) allows researchers to specify relations between the observed variables and the underlying constructs *a priori*, and to analyze the causal relationships between the latent constructs that are measured by observed variables.

Instrument assessment is an important part of testing the theoretical research model. CFA is performed by assessing the constructs for unidimensionality, reliability and validity. When the unidimensionality of a construct has been established, reliability and construct validity can be subsequently investigated. Unidimensionality mean that a set of measured variables (indicators) has only one underlying construct. After assessing unidimensionality, the measures are investigated for reliability and construct validity. Reliability refers to the consistency of the measurement. That is, the degree to which the set of indicators in a latent construct are internally consistent in their measurements. The constructs are examined for convergent validity which implies that the indicators for a specific construct should converge or share a high proportion of variance in common.

The results of the tests for Unidimensionality, Reliability and Validity in this study are presented in Table 1. The AVE values in Table 1 were found to be greater than the squared correlation estimates among the variables in the latent construct and thus also provided good evidence of discriminant validity.

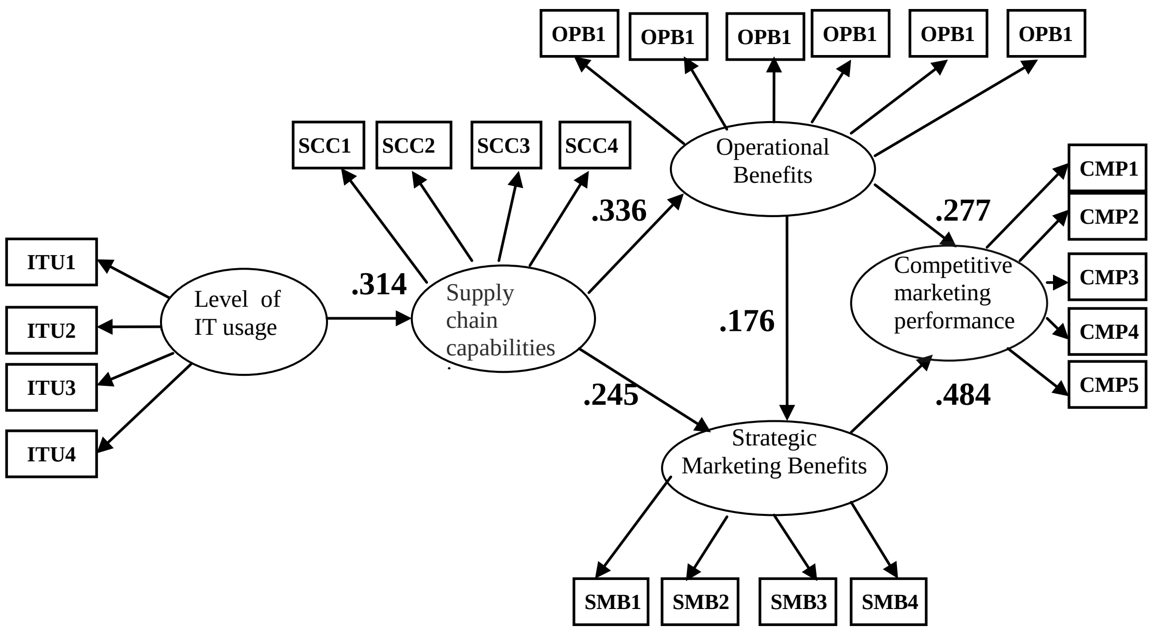
A structural equation model consists of two major sub-models – a measurement model and a structural model. The measurement model describes the relationships between a latent variable or theoretical construct and its observed variables or indicators. The structural model defines the relationships or paths among latent constructs. Adopting this two step approach in SEM, the measurement model was first tested for fit and the results are indicated in the Table 2. The fit indices are all above .90 indicating good fit of the measurement models. The structural model to assess the effects of IT usage on competitive marketing performance was assessed. The Standardized path coefficients and the overall fit statistics which show excellent model fit for the structural model are shown in Figure 1.

Regarding the hypothesized relationships, the SEM analysis finds all the relationships significant and the entire hypotheses are supported. Table 3 presents the results of the SEM analysis for the six hypotheses proposed in this study.

Table 1 **Unidimensionality, Reliability and Validity results for constructs**						
Factor/ construct	No. of items	Cronbach Alpha	Composite Reliability	AVE	CFI*	NFI**
Level of IT usage	4	0.854	0.903	0.700	1.00	0.997
Supply chain capabilities	4	0.863	0.907	0.711	0.992	0.989
Operational benefits	6	0.883	0.911	0.633	0.998	0.988
Strategic marketing benefits	4	0.820	0.885	0.658	0.977	0.973
Competitive marketing performance	5	0.835	0.885	0.609	0.932	0.925
*CFI=Comparative Fit Index >0.90 indicates Unidimensionality						
Cronbach alpha >.60 confirms construct reliability.						
** NFI=Normed Fit Index(Bentler-Bonnet Index) >0.90 & Composite reliability >.70 indicates Convergent Validity						

Table 2 **Measurement model fit indices results**						
S.No.	Construct	Chi square	GFI	NFI	CFI	RMSEA
1.	Level of IT Usage(ITU)	1.686	0.997	0.997	1.000	0.000
2.	Supply chain capabilities (SCC)	6.796	0.989	0.989	0.992	0.089
3.	Operational Benefits (OPB)	10.433	0.989	0.988	0.998	0.023
4.	Strategic marketing benefits (SMB)	12.135	0.980	0.973	0.977	0.090
5.	Competitive Marketing Performance (CMP)	45.20	0.942	0.925	0.932	0.076

Figure 1
Impact of IT leveraged supply chain capabilities on competitive marketing performance



Chisquare: 417.140 df: 221 CMIN/df=1.862. GFI: .917 NFI: .908 CFI: .945 RMSEA: .053 ***p<.001

Table 3
SEM Analysis – Results of tests of Hypothesis.

Structural Path	Hypothesis	Beta Coefficient	t-value	Decision
Level of IT Usage → Supply chain capabilities	H1	0.314	3.996***	Supported
Supply chain capabilities → Operational Benefits	H2	0.336	6.180***	Supported
Supply chain capabilities → Strategic Marketing Benefits	H3	0.245	5.953***	Supported
Operational benefits → Strategic marketing benefits	H4	0.176	3.717***	Supported
Operational benefits → Competitive marketing performance	H5	0.277	6.593***	Supported
Strategic marketing benefits → Competitive marketing performance	H6	0.484	7.374***	Supported
***p < 0.001 (Significant at 99.9% Confidence level)				
Beta => Structural Path Coefficient / Standardized Partial Regression Coefficient				

FINDINGS AND DISCUSSION

The study provides a theoretical research framework that identifies positive and significant relationships between constructs that were developed for level of IT usage, supply chain capabilities and its impact on competitive marketing performance. . The study has confirmed that the level of IT usage has a positive influence on Supply chain capabilities.

Firms need to be operationally responsive to compete in the market based on cost, quality, delivery and dependability of service by gaining Operational Benefits from IT investments in the downstream supply chain. They also need to give better service support to their customers through improved information and inventory visibility to their customers, customize pricing and promotion based on consumer reactions in the market and understand customer needs and introduce new products faster through acquiring Strategic Marketing Benefits from IT investments.

It was proposed that Supply chain capabilities would create a positive impact on both Operational Benefits and Strategic Marketing Benefits. Enhanced information sharing, coordination and collaboration with downstream channel partners leads to effectiveness in handling the ordering process, reduction in order fulfilment cycle times, perfect fulfilment of orders and improved delivery performance. Maintaining lower levels of inventory and satisfying customer orders is enabled due to greater shared forecast and sales information among the company and its downstream partners leading to reduction in inventory costs. It has been noted that an improved perfect order fulfilment rate from enhanced information exchange can contribute to firm performance. Supply Chain Capabilities was hypothesized to have a positive impact on Operational benefits and it was accepted.

As companies develop the capacity to execute their orders on time, in full and without errors they are in a position to render better service support to their customers. Customers' requirement for increased information about stocks is also enabled through improved information visibility through IT investments. They utilize IT to capture demand information in the channel and are now in a position to use the information at input to customize their prices and promotions which leads to greater effectiveness of firm performance. The improved information visibility enables firms to understand their customer needs proactively and introduce new products faster than their competitors. The study thus confirms that Supply chain capabilities impacts such Strategic marketing benefits positively.

It was expected that these supply chain capabilities will lead to operational efficiencies and strategic marketing benefits. As a firm's downstream supply chain activities are carried out in the market through distribution channels that reach the end consumer, market performance was adopted as the ultimate outcome dependent variable in the study, in order to assess the impact usage of IT resources by the firm. Marketing related metrics in SCM therefore measure sales growth, market share, and customer satisfaction. The market performance measures of sales growth and market share are the outcomes of efficiencies in the downstream supply chain activities observed in the market as a result of investment in IT. This study confirms the positive impact of IT on competitive marketing performance through creating a positive influence on operational and strategic marketing benefits.

The study and the findings provide practical implications for managers in the downstream supply chain. The findings of this research assure supply chain managers that IT investments in downstream supply chain have a positive impact on supply chain capabilities. The antecedent to creating good operational and strategic marketing benefits is the creation of supply chain capabilities. Operational and Strategic Marketing Benefits contribute positively to Competitive Marketing Performance.

Managers in supply chain tend to concentrate more on the operational efficiencies through a metrics-driven lens and fail to focus on the strategic marketing benefits that can be realized through effective deployment of IT resources in the downstream supply chain. For instance, information flows facilitated by IT can result in increased sales volume by reaching customers directly and promptly whenever a new product is introduced, and by tapping into new markets that were not identified due to lack of market data. IT enables a firm to respond to customer inquiries, track customer orders, and provide better after-sale service. This results in increased customer satisfaction and can lead to higher marketing performance.

CONCLUSION

The study demonstrates that the level of IT usage influences supply chain capabilities positively. IT leveraged supply chain capabilities have created a positive impact on operational and strategic marketing benefits. The study results indicate a higher positive impact from strategic marketing benefits than operational benefits and underline the importance of a strategic marketing benefit focus in the downstream supply chain. The study thus also highlights that there is room for improvement in the Operational Benefits area and managers in Indian manufacturing companies need to direct their efforts at improving the efficiencies to ensure higher positive impact on competitive marketing performance in future.

While the study has made contributions in the areas of both research and practice, there are limitations that need to be considered when interpreting the findings. Because of the limited number of observations (307), the revalidation of the model through split run tests or retaining a holdout sample to reassess the model could not be carried out in the research. This needs to be addressed in future research. In this research, individual respondents were from marketing, sales, and distribution, logistics and operations functions. They were asked to respond to complex SCM issues in the downstream supply chain. A single person cannot have a holistic view of the supply chain and asking responses from single respondents in a particular function may generate some measurement inaccuracy, for instance strategic marketing benefits may have been inaccurately assessed by logistics function respondents. Future research should involve multiple respondents from different functions in the same organization.

Future research can test the hypothesized structural relationships across industries and examine for possible industry-specific IT in SCM performance issues. Financial performance indicators can be included to assess firm outcomes more holistically than from the marketing viewpoint alone as done in this study. A longitudinal research on the benefits of usage of IT in downstream supply chain can be undertaken to track the pay-off to organizations in the long run.

REFERENCES

Armistead, C.G. & J. Mapes (1993). The Impact of Supply Chain Integration on Operating Performance. *Logistics Information Management*, 6(4), 9-14.

Angerhofer, B.J. & M.C.Angelides (2005). A model for performance measurement system for collaborative supply chains. 42, 283-301.

Barratt, M. & R.Barratt (2011). Exploring internal and external supply chain linkages: evidence from the field. *Journal of Operations Management*, doi:10.1016/j.jom.2010.11.006.

Boone, T. & Ganeshan R (2002). *New Directions in Supply-Chain Management: Technology, Strategy, and Implementation*. New York, AMACOM.

Byrd, T.A. & N.W. Davidson (2003). Examining possible antecedents of IT impact on the supply chain and its effect on firm performance. *Information and Management*, 41(2), 243–255.

Cao, M. & Q. Zhang (2011). Supply chain collaboration: Impact on collaborative advantage and firm performance. Journal of Operations Management, 29 (3), 163-180.

Chatterjee, P. & J. McGinnis (2010). Customized Online Promotions: Moderating Effect of Promotion Type On Deal Value, Perceived Fairness and Purchase Intent. *Journal of Applied Business Research*, 26(4), 13-19.

Christopher, M. & H. Lee (2004), Mitigating supply chain risk through improved confidence. *International Journal of Physical Distribution and Logistics Management*, 34(5), 388-296.

Fawcett, S.E., G.M. Magnan & M.W. McCarter (2008). Benefits, barriers, and bridges to effective supply chain management. *Supply Chain Management: An International Journal*, 13(1), 35-48.

Fleischmann, G. (2001). Sources for product ideas: a proactive view on the consumer. *Advances in Consumer Research*, 8(1), 386-390.

Frohlich, M.T. (2002). e-integration in the supply chain: Barriers and performance. *Decision Sciences*, 33(4), 537-556.

Grawe, S.J., H. Chen & P.J. Daugherty (2009). The relationship between strategic orientation, service innovation, and performance. *International Journal of Physical Distribution and Logistics Management*, 39(4), 282-300.

Gunasekaran, A., C. Patel & E. Tirtiroglu (2001). Performance measures and metrics in a supply chain environment. *International Journal of Operations and Production Management*, 21 (1/2), 71-87.

Hilletofth, P. & D.Eriksson (2010). Coordinating new product development with supply chain management. Industrial Management & Data Systems, 111(2), 264-281.

Hoffman, D. (2004). The Hierarchy of Supply Chain Metrics: Diagnosing Your Supply Chain Health. AMR Research report.

Holweg, M. (2005). The three dimensions of responsiveness. *International Journal of Operations and Production Management*, 25(7), 603-622.

Humphreys, P.K., M.K. Lai & D. Sculli (2001). An inter-organizational information system for supply chain management. *International Journal of Production Economics*, 70(3), 245-255.

Kaipia, R. & H. Hartiala (2006). Information sharing in supply chains: five proposals on how to proceed. *International Journal of Logistics Management*, 17(3), 377-393.

Kanda, A.A. & S.G. Deshmukh (2007). Coordination in supply chains: an evaluation using fuzzy logic. *Production Planning and Control*, 18(5), 420–435.

Kim, D., S.T. Cavusgil & R.J. Calantone (2006). Information System Innovations and Supply Chain Management: Channel Relationships and Firm Performance. *Journal of the Academy of Marketing Science*, 34(1), 40-54.

Kwon, D.W. (2003). *The Effect of Valuation Logics of Information Technology on the Company Performance: Pluralistic Assessment of Paradox*. Doctoral dissertation, Case Western Reserve University.

Lambert, D.M. & T.L. Pohlen (2001). Supply chain metrics. *International Journal of Logistics Management*, 12(1), 1-19.

Lapide, L. (2000). What About Measuring Supply Chain Performance? AMR Research white paper.

Leek, S., P.W. Turnbull & P. Naude (2003). How is information technology affecting business relationships? Results from a UK survey. *Industrial Marketing Management*, 32(2), 119-126.

Li, S., B. Ragu-Nathan, T.S.Ragu-Nathan & S.S.Rao (2006). The impact of supply chain management practices on competitive advantage and organizational performance. *Omega*, 34, 107-124.

Lummus, R.R., L.K. Duclos & R.J. Vokurka. (2003). The impact of marketing initiatives on the supply chain. *Supply Chain Management: an International Journal*, 8(4), 317-323.

Lumsden, K. & V. Mirzabeiki (2008). Determining the value of information for different parties in the supply chain. *International Journal of Physical Distribution and Logistics Management,* 38(9), 659-673.

Mentzer, J.T., S. Min & Z.G. Zacharia (2000). The Nature of Interfirm Partnering in Supply Chain Management. *Journal of Retailing*, 76(4), 549–568.

Morash, E.A. (2001). Supply chain strategies, capabilities and performance. *Transportation Journal*, 41(1), 37-54.

Neely, A. (2005). The evolution of performance measurement research: Developments in the last decade and a research agenda for the next. *International Journal of Operations and Production Management*, 25(12), 1264-1277.

Pereira, J.V. (2009). The new supply chain's frontier: Information management. *International Journal of Information Management*, 29(6), 372-379.

Rogers, D.S, P.J. Daugherty, & T.P. Stank (1993). Enhancing service responsiveness: The strategic potential of EDI. *Logistics Information Management*, 6(3), 27-32.

Sahin, F. & E.P. Robinson (2002). Flow coordination and information sharing in supply chains: Review, implications, and directions for future research. *Decision Sciences*, Vol. 33(4), 505-536.

Sambasivan, M., T. Nandan & Z.A. Mohamed (2009). Consolidation of performance measures in a supply chain environment. *Journal of Enterprise Information Management,* 22(6), 660-689.

Sanders, N.R. & R. Premus (2002). IT applications in supply chain organizations: a link between competitive priorities and organizational benefits. *Journal of business logistics,* 23(1), 65-83.

Shepherd, C. & H. Gunter (2006). Measuring supply chain performance: current research and future directions. *International Journal of Productivity and Performance Management*, 55(3/4), 242-258.

Sriram, V. & R. Stump (2004). Information technology investments in purchasing: an empirical investigation of communications, relationship and performance outcomes. *Omega*, 32(1), 41- 55.

Srivastava R.K., T.A. Shervani & L. Fahey (1999). Marketing, Business Processes, and Shareholder Value: An Organizationally Embedded View of Marketing Activities and the Discipline of Marketing. *Journal of Marketing,* 63, 168-179.

Stalk, G., P.Evans & L.E. Schulman (1992). Competing on capabilities: the new rules of corporate strategy. *Harvard Business Review*, 70(2), 57-69.

Story, V., H. Susan & L. O'Malley (2009). Relational resources and competences for radical product innovation. *Journal of marketing management*, 25(5/6), 461-481.

Stratopoulos, T. & B. Dehning (2000). Does successful investment in information technology solve the productivity paradox? *Information and Management,* 38(2), 103-117.

Tracey, M., J.S. Lim & M.A.Vonderembse (2005). The impact of supply-chain management capabilities on business performance. *Supply Chain Management*, 10 (3/4), 179-191.

Venkataraman, N. & V.Ramanujam (1986). Measurement of Business Performance in Strategy Research: A Comparison of Approaches. *Academy of Management Review*, 11(4), 801-814.

Wisner, J.D. (2003). A structural equation model of supply chain management strategies and firm performance. *Journal of Business Logistics,* 24(1), 1-26.

Wisner, J., G.K. Leong & K-C. Tan (2005). *Principles of supply chain management – a balanced approach*. Ohio, South-Western.

Wu, F., S.Yeniyurt, D.Kim & S.T. Cavusgil (2006). The impact of information technology on supply chain capabilities and firm performance: A resource-based view. *Industrial Marketing Management*, 35(4), 493-504.

Zacharia, Z.G., N.W. Nix & R F. Lusch (2009). An analysis of supply chain collaborations and their effect on performance outcomes. *Journal of Business Logistics,* 30(2), 101-123.

Zhang, J. & L. Krishnamurthi (2004). Customizing Promotions in Online Stores. *Marketing Science,* 23(4), 561-578.

Zhao, X., J.Xie & W.J.Zhang (2002). The impact of information sharing and ordering coordination on supply chain performance. *Supply Chain Management: An International Journa*l, 7(1), 24-40.

THEORY OF NEGOTIAUCTION: CONDITIONS FOR APPLICATION

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ABSTRACT

It seems only Subramanian (2010) has looked at dynamics of the real world negotiations and auctions and found limitations in negotiation and auction theories. In the same vein, thus far only Teich et al. (2001) have comprehensively discussed relevant design issues that are concerned with how to construct a negotiauction. By combining these two perspectives: the real world perspective and the theoretical perspective of Subramanian (2010) and Teich et al. (2001), respectively, a number of propositions are proposed with respect to when to negotiate, when to auction, and when to negotiauction. Future research directions are opened up with the purpose of empirically investigating negotiauctions.

INTRODUCTION

Negotiations are an integral part of the lives of almost all people in the world, and people negotiate about almost all aspects of their life. A variety of definitions of what a negotiation is have therefore been proposed. Most of these definitions seem to have a common characteristic that they view a negotiation as a decision process in which two or more parties try to influence each other through different means of communication with the purpose of achieving their own as well as common interests.

Many people also negotiate in their role as employees or owners of organizations. This may be termed professional negotiating, since people carry out these negotiations in their professional capacity. This goes on at all levels in all organizations all of the time. Negotiations are also carried out between organizations for business purposes, an aspect of professional negotiating that may be termed business negotiations. Business negotiations most commonly take the form of buyer-seller negotiations. How such negotiations are carried out and the outcomes they create naturally have a great impact on organizations.

Besides negotiations, auctions are a market mechanism already introduced in the ancient world. Traditionally, they allow selling rare and unusual goods, and apply in situations where a more conventional market in which buyers consider the price as given, do not exist. With the widespread availability of the Internet and e-commerce technologies, there are a variety of formats applied to auctions; however, forward and reverse auctions are the most popular. Forward auctions are often viewed as ascending price auctions and reverse auctions as ones in which prices start high and descend when the auctions progress.

Although both negotiations and auctions are viewed as two primary market mechanisms to sell and/or buy goods/services (Pinker et al., 2003), theories on them have limitations and they are often investigated in isolation (Subramanian & Zeckhauser, 2005). In negotiations, the main source of competitive pressure comes from the across-the-table dynamics. In contrast, in auctions, the competitive pressure comes primarily from same-side-of-the-table dynamics. The point here is that most real world situations include aspects of both same-side-of-the-table competition and across-the-table competition (Subramanian & Zeckhauser, 2004). So the objectives of this study are as follows:

1. Examine characteristics of negotiation and auction.
2. Investigate limitations in theories on both negotiation and auction.
3. Analyze conditions in which negotiations/auctions are used.
4. Build a set of relevant propositions relating to negotiation/auction/negotiauction
5. Open up avenue for empirical research on negotiauction

NEGOTIATION

Negotiation can be viewed as a decision making process through which consensus can be achieved. It is utilized in situations where entities like persons or organizations are very unlikely to pursue their goals unilaterally. Negotiations can be carried out in a variety of formats, in different circumstances, and impacted by many factors such as ethics, culture, and socioeconomics. Diversified backgrounds of negotiators and negotiation processes bring about many challenges facing researchers from multi-disciplines consisting of anthropology, psychology, sociology, political sciences, economics, law, and applied mathematics. There are a number of theories, models, and approaches for negotiations due to the fact that negotiations have been studied based on various assumptions and under different perspectives such as descriptive, prescriptive and normative.

The term negotiation in the literature is understood with different meanings. Under the economics perspective, negotiation and bilateral bargaining are utilized interchangeably (Bulow & Klemperer, 1995). Sebenius (1992) proposes a progressive negotiation process that commences with an inefficient offer and moves to an efficient (Pareto-optimal) compromise. Under negotiation analysis, some practical issues, for example, not fully rational behavior of negotiators, non-binding commitments, and incomplete information are stressed.

The negotiation process with the focus of interpersonal communication aimed at establishing and changing negotiation perceptions and attitudes have been extensively investigated by behavioral studies. In these studies, negotiation is considered as any process in which social interaction and communication consisting of allocation and reallocation of resources, commitments, and power occur (Pruitt, 1981). The behavioral studies have been making many contributions by devising various heuristics and qualitative models and approaches that are proved to be useful in negotiation practice.

In order to thoroughly and comprehensively understand the negotiation process, models, concepts and approaches devised from law and social science and those from economics and management science are needed to be integrated.

By doing so, negotiation is viewed as a decision making process with interactive communications between two or more agents (parties or their representatives) who:

1. Are unlikely to gain their goals unilaterally;
2. Implement exchange processes consisting of offers and counteroffers;
3. Deal with interdependent tasks; and
4. Search for a consensus which is a compromise (Bichler et al., 2003).

It should be noted that a compromise or a disagreement can be resulted from a negotiation. In order for negotiations to occur, an agenda needs to be established. The agenda is aimed at specifically providing a negotiation framework that consists of specification of negotiated issues and format where they are presented, for example negotiated issues are implemented in a sequential or simultaneous manner. In addition, under the negotiation framework, rules need to be specified so that alternatives and concessions can be determined, analyzed, and selected. Among the rules, communication roles play an important role in making favorable conditions for offers, counter-offers, and arguments to be exchanged. In negotiations where some tasks can be implemented by software, it is necessary to specify rules so that a distinction between tasks implemented by a system and by human can be observed.

There are various strategies that negotiators can pursue in negotiation situations. However, the most popular strategies are collaborating and competing ones. These strategies are also named after Integrative vs. Distributive negotiation in the literature. Integrative negotiation is expected to be utilized in situations where parties want to develop a relationship such that joint outcomes can be maximized for all the negotiators. By using integrative negotiation, negotiators' objectives are likely to be achieved. By contrast, negotiators view key resources as being limited and controlled in a distributive negotiation. Put it another way, a distributive negotiation is considered as a fixed pie situation. Under fixed pie circumstances, it is unlikely to nourish a long term relationship due to the fact that the gain one party earns is the loss the other party incurs (Ruane, 2006):

Distributive negotiation: Under this strategy, a zero-sum game is assumed meaning that the gain one party earns is the loss the other party incurs (Ruane, 2006). Barry et al. (2004) argue that the outstanding reason for a distributive or a zero-sum situation to occur is that parties' goals are interrelated in such a way that correlation coefficient is negative meaning that when one party earns its goals, that of the other party gets blocked. In single issue negotiations, Johnson and Johnson (2006) argue that under a distributive negotiation, one party earns benefits only if concession has to be made by the other party. Put another way, one is going to maximize their outcomes while minimizing that of the other parties. Whenever a short term relationship among negotiators is prevalent and their wants, needs and goals are critical, they often utilize the distributive approach. However, it should be noted that under this approach, deficient trust and sincerity are likely to be brought about. In turn, deficient trust and sincerity lead the negotiators to focus on only their outcomes while ignore the outcomes of the other ones.

If a distributive strategy is utilized by someone, someone must be able to respond to his or her opponent in a decisive manner. If not doing so, there is no challenge under the view of the opponent and the opponent may think that his counterpart has put down his guard. Keeping an offensive position and gaining control is very important because it helps the negotiators know directions for communications when they want to utilize offensive tactics (Donohue, 1981). It should be noted that many drawbacks rooted in distributive negotiations such as unfavorable effects on collaboration among the parties in the future. That is why under this strategy, people often assume that future relationships are not important. But the negotiators should be careful that the probability that they will not meet again is very small, and if it happens, revenge made by the opponents is highly possible. So it would be better for the parties to overcome conflicts by taking joint outcomes into consideration.

Integrative negotiation: Under this approach, joint gains are assumed to be created through creative communication and information sharing (Ruane, 2006). In other words, parties work closely in efforts to search for a solution that is beneficial for all of them by maximizing joint outcomes. By utilizing the integrative strategy, it is assumed that nourishing a good relationship with the other party is more important than focusing only on one's own interests (Johnson & Johnson, 2006). It is obvious that a positive correlation exists among the goals of the parties, and their goals can be gained via the integrative or non-zero-sum game (Barry et al., 2004). So, the negotiation environment is very cooperative (Donohue, 1981).

In an integrative approach, joint outcomes are pursued by both parties. The most important thing to do is to nourish a relationship based on mutual benefits. Therefore, integrative negotiation can be viewed as a very difficult process. For example, how members in a family live in harmony is vital. In order to maintain a long lasting relationship, each member has to think about reciprocity based on mutual responsiveness. In an integrative approach, if a cooperative long term relationship is pursued by the parties, they need to understand dynamics rooted in the relationship such as roles, responsibilities, interaction behavior, and other factors that are likely to reinforce their cooperation (Johnson & Johnson, 2006).

Another important concept in negotiation is BATNA. BATNA stands for Best Alternative to a Negotiated Agreement. BATNA is devised by Fisher & Ury (1981) in their bestseller - Getting to Yes: Negotiating without Giving in. BATNA is the alternative the negotiator can make if he or she finally thinks that a favorable outcome cannot result from negotiating with a particular party. In other words, parties can stop the negotiation process if their BATNA is better than the outcome expected from the negotiation.

Good BATNAs are likely to bring about power for the parties. That is why a negotiator often makes great efforts to better his or her BATNA whenever possible. Skilled negotiators can guess when their opponent is desperate for an agreement. If this situation occurs, the negotiators are likely to demand much more based on the fact that their opponent will have to accept. In contrast, if there are numerous options for the opponent outside the negotiating table, the negotiator would try to make great efforts to better his or her BATNA before participating in the negotiation so that he or she can gain a better negotiation position.

Another important concept used in research on negotiations is the bargaining zone model devised by Raiffa (1982). Under this model, each negotiator has a reservation price – a price at which the negotiator would be indifferent between implementing the negotiation agreement or stopping it (Raiffa, 1982). Specifically, negotiators will not come into a negotiated agreement that is worse than their least acceptable outcomes. Therefore, if the negotiators' reservation prices are overlapped, the possible agreement zone will exist (Raiffa, 1982).

Recently, the Internet has been emerging as an important channel for business transactions including e-negotiations. As a matter of fact, many negotiations have been carried out electronically in e-commerce and e-business. Furthermore, many applications of computer and information technologies have been applied in attempts to make favorable conditions for negotiations, aid human negotiators, and facilitate software agent collaboration as well such as MIT Deep Ocean Mining model and IIASA RAINS model (for further information, see Kersten & Lai (2007)). In today's business arena that is characterized by interdependence and constant changes, negotiations are indispensable for businesses with respect to time and effort spent for them. Thus, systems based on computer power have an important role in upgrading negotiation efficiency and effectiveness that are likely to have keen effects on negotiation outcomes of organizations and individuals (See Kersten & Lai (2007) and cybersettle.com for further information on negotiation support and e-negotiation systems).

AUCTION

The word auction has its root in the Latin language that can be understood as "go up" (Webster, 1999). Under the traditional perspective, auctions are viewed as economic mechanisms to find prices for assets that are not placed on traditional markets for transactions and that have very unique and/or rare characteristics that are very difficult in determining the suitable prices on traditional markets. An auction brings about a forum that can be considered as a marketplace where potential bidders can gather. So, one of the outstanding functions that auctions take is to create liquidity for marketplaces where the asset prices can be set up that are expected to be close to true market value.

According to Klein (1997), auctions are described as efficient allocation mechanisms at which consumer items can be sold that are unlikely to be done via traditional market mechanisms because of the following:

+ Items for example airline seats with their limited life time, or items that can be unusable after a given time.

+ Items' older versions are separated from their new ones, or

+ Items that may be reconditioned or discontinued.

Types of auctions:

McAfee and McMillan (1987) classified various types of auctions into four distinct groups: The English auction, the Dutch auction, the first price sealed bid auction, and the second price sealed bid auction.

* English auction

English auctions or forward auctions are described as economic mechanisms where bidders can attend to openly compete with each other to have opportunities to buy an asset. The bidder who values the asset the most will become the winner. It should be noted that when the auction comes into the end, the final price is not necessary the true market price but the final valuation for the asset auctioned that is expected to be close to the true market value (McAfee & McMillan, 1987).

* Dutch auction

Dutch auctions are viewed as descending auctions that present a perspective bidder with a price that may be contested with a competitive bid or bids in a downward direction until the auction comes into the end. The asset is sold to the lowest bidder at the close of the auction (first to stop clock wins the auction). It should be noted that the final price is not necessarily the true market price but the final valuation of the item auctioned that is expected to be close to the true market price (McAfee & McMillan, 1987).

Online reverse auctions share some common characteristics with Dutch auctions except for limited sharing of information. The information that is not shared with the bidders may consist of the buyer's identity, the bidders' identity, the asset's reserve price, and the historical piece price of the asset (McAfee & McMillan, 1987).

* First price sealed bid auction

In a first price sealed bid auction, bidders submit their best bids only one time to the seller in a sealed envelope. All of these bids will be opened at the same time. In ascending auctions, the highest bidder is awarded the asset while in reverse auctions the lowest bidder is awarded the asset. First price sealed bid auctions do not provide bidders any opportunity to see bids of their competitors, make changes in their reserve prices, or resubmit new bids. The winning bidder is required to pay the amount submitted in his or her bid to the seller. First price sealed bid auctions are often utilized in governmental procurement (McAfee & McMillan, 1987).

* Second price sealed bid auction

This kind of auction also known as the Vickrey auction is named after its classifier William Vickrey - the 1996 Nobel Prize winner in economic science. It should be noted that Vickrey (1961) discussed this kind of auction that share many common characteristics with the first price sealed bid auction except for one distinct thing. In spite of the fact that depending situations (forward or reverse) the winning bidder is the one who has the highest or lowest bid, he or she has to pay the amount listed on the bid of the second highest bidder.

* Online reverse auctions

It is obvious that e-commerce has been changing the way firms are doing business. Information and communication technology plays an important role in today's business. In addition to the introduction of new technologies which help to streamline processes within companies, e-commerce has become the most recent trend. E-commerce can be described as business transactions that occur via open-networks, such as the Internet (Organization for Economic Co-operation and Development - OECD, 1997). These new information and communication technologies have been bringing about new opportunities and mechanisms for businesses to cooperate or to compete by effectively utilizing computer power, communication capabilities through the network. It also helps that an increasing number of people and businesses are simultaneously online. E-commerce has the potential to streamline and improve business-to-business, business-to-consumer as well as consumer-to-consumer transactions.

In terms of business-to-business e-commerce, online reverse auctions have been being used by a number of Fortune 1000 companies as a tool to drive down the price of purchased products and services (Emiliani & Stec, 2004). There are a variety of formats applied to auctions; however, forward and reverse auctions are the most popular (Emiliani, 2000). Forward auctions are often viewed as ascending price auctions and reverse auctions as ones in which prices start high and descend when the auctions progress. Emiliani (2000) simply defines that business-to-business online auctions are downward pricing and hence reversed. Smeltzer and Carr (2003) argue that the reverse auction is a price-decreasing format. Jap (2003) defines reverse auctions as declining price auctions where sellers bid instead of the buyer (forward) auctions. Parente Entrepreneur al. (2004) suggest that the difference lies in the number of buyers and sellers, whereas reverse auctions have one buyer and many sellers.

However, it should be noted that in few situations, the bids do not necessarily go down during the auction event, instead they go up; but the nature of the auction is still "reverse" because it has one "buyer" and many "sellers". For example, some websites are working as market-makers for commercial banks and their consumers. One of them is MoneyAisle.com that can be viewed as the next generation online auction marketplace. MoneyAisle is different from other online auction sites due to the fact that it is a buyer concentrated auction, not seller concentrated one like eBay. By utilizing MoneyAisle, they claim that consumers are very likely to find good rates on Bank CDs and Saving Accounts. Specifically, whenever, a consumer posts the amount of money and duration he or she wish to invest in Bank CDs or Saving Accounts, via MoneyAisle, a number of banks actively bid against each other in a live (however with automatic bidding – no humans) auction and the interest rates continuously increase until there is one bank left with its highest rate given to the consumer. For further information about MoneyAisle, please visit MoneyAisle.com.

Online reverse auctions can bring about benefits for not only buyers but also suppliers. Via online reverse auctions, suppliers can gain market information, create new markets for better excess capacity management, and attract new customers from their competitors. In addition, online reverse auctions are expected to help suppliers distil valuable information with respect to their competitors' cost structures that are likely to make them become more efficient and effective in the long term.

Besides these above-mentioned benefits that online reverse auctions can bring about, concerns relating to online reverse auction adoption and usage have been pointed out. One of the major concerns is that online reverse auctions only concentrate on the interests of the buyer while ignoring that of the suppliers. It is likely that long-term relationships between buyer and supplier can be destroyed if final price is the only priority of the buyer and if winner determination procedures through the auctions are biased towards the buyer (Jap, 2007). Furthermore, the feeling of being taken advantage of stems from forces to continuously reduce prices makes suppliers put up resistance to attend online reverse auctions (Jap, 2002).

LIMITATIONS OF NEGOTIATION AND AUCTION THEORIES

Based on what are happening in the real world negotiations and auctions, Subramanian (2010) has distilled limitations in negotiation and auction theories as follows:

Limitations in Negotiation Theory

Although negotiation theories have been making many contributions to the understanding of the real world negotiations, they have some limitations in their own. One of the primary ones is related to the concept of BATNA - Best Alternative To A Negotiated Agreement. In spite of the fact that this concept is very helpful in many dispute resolution situations, there are other situations where the concept is less helpful. For example, think about a situation where one is making attempts to sell a product to a potential customer – this can be viewed as a classic negotiation. In this situation, a possible question is that what is their BATNA? Perhaps the expected answer is the possibility of some other deal. It should be noted that this BATNA is not an alternative to a negotiated agreement. In almost all situations, one can follow the alternative deal and follow the deal at the table. By utilizing the concept of BATNA, there is an assumption that the alternative deal and the deal at the table are mutually exclusive (Raiffa, 1982). However, the concept of BATNA in many deal-making situations in reality does not work due to the fact that deals are not mutually exclusive. For example, return to the above-mentioned example, one is able to sell to zero, one, two, or twenty potential customers. In other words, the concept of BATNA is not incorrect because they'd better prepare their BATNA prior to participating in any negotiation; however, as for more complex deals in reality, the concept of BATNA cannot go beyond the obvious (Subramanian, 2005).

Another limitation is related to empirical studies on negotiations. It should be noted that there is an increasing literature on negotiation behavior under perspectives of social psychology and behavioral economics. One important question is “Are these empirical studies useful to dealmakers in reality?” (Subramanian, 2010). If so, it is important that real dealmakers understand these studies so that they can effectively construct the ZOPA – Zone of Possible Agreement – an overlap between the negotiators’ reservation prices.

In order to thoroughly answer this question, we should know how almost all empirical studies have been carried out. It is obvious that the researchers in these studies have intention to overlook real-world negotiations due to the fact that it is very difficult to collect data on real deals; or if possible, controlling for numerous factors that are expected to have effects on these negotiations in order to meaningfully compare deals is very difficult. More precisely, almost all empirical studies on negotiations have been carried out by utilizing data from students in undergraduate classes (Mithas & Jones, 2006). For example, there is one recent article that implemented a survey of all empirical negotiation studies published in top-tier, peer-reviewed journals in the 1990 – 2005 period. The surprising finding is that two thirds of these studies utilize classroom data (Bendersky & McGinn, 2008).

Real dealmakers have the tendency to overlook classroom data due to the fact that there are often no financial incentives for the experimental subjects to seriously pursue negotiations. Sometimes, there are other kinds of incentives for the subjects such as extra grades or so that they are expected to participate in negotiations well; however, such incentives are likely to make the results to be difficult to be interpreted. Besides utilizing classroom subjects in negotiation experiments, economists tend to utilize laboratory environments at which a number of factors that are expected to have effects on negotiations such as incentives of participants are likely to be measured and controlled in a careful manner. In these laboratory environments, subjects go to the lab and carry out certain negotiation tasks that are expected to bring about knowledge relating to how negotiations work. Typically, there are some show-up fees plus additional monetary income depending on how well they do in the exercise (Subramanian, 2010).

It is not surprising that almost all of the lab participants are students in universities. Thus, there are many similar characteristics between lab contexts and classroom contexts at which negotiations are experimentalized; however, in the lab contexts, a notable difference exists in the sense that the subjects gain some financial incentives. But it is important that raising questions such as “if tiny financial incentives are sufficient to bring about impetus for the subjects to do well” and “if tiny financial incentives are very likely to create a difference between lab and classroom contexts need to be answered (Milgrom, 2004).

Another problem is whether or not inferences for real world negotiations can be made based on findings derived from the classroom and laboratory experiments. This can be considered as a basic problem in almost all efforts of the academic community. Think about one example that it is evident that a new drug is invented works for a kind of animal in laboratory experiments. However, the point here is will humans react the same way as the kind of animal? In the similar vein, it is very surprising that academics have spent little time and effort to examine if the findings derived from low stakes experiments done with university students inferred into negotiations in the real world (Subramanian, 2010).

Lastly, in negotiation experiments in lab or classroom contexts, BATNAs are utilized in a static manner. To put it another way, BATNAs are very well defined as the alternatives for the subjects if they are not successful in reaching their negotiated outcome. In the experimental studies, subjects are rarely allowed to pursue dynamic BATNAs but very often precisely defined BATNAs (Subramanian, 2007) . However, it should be noted that negotiations in the real world are much more complicated than those in experimental studies with precisely defined BATNAs. In addition, precise specification of the negotiation process is required by these studies; however, almost all complex negotiations in reality have the process that is very murky and messy, and does not follow the precise specification. In a word, research done by using data from lab and classroom contexts is unlikely to dig into the way where real deals actually get done (Bapna et al., 2006).

Limitations in Auction Theory

Like negotiation theory, precise specification of the situation structure is required in auction theory. Thus, there is a big gap between auctions implemented in experimental contexts and those carried out by real dealmakers. As noted by well known auction theorist Klemperer that much existent auction literature is insufficient for designing practical auctions (Klemperer, 2004). Obviously, the auction literature seems to concentrate on things that are not important and useful for those implemented in the real world (Hendricks & Paarsch, 1995).

From these above comments, problems rooted in the experimental studies are well defined situations in which auction rules are specified and strictly followed in a precise manner, so the only thing to do is to find an optimal strategy for both buyers and sellers. Another problem rooted in the existing auction theory is that almost all of auctions in reality seem to be pure auctions such as FCC spectrum license auctions and art auctions. These auctions are considered as important situations, and economists seem to concentrate on them due to the fact that clear rules are specified in them. It should be noted that with rules clearly specified, auction problems are likely to be tractable. However, tractable problems are quite far from what sophisticated real dealmakers are dealing with (Subramanian, 2010).

In reality, auctions are often carried out in a messy and murky manner. In other words, their rules are unclear and constantly changing. Price is one dimension among multiple ones interested. The seller (or the buyer depending on situations) is not a passive participant when the auction rules are set up. Thus, dynamics of factors that are expected to have influence on real world auctions do not conform to the fundamental assumptions made by almost all auction theories (Pinker Entrepreneur al., 2003). More specifically, it is unlikely to find out an answer from auction theories due to the fact that they have been ignoring interactions between negotiations and auctions, which can be considered as two facets of the same phenomenon (Subramanian, 2010). The rest of this paper is aimed at integrating auction theory and negotiation theory to form a new term – negotiauction – that is expected to jump over the aforementioned limitations rooted in both auction and negotiation theories.

NEGOTIAUCTION

What is a negotiauction? A negotiauction can be defined as a dealmaking situation where competitive pressure stems from both across the table competition and same side of the table competition (Subramanian, 2010). Or put it another way, negotiauction is a hybrid entity that combine characteristics of both auction and negotiation (Teich et al., 2001).

Before digging into how negotiauction works, there are several factors that need to be taken into consideration regarding when to hold an auction and when to hold a negotiation. These factors are distilled by Subramanian (2010) as follows:

Bidder Characteristics

Number of bidders: One of the very important factors in determining what economic mechanisms – auction or negotiation - to be used is number of bidders. If a significant number of bidders exist, it would be better for sellers to organize an auction; and by contrast, sellers are suggested to negotiate privately with a few of potential buyers. In other words, it is very likely for sellers to hold an auction as the number of serious potential buyers goes up. In situations with a significant number of serious potential buyers, sellers will have advantages stemming from high competition of the same side of table. In such situations, holding an auction is preferred over holding a negotiation because buyers are given discretion to drive the price up. Thus, we propose that:

> ***Proposition 1.*** *Sellers are very likely to utilize auctions when there are a significant number of serious potential buyers.*
> ***Proposition 2.*** *Sellers are very likely to utilize negotiations when there are a few of serious potential buyers.*

Certainty degree about bidders: Another important factor worth being considered is your certainty degree about who the bidders are so that one can make their final decision regarding how to hold an auction or a negotiation. For example, suppose that a government is seeking a contractor to construct a nuclear electricity generator plant, and of course there are just a few contractors that are valued as being qualified to implement such a multi-million dollar contract. In such a situation, it is evident that holding an auction does not make any sense. In such a situation, Subramanian (2010) states that the best thing to do is to go to negotiate with some contractors who are really capable of constructing the plant. However, there are some other situations in which it is very difficult for one to search for highly qualified buyers and of course doing so will cost them in terms of their time, money, and efforts. In such a situation with high search cost, organizing an auction by making it known to the world is better because highly qualified buyers will search for you. Thus, we propose that:

> ***Proposition 3.*** *Sellers are very likely to utilize auctions when searching costs are very high.*
> ***Proposition 4.*** *Sellers are very likely to utilize negotiation when there are a few of qualified buyers and certainty degree about such buyers is very high.*

Participation incentives: Bidders often take precaution of attending auctions. There are some circumstances in which they are highly inclined to utilizing a negotiation mechanism to bring bidders to the table. The implication here is that if BATNAs of the bidders are very good, they should negotiate privately with them in attempts to bring them to the table. In addition, it is possible that a number of bidders do not want to attend auctions because they are afraid of the fact that their expertise and knowledge can be taken advantage of by other bidders. Thus, we propose that:

Proposition 5. *Sellers are very likely to utilize negotiations when buyers have very good BATNAs.*
Proposition 6. *Sellers are not very likely to utilize auctions when buyers are afraid of their expertise and knowledge being taken advantaged.*

Valuation distribution: Lastly, bidders' value distribution plays an important role in deciding what economic mechanism – auction or negotiation – is used. There are some situations in which a significant number of bidders exist, but one still may want to negotiate privately if there is a big gap between the two top bidders. In such situations, one is likely to leave much value on the table by organizing an auction because the predicted outcome in an auction is the second-highest valuation plus the bid increment. Thus, we hypothesize that:

Proposition 7. *Sellers are very likely to utilize negotiations when a significant number of buyers exist but there is a big gap between the two top buyers.*

Asset Characteristics

+ Asset specification: An important factor that needs to be taken into consideration regarding whether to organize an auction or a negotiation is their ability to specify their asset. It is evident that the more they are able to specify what they want, the more likely they should be to hold an auction. For example, if they are buying or selling a commodity, utilizing an auction is the best. In addition, if their asset is not a commodity but they can build a utility function (scoring function) that precisely embraces their preferences, they can organize a multi-attribute auction that is expected to work well in such a situation. In cases where these above conditions are not satisfied, they would be very likely to negotiate privately with one or some serious potential buyers. Thus, we hypothesize that:

Proposition 8. *Sellers are very likely to utilize auctions if assets are easily specified.*
Proposition 9. *Sellers are very likely to utilize negotiations if assets are difficult to be specified.*

+ Value creation: Another important factor worth being considered in deciding if to auction or negotiate is value creation possibilities. Auctions are traditionally viewed as mechanisms aimed at incorporating all dimensions to price; however, incorporating everything to price is completely different from what one would like to do in attempts to search for and take advantage of value creating opportunities. In situations where win-win moves are possible, implementing a negotiation with one or some serious potential buyers is better than organizing an auction. In such situations, implementing a negotiation is likely to bring about opportunities for one to learn each others' preferences, make tradeoffs across different issues, and construct a deal based on a larger pie, not a fixed one. Thus, we propose that:

Proposition 10. *Sellers are very likely to utilize negotiations when value creating opportunities are emphasized.*

+ Relationship importance: Lastly, factors like relationship, service, and/or deal execution need to be carefully investigated in terms of their relative importance they attach to what is being bought or sold. The more important these factors are the more likely one should be inclined to utilize negotiations. That is why in many situations, both buyers and suppliers have been very reluctant to utilize e-auctions in the procurement context. Specifically, in the context of supply chain management in which vertical partnerships are considered as a best practice, auctions do not work well. By utilizing these reverse auctions, a notable signal is elicited that the buyer is going to treat all the suppliers in the same way except for prices of auctioned items. It should be noted that focusing only on price is likely to create serious problems in the future that can have negative influence on both buyer and suppliers' final outcomes. Thus, we propose that:

> ***Proposition 11.*** *Sellers are very likely to utilize negotiations when future relationships between sellers and buyers are emphasized.*

Seller Characteristics

According to Subramanian (2010), seller characteristics are worth being considered in making final decisions about whether to auction or negotiate. Among seller characteristics, there are two primary factors that often go in opposite directions with each other namely speed and risk. It is expected that auctions are better than negotiations in terms of speed, thus whenever speed is emphasized, use an auction mechanism. However, speed often goes with risk due to the fact that you are provided with less time to change your strategy based on new information gained.

+ Speed: It takes time to identify interests, create options, and take advantage of value creating opportunities in almost all the moves happening in private negotiations. In addition, issues in negotiations are often handled in a sequential manner while those in auctions are handled in a simultaneous manner due to the fact that you are unlikely to negotiate with two or more different parties exactly at the same time. There are some circumstances in which they don't have this time because they are losing an opportunity to sell, or there is a chance that the asset is degrading if they keep it for a long time. In such circumstances, organizing an auction will ignore value creation opportunities in return for speed of sale. Thus, we propose that:

> ***Proposition 12.*** *Sellers are very likely to utilize auctions when speed is emphasized.*

+ Risk: As noted above, auctions are expected to be faster than negotiations. However, speed goes along with risk with a positive correlation coefficient. One is likely to face a situation in which nobody shows up in an auction, or equally bad, there is only one bidder showing up in the auction. By contrast, one is allowed to move more slowly in negotiations in attempts to search for value creating opportunities to achieve a better outcome. Thus, we propose that:

> ***Proposition 13.*** *Sellers are very likely to utilize negotiations when risks (go along with speed of auctions) are emphasized.*

Contextual Factors

There are two contextual factors that need to be taken into account to determine if an auction mechanism or a negotiation mechanism is preferred over the other. These factors are the need for secrecy and the need for transparency.

+ Secrecy: It should be noted that it is very difficult to keep bidders' information (identity) secret in auction mechanisms. Although confidentiality agreements are required between the seller and the bidders, it is very likely that information leak occurs increasingly as the seller shops the asset. Thus, whenever secrecy is emphasized, the seller is suggested to negotiate privately with one or with serious potential buyers. Thus we propose that:

Proposition 14. *Sellers are very likely to utilize negotiations when secrecy is emphasized.*

+ Transparency: Another factor that is equally important as secrecy is transparency. Transparency is related to the concept of a level playing field under the view of bidders. It is expected that auctions are better than negotiations in terms of transparency, and whenever transparency is emphasized, it is likely that an auction should be organized. This is the reason that auctions are very popular and utilized in the area of most public procurement contracts and government privatizations, particularly in situations in which the government would like to erase criticisms about possible corruption/favoritism. Thus, we propose that:

Proposition 15. *Sellers are very likely to utilize auctions when transparency is emphasized.*

Common Design Features in Negotiauction

The following common design features are distilled by Teich et al. (2001). Actually, Teich et al. (2001) have developed a system for implementing negotiauctions, but no empirical studies have been so far carried out to investigate the economic performance of it:

1. Negotiauctions are better used in situations where there are several potential buyers, perhaps somewhere between three and ten. In case of more than ten buyers, it is extremely difficult for the seller to make a serious investment in negotiations with more than a few of them. In such a situation, an auction mechanism is often preferred over a negotiation mechanism, although it may apply some negotiation characteristics, especially when approaching towards the end.

2. There is often an asymmetric information situation where the situation structure is better known by the seller than the buyers at least at the beginning stage. One example is that the asset itself is often better known by the seller than the buyers. In addition, the seller is able to know who are serious potential buyers though he or she might not understand fully motivations under the buyers' interest. Also, information circulating among the buyers is controlled by the seller at least at the beginning stage. Finally, the seller dictates if, when, and how potential buyers understand the initial structure of the negotiauction situation.

3. One-on-one negotiations are carried out between the seller and various potential buyers. One of the outstanding reasons that negotiauctions deviate from traditional negotiation mechanisms is that the seller's BATNA is fluid, not static, due to the fact that negotiauctions are likely to bring about opportunities for the seller to negotiate with potential buyers on the same side of the table.

4. In negotiauctions, there are one or more rounds of bidding and other forms of direct competition among potential buyers in ways that resemble auctions. Unlike traditional auction mechanisms, the rules in these auction rounds of negotiauctions are expected to be murky and messy, and subject to potential changes that can bring about both opportunities and challenges for the bidders.

We propose that:

Proposition 16. *Sellers are very likely to utilize NegotiAuction when a number of buyers are in a range of 3 – 10.*

Propostion 17. *Sellers are very likely to utilize NegotiAuction when BATNAs are fluid (not static).*

Proposition 18. *Sellers are very likely to utilize NegotiAuction when game rules are murky and messy.*

Issues relating to the negotiauction design:

The following are major features of Negotiauctions in terms of design issues:

1. Negotiable Bid Issues and Bidder Attributes are used to take multiple issues into consideration with the purpose of differentiating among bidders:

A. Negotiable Bid Issues: Issues other than price and quantity included in the actual bid. Discounts can be used for different levels of such issues. For example, a warranty level of 3 years with a discount of $0 and a warranty level of 4 years with a discount of $5 per unit, and so on.

B. Bidder Attributes: Information on bidders (characteristics of bidders). For example, bidders are ISO certified or not.

2. Scoring, Rating and Ranking of bidders. Bid premiums (or penalties, also known as "set-asides") can be used to discriminate among bidders, without their knowledge.

3. A variety of constraints can be set up such as limits on quantity for each bidder or a group of bidders, limits on negotiable bid issues, and so on. The simplex algorithm is imbedded in the system so that all the constraints are met. The algorithm then makes suggested bids to the bidders to make their bid active in real time.

4. Three modes of the auction are:

A. Auto Mode: Prices are suggested by the system to the bidders to make them active. This is the auction mode of the system.

B. Manual Mode: By using this mode, negotiations between the auction owner and the bidder can be carried out one on one during the event.

C. Pause Mode: Bidders can be put on the hold state during the event.

In matching the seller and the buyers, Negotiauction is believed to combine the best characteristics of auctions and negotiations. Negotiations can bring about much flexibility for discriminating among the bidders.

With the auto mode mechanism, the price suggested by the system to the bidder to make his bid active in the auction is computed based on NBI discounts, bid premiums, reserve prices and bid increments. This characteristic can be considered as an advantage to the bidder due to the fact that he is always aware of where he is standing and what decisions he has to make to become active. It should be noted that by using the system, only the seller has information on all bids from the bidders and the bidders can be confident that their rivals are unable to achieve a lot of information about their private pricing strategies.

In addition, with the auto mode, Negotiable Bid Issues can be processed in the way that preferred levels for an issue are given discounts. By utilizing this system, score or value functions over multi-issues are not needed and that is different from other research in the literature. In the same token, utilizing Bidder Attributes brings about favorable conditions for the seller to realize bid premiums on individual bidders aimed at discriminating among them.

Specifically, in the auto mode, each NBI is assigned a discount for each level whereas BAs are not given premium**s** for each level. To put it another way, the overall ranking of each bidder is taken into consideration such that bid premiums (penalties) can be set up for each bidder. Another characteristic of the system is that explicit constraints can be applied by the seller meaning that the bidders can be assigned limits on quantities and bidding levels on NBIs. This move brings about the advantage to the seller in the sense that the system algorithm can solve complex decision situations automatically that are quite different from traditional negotiations.

As for the manual mechanism, NBI discounts, bid premiums, and constraints are not applicable so that the request price button is no longer utilized. In this situation, one on one negotiations can be carried out between the seller and the buyers during the event. Each bidder can take advantage of making his bid more attractive in the eyes of the seller by providing new issues. By doing so, it is possible that the bid is locked by the seller. In the same vein, the seller can bring up new issues while the auction process keeps going with the other bidders.

In a word, the outstanding advantage that negotiauctions are expected to bring about for the seller is that it is likely to be used in complicated situations and all the bidders can be discriminated against by the seller based on the system characteristics. The seller has freedom to negotiate with the bidders whenever he wants. As a benefit for both, it is expected that Pareto optimal outcomes may result and total time for the auction process may go down. The major advantage to the bidders is that the system automatically suggests to the bidders what to bid in order to make them active in the event. Thus, we propose that:

> ***Proposition 19.*** *Hybrid Mode (Negotiauction) > All Auto Mode > All Manual Mode, with respect to allocational efficiency, Pareto efficiency, cost savings for buyer, and profits for suppliers. The symbol > indicates BETTER. Specifically, we propose that:*
> ***Proposition 19a.*** *Hybrid Mode (Negotiauction) > All Auto Mode > All Manual Mode with respect to allocational efficiency*
> ***Proposition 19b.*** *Hybrid Mode (Negotiauction) > All Auto Mode > All Manual Mode with respect to Pareto efficiency*
> ***Proposition 19c.*** *Hybrid Mode (Negotiauction) > All Auto Mode > All Manual Mode with respect to cost savings for buyer*
> ***Proposition 19d.*** *Hybrid Mode (Negotiauction) > All Auto Mode > All Manual Mode with respect to profits for suppliers*

FUTURE RESEARCH DIRECTIONS

Although there are minor differences in the concept of negotiauctions between Subramanian (2010) and Teich et al. (2001) (for example, there is one winner in Subramanian (2010) while there may be a group of winners in Teich et al. (2001)), their ideas from practical and theoretical perspectives respectively bring about a unique conceptual framework for better understanding negotiauctions that have not been comprehensively investigated thus far. This study proposes a number of propositions relating to decisions about when to auction, when to negotiate, and when to negotiauction under dynamic contexts. In addition, design issues regarding how to design a good dynamic negotiauction to achieve Pareto optimal outcomes for both buyers and sellers are analyzed.

The next step is to test the derived propositions. Each of the factors identified in the previous discussion will form the basis for analysis in the empirical study of negotiauctions. The conceptual framework presented in this paper is unique as there is no comprehensive theoretical and practical model for analyzing negotiauctions at present. None of the prior frameworks have taken into account the interactions between negotiations and auctions from perspectives of real world auctions and their theoretical design issues. This conceptual framework can provide an impetus for future research, structuring it along the lines of interactions between negotiations and auctions, and negotiauctions’ design issues that will expand the frontiers of knowledge in market mechanisms.

REFERENCES

Bapna, R., Goes, P., & Gupta, A. (2006). Comments by the Guest Editors-ITM: Special issue on online auctions. *Information Technology Management*, *7*(3), 155-171.

Barry, B., Minton, J., Lewicki, R., & Saunders, D. (2004). *Essentials of Negotiation*. McGraw-Hill/Irwin.

Bendersky, C., & McGinn, K. (2008). Phenomenological assumptions and knowledge dissemination within organizational studies. Havard Business School Working Paper.

Bichler, M., Kersten, G., & Strecker, S. (2003). Towards a structured design of electronic negotiations. *Group Decision and Negotiation, 12*(4), 311 – 335).

Bulow, J., & Klemperer, P. (1996). Auctions vs. Negotiations. *The American Economic Review*, *86*(1), 180 – 194.

Bulow, J., & Klemperer. (1995). Auctions vs. Negotiations. *American Economic Review*, *86,* 180 – 194.

Donohue, W. (1981). Analyzing negotiation tactics: Development of a negotiation interact system. *Human Communication Research*, *7*(3), 273 – 287.

Emiliani, M. (2000). Business-to-business online auctions: Key issues for purchasing process improvement. *Supply Chain management: An International Journal*, *5*(4), 176 – 186.

Emiliani, M., & Stec, D. (2004). Aerospace parts suppliers' reaction to online reverse auctions. *Supply Chain Management: An international Journal*, *9*(2), 139 – 153.

Fisher, R., & Ury, W. (1981). *Getting to Yes: Negotiating Agreement Without Giving In*. New York: Penguin Books.

Guttman, R., & Maes, P. (1998). Agent-mediated Integrative Negotiation for Retail Electronic Commerce. *Proceedings of the Workshop on Agent Mediated Electronic Trading*. Minneapolis, USA.

Hendricks, K., & Paarsch, H. (1995). A survey of recent empirical work concerning auctions. *The Canadian Journal of Economics*, *28*(2), 403 – 426.

Jap, S. (2002). Online reverse auctions: Issues, themes and prospects for the future. *Academy of Marketing Science*, *30*(4), 506 – 525.

Jap, S. (2003). An exploratory study of the introduction of online reverse auctions. *Journal of Marketing*, *67*(7), 96 – 107.

Jap, S. (2007). The impact of online reverse auction design on buyer-supplier relationships. *Journal of Marketing*, *71*(1), 146 – 159.

Johnson, D., & Johnson, F. (2006). *Joining together – Group Theory and Group Skills*. Boston, Mass., London: Allyn and Bacon.

Kersten, G., & Lai, H. (2007). Negotiation support and e-negotiation systems: An overview. *Group Decision Negotiation*, *16*, 553 – 586.

Klein, S. (1997). Introduction to electronic auctions. *Electronic Markets, 7*(4), 717 – 726.

Klemperer, P. (2004). *Auctions: Theory and Practice*. Princeton, NJ, Princeton University Press.

Lewicki, R., Saunders, D., & Minton, J. (1997). *Essentials of Negotiation*. Irwin McGraw-Hill, Boston, USA.

McAfee, R., & McMillan, J. (1987). Auctions and bidding. *Journal of Economic Literature*, *25*(6), 699 – 738.

Milgrom, P. (2004). *Putting Auction Theory to Work*. Cambridge University Press: Cambridge.

Mithas, S., & Jones, J. (2006). Do auction parameters affect buyer surplus in e-auctions for procurement?. *Production and Operations Management, 72*(3), 1 – 33.

OECD (1997). Measuring Electronic Commerce (OECD/GD(97)185). Paris: OECD (1998). The Economic and Social Impacts of Electronic Commerce. OECD

Parente, D., Venkataraman, R., & Millet. (2004). A conceptual research framework for analyzing online auctions in a B2B environment. *Supply Chain Management: An International Journal*, *9*(4), 287 – 294.

Pinker, E., Seidmann, A., & Vakrat, Y. (2003). Managing online auctions: current business and research issues. *Management Science*, *49*(11), 1457 – 1484.

Pruitt, G. (1981). *Negotiation Behavior*. New York, Academic Press.

Raiffa, H. (1982). *The Art and Science of Negotiation*. Cambridge, MA: Harvard University Press.

Raiffa, H. (1982). The Art and Science of Negotiation. Cambridge, MA, Havard University Press.

Ruane, A. (2006). Real men and diplomats: Intercultural diplomatic negotiation and masculinities in China and the United States. *International Studies Perspectives*, *7*(4), 342 – 359.

Sebenius, K. (1992). Negotiation analysis: A characterization and review. *Management Science, 38*(1), 18 – 38.

Smeltzer, L., & Carr, A. (2003). Electronic reverse auctions: Promises, risks, and conditions for success. *Industrial Marketing Management*, *23*(6), 481 – 488.

Subramanian, G. (2005). Takeover defenses and bargaining power. *Journal of applied Corporate Finance*, *17*(4), 85 – 96.

Subramanian, G. (2007). *Taking BATNA to the Next Level*. Negotiation Dynamics. Havard Business School Publishing Corporation: 7 – 9.

Subramanian, G. (2010): *Negotiauction: New Dealmaking Strategies for a competitive Marketplace*. W. W. Norton & Company, MA.

Subramanian, G., & Zeckhauser, R. (2004). For sale, but how? Auctions versus Negotiations. Negotiation Strategy. Havard Business School Publishing Corporation: 3 – 5.

Subramanian, G., & Zeckhauser, R. (2005). Negotiauctions: taking a hyprid approach to the sale of high value assets. Negotiation Strategy. Havard Business School Publishing Corporation: 3 – 5.

Teich, J., Wallenius, H., Wallenius, J., & Zaitsev, A. (2001). Designing electronic auctions: An internet-based hybrid procedure combining aspects of negotiations and auctions. *Electronic Commerce Research*, *1,* 301 – 314.

Vickrey, W. (1961). Counterspeculation, auctions, and competitive sealed tenders. *Finance*, *16*(1), 8 – 37.

Webster. WWWWebsters Dictionary, http://www.m-w.com/dictionary.htm, Merriam Webster, Incorporated, 2000.

STRUCTURED MODEL FOR STRATEGIC GOAL SETTING IN INTENSIVE SUPPLY CHAIN COLLABORATION USING BALANCED SCORECARD

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ABSTRACT

Network-level competition and supply chain focused business strategies are driving strategic collaboration with suppliers and partners. Although some firms claim that they have entered level three or higher, collaborating more effectively with supply/channel partners is still one of the major problems confronting the supply chain professional. Only about 35% of the supply chain collaboration (SCC) initiatives were fairly successful. There were relatively few recorded cases of successful implementations of SCCs. Besides, lack of mutually agreed objectives or goals has leaded many supply chain alliances to fail. These are primarily because supply chain planning process is still not as robust as it should be. Many SCCs are ending up in failure when the beginning is all incorrect and compromises on irreconcilable differences ignoring critical long-term details. It implies limited (or) no focus on dimensions pertinent for evolving true collaboration goals. This paper aims to unravel the planning deficiencies and develop an effective approach for strategic goal-setting in the context of intensive supply chain collaborations (ISCCs).

INTRODUCTION

The advent of open economy, globalization and e-commerce has introduced new business opportunities while taking competition to next level. With the emergence of Internet enabled e-commerce, customers are just a click away from the competitors seeking more specific products and services matching their needs at a competitive price. Heat of competition is being felt in all areas of economy leading the forward looking firms to focus on achieving global competitiveness. Delivering maximum *customer value* -- ability to deliver customer orders of personalized products and services efficiently and responsively than the competitor's supply chain, has become crucial. Organizations are, therefore, under constant pressure to sustain and achieve their goals through streamlined operations and integration of logistics processes/functions within and beyond the organization. Besides growth strategies, improving bottom-line through increased operational efficiency, reduced costs, shrinked lead-times and renewed service levels across the value chain is essential. It is, therefore, critical to focus on holistic performance of the entire supply chain, rather individual entities.

Supply Chain Management (SCM) is one of the fastest evolving areas of interest to management academicians and executives. It is viewed as the process of managing and controlling the flow of material, information and finance in a network consisting of suppliers, manufacturers, distributors and customers. A steady stream of research and development over the decades of supply chain management (SCM) evolution has resulted in the emergence of several concepts, models and practices. These developments have significantly contributed to the operational excellence in different industries and sectors at times when the industry has started contemplating, both logistics and SCM as sources for growth and achieving competitive advantage. SCM benefits are now widely realized and accepted by global industry.

Supply chain Management (SCM) emerged in early 1980s due to fast changing and challenging environments in industries (Svensson, 2002). It was mostly used in the context of logistics, though logic of synchronization and integration of players involved in business activities was not a product of this era. During 1980's there was a significant increase in professionalism within distribution. Inventory management and warehousing became part of corporate decisions with a leap in interest rates and corporate buyouts (Lin et. al. 2001). Measures like centralized distribution, inventory control and use of information technology (IT) for data processing were central. Third party distribution services started ushering that further brought methods of improving information transmission and processing to the front (Croucher, 2000). With all these rapid changes taking place in logistics environment the term "supply chain management" emerged.

Principles of SCM were noticeably put into practice by Kurt Salmon associates in 1985. They found out that lead times for the apparel supply chain from upstream to downstream were 66 weeks long. Time spent in warehouse or in transit was 40 weeks i.e. 67% of total time till it reaches the final consumer. Industry incurred huge losses due to working capital being locked in inventory and untimely delivery. They focused on delivery lead times and then devised '*Quick Response Strategy*'. In this, retailers and suppliers worked together with a common goal of responding quickly to consumer needs by sharing information. Later, electronic data interchange (EDI) was developed that supported the success of this strategy. This was a period where *internal integration* was being focused upon. Mid 1980's saw emergence of an era of supply chain management. The paradigm of integration began to shift gradually from internal to external integration. Porter's (1985) value chain brought focus on *strategic networks*, advocating contracts between coordinated chains of organizations. This proved to be one of major directives for the development of SCM theory. The start of next decade saw processes being developed to encompass not only the key functions of logistics within an organization, but also those functions that contributed in delivering product to customer (Croucher, 2000). This seminal change can be said to be *external integration.*

Oliver and Weber (1982) studied companies in USA, Japan and Western Europe and concluded that traditional approaches to managing integrated marketing channels do not suffice in the changing business environment. During the same period a major development in SCM practices was seen in grocery industry when a group of grocery industry leaders joined together to make an industry task force called *efficient consumer response (ECR)* working group. They worked all together to find ways of increasing supply chain competitiveness. Their study resulted in developing Electronic Data Interchange (EDI) and Point of Sales (PoS) systems. These developments can be counted as technological breakthroughs in relation to supply chain practices. Wisner (2005) described that with the end of Business Process Reengineering (BPR) as a fad, development of SCM became more rapid to be seen as a source of competitive advantage. Practitioners, consultants and scholars began to realize the importance of integrating all key business processes among supply chain entities. Gradually various characteristics of a good supply chain began to get realized across the industry.

Emberson et. al. (2006) presented a list of characteristics of an idealized supply chain which emphasize collaboration and hence *partnership*.

SUPPLY CHAIN COLLABORATION (SCC) FOR COMPETITIVENESS

Supply chain collaboration (SCC) is neither the same as joint ventures or strategic alliances (see figure 1), which normally involve some degree of shared ownership across the parties (Lambert et al., 1996). It is also not a form of vertical integration, where there is common ownership of several supply chain members (Cooper et al., 1997b). In addition to Lambert (1996), we can view partnerships as a special case of supply chain collaboration while other formats may involve extended financial linkages that are not necessary in supply chain collaboration.

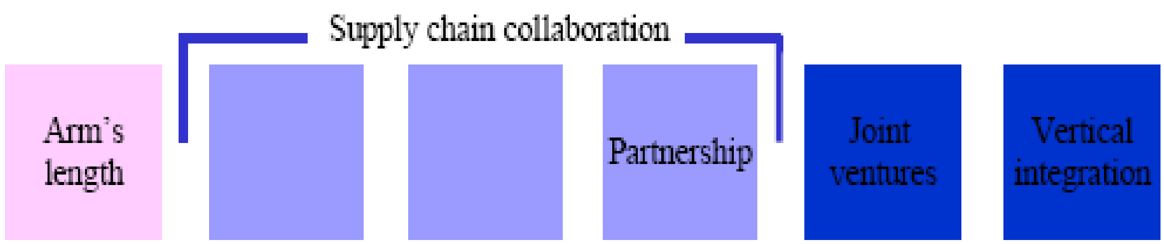
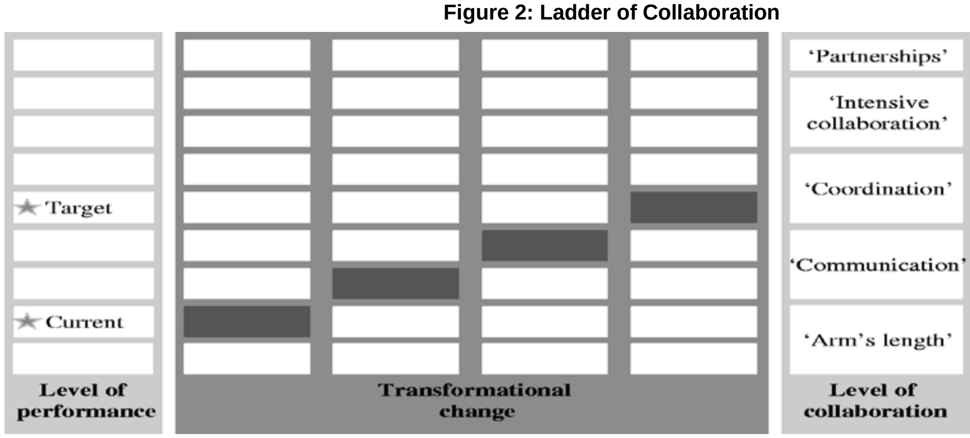


Figure 1 - the types of relationships (modified from Lambert et al., 1996)

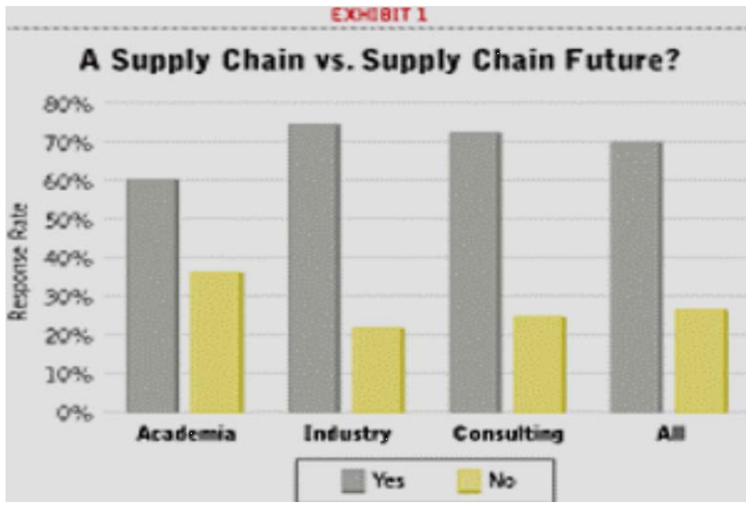
Recognizing collaboration as the key for supply chain performance, the authors R.P. Kampstra, J. Ashayeri, J.L. Gattorna, (2006) developed a concept that they call as "*the ladder of collaboration*"(see figure 2). Basic level of collaboration is *Communication*. The next level of collaboration is *Coordination* - focuses on synchronization of intra- and inter-organizational processes. The third level is *Intensive collaboration*, in which supply chain members involve in a higher-level partnership to improve strategic performance and innovation of supply chain. The fourth level is *Partnerships*, involving extended financial relationships, such as sharing investments, risks and profits.

Source: "Realities of supply chain collaboration", International Journal of Logistics Management, The, Vol. 17 Iss: 3, pp.312 - 330

Figure 2: Ladder of Collaboration



By the end of 20th century, the industry analysts made a significant observation in terms of transformation in the global competitive scenario. Their vision is of a competitive arena where cohesive supply chain teams compete against other supply chains (Bhattacharya et al., 1995; Fawcett and Magnan, 2001). Amongst the most important and implacable of these forces are 1) the emergence of more demanding, information-empowered customers, 2) the continued globalization of markets, which increases the number of competitive options available to the customer, and 3) the recognition by more and more managers that their companies lack some of the resources and competencies needed to achieve success in this evolving competitive environment (Cook and Garver, 2002; Das and Teng, 2002; Fine, 1998; Mehta, 2004; Tyndall, 1998).



In present scenario, Handfield (2006)[32] defined SCM that focuses on competing supply chains in which all players of a supply chain thrives to maximize value transferred to its customer. Among all related studies, the delphi study carried by James B. Rice, Jr. and Richard M. Hoppe (2001) with 30 supply chain experts from industry, academia, and consulting, as part of the Integrated Supply Chain Management (ISCM) Program at the Massachusetts Institute of Technology (MIT) found that the great majority of respondents who answered the question (70 percent) agreed that supply chain vs. supply chain accurately characterized the competitive future (see exhibit 1). The fact that competition has shifted from company level to the network level has driven the need for a holistic or integrated approach towards developing supply chain competitiveness.

Martin Christopher (2000) viewed that "*we are now entering the era of network competition where the prizes will go to those organizations who can better structure, co-ordinate and manage the relationships with their partners in a network committed to better, closer and more agile relationships with their final customers*." Lambert et al. (1998) and Simchi et al. (2003) emphasized on holistic view i.e. importance of overall optimization in supply chain rather than functional optimization. Ajmera, Abhinav; Cook, Jack (2009) have proposed a multi-phase framework for supply chain integration consisting of four phases. In the final phase of supply chain integration (i.e., collaboration and expansion of strategic capabilities) all the companies in the chain start to behave as a single entity with a common goal; they begin to benchmark their performance against other fully integrated supply chains (Ajmera, Abhinav; Cook, Jack, 2009). It means the entire supply chain has to operate as one organizational entity with a holistic view while benchmarking with other best supply chains in the industry. In view of this, the need to leverage suppliers' and/or partners' relations has increased. Berry et al. (1994) has constantly emphasized on maintaining long-term relationships among members in supply chain. When the success of one company depends on the success of others in the chain, it becomes critical for the supply chain partners to engage in more strategic collaboration (Abhinav, Cook, 2009). Therefore, collaborative strategic partnership with supply chain partners at ***intensive level*** has become mandate in several industries of the manufacturing sector. This drives the need for *intensive collaboration* among supply chain members.

With increasing supply chain-level competition and/or need for supply chain optimization, global industry leaders are embracing intensive collaboration with their supply chain partners. Global firms like Dell, Wal-Mart, Cisco, Hewlett-Packard, P&G, IBM, etc., have emerged as global leaders because, they maximized 'customer value' through finest SCM practices. Especially, strategic partnership practices like, Third Party Logistics (3PL), Supplier or Customer Integration, Retailer-Supplier Partnerships (RSPs), Distributor Integration (DI), etc., were critical in building their supply chain competitiveness and gaining edge over others in their industry. However, several firms are yet to adopt level three (external integration) and level four (cross-enterprise collaboration) of PRTM's supply chain maturity model (figure 3) critical for effectively competing in the networked global economy.

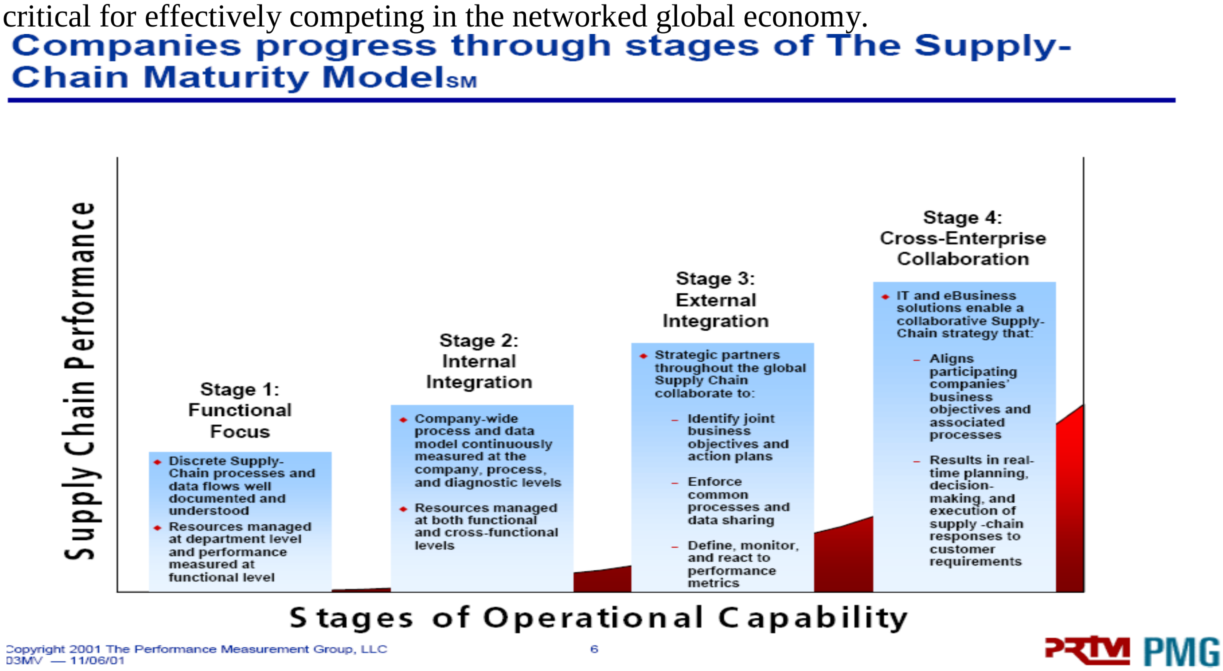
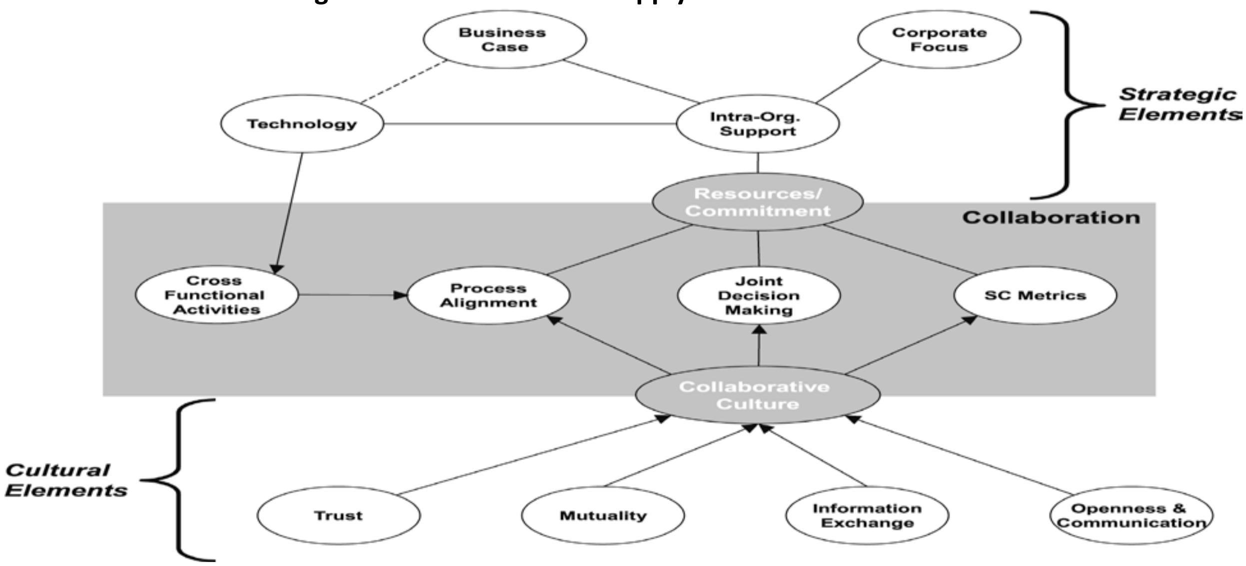


Figure 3: PRTM's Supply Chain Integration Model

Today intensified network-level competition is leading to high-level intensive supply chain collaboration (i.e., cross-enterprise collaboration). Two aspects are critical for such supply chain collaboration. One, it is imperative to design a supply chain environment that facilitates strategic collaboration, often by exploiting technology, resulting in a new level of operational excellence (Bowersox, Closs, and Drayer, 2005). Therefore, a high-level integration (collaborative relationship) among the supply chain partners should be established. Such environment should be characterized with high-level trust, openness, and exchange and relationship commitment between all the supply chain partners. At large, it should comprise elements (shown in figure 4) like strategic alignment, cross-organizational teams, process-alignment, multiple contact points at all levels of management, regular interaction, focus on end-customer value, flexible interfaces, two-way communication systems, collaborative performance management, cultural integration, realigned structures, resource pooling, risk sharing, technology focus and corporate focus.

Figure 4: The elements of supply chain collaboration



Source: Supply Chain Management: An International Journal, Vol.0 number 1, 2004, pg. 30-42

Two, strategic collaboration among supply chain partners means strategic partnerships that would make the chain behave as a single system, coordinated with each element of the chain and aligned with a jointly established supply chain goal (Taylor, 2004). Collaborative supply chain management focuses on joint planning and execution of supply chain activities (Ayers, 2006). These supply chain activities include not only logistics, but also product development and strategic planning (Ayers, 2006). Companies not only have to contemplate sharing operational information (e.g., point-of-sale data, production schedules) but should also consider jointly developing tactical and strategic plans (e.g., inventory and production plans, strategic plans like capacity planning, network expansion, long-term supply chain goals, etc., (Xu and Beamon, 2006). Intensive collaboration involves members to improve the strategic management decision-making and enhance innovation in the chain (R. Kampstra, J. Ashayeri, & J. Gattorna, 2006). Which means shared goals and objectives of the strategic supply chain alliance should be planned by the partners jointly. Joint strategy to achieve the network goals/objectives should be formulated by the partners. Relevant policies to govern and steer the strategic partnerships should be framed. Also joint strategies should be executed and controlled by the alliance partners together. This is also often referred to as '*Joint Decision-Making (JDM),*' defined as "*joint authority and structure to carry out a common mission [in which] the parties engage in comprehensive planning and operate well defined communication channels. They pool resources jointly and share the resulting benefits* (Scheff and Kotler, 1996)."

SUPPLY CHAIN COLLABORATION: REVIEW & ANALYSIS

A study conducted by Supply Chain Management Review (SCMR) and Computer Science Corporation (CSC) observed that, though supply chain collaboration is most crucial; the way to accomplish it is not properly understood. The study found that 44% of the organizations have set up functions for supplier and customer collaboration. However, only about 35% of the collaboration initiatives were moderately successful. Although some firms claim that they have entered level three or higher, collaborating more effectively with supply/channel partners is still one of the major problems confronting the supply chain professional. In their 2006 article "Realities of supply chain collaboration," R. Kampstra, J. Ashayeri, & J. Gattorna examined the gap between the interests in supply chain collaboration (SCC) and found relatively few recorded cases of successful implementations. According to the PRTM's sixth annual survey in 2008, many companies claim that potential benefits are lost due to lack of supply chain coordination (i.e., realignment of decisions and responsibility in the supply chain).

One of the top-level reasons for such poor implementation of strategic supply chain collaboration, from several supply chain surveys is -- *the supply chain planning process is still not as robust as it should be.* Without appropriate planning and analysis from the outset there is a potential for failure. The supply chain strategy process in many businesses is still immature and fragmented. In fact, this is one of the areas where the leaders appeared to be just as deficient as followers and laggards. The study by Cranfield University in 2010 states that "*the most important of supply chain performance drivers are cost focus, customer lead-time and customer quality but these vary by sector.*" Hence the shared goals or objectives (whether cost-focused and/or lead-time focused and/or quality-focused) chosen for the supply chain collaboration should be ***relevant*** to the business/industry in which the firm operates. The study also found that *Customer Service* and *Corporate Strategy* are key functional drivers of supply chain strategy. Therefore, short- and long-term business strategies should also be factored in while evolving supply chain goals to achieve corporate ***objectives***.

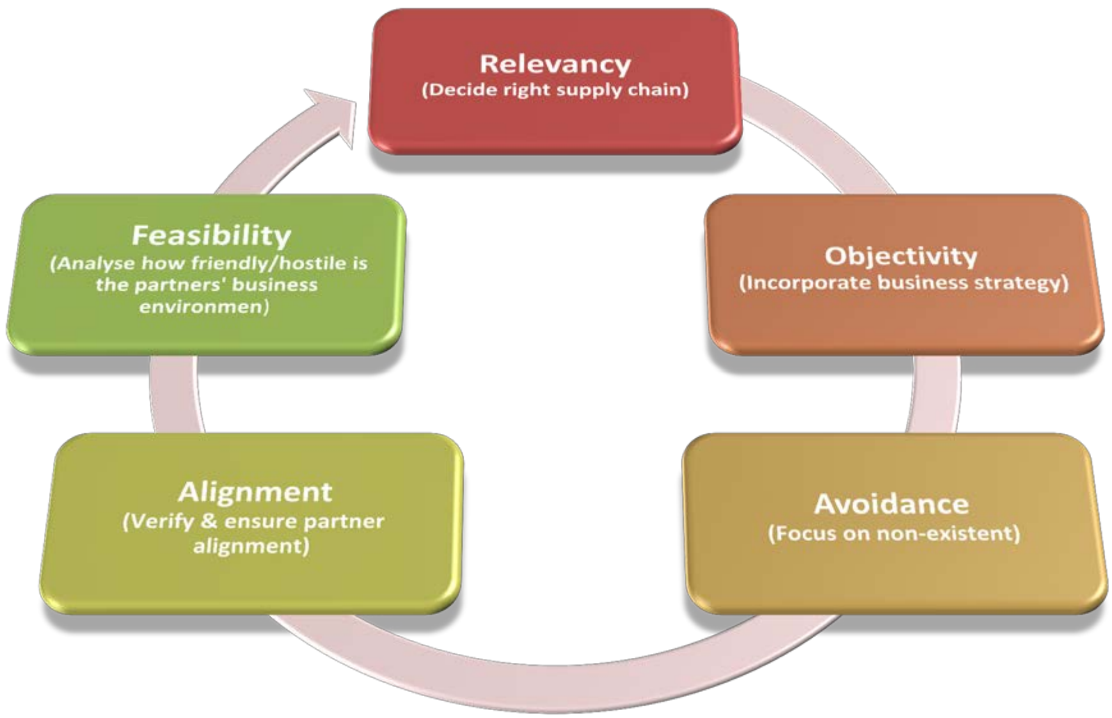
Researchers often claim that "*collaboration ends up in failure when the start is all wrong and when compromises cover irreconcilable differences*." Because collaboration requires objective sharing between partners and *lack of agreed objectives will lead the alliance to fail* (Bruner and Spekman, 1998). So, adequate care should be taken to ensure that mutually agreed objectives are set for collaboration while addressing all possible differences among partners. Therefore, the joint strategic planning process should evolve mutually agreed objectives contemplating the strategic objectives and expectations of all partners with an outlook for inclusive growth and supply chain performance. Further, shared objectives should comprise only those which are ***aligned*** with every partner's business strategy. However, care should be taken so that rebuilding or reinvention of supply chain capabilities is prevented. The status of supply chain should be ***assessed*** in terms of its current capabilities for future performance. If common agreed objectives cover existing supply chain capabilities, then shared goals or vision of supply chain collaboration should be restricted to build required competencies from there.

Daugherty et al (2005) found *that collaboration efforts often do not succeed because vital long-term details are ignored*. Besides, failure to identify and mitigate key risks (internal or external) proactively has been found to be one of the major reasons for supply chain collaboration failures. One of the findings of '*Supply Chain Strategy in the Boardroom 2010"* *of Cranfield University* is the supply chain strategy development process is generally undertaken internally, with little visibility outside the company. But, if external risks are not factored in, then collaboration may not be able to pursue the stated shared goals. For instance, if partner(s) are operating in unstable economic conditions the high cost of credit and currency fluctuations limits the ability to improve cost structures. Similarly, if stringent labor laws prevail in their countries then partner(s) cannot contribute to efficient HR assets utilization. 'Innovation' cannot be the objective if partners have limited access to skilled labor and/or technology resources. 'Delivery' cannot be the game plan if logistics infrastructure is poor. Hence, both micro and macro business environments of all the partners should be contemplated to evolve ***feasible*** supply chain collaboration goals.

Above analysis imply poor strategic planning process due to deficiencies like inappropriate focus, lack of strategic alignment, lack of partner alignment, redundancy, and over-looked feasibility. Therefore, it is imperative to encompass the following dimensions in setting the joint goals for supply chain collaboration:

a) Supply chain capabilities relevant to business/industry
b) Elements of corporate strategy (to be achieved through supply chain management)
c) Existing supply chain capabilities
d) Partners' strategies that align
e) Business environment of partners

Figure 5:
Five Dimensions for Planning Supply Chain Collaboration Goals



Source: Original Derivation

Though the above five dimensions needs to be contemplated in evolving the right goals for intensive supply chain collaborations, how to apply these remains as a mystery. The following questions will emerge while considering five dimensions.

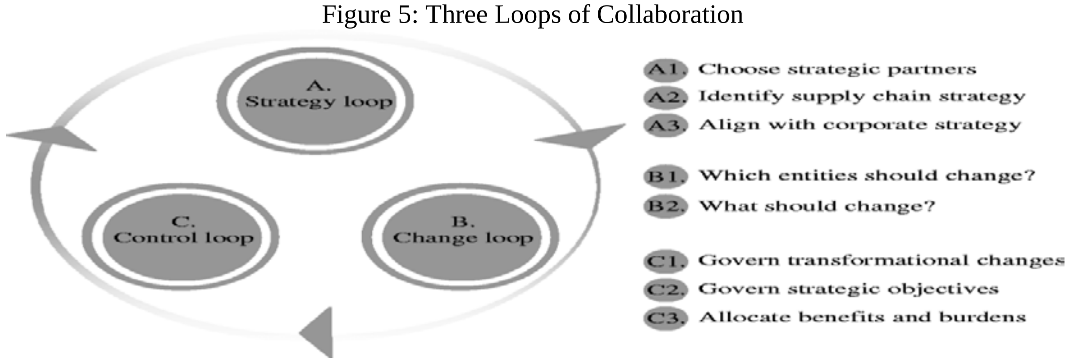
1. How to determine relevant supply chain capabilities for the business/industry?
2. How to integrate business strategy with supply chain goals?
3. How to factor redundancy in supply chain goals?
4. How to achieve strategic alignment among collaboration partners?
5. How to contain feasibility issues?

To address above issues, a comprehensive management approach/framework is required that facilitate development of shared strategic goals for intensive supply chain collaborations.

SCC DEVELOPMENT REVIEW

In response to industry problems (discussed in previous section), several researchers have defined issues in high-level supply chain collaboration (SCC), and only few of them have unleashed the challenges and suggested generic frameworks for transition to high-level integration. In their 2006 article "*Realities of supply chain collaboration,*" R. Kampstra, J. Ashayeri, & J. Gattorna examined the gap between the interests in supply chain collaboration (SCC) and proposed a broad conceptual framework called *three loops for collaboration* for what it takes to make collaboration work in supply chains (see figure 5).

Figure 5: Three Loops of Collaboration



Source: "Realities of supply chain collaboration", International Journal of Logistics Management, The, Vol. 17 Iss: 3,

Ajmera, Abhinav; Cook, Jack (2009) proposed an implementation framework to initiate the transition from a simple information sharing agreement to a fully functional joint decision-making (JDM) collaboration. In the process, the authors suggested two alternative ways for transition to JDM viz., Self-sustained initiative and Third-party managed initiative. *Self-sustained initiative* involves setting up a permanent steering committee accountable for both operational and strategic aspects of the collaboration. Whereas in *third-party managed initiative,* companies could outsource the overall supply chain management function to a designated third party referred as *fourth-party logistics (4PL).* However, the proposed implementation frameworks don't address joint decision-making and planning issues discussed above.

Though few researchers have developed collaboration models for supply chain environments, many of them are limited to operational level collaboration. Other set of models cannot be applied for globally distributed supply chains and doesn't suit every supply chain type. Further, they were designed for short-term partnerships and do not account multiple dimensions like financial, environmental, internal and external factors influencing strategic partnerships. On the other hand, these models may not guide in the process of building competitive supply chains as they don't consider competitive environment of the supply chain. Though few research studies have attempted to address the challenge of strategic alignment among partners in collaboration, there is no comprehensive methodology that focuses on achieving strategic goal alignment among members of collaboration. So none of the research studies have so far, provided a comprehensive collaboration framework/model that offers structured approach to better joint goal-setting, in case of intensive supply chain collaboration (ISSC) initiatives. This paper attempts to develop an approach for ensuring relevancy, objectivity, duplication avoidance, alignment and feasibility in the collaborative goal-setting for intensive supply chain collaborations (ISCCs) in the ensuing discussion. The process starts with how collaborative initiatives emerge and evolve and later, develops strategic goal setting methodology for *intensive or strategic supply chain collaboration* (ISSC) with a focus on ensuring relevancy, objectivity, avoidance (of existing capabilities), alignment and feasibility (ROAAF) of collaboration objectives.

MODELING GOAL SETTING IN ISCC

Collaboration is to create value. Often, creating value requires significant change. A transformational change is usually driven by new constraint(s) or the need to achieve next level of performance. John Kotter (1990) in his book "*A force for change: How Leadership Differs from Management*" advocates eight phase model for successful change. 1. Establish a sense of urgency, 2. Create a coalition, 3. Develop a clear vision, 4. Share the vision, 5. Empower people to clear obstacles, 6. Secure Short term wins, 7. Consolidate and Keep moving, and 8. Anchor the Change. Kotter's model focuses on organizational change showing similarity to supply chain change through strategic collaboration. First three stages of Kotter (1996) model describe how a change initiative begins at the top and with three separate actions by the leaders: (1) establish a sense of urgency; (2) create the guiding coalition; and (3) develop a clear vision.

As referred in Kotter's model, supply chain transformational change initiatives also evolve by establishing a sense of urgency, creating the coalition and developing a shared objective among supply chain members. According to theory of *five bases of power* developed by social psychologists John R.P. French and Bertram Raven (1959), one of the bases of power is positional power, i.e., power due to the relative position. Therefore relative positions of partners in a supply chain determine the power relationships and hence the *dominant partner(s)*. Existing literature suggests that supply chains are predominantly characterized with asymmetric powers due to their relative positions. Asymmetric power in supply chains can be found in industries like aerospace (Leslie and Young, 2005), food processing (Van Dijk et al., 2003), and automotive (Dyer and Nobeoka, 2000; Maloni and Benton, 2000). Indeed, entity(s) relatively powerful becomes dominant partner in the strategic partnership and controls other members. In industries like automotive, aerospace, etc. dominant partner is usually the original equipment manufacturer (OEM). Whereas in consumer goods, apparels, accessories, etc., big retailers like Wal-Mart, Metro, Tesco, etc., tend to influence upstream partners in their supply chains. Consumer Product Manufacturers (CPMs) have no or limited influence on their retailers, especially in multi-branded outlets.

New supply chain constraint(s) like supply chain security, environmental regulations, etc., (or) the need to achieve next level of supply chain performance creates sense of urgency (Kotter) and drives *dominant partner* towards supply chain integration initiative. For example sensing the need for improved operational performance and supply chain security, Wal-Mart transformed its back-end procurement and inbound logistics processes. It has collaborated with its key vendors and implemented several transformational initiatives like satellite based vendors-stores links, item-level RFID tracking, vendor managed inventory (VMI), etc., to facilitate advanced planning, inventory management and pilferage control. Therefore dominant partner(s) usually initiate(s) formation of strategic coalition and developing shared objectives.

Strong coalition for collaboration depends on how the dominant partner(s) perceive internal and external environments of other supply chain members and how important are other members in satisfying the recognized need. Partners those with higher collaborative value aligned with the long-term interests of dominant partner will be motivated for the strategic partnership by establishing sense of urgency (Kotter's Model second phase). Keeping the business objectives of dominant partner in mind, each partner's strengths, limitations, opportunities, threats and challenges will be evaluated to qualify as *strategic partners*. For example, supplier(s) and service partner(s) who can easily and quickly expand their capacities where dominant partner has plans to operate in future will be motivated to part with strategic collaboration, if the dominant partner is aiming at evolving as a global leader. Besides, partner(s) whose interest strongly aligns with dominant partners' will also join the strategic coalition without any motivation. However, no successful transformational change occurs without proper leadership. "Or they must have been very lucky", Kotter (1996) explains. According to James MacGregor Burns's theory of transformational leadership, *a transformational leader focuses on "transforming" others to help each other, to look out for each other, to be encouraging and harmonious, and to look out for the organization as a whole*. Therefore the *initial coalition* comprising dominant partner(s), whose interests are stronger tend to transform group of partners in the supply chain and encourages them to help each other, behave harmoniously while considering all firms in the collaborative partnership as one corporate entity. Ultimately, the strategic coalition will comprise those members of the supply chain whose interests align and need for collaboration is felt. As formation evolves, some partners remain as permanent members while few others may continue or leave the group based on perceived variations of collaborative value.

After supply chain coalition is formed, true collaborative strategic planning effort begins. When strategic partners in the supply chain collaboration share equal power relationships, collaboration goal-setting becomes difficult mostly due to conflict of interests. When asymmetric power relationships exist among partners, business objectives of dominant partner(s) usually influence the determination of collaboration goals. However, for better strategic alignment and feasibility, the strategic goal setting process should ensure that all units in the partnership work towards well aligned, relevant and feasible goals maintaining the purpose of business. Because collaboration requires objective sharing between partners and lack of agreed objectives among partners will lead the alliance towards failure (Bruner and Spekman, 1998). On the other hand, Daugherty et al (2005) found that collaboration efforts often do not succeed because vital long-term details are ignored. Therefore, success of collaboration depends on ensuring commonly agreed objectives and joint strategy. A comprehensive joint planning process can ensure evolution of relevant, mutually agreed, feasible objectives or vision for the strategic alliance. Achieving alignment across members, therefore, should take a structured approach.

Planning Shared Goals

Harvard Professors Robert S. Kaplan and David P. Norton (2001) discuss how corporate goals & strategy can be aligned with all organizational units, staff functions and business units based on synergies using balanced scorecard. Similarly, balanced scorecard approach can be applied to develop common objective(s) which align with business strategies of each supply chain collaboration partner. According to traditional Balanced Scorecard devised by Robert Kalpan and David Norton, organizations are viewed from four different perspectives: Financial Perspective, Customer Perspective, Business Process Perspective and Learning & Growth Perspective. The *Financial Perspective* covers the financial objectives of all organizations and allows tracking financial success and shareholders' value. The *Customer Perspective* covers the customer objectives such as customer satisfaction, market share goals as well as product and service attributes. The *Internal Process Perspective* covers internal operational goals and outlines the key processes necessary to deliver the customer objectives. The *Learning and Growth Perspective* covers the intangible drivers of future success such as human capital, organizational capital and information capital including skills, training, organizational culture, leadership, systems and databases.

Strategy Map is the most important practice and one of the best ways of balanced scorecard method to achieve strategic alignment in business context. Strategy Map highlights that each perspective is inter-linked with other perspective. Delivering the right performance in one perspective, therefore, can only be achieved by delivering objectives in the other related perspective. The financial perspective views organizations as creating long-term shareholder value, and therefore builds from a productivity strategy of cost structure and/or asset utilization and/or a growth strategy of expanding opportunities and/or enhancing customer value. This means delivering financial objectives depend on gaining market share (growth strategy) and repeat business which in turn depend on delivering what customers want for (Customer objectives). Achieving customer objectives depend on delivering high quality business processes (Business Process objectives). Delivering process objectives depend on developing the right human, information and organizational capital (Learning & Growth perspective).

Partner at any stage of the supply chain is of course a commercial entity and hence behaves like any other business organization. According to Balanced Scorecard (BSC) theory every commercial entity works towards customer and/or financial goals in pursuit of their business. Therefore they are driven by short- or long-term business strategies like gaining repeat business, expansion/growth, improving cost structures and asset optimization (see table 1).

Table 1: Drivers of Supply Chain Collaboration

Partner Business Objective/ Strategy (short or Long-term)	Drivers	Strategy	Strategic Focus Element	External Focus Driving Supply Chain Collaboration
Gain Repeat Business	Competition, Limited opportunities	Maximize Customer Value	Price Quality Delivery Availability Functionality Relationship Brand/Image	Supply and/or Distribution Supply Supply and/or Distribution Supply and/or Distribution Supply ---- Supply Partners (for eco-friendly products)
Gain Market Share	Opportunity to serve other customer segments or markets (in same business) for maximizing revenue	Customize offerings to match untapped/new market needs	Price Quality Delivery Availability Functionality Relationship Brand/Image	Supply and/or Distribution Supply Supply and/or Distribution Partners Supply Supply --- Supply (for eco-friendly products)
Growth	Opportunity to serve customer segments or markets in allied business for maximizing revenue	Develop New Product(s)	Product Innovation	Supply
Improve Cost Structures	Need to maximize shareholder/ customer value	Improve operating efficiency	**Operating Cost Areas** Processing Storage Shipment	Supply Supply and/or distribution Logistics (inbound/outbound)
Asset optimization	Need to maximize shareholder/customer value	Improve asset efficiency	**Operating Resources** Production Units Storage Units Transportation	Supply Supply and/or distribution Logistics (inbound/outbound)

Source: Original derivation applying Balanced Scorecard Theory

A stage in the supply chain would show interest in collaboration if integration is essential with others on supply or distribution side or both sides to deal with its external constraints or to improve *strategic focus elements* of its business objective(s). Each partner in the supply chain alliance, therefore views their partnership to be aligned with their business strategy to maximize their own share-holder or customer value (as shown in the table 1). However, enhancing *shareholder* or *customer value* variables like price, delivery and availability depends on improving cost structures(C), reliability(R), asset utilization (U), inbound or outbound speed (S) of inventory, and production and logistics resources of relevant partner in the chain.

Price Inventory, Production & Logistics (improving cost structures) (C)
Inventory, Production & Logistics (improving asset utilization) (U)

Delivery Improving speed(S) of Production & Logistics (inbound/outbound)

Availability Minimizing inventory, production and logistics related risks or maximizing reliability (R)

Variables like quality (Q), functionality {rapid feature innovation (RFI), rapid product innovation (RPI)) and brand image (B) are product related. Relationship variable depend on internal factors. Therefore, *strategic focus elements* in financial and customer perspectives can be reduced to four functions viz., Product, Materials, Production, and Logistics. Participating partners are listed from upstream to downstream in the *strategic focus matrix* as shown below.

Strategic Focus Matrix

Supply Chain Network	Strategic Focus Areas (SFAs)															
	Product				Inventory				Production				Logistics			
	RFI	Q	RPI	B	C	R	U	S	C	R	U	S	C	R	U	S
Tier i Supplier(s)																
Tier i +1 Supplier(s)																
[redacted]																
Channel Level n-1																
Channel Level n																
SCM Goals (Focus Areas) =																

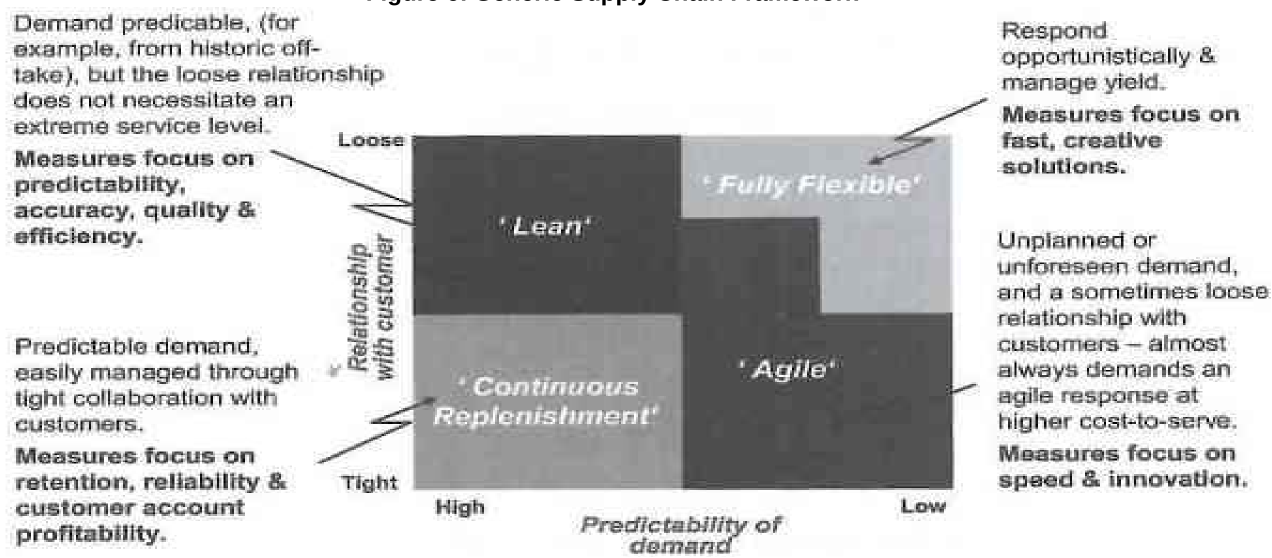
Source: Original Derivation

Now, the five dimensions of goal planning (ROAAF) should be factored using this *strategic focus matrix.*

Ensuring Relevancy

Partners in the strategic collaboration should focus on core purpose and building right supply chain relevant to the dominant partner's business/industry. Which means dominant partner should focus only on those relevant strategic focus elements in Product/Material/Production/Logistics desired by customers in the business (based on customer behavior pattern observed through customer order decoupling point). Therefore to ensure *relevancy*, joint strategic planning process should be guided by supply chain system(s) desirable in a given business/industry context based on the customer behaviour. John Gattorna, thought leader in SCM, and author of the books "*Living Supply Chains*" and "*Dynamic Supply Chain Alignment*" has depicted four generic supply-chain types viz., Continuous Replenishment Supply Chain, Lean Supply Chain, Agile Supply Chain, Fully Flexible Supply Chain (shown in figure 6) based on customer behavior patterns observed across industries.

Figure 6: Generic Supply Chain Framework



Source: Living Supply Chains

The focus in *continuous replenishment* type should be on service reliability; and retention of the relationship over the long-term. Here improving supply chain RELIABILITY in terms of maximizing availability and minimizing risks along with improving SPEED of inventory, production and logistics resources become major focus (see table 2). Building *lean supply chain* means focus should be clearly on delivering a low-cost predictable service to customers (Measures: accuracy, delivery-in-full-on-time (DIFOT); cost per unit, quality ;). Both *EFFICIENCY* and *QUALITY* are the focus areas. Hence, cost structures (C), utilization (U) of inventory, production and logistics resources along with product quality (Q) are the focus areas. In *agile supply chains*, the emphasis moves from reliability to time sensitivity (ability to respond quickly to customers) in an unpredictable world. Time to respond to unpredictable demand/needs depend on SPEED of supply chain resources at various points in the pathway to customer. So it is more of optimizing resources than utilization of resources, because redundant capacities mean extra cost.

Table 2: Strategic Focus Matrix with Relevancy

Business Objective (in terms of SFAs) for stage i (i= 1 to n)		Product				Inventory				Production				Logistics			
		RFI	Q	RPI	B	C	R	U	S	C	R	U	S	C	R	U	S
Tier i Supplier(s)	SUPPLY ALIGN																
Tier i +1 Supplier(s) [10]																	
My Organization (Business Strategy)																	
Supplier Collaboration Opportunities																	
Channel Collaboration Opportunities		N/A								N/A							
Level n-1[ ]	CHANNEL ALIGN																
Level n[ ]																	
Supply Chain Type	**Key Focus**	**RFI**	**Q**	**RPI**	**B**	**C**	**R**	**U**	**S**	**C**	**R**	**U**	**S**	**C**	**R**	**U**	**S**
Continuous Replenishment(C)	R						x				x				x		
Lean (L)	Q, C, U		x			x		x		x		x		x		x	
Agile(A)	RFI, R, S	x					x		x		x			x	x		x
Fully Flexible (F)	RFI, RPI, R, S	x		x	x		x		x		x		x		x		x
SCM Goals (Focus Areas)							IR				PR				LR		

Fully flexible supply chains, means ability to offer acceptable and new solutions quickly to the customers for unplanned events. INNOVATION and SPEED are key capabilities in this type of supply chain. So capabilities to ensure availability of whatever resources and systems required for producing and delivering acceptable products quickly have to be built along supply chain points. Now the dominant partner should focus on those strategic focus elements under product, inventory, production and logistics based the supply chain type relevant to his business/industry. The *generic supply chain* framework integrated with *strategic focus matrix* should broadly guide collaboration partners in deciding/deriving relevant *collaboration objectives*. For example, if the type of supply chain required is continuous-replenishment, then the *strategic focus areas* suggested for SCM Goals will be as shown in table 2.

Ensuring Objectivity and Avoidance

Short- and long-term business strategies should also be factored in while evolving supply chain goals to achieve corporate objectives. Therefore corporate or business strategy in terms of the defined key focus areas should mapped in *strategic focus matrix* to incorporate *objectivity* in supply chain collaboration. If the business goal is to achieve cost leadership through improving cost structures, then strategic focus areas include: inventory cost (IC), production cost (PC) and logistics cost (LC). Applying this to the *strategic focus matrix*, the extended SCM Goals would be as shown below (table 3). The evolved objectives should be mapped to existing supply chain capabilities across the chain to determine exact gaps (or) needs to be achieved. Level 1 Metrics of Supply chain operation reference (SCOR) model offers a better approach to assess the current supply chain performance and hence the required capabilities.

Table 3: Strategic Focus Matrix with Relevancy & Objectivity

Business Objective (in terms of SFAs) for stage i (i= 1 to n)		Product				Inventory				Production				Logistics			
		RFI	Q	RPI	B	C	R	U	S	C	R	U	S	C	R	U	S
Tier i Supplier(s)	SUPPLY ALIGN																
Tier i +1 Supplier(s) [10]																	
My Organization (Business Strategy)						x				x				x			
Supplier Collaboration Opportunities																	
Channel Collaboration Opportunities		N/A								N/A							
Level n-1[ ]	CHANNEL ALIGN																
Level n[ ]																	
Supply Chain Type	**Key Focus**	RFI	Q	RPI	B	C	R	U	S	C	R	U	S	C	R	U	S
Continuous Replenishment(C)	R						x				x				x		
Lean (L)	Q, C, U		x			x		x		x		x		x		x	
Agile(A)	RFI, R, S	x					x		x		x			x	x		x
Fully Flexible (F)	RFI, RPI, R, S	x		x	x		x		x		x		x		x		x
SCM Goals (Focus Areas)						IC	IR			PC	PR			LC	LR		

Ensuring Partner Alignment

Strategic focus element(s) of each partner should be mapped in the respective cells to assess partner alignment as shown in the *strategic focus matrix* (table 4). For instance, if all relevant suppliers in tier i is aiming at improving the chances of *repeat business*, then they are more likely to focus on customer value elements like quality, functionality, cost, service, etc. The collaboration opportunities and respective collaborative SCM goals suggested (shown in the table 4) would be restricted to areas of alignment with collaboration partner.

Table 4: Strategic Focus Matrix with Relevancy, Objectivity & Alignment

Business Objective (in terms of SFAs) for stage i (i= 1 to n)		Product				Inventory				Production				Logistics			
		RFI	**Q**	**RPI**	**B**	**C**	**R**	**U**	**S**	**C**	**R**	**U**	**S**	**C**	**R**	**U**	**S**
Tier i Supplier(s)	**SUPPLY ALIGN**	x	x			x			x	x				x			
Tier i +1 Supplier(s) [10]																	
My Organization (Business Strategy)						x				x				x			
Supplier Collaboration Opportunities						C				C				C			
Channel Collaboration Opportunities		N/A								N/A							
Level n-1[ ]	**CHANNEL ALIGN**																
Level n[ ]																	
Supply Chain Type	**Key Focus**	**RFI**	**Q**	**RPI**	**B**	**C**	**R**	**U**	**S**	**C**	**R**	**U**	**S**	**C**	**R**	**U**	**S**
Continuous Replenishment(C)	R						x				x				x		
Lean (L)	Q, C, U		x			x		x		x		x		x		x	
Agile(A)	RFI, R, S	x					x		x		x			x	x		x
Fully Flexible (F)	RFI, RPI, R, S	x		x	x		x		x		x		x		x		x
SCM Strategy (Focus Areas) =						IC	IR			PC	PR			LC	LR		
Collaborative SCM Strategy						IC				PC				LC			

Choosing right *strategic focus element(s)* is driven by their market competition and what their customer wants. However, collaboration in any specific focus area is possible if the dominant partner desires. Supplier or channel collaboration opportunity is said to exist in any specific focus area under Material/Production/Logistics when at least two partners including dominant partner agrees. But product collaboration is possible when at least two consecutive stages on supply side agree and all relevant partners at each stage agree along with the dominant partner. On demand side, the collaboration opportunity exists in inventory and logistics areas if at least one distribution/channel partner agrees with dominant partner.

Ensuring Feasibility

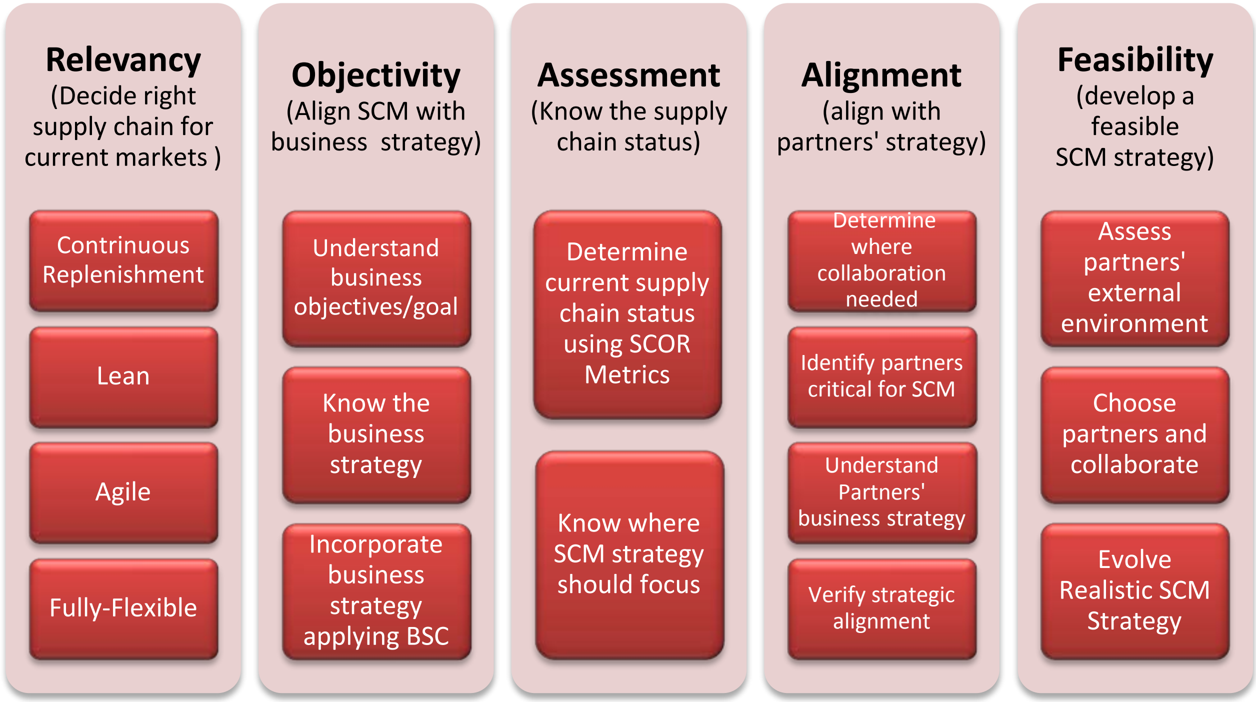
Evolving feasible collaboration objective(s) for the supply chain alliance is a complex challenge if partners are operating in a multi-national setting or global context. For instance if partner(s) are operating in unstable economic conditions the high cost of credit and currency fluctuations limits those partners' ability to contribute for improving cost structures. Similarly, if stringent labor laws prevail in their country then partner(s) cannot contribute to efficient HR assets utilization. 'Innovation' cannot be the objective if partners have limited access to skilled labor and/or technology resources. 'Delivery' cannot be the game plan if logistics infrastructure is poor. According to Simplified Strategic Planning (Bradford and Duncan, 1999), the external environment is broken into 7 key areas: Markets (M), Competition(C), Technology (T), Supplier markets(S), Labor markets (L), Economy (E), & Regulatory environment(R) as shown in table 5. So, the big picture should be assessed. In the example, since collaboration strategy focuses on cost, competitive and customer environments determine the level of cost improvement required while economic environment, labour & supply market gives realistic view of cost mgt. opportunities.

Table 5: Strategic Focus Matrix with Relevancy, Objectivity, Alignment & Feasibility

Business Objective (in terms of SFAs) for stage i (i= 1 to n)		Product				Inventory				Production				Logistics				External Environment						
		RFI	**Q**	**RPI**	**B**	**C**	**R**	**U**	**S**	**C**	**R**	**U**	**S**	**C**	**R**	**U**	**S**	**R**	L	**E**	**T**	S	C	M
Tier i Supplier(s)	SUPPLY	x	x			x			x	x				x										
Tier i +1 Supplier(s) [10]																								
My Organization (Business Strategy)						x				x				x										
Supplier Collaboration Opportunities						C				C				C										
Channel Collaboration Opportunities		N/A								N/A														
Level n-1[ ]	CHANNEL																							
Level n[ ]																								
Supply Chain Type	**Key Focus**	**RFI**	**Q**	**RPI**	**B**	**C**	**R**	**U**	**S**	**C**	**R**	**U**	**S**	**C**	**R**	**U**	**S**	**External Environment**						
Continuous Replenishment (C)	R						x				x				x			x						
Lean (L)	Q, C, U		x			x		x		x		x		x		x								
Agile(A)	RFI, R, S	x					x		x		x			x	x		x							
Fully Flexible (F)	RFI, RPI, R, S	x		x	x		x		x		x		x		x		x							
SCM Strategy (Focus Areas) =						I C	I R			P C	P R			L C	L R				L	E		S	C	M
Collaborative SCM Strategy						I C				P C				L C					L	E		S	C	M

Analysis of partners' external environment to verify feasibility of derived collaboration objectives is necessary to craft feasible supply chain collaboration goal(s). If feasible supply chain collaboration objectives could not be determined, the partners should expand their business objectives set and redo the process until objective, aligned, relevant and feasible collaboration goals are determined.

Figure 7: ROAAF Framework



Source: Original, derived from this article

CONCLUSION

The proposed structured approach, ROAAF (Relevancy, Objectivity, Avoidance, Alignment and Feasibility) model (see figure 7) to strategic goal-setting process in intensive supply chain collaborations (ISCC) will immensely benefit the global manufacturers and retailers. This structured approach effectively addresses the prevailing strategic planning or Joint Decision Making (JDM) challenges like achieving strategic alignment, in supply chain driven firms. It offers a solid mechanism to implement strategic goal-setting in collaborative supply chains. The model adds to the existing literature of supply chain management (SCM) besides stimulating research for further development of the model or address next level JDM issues like achieving strategic and cultural alignment in joint strategy development in the ISCC context.

REFERENCES

Oliver, R. K. and Webber, M. D. (1982), “Supply-Chain Management: Logistics Catches up with Strategy”, in M. Christopher (ed.), *Logistics: The Strategic Issues*. London: Chapman and Hall, 63–75.

Porter, M.E. (1985) , *Competitive Advantage: Creating and sustaining superior performance*, Free Press, New York.

Kurt Salmon Associates (1993), *Efficient Consumer Response: Enhancing Consumer Value in the Grocery Industry*, Food Marketing Institute, Washington, DC.

Berry, D., Towill, D.R. and Wadsley, N. (1994), “Supply chain management in the electronics product industry”, *International Journal of Physical Distribution and Logistics Management*, Vol.24 No.1, pp 79-100

Martha C Cooper, Lisa M Ellram, John T Gardner, Albert M Hanks (1997) “Meshing multiple alliances” *Journal of Business Logistics*, 1997

Lambert, D.M., Cooper, M.C., and Pagh, J.D. (1998), "Supply chain management: implementation issues and research opportunities", *International Journal of Logistics Management*, Vol. 9 No.2, pp.1-19

Christopher, M. (2000), “The agile supply chain competing in volatile markets,” *Industrial Marketing Journal*, 29, pp. 37-44.

Croucher, P., Rushton, A.and Oxley, A.(2000) , *Handbook of Logistics and Distribution Management*, Second Edition, Kogan Page Limited, London, UK.

Robert W. Bradford (2000) “*Simplified Strategic Planning: The No-Nonsense Guide for Busy People Who Want Results Fast*” Chandler House Press (September 2000)

Lin, B., Collins, J. and Su, R.K. (2001), “Supply chain costing: an activity based perspective", *International Journal of Physical Distribution and Logistics Management*, Vol. 31 No. 10, pp. 702-713.

James B. Rice, Jr. and Richard M. Hoppe (2001), “Supply Chain vs. Supply Chain—The Hype & the Reality, ” *Supply Chain Management Review*, September-October, 2001

Svensson, G.(2002), "The theoretical foundation of supply chain management", *International Journal of Physical Distribution and Logistics Management*, Vol.32 No.9, pp.734-754.

Simchi-Levi, D., Kaminsky P. and Simchi-Levi, M. (2003), “*Designing and managing the supply chain: Concepts, strategies and case studies*”, Erwin Mc-GrawHill, Singapore.

David A. Taylor (2004) “*Supply Chains: A Manager's Guide*" Addison-Wesley Professional.

Wisner, J.D. , Leong, G.K.and Tan, K.C. (2005), *Principles of supply chain management*, Thompson Asia, Singapore.

Emberson, C., Storey, J., Godsell, J. and Harrison, A. (2006), "Supply chain management: theory, practice and future challenges", *International Journal of Operations and Production Management*, Vol. 26 No.7, pp.754-774.

R.P. Kampstra, J. Ashayeri, J.L. Gattorna, (2006) "Realities of supply chain collaboration", *International Journal of Logistics Management*, The, Vol. 17 Iss: 3, pp.312 – 330

Handfield, R. B. and Bozarth, C.C. (2006), *Introduction to Operations and Supply Chain Management*, Pearson Education, Inc. , New Delhi.

Patricia J. Daugherty, R. Glenn Richey, Anthony S. Roath, Soonhong Min, Haozhe Che, Aaron D. Arndt, Stefan E. Genchev (2006), “Is collaboration paying off for firms?” *Business Horizons* Volume 49, Issue 1, January-February 2006, Pages 61-70

Abhinav Ajmera, Jack Cook (2009), “A multi-phase framework for supply chain integration,” *SAM Advanced Management Journal*, Winter, 2009

“*Supply Chain Strategy in the Boardroom Interim findings*” February 2010, School of Management, Cranfield University

Mei Cao, Qingyu Zhang (2010) “Supply chain collaborative advantage: A firm’s perspective,” *International Journal of Production Economics*, Volume 128, Issue 1, November 2010, Pages 358-367

MAIN OBSTACLES OF VIETNAMESE RURAL FINANCIAL INSTITUTIONS' FINANCIAL SUPPORTING POLICIES

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ABSTRACT

Vietnam's rural finance sector has been developing and making significant contributions to its rural development by a rapid expansion of outreach and available fund sources. However, there have been remaining problems that are very likely to hinder the sector from its further development. Such problems are: (1) there is a lack of responsive and adequate financial services in rural areas; (2) a significant number of the poor households still do not have access to any microfinance services, to name a few. Thus, the objectives of this study are two-fold. The first is to analyze the causes of such problems, and the second is to provide recommendations that are strongly expected to overcome such problems.

OVERVIEW OF VIETNAM'S RURAL FINANCIAL MARKET

What Are the Problems of Vietnam Rural Sector?

Vietnam has approximately 72% of the population living in rural areas, where 94% of the nation's poor also lives and the agriculture accounting for 54% of the national workforce is the economic mainstay. Therefore, the rural economy sector plays an important role in Viet Nam. Total loans outstanding in rural areas comprise a mere 17% of the total bank credit and less than 20% of the rural population has access to any kind of institutional finance sources. The government's national poverty reduction program is thus a multi-pronged approach to modernizing agriculture and value-added agro-processing; promoting non-farm household businesses; and increasing employment opportunities through geographically dispersed industrialization and SME (small and medium enterprises) promotion. The results have been remarkable, with poverty reduced from 58% in 1993 to 12.3% as of 2009 and Vietnam is expected to meet its Millennium Goal by 2015. However, poverty distribution remains skewed with 45% of the poor accounted by ethnic minorities in remote areas, while they comprise only 14% of the population.

This continued growth is set to bring Vietnam out of the low income country status to the group of middle-income countries in 2010, when the GDP per capita will surpass the threshold of 1000 USD. The poverty rate, measured by the international standard, has decreased from 58% in 1993 to 14% in 2008 (GSO, 2009). It is an exceptional achievement, more than two times better than what is aimed for in the first Millennium Development Goal

(MDG). In the absolute term, Vietnam has lifted some 35 million people out of poverty from 1993 to 2008, nearly 6,400 people every day (World Bank, 2010). There are, however, still 12.5 million people living below the poverty line. The achievement in poverty reduction is still precarious and not yet sustainable. As the United Nations Development Program (UNDP) stated: "*With so many of Vietnam's people on the precipice of the poverty line, any major economic or natural disasters will only set Viet Nam back*" (UNDP, 2010). Poverty in Vietnam is mainly a rural phenomenon. The poverty rate in rural areas is more than 5 times higher than in urban areas in 2008, 18.7% versus 3.3% (see Table 1).

Table 1
General Poverty Rate by Urban Rural and Region Calculated by Expenditure (GSO, 2010)

Region	2002	2004	2006	2008
Whole Country	28.9	19.5	16.0	14.5
Urban	6.6	3.6	3.9	3.3
Rural	35.6	25.0	20.4	18.7

Given the fact that 72% of the population live in rural areas, the rural poor account for 94% of the total number of poor people. Poverty is increasingly associated with ethnic minorities. Both the poverty headcount (percentage of the population living below the poverty line) and poverty gap, which measures the seriousness of poverty, are higher among ethnic minorities (see Table 2).

Table 2
Poverty Headcount and Poverty Gap in Rural Areas among Different Ethnic Groups, 2006 (Baulch Bob, 2010)

Ethnic Category	Poverty Headcount	Poverty Gap
Kinh-Hoa	13.5%	2.7%
Khmer-Cham	34.6%	5.8%
Tay-Thai-Muong-Nung (in the Northern Uplands)	45.2%	11.1%
Other ethnic minorities in the Northern Uplands	72.4%	26.1%
Ethnic minorities in the Central Highlands	73.6%	25.7%
Others	50.1%	23.5%

Participatory analyses of poverty in Vietnam often pointed out the lack of capital and limited access to financial services as one of the major causes of poverty. The poor people usually reported that they either did not have collaterals to access credits from commercial banks or the level of credit from VBSP offered through mass organizations (WU, FU, etc.) was low, not enough for production and business development (Vietnam Academy of Social Sciences, 2008).

As of April 2009, Vietnam had a population of 85.8 million people, which ranked the country at the 13th place in the world and the 3rd in the South East Asia as most populous nations (GSO, 2010). The share of the rural population, although declining, still accounts for 70.4% of the total. With relatively young population and declining fertility rate, Vietnam is now entering "the golden period" of the labor force. The dependency ratio is low as 66.2% of the population is in the working age (15-59) in 2008 (GSO, 2010). Most of the labor force work for themselves/their households or employed in household businesses. The average annual growth of the labor force in the period of 1999-2008 is 2.2%, equivalent of 910 thousand people (ADB, 2009) entering the labor force every year. More than 70% of this growth occurs in rural areas. However, the number of jobs in the agriculture sector is stagnant or even declining throughout the decade, from 24.8 million in 1999 to 23.6 million in 2008

(ADB, 2009). Therefore, the solutions for developing rural Vietnam are employment creation and poverty reduction in sustainable ways.

Rural Finance – Is It the Answer for Vietnam's Rural Development?

Although the literature on the link between rural finance/microfinance and employment creation/poverty reduction remains mixed, several studies show a strong poverty impact of rural finance/microfinance. For instance, a study by Pitt and Khandker (1998) conclude that credit raises household consumption, especially when lend to women. Similarly, Khandker (2005) show that microcredit helps the extremely poor even more than the moderately poor. On the other hand, studies by Montgomery and Weiss (2005) and by Weiss, Montgomery and Kurmanalieva (2003) show mixed results. They argue that while rural finance/microfinance may have positive impacts on poverty, its reach to the core poor is limited and there is a need to improve relevant designs to make MFIs as part of the package for targeting the poor, rather than the whole solution. A recent study by Islam and Choe (2009) shows household participation in a rural credit program may increase child labor and reduce school enrollment, and this is more pronounced for girls and younger children. In a similar way, the ADB's review paper (2009) highlights the consensus that financial sector development plays a vital role in facilitating economic growth and poverty reduction. The paper also concludes that microfinance and SME credit programs need to be well designed and targeted to be effective. In addition, rural finance/ microfinance programs need to be accompanied by other supporting services including access to markets and technologies.

The provision of agricultural and rural financial services has always been a major component of poverty reduction and employment creation measures of the government from the onset of Doi Moi in 1986. Several policies and actions have been made to provide better financial services for the rural sector.

Table 3
Key Milestones of Vietnam's Rural Finance Policies and Development (ADB, 2010)

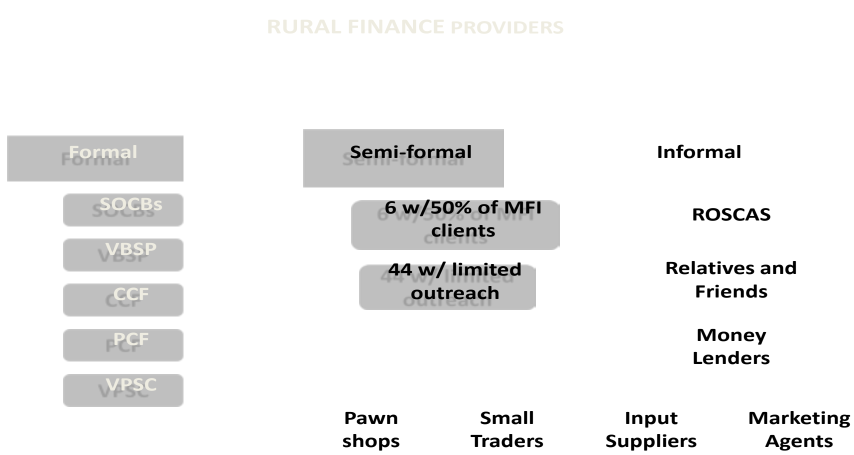
Year	Event
1988	Vietnam Bank for Agriculture (VBA) was established to focus on providing financial services to agriculture and rural sectors
1991	CEP – the first type of Microfinance institution (MFI) was established by the Labor Confederation of HCM City
1992	TYM – one type of MFIs - was created by the Vietnam Women's Union
1993	People's Credit Funds (PCF) network started the pilot after the collapse of the whole Credit Cooperative System in the hyperinflation period before *Doimoi*
1995	The Bank for the Poor was established within VBA
2001	Decree No.48/ND-CP of the Government for improving organizations and operations of PCFs
2002	The Bank for Social Policies (VBSP) was established by separating the commercial banking to VBA and social banking to VBSP
2003	Vietnam Bank for Agriculture was transformed into Vietnam Bank for Agriculture and Rural Development (VBARD) with full banking services
2005	Decree No. 28/ND-CP dated 8/3/2005 of the Government on organization and operation of microfinance institutions (MFIs) was released with ADB supports
2007	Amendment of Decree 28 above by Decree 165/ND-CP dated 11/7/2007
2008	Resolution 26-NQ/TW- on "Tam Nong" dated 5/8/2008 – of the Party Congress on three rural critical issues: agriculture, farmers and rural sector. One of solutions is to "continue to provide favorable credit to the rural sector, and encourage the financial

	institutions to lend to the rural sector”
2009	National Microfinance Steering Committee was formed to assist the Prime Minister in policy and strategy formulation to develop a market-based microfinance sector
2009	Decision No.497/QD-TTg of the Prime Minister dated 17/4/2009 on providing the interest support for farmers within the Demand Stimulus Package
4/2010	Decree 41/ND-CP dated 12/4/2010 on Credit Policy for developing agriculture and rural sector, allow non-collateral borrowing to farmers up to VND 50 millions to farmers, VND 200 mill to non-farm households, and VND 500 mill to cooperatives/business farm
6/2010	The new Credit Institution Law (CIL) was released to replace the old version of CIL, which incorporates MFIs into the formal financial system and liberalize the banking operations, including the rural finance
8/2010	TYM - The first MFI has been formalized to become one of credit institutions

Rural Finance System of Vietnam

The rural financial providers in Vietnam consist of three types: formal (registered) credit institutions, semi-formal credit programs (mainly NGO-MFIs), and the informal sector.

Figure 1. Main Rural Providers in Vietnam (ADB, 2010)



The formal sector consists of 6 types of credit institutions (SBV, 2010):

* Commercial banks, especially VBARD. Before 2005, more than 16 joint-stock rural commercial banks were established and operated in rural areas. After 2005, no more rural banks were operated, as the Government does not distinguish among rural-urban banks anymore.
* Vietnam Bank for Social Policies (VBSP) – wholly owned by the government, provided subsidized credits to the poor, and funded mainly from the State Budget.
* People’s Credit Funds (PCFs) system with Central People’s Credit Fund (CCF) as the apex institution – applying the cooperative model.
* Vietnam Postal Savings Company (VPSC): Providing savings mobilization services only.

And TYM - the first newly formalized NGO Microfinance Institution which just has been registered in August 2010.
* The semi-formal sector includes more than 300 small-scale microfinance programs, of which 40 are relatively big and focusing on microfinance. All of them are NGO-typed, with number of clients range between 1,000 – 10,000 and majority of the loan portfolio is below US$1M (except CEP and TYM – two biggest MFIs). The programs strongly focus on the poor, have typical loan size between US$150 – 300; locations mostly on the rural parts of Vietnam; and lend almost entirely to women – (94% of the clients are female). Among them, 6 biggest ones account for more than 50% of market share for the whole semi-formal sector. Their savings are mainly compulsory, very tiny voluntary savings. They also receive few commercial funding sources (MFWG, 2009). The informal sector consists of the Rotating and Savings Associations (ROSCA), relatives and friends.

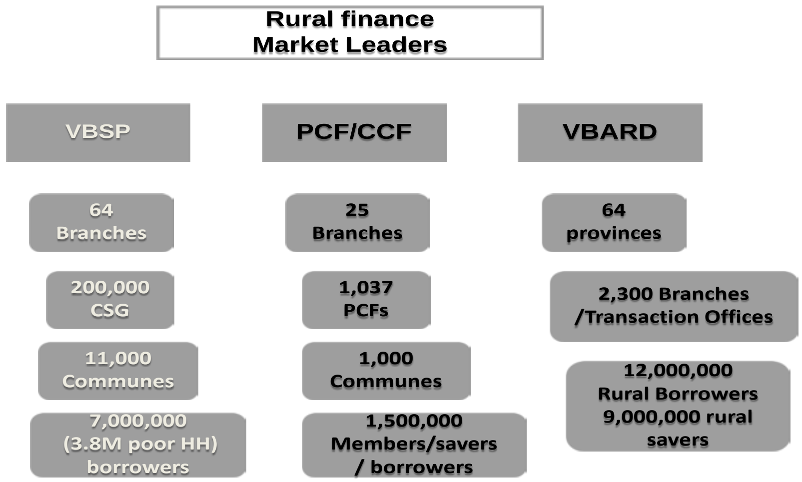
The operations of main rural finance providers are presented as followed:

Table 4
Rural Finance Formal and Semi-formal Landscape up to 2009 (ADB, 2010)

Institution	Number of Borrowers (mil.)	% of Total Borrowers	Total Outstanding Loans (USD mil.)	% of Total Outstanding Loans	No. of Savers (mil.)	% of Total Savers
VBSP	7.8	36.62	4,398	26.40	2.14	15.88
VBARD	12	56.34	11,182	67.11	9.00	66.77
PCFs	0.9	4.23	1,006	6.04	1.5	11.13
NGO MFIs	0.6	2.82	75	0.45	0.43	3.19
VPSC	0				0.41	3.04
Total	**21.3**	**100**	**16,661**	**100**	**13.48**	**100**

Three biggest rural finance market players are: VBARD, VBSP, and CCF/PCFs system. Of which, the biggest credit provider is VBARD (56.34%). However, the credit approach of VBSP is quite different from others, as it has subsidized interest rates (ranging from 0.4% to 0.9%/month).
The savings capacity of these rural finance providers is much less than credit. Only PCFs/CCF system and the VBARD operate as the commercialized institutions, with main funds for lending from savings mobilizations using market rates. VBSP and NGO MFIs mainly provide credits, with pilot savings program (VBSP started in 2007), or compulsory savings (NGO MFIs).

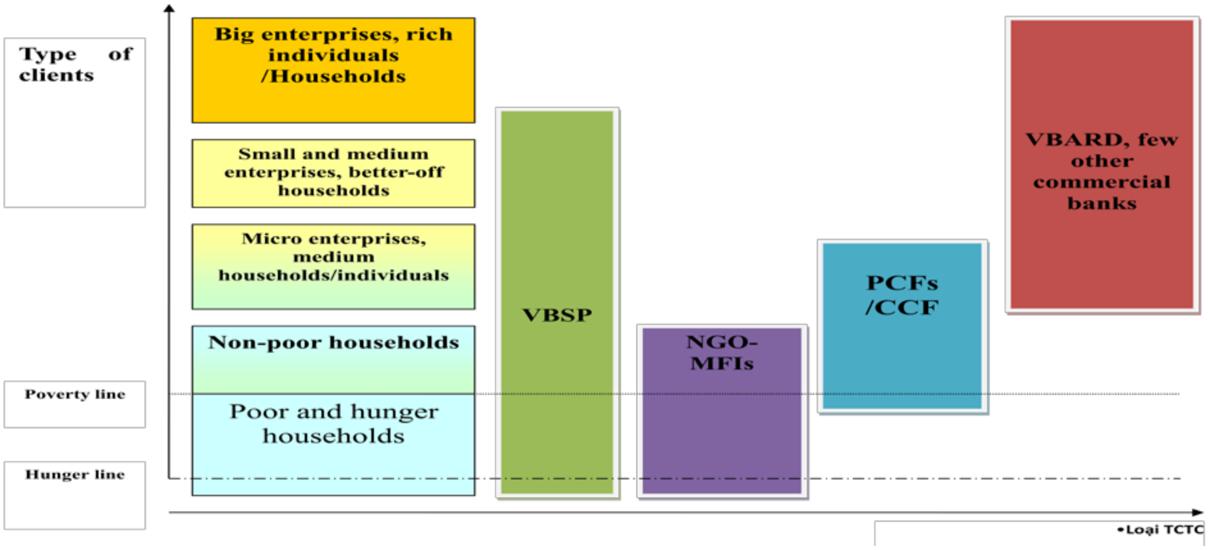
Figure 2. Rural Finance Market Leaders of Vietnam (ABD, 2010)



Among three major players in the rural finance market, VBARD is a commercial bank with profit-orientation, balances its development banking mandate with profitability and sustainability concerns. To date, it has 2,300 branches and transaction offices covering all of the provinces and districts, focusing on the upper-segments of the rural finance market. In 1993, the State Bank of Vietnam (SBV) promoted the setting-up of the People's Credit Fund (PCF), a form of financial cooperatives, to provide commune level financial services. The Central Credit Fund (CCF) was also established to act as the PCFs apex institution and provide support to the PCFs. The prudent nurturing of the PCF by SBV was aimed at restoring confidence in financial cooperatives that suffered massive failures in prior years mainly due to the hyper-inflation and the rapid devaluation of the VND. By June 2010, there were 1,037 PCFs covering about 10% of the country's communes and serving some 1.5 million members, about 50% are considered as the poor. The PCFs have always been and continue to be market-oriented. They adhere to the basic cooperative principles of self-help and mutual assistance with less than 15% of their resources funded from external sources, mainly from CCF.

The VBARD and PCF networks have an extensive geographic presence to cover low-income rural households, but their commercial orientation creates the government's concerns about the exclusion of poorer households and disadvantaged groups. The Vietnam Bank for the Poor (VBP) was thus set up in 1995 as a Fund administered by the VBA (now VBARD) to target poor households. By 2002, VBP was spun off from VBARD to create the Vietnam Social Policy Bank (VBSP), a non-profit entity focuses on subsidized "social policy lending" to poor households and disadvantaged groups as being defined by the Government. By the end of 2009, VBSP had about 8,000 staffs assigned in all districts with 98% coverage of all communes of the country.

Figure 3. Market Segments of the Rural Financial Players (Le, 2008)



Although VBARD has the biggest coverage in terms of outstanding loans and number of customers, it focuses mainly on the upper part of the rural finance market, such as big and medium enterprises, rich and better-off households. CCF/PCFs clients are mainly rural households, small and medium enterprises, and micro-enterprises, and some upper-poor households living in rural areas. The first credit program of VBSP was for the poor only. However, VBSP currently covers different types of customers. There are 18 subsidized credit programs directed by the government to different stakeholders, except the rich and big enterprises (Le, 2008; ADB, 2010). NGO-MFIs are mainly covering the non-poor and poor households, which have been proved to have the best outreach to the poor in terms of quality (Le, 2005).

MAIN OBSTACLES OF VIETNAMESE RURAL FINANCIAL INSTITUTIONS' FINANCIAL SUPPORTING POLICIES

The rural finance sector has been developed and contributed significantly to the rural development of Vietnam, with a rapid expansion of outreach, and available fund sources. However, the remaining problems are still the stagnancy to the next development. There is a lack of responsive and adequate financial services in the rural areas which have a mere 17% share of the total bank credit and where less than 20% of the population has access to any kind of institutional finance services. Almost 50% of the households officially classified as poor by the local government still don't have access to any microfinance services. Ethnic minorities still borrow less frequently than ethnic Vietnamese, get smaller loans overall, and are more vulnerable to cycles of debts in the informal sector (VLHSS, 2008). The main obstacles of the financial supporting policies are:

The Government Has Applied the Dual Approach in Rural Financial Policy, Which May Cause Risks to Customers

Since the onset of Doi Moi, the government has created and nurtured commercially-oriented financial institutions which have become major players in the micro and rural finance

– the Vietnam Bank for Agricultural and Rural Development (VBARD) and the People's Credit Fund network (PCF – a financial cooperative). Simultaneously, it has also developed and expanded the role of the Vietnam Bank for Social Policy (VBSP) which has become a main provider of the "social policy lending" to target groups funded by State-mobilized funds and heavily supported with subsidies. The establishment of this bank makes the government out of concerns about the exclusion of these groups from the market-oriented operations of VBARD and the PCFs.

Nonetheless, the government also sees the growing importance of market-driven microfinance and is aware of its rapid development elsewhere in the region in providing sustainable quality financial services to poor and low-income households. Starting from 2005, it initiated moves to transform semi-formal microfinance institutions (MFIs) into formal MFIs. By late 2000, it stepped up efforts to rationalize the microfinance sector, with a series of measures from drafting a new Credit Institutions Law to the formation of a high-level National Microfinance Steering Committee (NMSC), to assist the Prime Minister in policy and strategy formulations in order to develop a market-based microfinance sector.

On 16 June 2010, the new Credit Institutions Law (CIL) was finally passed. It is landmark legislation - not seen even in countries with major advances in microfinance - that integrates microfinance as a subset of the financial system where it rightly belongs. The new CIL resolved previous fragmented legal bases for institutional microfinance, including issues raised on the restrictive provisions of the 2005 Decrees, and uncertainties on the liberalization of interest rates in the financial market. More importantly, it set the enabling legal and regulatory framework for developing a robust, sustainable, and responsive microfinance sector of Vietnam. However, key issues and "binding constraints" still need to be addressed to attain the vision for the microfinance sector.

Indeed, the continuing efforts of the government resulting in the passage of the new CIL and the ongoing efforts to formulate the Microfinance Strategy and Roadmap are major steps towards the right direction. However, the government also has to ensure that its focused pursuit of other social objectives will not undermine its objectives for the Microfinance Sector. The major risk is that the government - in its concern to ensure the inclusion of its "social policy lending" target groups - could cause the exclusion of the vast majority of the poor and low-income households from accessing permanent, responsive, and a range of financial services, not just micro-credit.

The Implementation of Opening and Rural-Support Legal Framework Is Not As Good As Expected

Although the legal framework for rural finance sectors has been opened up and supportive to clients, the implementation is not as smooth as expected. Since 2008, the idea of "Tam Nong" – three key stakeholders in farming – (agriculture, farmers, and rural sector) has been paid attention. However, the policy of "continue to provide favourable credits to rural sectors, and encourage financial institutions to lend to rural sectors" needs further implementing rules and regulations.

Under the prime ministerial Decision 497/QD-TTg dated 17/4/2009, the government provides interest-free loans for farmers and entities to buy fixed assets for productions, such as agricultural machinery and vehicles. The loan period is 24 months. The program also offers farmers a 4 per cent interest rate subsidy on loans for a one-year term to buy fertiliser, pesticides and construction materials. Total budget for this package was VND 12 trillion (equal to USD 700 millions). However, this demand stimulus package did not reach the objectives, as only VND 776 billion were released up to 31/12/2009, and many farmers did not get access to this package because of the complicated procedures or lack of information.

In order to effectively pursue the credit policy for the agricultural and rural development, the SBV held a conference in August 2010 to review the 10-year implementation of this policy and implement the Decree No.41/2010/ND-CP, with the participation of representatives of the provincial and municipal People's Committees, ministries and central agencies. At this meeting, the SBV, the Vietnam Farmers' Association, and the Vietnam Women' Union signed an inter-institutional resolution on the coordination of the implementation of the Decree No. 41/2010/ND-CP. The SBV Governor requested ministries and agencies to issue as early as possible the guidelines related to their tasks as assigned in the Decree No.41/2010/ND-CP. However, for commercial banks with profit-orientation such as VBARD, the issue of non-collateral loan maximum to VND 500 million to business farms is a big issue.

Moreover, given the legal framework for MFIs (Decree 28/165 and the new Credit Institution Law), the formalization process of semi-formal MFIs into financial market is still difficult, even TYM – the first semi-MFI has been given the license. Following is the summary of the problems faced by MFIs in the formalization process.

Table 5
Some Issues and Concerns Raised by MFIs (ADB, 2010)

Key Features	Issues/Concerns
Legal Capital	Only few MFIs (big ones, established in early 90's) can readily comply with the SBV provisions.
Ownership	This limits the MFI to call for capital to support its expansion. The ownership composition required to have mass-based organizations poses a concern since most organizations change leaderships every 5 years, thus will become a threat in the policy direction. In terms of fund ownership, there is also an issue for the capital granted by donors since it will imply fund capitalization sharing with the poor community.
Branching	Server/PC and security requirements will be impractical to most MFIs since they operate in far-flung areas and it will increase their cost significantly. Further, the control on branches opening only after one year shall constraint the expansion of MFIs operations.
Legal Registration to Establish a MFI	-Some MFIs do not match with Circular 02 because they were founded under Decree 88. -Some NGOs have limited capital. If the capital is invested to comply, it will be more difficult for such MFIs to financially support the expansion of its operation.
Head Office of the MFI	While most MFIs have their offices in Hanoi or HCM city, their microfinance operations are in provinces and remote areas. Therefore, the setting-up of the Head Office in actual areas of their operations would be difficult.
Security	These requirements shall be difficult and impractical for the MFIs especially if they are working in mountainous and remote areas. Further, the MIS required (Daily Cash Balance report) will also be very costly for MFIs.
Other Laws Related to the Decrees 28 and 165	
Interest rate and Tax	• Although the formalized interest rate policy is negotiable, the informal cap relating to

	the base rate and the alliance among bankers still remain. This poses a problem for the MFI's financial sustainability. Also, it is still unclear for most MFIs whether the interest rate shall be imposed on a flat or declining mode. • The current standard corporate income tax rate is 25%. This would not be appropriate given the nature of many MFIs that provide the poor with access to credit and savings services and additional supporting programs to improve the well-being of poor communities.
Restriction on Foreign Borrowings	This shall limit the expansion capabilities of MFIs.
Auditing and Accounting Standards	MFIs raised issues on the SBV's provision of clear auditing and accounting standards for microfinance such as the CAMELS rating, CGAP ratios, SEEP, WOCCU's PEARL

Therefore, the macro environment has been good, but it needs to be improved for bringing the enabling environment for rural finance development.

Dominance of Subsidy from VBSP Causes the Burden to the Government, While Discourage the Development of Market-Oriented Rural Finance Institutions, Especially MFIs.

VBSP applies a similar group lending technique to borrowers. About 98% of VBSP's lending are channelled through commune-based credit and savings groups (CSGs) composing of 35-50 clients, organized through the VBSP's highly effective use of mass organizations and the People's Committee networks that permeate down to the hamlets. In fact, most of the target clients of VBSP are also of MFIs. VBSP offers 16 types of loan products. Their features are all prescribed by the government and funded from the state budget, mandatory deposits of SOCBs, entrusted funds and borrowings. VBSP's target clients are eligible to borrow from all lending programs.

In the Decree 78/2002/ND-CP, VBSP mandates are: a non-profit financial institution devoted to provide concessional lending to the poor and other "social policy" lending clients; with heavy dependence on the government for its operations. The government support comes in various forms: (a) budgetary allocation and the government guaranteed loans for funding its portfolio growth; (b) subsidies to cover its negative financial spread and cost of operations; (c) 2% compulsory deposits from SOCBs; and (d) tax exemptions.

Apart from the usual adverse impact of subsidized credit to the proper functioning and development of a robust microfinance sector, the strongest case against VBSP's subsidized lending is the marginal monetary benefit derived by the borrowing individual target household (HH) that cannot justify the increasingly heavy fiscal burden imposed to the government by such a subsidy. The paradox is due to the small average size of the target HH's loan of VBSP (average of USD521) and the unsubstantial difference between VBSP's subsidized lending rate averaging at 0.65%/month as against VBARD's, the market leader, and most of the PCFs' lending rate at 1%/month. Using the end of 2009 figures of VBSP and applying the difference between VBARD's lending rates against VBSP's, the poor HH clients of the VBSP benefited only about VND 33,735/HH/month (USD1.82/HH/month) due to the subsidy, or a little over VND 8,000/individual/month based on an average of 4 members/HH. On the other hand, the cost to the Government in interest income forgone from 3.8 million poor HH could reach USD USD6.93 million/month or about USD 83 million/year (ADB, 2010).

The success of VBSP in achieving its mandate backed by substantial Government resources and subsidies, and 98% coverage of communes are also seen to discourage the entry of other institutional players. This in turn would adversely impact on the development of a market-driven microfinance sector, which is crucial in promoting competition and efficiency, as well as in widening the choices of clients for microfinance providers and the services they offer. And while VBSP has attained remarkable outreach, it is also becoming an increasingly heavy fiscal burden for the government that may not be justified.

The Quality of Financial Services Provided Are Still Low

First, credit is still the main financial product provided by rural financial institutions. About 70% of the total outstanding loans of VBARD is for the rural sector, which reached more than VND 270 trillion in 2009. In recent years, a sharp increase of credits to poor households and social policy lending target groups was mainly driven by the rapid growth of VBSP's portfolio funded by State-mobilized funds through budget allocations, compulsory deposits from state-owned commercial banks (SOCBs) and fully Government guaranteed borrowings.

Second, savings are still limited. Among rural financial institutions, VBARD is the champion in mobilizing deposits from customers. However, the rural sector is still the net borrower, as VBARD has to transfer the mobilized funds from urban to rural sectors. VBSP has started to mobilize savings as a pilot program to transform it into a more sustainable institution. CCF/PCFs system are characterised by the self-sustainability manner, therefore savings mobilization is the main source for their operation. However, up to 2010, CCF/PCF system only covers 10% of communes, and total savings of PCFs reached VND 17,900 billion in 2009. Semi-formal MFIs only can mobilize compulsory savings with insignificant volume, and only TYM can mobilize voluntary savings after its formal registration. The savings products are still very simple and undiversified, not tailor-made to rural demand.

Third, other financial products are very scant or underdeveloped. Few products such as payment and remittance are provided by VBARD and Vietnam Postal Savings only. CCF/PCFs system and VBPS have started to test the remittance products. VBARD is currently the best positioned institution to offer quality banking services, especially for payment and remittance systems, given its extensive branching network and the adoption of information and communications technology (ICT) that allows mass-based and pro-poor innovations in banking services. Microinsurance, while still largely misunderstood by rural households, is now recognized as a vital service to the rural poor who are most vulnerable to the economic shocks brought about by death, illness, and loss of assets. Existing laws allow small-scale financial institutions like PCFs and MFIs to be agents of insurance companies only, with a few local insurers already offering both life and non-life insurance products appropriate for the low-income market. The most notable is Bao Viet Life that offers a range of low-cost life, livestock and health insurance. Others like AIA specialize in credit life insurance through an agency agreement with banks. Prudential has insurance products for women and children under 18. Some semi-informal MFIs with external partners (e.g., ILO, RIMANSI, Action Aid) have also pilot tested Mutual Aid Funds (MAF) that were proven successful in other countries. RIMANSI's experience with TYM is well-documented and shows that mutual assistance funds can be quickly and viably set up, with a good market acceptance. However, with the prohibition on ownership of insurance schemes by MFIs and PCFs, the only option is to develop MAF and other microinsurance products in agency agreements with existing and more progressive insurers like Bao Viet.

The Infrastructure for Rural Financial Development Is Inadequate

The infrastructure for rural financial development includes capacity-building facilities and credit information exchange. However, only VBARD joins the SBV's Credit Information Centre (CIC). Up to now, VBSP and PCF networks are not members of CIC, given their large volume of micro-loans that cannot be accommodated by the system, their commune level operations that will not pose systemic risks at national or even provincial levels, and low-level IT of the PCFs and VBSP. However, there need to have a proper monitoring of micro-loans even at a localized (commune or district) level. The real risk is that the poor and rural HHs that are most vulnerable to the adverse impact of over-indebtedness. There are anecdotal indications of the multi-financing of borrowers, especially with the rapid growth of VBSP in rural areas that are also extensively covered by VBARD and the 1,000 communes covered by PCFs. VBSP has just recently consolidated its accounts to borrower-based, rather than loan product-based monitoring, to avoid double counting and over-financing of a HH, since this can avail several loan products.

Despite the long existence of the rural financial providers, most of the service providers for capacity-building of MFIs are in the nascent stage or developing their capability to meet specific demands of the microfinance sector. Among the more notable entities that provide knowledge exchange and capacity-building services are: (i) Universities (including National Economics University, Bank Academy, and others) offer training mostly on traditional banking but has also been conducting training for the PCFs and VBSP; (ii) VBARD's own training school; (iii) Bank Training and Consultancy (BTC), founded by 10 joint stock commercial banks with supports from the International Finance Corporation (IFC) is also a core banking-oriented training facility; (iv) World Bank's (WB) Vietnam Development Information Centre (VDIC) is a partnership initiative of the WB and other donors that offer a range of services, facilities, and targeted trainings for knowledge exchange in development programs worldwide; (v) several NGO-oriented rural and microfinance training providers, including Microfinance Working Group (MFWG) - a platform for advocacy and knowledge exchanges among NGO-MFIs with periodic workshops and training programs, though it acts more as a forum for MFI practitioners; the Microfinance and Community Development Institute (MACDI); and Community Finance Resource Centre (CFRC) was also set up in 2007 by a group of well-known international and local scientists, researchers, banking experts and microfinance practitioners to offer a range of training and information exchange on microfinance, community development, education-communications and related topics.

RECOMMENDATIONS

To enhance the development of rural financial sector, the following issues should be taken into consideration:

A Clear Vision and Strategy for Rural Finance Should Be Developed by the Government

The market-based approach should be applied for ensuring the sustainability of financial providers, and the quality of products. The rural industry offers a broad range of appropriate financial products and services at *reasonable costs*, to its target clientele, including savings, short and long-term credits, leasings and factorings, mortgages, insurance, pensions, payments, money transfers and remittances. Financial products and services shall be offered at market terms and interest rates, and will be differentiated not only in terms of price but also in terms of quality, range of services and efficiency in providing these (and not subsidy, regulatory relief, or undue advantages provided by the government).

Making the Enabling Macro Environment for Rural Finance

As analyzed above, the macro environment for rural finance has been opened up and developed. However, the implementing rules and regulations (IRR) are still lack or inadequate. Therefore, more IRR should be prepared for the detailed implementation of the new Credit Institution Law and the Decree No.41. For examples, develop and refine supervisory and regulatory measures, including on-site and off-site supervision; improve and facilitate the licensing procedure, including the application of the "fit and proper rule" to directors and key officials of commercial banks working in rural sector, MFIs, PCFs and cooperative banks. Incentives for downscaling of commercial banks and upscalling of MFIs in rural finance market should be taken into consideration, such as tax incentives, cheap funding sources. The non-financial measures should be incorporated in a complementary way (such as market development, infrastructure investment, capacity building for rural employees, job creation, etc). Following are the recommended six levels of enabling regulatory environment for rural finance.

Table 6
Six Levels of Enabling Regulatory Environment for Rural Finance (ADB, 2010)

1. Market
   The specific market it operates in with specific characteristics and activities that determine that all players in that market can be compared to each other and allowing them to fairly compete with each other (also called a "level playing field");
2. Measurement
   The specific cost and income particularities that determine the profitability, the sustainability of the specific market activities and their sustained growth need to be accurately measured. Reporting requirements thus need to be detailed so that an individual institution's operations and performance can be accurately assessed and verified. It also means that performance can be compared with other players in the same market[1]. Only with such measurement is it possible to assess whether policy and regulatory measures are effective;
3. Ownership
   The nature of the owners of the players in that particular market and whether and how they can be held liable for their actions and for the performance of the organisation they own;
4. Financial Sources
   The nature, conditions and impacts of the different sources for financing the different players in this specific market;
5. Management and Human Resources
   The responsibilities, skills and organizational environment that managers and staff need to have as well as the legal, contractual and financial conditions that govern their activities;
6. Government
   a. Government needs to have a department that has strong authority over this specific market; that has adequate credibility (competence) and sufficient resources to ensure compliance of market rules by its players and to ensure that other private sector and public sector agents do not interfere in this market without proper authorization;
   b. On central government level there needs to be effective policy making and coordination on policy implementation. On this level specific support measures can be determined for the development of different sectors and their conditions.

Reforming the VBSP Operation

The reforming of VBSP is essential for reducing the government fiscal burden, utilizing the government sources for poverty reduction, while enabling the participation of several rural finance-oriented credit institutions to join the market. The different subsidized programs of VBSP should be reviewed. The essential supporting programs such as student loans, loans for very disadvantaged clients still can be subsidized, but it should be managed in a different way. For example, the off-balance sheet management is one good choice, and government will pay the fee for doing that. This measure also can encorage the participation of other credit institutions. For the programs which could be commercialized, apply the market interest rates. VBSP can also become the wholesale bank for other credit institutions, particularly MFIs in providing financial services. Savings mobilization should be more encouraged to make it really a "Bank" in sustainable and efficient manner.

There is no single model for a successful rural financial institution (RFIs). Following is the summary from several RFIs in the developing countries by Yaron, which could be applicable for Vietnamese RFIs in general, VBSP in particular.

Table 7
Key Characteristics of Successful RFIs (World Bank Report, 1996)

1. Ensuring appropriate governance.
2. Clearly defined strategies and objectives.
3. Motivated and skilled staff. Staff trainings and incentive systems are essential for improved performance.
4. Innovative low-cost systems and procedures which meet the special needs of targeted clientele. Examples are mobile-banking for improved delivery of financial services and joint-liability groups – which reduce transaction cost and replace the traditional form of collateral.
5. Positive interest rates on loans and high repayment rates. Flexible loan terms and conditions, careful monitoring of loan repayments, and incentives to clients for early repayment.
6. Savings mobilization through flexible and accessible savings facilities and positive interest rates.
7. Risk diversification through lending for both agricultural and non-agricultural activities; geographic diversification and integration with the broader financial system.
8. Advanced management information system (MIS) which enable the monitoring of loans, individual client records and staff performance.

Encouraging the Participation and Development of Various Rural Finance Providers, Particularly the PCFs and MFIs.

The PCFs model has been proved to "meet the demand of rural customers the best" (World Bank, 2007). PCFs should be encouraged to expand its operation to 90% of communes which are not covered now. It is also essential for expanding the scope of each PCF, not just inter-commune as now. The planned coverage of PCFs are district-level. The transformation of CCF into the cooperative bank should be accelerated to make it more effective and efficient in working as the Hub for the whole development of PCF system.

Semi-formal MFIs, at the micro level, have better performance in targeting the poor, tailoring services to their needs and mobilizing their savings than other formal institutions. MFIs should be encouraged to expand their coverage. In order for the institutional forms determined by the Government to effectuate its Microfinance policy, the Policy Banks, the Associations, the Funds and the Cooperatives need to have rules that ensure their Financial, Institutional, Legal and Personal capabilities. They need to have "Deep Pockets" (long term solvency, liquidity), their owners and management need to be "Fit & Proper", and the owners and managers need to be held "Liable", personally, legally and financially responsible for possible failure, damages and losses (under current Vietnamese legal practices, it needs to be practically possible to take them to court and make them pay).

Special support measures can and need to be put in place that support and not undermine the abovementioned process. Support, such as start-up subsidies, technical and financial assistance, in-/direct tax advantages, tax holiday, etc. can be designed as "Smart Subsidies", integrated into a market-oriented financial sector development process. In particular, the central bank could also chair a process for designing a national capacity building program with an official certification process, which would ensure that all players are competent to work in the specific Vietnam.

Diversifying Rural Financial Products and Improving the Quality of Financial Products Provided

As the living standard is being improved, people's demand are various and increased. Therefore, rural financial products need to be diversified for satisfying the demand of rural people. The needs of people include 5 hierarchies as in Maslow's figure. The products provided cover credit, savings, insurance, payment, money transfer services and other non-financial services.

Figure 4. Maslow's Hierarchy of Needs (http://www.ict-learningnow.com)

Diversify of loan products: RFIs will provide various credit products with different size, duration, form and interest rate to meet with various increasing demand of customers. VBARD should develop the tailor-made credit products specifying for different needs of the rural sector, depending on different regions and agricultural structure. Diversifying credit products also depends on financial capacity, management capacity of the institution and fund utilization capacity of customers. Institutions should not provide too many credit products in the context where their supervision capacity and their customers' loan utilization are limited because this lead to the risk of deferred payment or capital loss. Traditional individual transaction model can be supplemented with group transaction model. From international experiences as well as practical experiences at financial institutions like VBARD, VBSP or MFIs, we can see that the model of providing financial services through self-help groups has proved its fitness to rural finance since it can deploy community power and decrease transaction cost for financial institutions. Therefore, financial institutions should enhance this strength, promoting lending through mass organizations, conducting democracy and transparency in credit activities.

Diversifying savings products: with the purpose of taking customers as the centre, savings products of RFIs should be designed to ensure security for savers, i.e. savings interest rate should cover inflation and earn profit. Small all and frequent contribution of savings should be encouraged. Compulsory savings should be applied only at the initial stage when the MFI is newly established. When customers gain awareness and get on with savings habit, MFIs should promote voluntary savings with various duration and interest rate to meet with demands. Such savings products would be truly convenient for customers; however, institutions themselves need to enhance management capacity to utilize the source with optimum efficiency.

Developing micro insurance products. Micro insurance is a social insurance model for low income customers. If it is distributed through RFIs, beneficiaries will not only be insured customers but the RFIs themselves. It is important for RFIs to work with official insurance organizations to make clear the agent roles, or RFIs to set up its own subsidiaries to specialize in microinsurance.

Developing non-financial products. As any other customer, customers of RFIs have desires for knowledge and skills in order to improve their existing business or open new ones. They need to identify markets, demands and distribution methods to maximize profit. They also need services on health, education, culture for their mental life. RFIs should have a strategy to cooperate with professional organizations to provide such products and services to their customers. They are microfinance supporting products such as: agriculture and forestation extension, communication education, capacity enhancement, community development, e.g. When customers are more mature, their capacity is improved, microfinance activities would be more helpful both for customers and RFIs.

Improving the Infrastructure for Rural Finance

Improving human resource and management skills toward professionalization and sustainability are essential for RFIs in the future. In order to improve capacity for RFIs, it is necessary to conduct the following activities:

- Study and design short term and long term training courses with or without certificate on disseminating policies of the State on rural finance and on management and operation of RFIs. The training funds could be raised by tuition fee and by the combination of public-private partnership.

- Find fund source and potential partners who can provide technical assistance (such as hiring consultants to assess the institution, recommend solutions for capacity improving each institution and support deployment of such solutions) for organizations already received microfinance operation license or not yet received but have the orientation to operate professionally and sustainably.

For other infrastructure supports, such as advisory services relating to the establishment of agencies, institutions functioning as supporting units for rural finance sector to develop effectively and sustainability, details are as follow:

- Set up a rural credit information agency, or an independent unit in the Credit Information Center to establish information and statistic bases of rural finance activities, which support customer risk appraisal, increase operational efficiency of MFIs;
- Form a rural finance forum for RFIs to cooperate and coordinate for utilizing resources and experience in providing the rural finance;
- Facilitating establishment of MFIs Association to create a forum for MFIs to gather, share experiences, difficulties in carrying out microfinance activities; to enhance application of best practices, thus, helping programs/projects conducting microfinance activities have sustainable development strategy.
- Support, help institutions, individuals who have desires to set up training centers which are independent from any RFI to providing training to RFIs' human resources.

REFERENCES

Islam, a., & Choe, C. (2009). Child labor and schooling responses to access to microcredit in rural Bangladesh. *MPRA Paper No. 16842*.

ADB (2010). Microfinance assessment: developing microfinance sector in Vietnam. *ADB TA-7499-VIE*.

ADB (2009). Financial sector development, economic growth, and poverty reduction: a literature review, Manila.

Nguyen, K.A. (2010). Developing rural financial market in integration process. *The Workshop "Impacts of the Global Economic Crisis on Agricultural Market and Rural Development of Vietnam"*. SBV-Ford Foundation, April 2010.

World Bank (2007). Vietnam: developing a comprehensive strategy to expand access for the poor to microfinance services (promoting outreach, efficiency and sustainability).

Montgomery, H., & Weiss, J. (2005). Great expectations: microfinance and poverty reduction in Asia and Latin America. *ADBI Research Paper Series No. 63.*

Quach, M.H. (2005). Access to finance and poverty reduction: an application to rural Vietnam. *Ph.D Thesis, University of Birmingham*.

Weiss, J., Montgomery, H., & Kurmanalieva, E. (2003). Microfinance and poverty reduction in Asia: what is the evidence? *ADBI Research Paper Series No. 53*.

Alip, J.A., & David-Casis, M.C. (2008). Micro-insurance in Vietnam. *RIMANSI*.

JFPR (2010). Formalizing microfinance institutions. *JFPR Project 9140-VIE.*

Le, L., & Tran N.A. (2005). Towards a sustainable microfinance sector in Vietnam: raising issues and challenges. *ILO paper No.5*.

Le, T.T. (2008). Developing rural financial institutions in Vietnam. *PhD Thesis, National Economics University*.

Ledgerwood, J. (1999). Rural finance handbook: an institutional and financial perspective. *The World Bank, Washington, D.C.*

Pitt, M., & Khandker, S. (1998). The impact of group-based credit on poor households in Bangladesh: does the gender of participants matter? *Journal of Political Economy*, *106*(5), 958-96.

Khandker, S. (2005). Microfinance and poverty: evidence using panel data from Bangladesh. *World Bank Economics Review*, *19*(2), 263-86.

Yaron, J. (1996). Rural finance: issues, design and best practices (rural well-being: from vision to action). *World Bank Report*.

A RECOVERING ECONOMIC MARKET WITH HISTORICALLY LOW INTEREST RATES CONTINUES TO GENERATE WEALTH TRANSFER OPPORTUNITIES

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ABSTRACT

Many investors remain paralyzed by the economic downturn experienced in 2008-2009. Nearly two years later, investors are skeptical as a result of the volatility they encountered, during one of the most difficult markets of a lifetime, with an average 80% decrease in portfolio valuations. According to historical standards, interest rates stay at an all-time low, even though the market has continued to recover. Rather than investors capitalizing on the various wealth transfer opportunities, the growing uncertainty in the market fosters their hesitancy in taking advantage of such prospects. Fears of a prolonged economic downturn caused market volatility to soar to historic levels and left asset values severely depressed. In order to escape the failing "Wall Street paradise," investors turned to the security of government bonds. As a result, this decreased the established hurdle rate for wealth transfers, which are promulgated by statutes at a minor premium to current market rates. In addition, the federal gift tax hurdle rates for many planning techniques dropped significantly, due to the financial crisis. However, we saw that the dramatic decline in asset prices produced an unusually strong return for those assets going forward. While the continued growth narrows the window of opportunity for planning in the wealth transfer arena, it still remains open and very compelling. The market has experienced an approximate one percentage point fluctuation in the 7520 hurdle rate, which reached an all-time low rate of 2% in February 2009. Although the gift tax hurdle rate increased to 3.0% in March 2011, the slight increase remains insignificant in achieving optimal wealth transfer benefits. The hurdle rate for valuing interests in trusts, the 7520 rate, is now averaging close to 6.5%. These lower rates should induce potential investors to aggressively pursue the planning opportunities afforded to them in the wealth transfer environment. In this paper, we quantify the probability and likely success of two strategies: charitable lead annuity trusts (CLATs) and intra-family loans. The authors will also demonstrate how an investor can achieve two goals at the same time: firstly, meet his or her charitable objective by fully funding payments to a charity with an aggregate present value equal to the amount attributed to a CLAT, and secondly, meet his or her objective in transferring wealth from a CLAT to a non-charity remainder beneficiary, free of an estate tax. The reader will better understand that the 7520 rate and the term of the trust determine the success for a CLAT.

REGULATION, CORPORATE GOVERNANCE ON FINANCIAL LEVERAGED COMPANIES MEXICO CASE

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ABSTRACT

During the last two decades several countries around the world has been modified and improve the regulation around the corporate governance practices, these new regulation standards require in instance to improve practices such a better board of directors, transparency in information, limitations in the use of debt and shareholders minority rights. Indeed those new practices from long view perspective should improve the economic position of the public companies ergo investors. Mexico is not the exception to this world wide trend and during 2001 the Mexican Financial Markets adopts new regulations and better corporate governance practices in order to improve the investor risk return relationship, according with the present research the reality is different as previously expected. We analyze several companies after the regulation of 2001 and how they managed the financial leveraged according with the new standards, the results contradicts the regulation expectations and the theoretical Principal Agent relationship.

INTRODUCTION

Regulation around the corporate governance practices has been increasing in the last two decades. First, new regulations attempt to minimize the conflict between Agent and Principal. Second, new regulations are now more concentrated in improve corporate governance practices and tight the administrators decisions into more transparency system. Third, part of this new system is the use and control of the financial resources inside the organization, specially the capital structure and leverage levels.

The Agency theory concentrates in how the Principal and Agent can minimize the differences using diverse mechanisms, in (Jensen & Meckling, 1976) the separation and control of the firm generates potential opportunistic behavior of the management in order to minimize the potential damage the organization may increase the Agency cost due to monitoring and control of the firm, then potential solutions (Jensen, 1993; Denis , 2001) can be found such 1) Legal and regulatory instruments linked to the symmetrical financial information 2) Internal organizational processes to control the use of debt, governance practices, board of directors, executive compensations and minority rights and 3) External Financial Market and Product Market. The potential solution can be different depending the country, regulation system and ownership structure.

Better corporate governance practices seems to be one the most used forms to minimize the conflict between Agent and Principal, in (Fama & Jensen, 1983) the organization can improve internal control mechanism or external systematic mechanism. Internal control mechanism can be a form of an entity that may evaluate and decide over long term economic decisions, board of directors. Another control form can be related to the level of debt or liabilities of the organization and the last form of control can be related to the compensation and evaluation of the executives or management of the firm.

One way to minimize the Agency problem as System can be due to new legislation or regulation. Changes in legislation and regulatory procedures began during last century. (Firend & Herman, 1964) point out the importance of regulation around public firms and financial agents. From a corporate governance perspective, later (Gregory, 1999) points out the importance of regulation in governance practices and guideline codes. Several institutions and organizations recommend the adoption of those practices by firms before some of those practices became a part of the legal requirements and regulatory procedures.

Later (Lombardo & Pagano, 2000) found out that the total stock market returns are correlated with an overall measure of judicial efficiency procedures and the rule of law, but also dividend yields, and earning price ratios are positively correlated with the same variables, judicial efficiency and the rule of the law. Also later on, (Lombardo & Pagano, 2002), found out that legal institutions, called rule of law and judicial efficiency procedures can affect the market equilibrium and improve legal institutions and also affect equity returns depending on the institutional change.

New regulation requirements are focused on the financial information and internal control matters. Evidence from (Leuz & Verrechia, 2004) shows that disclosure of proper information improves investor's perception of the company and how the financial resources are being used.

This evidence shows in the last decade, regulation of governance practices have increased dramatically and the results seem to have improved the performance of the firm as well the transparency, and at the same time controlling the opportunism of the management. It also shows regulation related with the investor protection rights is crucial to improve the financial markets and the way the firm is managed.

Corporate Governance Practices (CGP) is ruled by law. Legal requirements differ around the world when they are related to shareholder interests and creditor protections. According to (La Porta, Silanes, Shleifer & Vishny, 1998, 2002), ownership structures, shareholders right protection, and financial markets are related with the legal system of the country. These variables are crucial to consider any investment, credit funds, and economic development of any country.

The relation has to do with investors and creditors "power", cash flow control, and residual claims. According with (Hart, 1995) the investor's and creditor's rights are protected and should be specified in the law. When they are ambiguous in the law, corruption system or inefficient legal system can result in options changes in how the investors finance the investments. During the last decade Mexican CGP suffered two major regulation and legal changes especially for public companies. The first major change in governance practices as a result of the new regulation and normative practice is based on the (CNBV, 2000), and the second major change is related to (CNBV, 2005). The first major overhaul to the system was the introduction of Code of the Best Governance Practices (CBGP) during 2000. The CBGP is sectioned in five major issues (CCE, 2000). According to the OECD, these issues meet general requirements for good corporate governance practices. These issues are concerned with the 1) board of directors; 2) evaluation and remuneration functions; 3) audit and control functions; 4) finance and planning functions; 5) disclose and information to the shareholders, see Table 1 to compare the new regulation with the OECD Principles.

Table 1 Comparison of Mexican Corporate Governance with the OECD Principles		
	OECD Principles	Mexican Law
The rights of the shareholders		
1) Secure methods of ownership registration	Yes	Partially
2) Relevant information in time and regular basis	Yes	Yes
3) Participate and vote in general shareholder meetings	Yes	Yes
4) Elect members of the board	Yes	Yes
The equitable treatment of the shareholders		
1) All shareholders have the same voting rights	Yes	Partially
2) Insider trading	Yes	Partially
3) Disclose strategic or relevant information	Yes	Partially
Disclose and transparency		
1) The financial and operative results of the company	Yes	Yes
2) Company objectives and financial plans	Yes	Yes
3) Members of the board and key executives remuneration	Yes	Yes
4) Material risk factors	Yes	Yes
5) Material issues regarding employees and stakeholders	Yes	Yes
6) Governance structures and polices	Yes	Yes
Respoonsibilty of the board		
1) Ensure strategic guidance of the company	Yes	Yes
2) Ensure compliance with applicable law	Yes	Partially
3) Reviewing and guiding corporate strategy, financials plans.	Yes	Yes
4) Selecting, compensating and replacing key executives	Yes	Partially

Source: Principles of corporate governance OECD, www.oecd.org.
LGMS(Ley general de sociedades mercantiles), LMV (Ley del mercado de valores)

According with the new regulation and law it seems that Mexican Financial Markets (MFM) is on the track to be in the same line that the (OECD, 1999) principles, also the major improvement is related to disclose and transparency and the rights of the shareholders. Using better CGP means for the investor better positions in terms of risk and return relationship, also it is important to mention that increase regulation and normative practices around the CGP also means at the beginning of the process additional cost control and short term adjustment of the company financial and operative efficiency, but as long term perspective the company as whole should be in much better financial performance position.

The purpose of this research is to evaluate and consider the effect of the first major improvement of the corporate governance practices from a Systematic perspective. The new law (CNBV, 2000) requires several requisites to the board of directors and how the financial resources are being used, the fundamental questions is how this new practices for the MFM are translated to improve financial performance and less associate financial risk for the investors using long time perspective approach. The new law requires several aspects, such structure and size of the board of directors, independent directors and CEO, transparency and specific procedures to change the capital structure of the company.

Table 2 Rule 11-33 and Governance Changes				
Governance Practices	LGSM	Comments	LMV	Comments
Equally treated (Shareholders)	Article 112,	Exist but no applied at all	Article 1, 14b1	Lacks homologate to ADRS and after 2001 Minority Rights
Insider trading prohibited		Not applied	Article 16b, 123, 124	Exist by law but not enforcement at all by CNBV
Information disclose that affect the firm economic performance	Article 158,166	Limited	Article 16b, 16b1	Applied but lacks of appropiate regulation for qualitative event status
Complete information about firm status to the shareholder	Article 166,172	Limited	Article 14b1, 14b2, 14b3	Applied but lacks of disclose material risk factors and relevant qualitative information
Audit financial information	Article 172,		Article 14b1, 14b2,	Applied
Corporate governance information	Article 172, 173,176	Only as law requirement. Limited in family owned firms.	Article 14b1, 14b2, 14b3	Applied after the rule 11-33 and code of best corporate governance practices
Financial information according with generally accepted accounting principles	Article 172, 173,176	Applied	Article 14b1, 14b2, 14b3	Applied
Corporate control and market regulation	Article 182,210	Only limited issues about control	Article 14b1, 14b2, 14b3,113	Not homologate to minority rights and creditors rights. But established after 2001.
Source: LGSM (Ley general de sociedades mercantiles), LMV (Ley del mercado de valores). Source: www.gob.mx/wb/egobierno/egob_leyes_del_congreso				

According with this new regulation, MFM companies should improve the long term decision process adopting and using the new law requirements and this will translate in better financial performance or less associate risk for the investors.

PREVIOUS RESEARCH AND EMPIRICAL EVIDENCE

We can describe the CGP as direct relationship with financial performance, the Agency Theory states that at some point the Agency cost should be less than the profit maximization process, (Jensen, 1993). Previous empirical research has been concentrated in how the domains affect the performance. We can describe according with (Drobetz, Schillhoffer & Zimmermann , 2003) 30 major variables which are divided in five major CGP domains 1) corporate governance commitment, 2) shareholders rights, 3) transparency , 4) management and 5) supervisory board matters and auditing. All this previous work shows significant evidence in establishing a relationship between governance practices and firm performance.

By the other hand, several empirical studies has been used different financial performance approach, financial domain has two implicit perspectives. The outside perspective is how the market perceives the value of the firm. If the company performs or creates value below the actual asset value, then the market will automatically set the new value. This perspective is linked to the movements on the stock price. The inside perspective refers to the financial statements or operative financial variables that accountants and the auditor’s disclose to different authorities or interested entities. During this process human behavior and market pricing are not related, but they are intrinsic variables, (Stewart, 2002).

Classical study about how new regulation can affect the earnings and management practices, is described by (Cohen, 2005) where there is significant change in earnings performance before and after major corporate governance regulation, also the authors support the hypothesis about the opportunistic behavior of the managers derived from the compensations structure and firm performance. Later on the same research line, (Machuga, S. & Teitel, K. 2007) found out the effect of the firm performance due to the new corporate governance code in Mexico, specifically using short term period analysis, the conclusion was the new regulation generally speaking in short term perspective increase the quality of earnings, compared with this research we use two wider windows of five years instead two years windows, we use same variables performance and financial ratios to compare before and after the new regulation.

Following the same line, (Chong, Guillen & Lopez de Silanes, 2009) conclude in the short term (one year period) that firm level corporate governance practices are positively related to better firm value and better financial performance, but the final conclusion is related to either serious problems for the MFM to access new capital, compared with the present research we use almost same financial performance variable but using long term analysis perspective.

There are several empirical evidence where and how the domains of the CGP can be related to financial performance, either internal or external perspective. According with previous research, Board of Directors, Evaluation and Remuneration function, Audit and Control functions and Disclose of information and transparency seems to have direct relationship with financial performance, especially in the long term perspective, see Table 3.
According with OECD Principles of Corporate Governance several activities are related with the function of the board of directors. The first and most important activity is related to the strategic view and definition of the future of the firm. Another activity is related to information transparency to shareholders and financial markets, also the board of directors should establish internal controls and procedures which translate in legal and regulatory procedures inside the firm and the last one is related to evaluation and compensation of the CEO and directors of the firm.

Table 3

These table permits to understand the empirical evidence between governance practices.
between governance changes, firm value performance and critical issues around new governance practices.

Domain / Reference	Dependent variable / Governance Issues	Performance variables / Independent variable
Board of Directors		
Campbell and Wasley (1999)	Incentive contracts / Compensation Policy	Stock price value
Agrawal, Charles and Knober (1996)	Shareholders insiders, institutions and large blockholders, use of outside directors, debt policy, labor market and corporate control	Stocks returns, book value, ROA
Black, Jang, and Kim (2003)	Governance Index. Board od directors, outside directors, audit committiee, internal auditor, disclosure to investors and ownership parity.	Tobin Q, Market Book Ratio
Shen, Hsu and Chen (2006)	Ownership structures	Firm values, and factors that formed firm values.
Li, Lam, Qian and Fang (2006)	Institutional Ownership, CEO Duality, Independent Board Leadership, Ownership structure.	ROA, EPS, Assets per Share.
Klapper and Love (2005)	The GOV index is devided in 7 domains, Discipline, Tranparency, Independence, Accountability, Responsibility, Fairness, Social Awareness.	Tobins Q Ratio as a measure of market valuation and ROA as a measure of operating performance.
Chiang (2005)	Structure of the board, proportion of independent directors, size of board of directors, president of the board of directors is currently the CEO, structure ownership, proportion of management shareholding. Proportion of institutional	ROA, ROE, EPS

CBGP is concerned with how the CEO and the high ranking officers are evaluated and remunerated. The guidelines according to the OECD governance principles establish the existence of independent committee members that evaluates nominate, and set remunerations to the highest executive ranks.

Table 3 Continue		
Evaluation and remuneration function	Dependent variable / Governance Issues	Performance variables / Independent variable
Kang, Kumar and Lee (2006)	CEO incentive compensation, corporate governance mechanism.	investment and firm returns
Nahar (2006)	Board of Directors, Ownership structure. Board independence, non executive directors.	Firms performance, ROA
Jiraporn, Kim and Davision III (2005)	CEO Compensation. Governance Index. Delay, Voting, State, Protection, other. Compensation, Cash, Bonus, Salary	Shareholders rights, Shareholder Wealth. Sales, assets, Ebit, debt, Stock return, Capx/sales, R&D/Sales, Ownership
Epstein and Roy (2005)	Strategic planning, management of customer relations, management style, operations, control and risk,	Financial performance
Jensen and Murphy (1990)	Incentives to CEO and top management	Shareholders Wealth (Firm value)
Bebchuk and Fried (2003)	Incentives and governance practices	Shareholders Wealth (Firm value)

The third section is related to the audit function, financial information, and control. Related to the audit function the requirement established in this part requires four observations, the proportion of the fee charged by the audit firm, the rotation of the audit partner who signs the audit report, independence from statuary audit, and the financial auditor.

Table 3 Continue		
Audit and control functions	Dependent variable / Governance Issues	Performance variables / Independent
Yeh, Lee and Ko (2002)	Ownership structure, directors and supervisors	CAMEL Variables and Growth variables
Myers and Ziegenfuss (2006)	Eight steps in internal audit procedures	Effectiveness and responsibility
Holstrom and Kaplan (2003)	Changes in compensation, Ownership structure, Board Directors,	US financial market returns
Payne (2006)	Governance practices in USA and Europe	Over a period of time becoming similar patterns in governance practices
Petra (2006)	Reforms to corporate governance practices and the rationale behind the reforms	Impact of governance reforms in corporate collapses

Also as part of the CBGP requires four major issues related with finance and planning. The first one is related to evaluation of new investment opportunities; second, use of debt or financial debt policy (Capital Structure), third evaluation and control of the financial plan and analysis risk factors. We have been analyzed these CBGP components and the relationship with financial performance in the following empirical research.

Table 3 Continue		
Disclose of information and transparency	Dependent variable / Governance Issues	Performance variables / Independent variable
Bushman and Smith (2003)	Discipline managers to direct resources and reduce information asymmetries	Productivity and value added of firms
Bushman and Smith (2004)	Transparency cross country analysis	Legal and Judicial regime
Mensah, Nguyen and Prattipati (2006)	Transparency as a multilevel concept	Comparison with financial accounting standard board

HYPOTHESIS AND METHODOLOGY

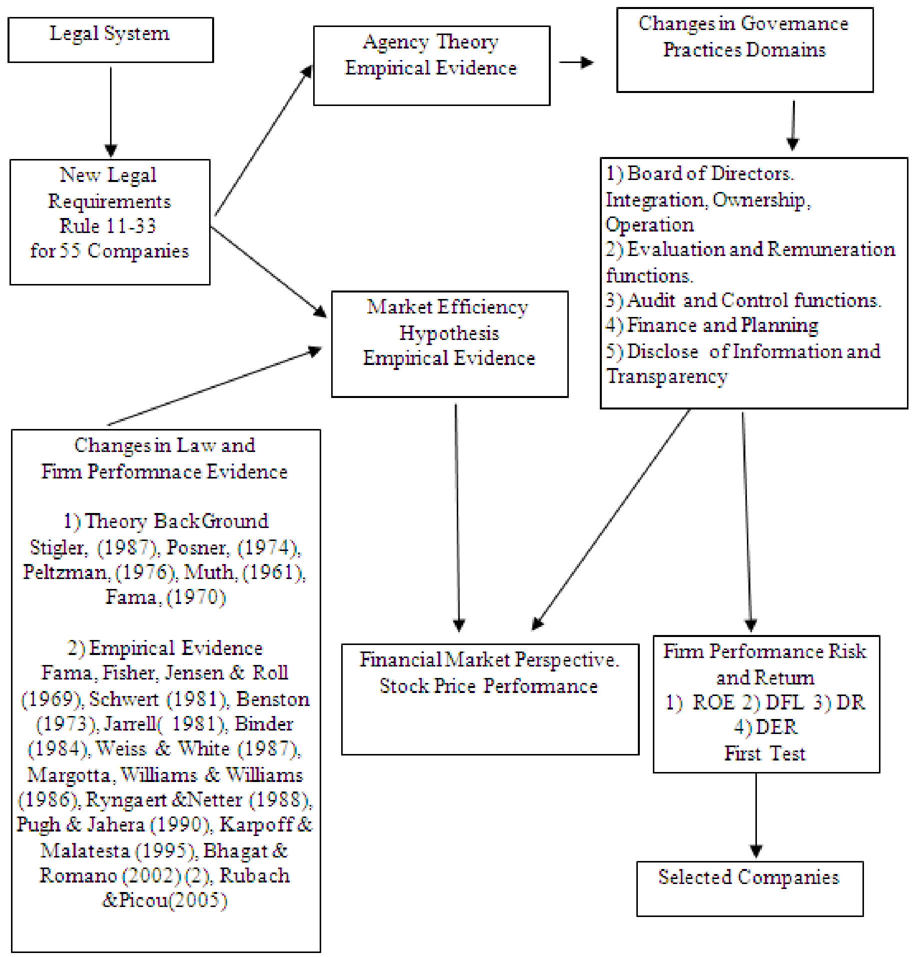
We designed the present research with one final goal, how financially stressed company or low return performance company has been affected (expost period) with the new regulation in terms of corporate governance domains? How financially stressed company or low return performance company improve corporate governance practices after the new regulation? What is the effect of the new regulation in terms of corporate governance and financial performance during the expost period? We support our research based on two theoretical primary perspectives, theoretical cause and effect relationship and the previous empirical evidence. See Figure 1.

The literature support the argument that information should affect the firm performance, also regulation can change the industry or firm performance depending the new specific requirements it can be either negative or positive in this framework the financial markets adopts the new information and according with the economic implications the changes should be reflected either from stock performance or firm financial performance. In our research according with previous literature changes in governance practices can affect the level of firm performance, capital structure and risk and return relationship.

We design the research in two steps, the first step should discriminate the effect of the new ruling in the Financial Markets, and then we select those companies with substantial lower return or higher financial risk or the combination of both. The first part of the research explore the following questions, Does the new Corporate Governance practices improve shareholder performance or reduce financial risk for any company?

The first step involves the data of 55 public companies during two periods, the first period is the previous risk and return performance before the regulation; we obtain quarterly data from 1995 to 2000 as Exante analysis.

Figure 1
First Step Selection of Companies



Then the period of transition and the adoption of the new regulation period include same companies' quarterly data from 2001 to 2005 we called Expost analysis. We obtain this data from Bloomberg, "BMV" "Infosel Financiero" and "El Financiero" which are the major financial sources of data in Mexico, the universe of companies holds up to the 95% of the Mexican Financial Market in terms of capitalization, also we exclude the financial sector due to not comparable data during that period and also due the comprehensive financial system regulation overhaul suffered during the Exante period, we used the following formulas as financial risk and return performance as parameters.

ROE (Return on Equity) = Net Profit / Equity
DFL (Degree of Financial Leverage) = EBIT / Earnings Before Tax.
DR (Debt Ratio) = Total Liabilities / Total Assets
DER (Debt Equity Ratio) = Total Liabilities / Stockholders Equity.

We use the T Test method to determine if the means and variances are significantly different from each other, comparing the Exante with the Expost periods. The formula for the first test applied to the entire universe is as follows:

$$Ttest \approx \frac{(\pi 1 - \pi 2)}{\sqrt{(\delta 1 / n1) + (\delta 2 / n2)}}$$

When $\pi 1$ = *mean exante period,* $\pi 2$ = *mean expost period,* $\delta 1$ = *sigma exante period,* $\delta 2$ = *sigma expost period, n1 = quarterly exante periods, n2 = quarterly expost periods*

We separate the data by time period Exante and Expost, and by industrial sector, and then we include the overall descriptive statistics by industrial sector and then a comprehensive analysis, see the Descriptive Statistics Table 1.

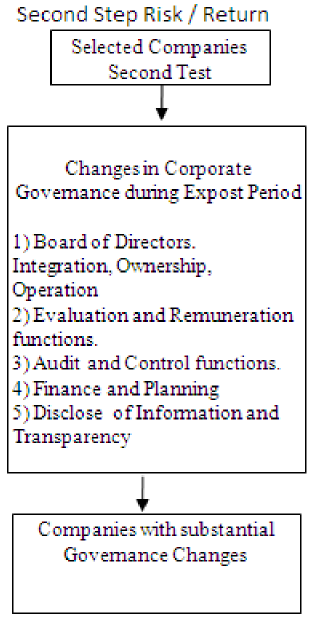
As previous research papers, the use of general data and financial firm data address several problems, first the system as whole can be affected by the economic data from both periods, we include the data from the GDP for both periods, our results confirm there is no significant difference between GDP means for both periods, the DGP growth an average 2.8% annually, the Exante Mean is 3.5% and the Expost Mean is 1.9%, in general terms, the stock market capitalization to GDP is 21.9%, see (Chong, Guillen & Lopez de Silanes, 2009).

The second problem we address is the financial economic disaster (abnormal loss) during 1995 (Exante Period) with decreased of 6.1% for GDP resulting in Mexican Financial System overhaul, we exclude the Financial Institutions from the entire analysis, but the economic event arise a serious debt and economic problems for the entire universe of companies, most of them recurring in restructuring the debt payments and gain additional time and wait to better economic conditions, in some cases this process last years.

Previous research studies used either, paired samples, regression or correlation statistical test, (Perry & Shivdasani, 2005; Petra, 2005; Kang & Kumar, 2006; Nahar, 2006; Shen, Hsu, Chen, 2006) are the recent studies using the same variables and similar statistical tests.

Figure 2

Second Step Risk / Return



HYPOTHESES

The first step requires discriminating the performance and financial distress companies from the entire universe, we use the following hypothesis to identify those companies:

The alternate H: For the 55 companies the mean and variance for H1 ROE, H2 DFL, H3DR, H4 DER are different between Exante and Expost periods.

After we ran the alternate Hypothesis, then we select from the universe of companies those companies with any of the following characteristics or conditions see Figure 2: 1) Substantial lower return using H1, 2) Substantial higher financial risk using H2, H3 and H4 or 3) Combination of both. The universe of initial companies is described in Table 4:

Table 4
Initial Universe

Sector / Industry	Companies
Retail	14
Communications	4
Construction	9
Manufacture	15
Others	7
Mining	3
Services	3
Total Companies	55

The statistical results for the first step of the research are in Statistical Results 1. We resume the statistical results into the following table, also we include how each variable improve or worse during the period of analysis.

Table 5
Statistical Significance Accepted H Alternative

	H1 ROE	H2 DFL	H3 DR	H4 DER
Accepted H Alternative	3	22	13	32
Rejected H Alternative	52	33	42	23
Total	55	55	55	55

Table 6 Cumulative Results Means*

	ROE	DFL	DR	DER
Worse	34	34	47	47
Better	21	21	8	8
Total Results	55	55	55	55

* Not statistical significance, but performed differently compared after the rule 11-33

From the Table 5, we select 32 companies which either decrease performance or increase financial risk, the second step consist in analyze the following question If the company explore lower return or higher financial risk then how new Corporate Governance practices affect changes in how the firm is manage? How the company addresses to improve performance or reduce financial risk in terms of Corporate Practices?

We divide the Corporate Governance practices into five most important issues, we use the same variables according with the Figure 2 and previous related research, 1) Board of Directors, 2) Evaluation and Remuneration function, 3) Audit and Control Functions 4) Finance and Planning and finally 5) Information Transparency then we identify the most important changes in corporate governance practices during the Expost period, the results are in the following Table 7.

Table 7.

Corporate Governance Domains and Changes after new regulation Expost Period

Domains*	(1)	(2)	(3)	(4)	(5)	Domains*	(1)	(2)	(3)	(4)	(5)
Commercial						Mining					
Benavides	3	0	0	4	9	Autlan	0	0	0	0	0
Collado	0	0	0	0	0	GMexico	1	0	0	2	0
Comerci	0	0	0	1	3	Peñoles	0	0	0	0	0
Coppel	0	0	0	0	4	Manufacture					
Elektra	7	0	3	17	44	Bimbo	5	0	0	5	8
Fragua	2	0	0	2	3	GCorvi	0	0	0	1	2
Gigante	0	0	0	2	13	Geupec	1	0	0	1	4
Liverpool	0	0	0	2	4	Hilasal	2	1	0	1	5
GPH	0	0	0	0	0	Kimberly	1	0	0	1	4
Walmart	5	0	1	8	25	Vitro	5	0	0	9	8
Communications						Others					
Cintra	10	2	1	4	15	Alfa	2	3	0	6	6
Telmex	9	1	0	9	7	CIE	0	0	0	1	3
Televisa	8	0	0	7	6	Desc	3	0	0	4	3
Services						Gissa	2	1	0	2	3
Posadas	3	0	0	4	3	Total	75	6	2	96	183
Construction											
Ceramic	0	0	0	0	0	*** Reference**	**Domains / Activities**				
GCC	2	0	0	2	1	(1)	Board of Directors				
GEO	1	0	0	1	4	(2)	Evaluation and remuneration function				
GMD	1	0	0	1	0	(3)	Audit and control functions				
Hogar	0	0	0	0	0	(4)	Finance and Planning				
Lamosa	3	0	0	3	1	(5)	Disclose of information and transparency				

CONCLUSIONS AND RESULTS

According with the evidence there are several important aspects we find out for Financial Distress companies in Mexico, first companies with this financial conditions opt for restructuring the calendar of the debt payments or opt for renegotiate the debt structure with the bond holders or financial institutions, or simply gain additional time to get better business periods, see domain 4. The second most important aspect is they enter to the process to concentrate into the core business processes these include the decisions to reduce the not core business assets or divestiture process domain 1 and 4. Third, we find out more informative and communication process to the Financial Market as a whole see domain 5, these include the actions and the processes the companies had been decided to improve the financial situation. Four, some few companies did not disclose any important information about the business plan, financial situation or any potential improvement of the actual business situation, except for the official annual report, they complain with the law but they did not disclose how they will improve the financial situation. Five, there are serious problems to the Mexican companies to access new capital due to excessive financial distress.

Several firms lost the management control or the ownership of the firm during the expost analysis, Benavides, Cintra and Gigante,

We did not find any radical or emergency plan to improve the financial situation in any of the companies with financial distress, this means, ownership control, change of the CEO, change of the administration or changes in any of the Members of the Board of Directors or any important changes of the main executives of the firm, see domains 2 and 3.

We find more questions than answers after this analysis, besides the empirical evidence from the financial distress companies in Mexico and corporate governance practices, How the Board of Directors realize the imminent danger of increasing financial distress and low financial performance? How the Board of Directors approves and accept additional financial risk and lower performance in five years window time (Expost analysis)? What is the relationship between the Board of Directors and the Shareholders? Why the Mexican Financial Market opt to accept companies with lower performance and more debt? There is any relationship between the ownership concentration and financial distress? There is any relationship between this trend and the Globalization process? There is any additional information that is not included besides the official annual reports and the official information disclosure?

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Descriptive Statistics Table 1																		
	Commercial				Communications				Services				Construction					
Variables / Time Period	ROE	DFL	DR	DER	ROE	DFL	DR	DER	ROE	DFL	DR	DER	ROE	DFL	DR	DER		
Exante Mean	20%	56%	43%	50%	11%	89%	52%	160%	2%	61%	37%	84%	13%	181%	50%	83%		
Expost Mean	11%	135%	48%	109%	12%	119%	63%	222%	3%	118%	40%	77%	8%	123%	52%	126%		
Std Dev EXANTE	0.33	3.71	0.09	1.10	0.19	2.26	0.06	0.42	0.28	1.42	0.15	0.49	0.25	6.32	0.11	0.43		
Std Dev EXPOST	0.05	1.13	0.04	0.27	0.35	3.98	0.05	0.77	0.07	0.53	0.02	0.06	0.08	1.26	0.05	0.26		
N Exante	306	306	306	306	130	130	130	130	63	63	63	63	215	215	215	215		
N Expost	280	280	280	280	120	120	120	120	60	60	60	60	200	200	200	200		
All Observations	586	586	586	586	250	250	250	250	123	123	123	123	415	415	415	415		
Mean	16%	0.92	45%	78%	10%	1.00	57%	192%	2%	0.86	39%	81%	11%	1.44	51%	104%		
Median	12%	1.04	47%	93%	9%	0.97	58%	171%	4%	1.02	39%	74%	10%	1.02	50%	109%		
Std Dev	26%	3.31	10%	92%	33%	3.80	9%	80%	22%	1.18	12%	40%	21%	4.58	12%	50%		
Min	-23%	-15.0	29%	-295%	-51%	-12.0	43%	104%	-117%	-4.8	18%	30%	-33%	-9.1	32%	3%		
Max	142%	8.7	64%	272%	125%	14.7	72%	391%	34%	2.6	58%	178%	72%	24.1	73%	188%		
	Mining				Manufacture				Others				All Sectors				Gross Domestic Product	
Variables / Time Period	ROE	DFL	DR	DER	ROE	DFL	DR	DER	ROE	DFL	DR	DER	ROE	DFL	DR	DER	GDP	
Exante Mean	10%	96%	34%	56%	13%	93%	37%	72%	15%	84%	49%	105%	12%	94%	43%	87%	**3.5%**	
Expost Mean	5%	289%	53%	120%	8%	99%	45%	102%	3%	260%	53%	122%	7%	164%	50%	125%	**1.9%**	
Std Dev EXANTE	0.06	0.38	0.10	0.29	0.08	1.92	0.07	0.27	0.10	1.65	0.07	0.28	0.18	2.52	0.09	0.47	**0.05**	
Std Dev EXPOST	0.15	9.14	0.07	0.34	0.08	1.25	0.05	0.21	0.09	6.14	0.05	0.28	0.12	3.35	0.05	0.31	**0.02**	
N Exante	72	72	72	72	394	394	394	394	200	200	200	200	1380	1380	1380	1380	**23**	
N Expost	60	60	60	60	340	340	340	340	180	180	180	180	1240	1240	1240	1240	**20**	
All Observations	132	132	132	132	734	734	734	734	380	380	380	380	2620	2620	2620	2620	**43**	
Mean	8%	1.84	42%	85%	11%	0.96	41%	86%	9%	1.64	51%	113%	10%	1.24	47%	106%	**2.8%**	
Median	8%	0.96	44%	81%	10%	1.06	42%	84%	10%	1.07	51%	109%	9%	1.02	47%	103%	**3.2%**	
Std Dev	12%	6.24	13%	46%	9%	1.85	8%	31%	12%	4.81	7%	31%	19%	3.68	10%	53%	**4.1%**	
Min	-26%	-1.9	23%	30%	-16%	-7.6	26%	41%	-23%	-5.8	37%	61%	-41%	-8.0	29%	-4%	**-9.2%**	
Max	30%	39.0	62%	172%	35%	5.6	55%	155%	35%	28.3	64%	188%	68%	17.6	64%	220%	**8.4%**	

Statistical Results 1

Statistical Test for Mean Paired Samples (T Test 5% Alfa Results for H1, H2, H3, H4)

Commercial	LC / FSC	ROE	DFL	DR	DER	Mining	LC / FSC	ROE	DFL	DR	DER
Alsea	LC	0.65	0.21	0.45	0.68	Autlan	LC	0.76	0.67	2.43	3.99
Benavides	LC	1.18	2.40	0.98	2.61	GMexico	LC	0.29	5.88	2.44	4.54
Collado	LC	0.05	0.20	1.21	2.76	Peñoles	LC	0.60	2.40	1.55	2.61
Comerci	LC	0.41	1.40	2.57	4.84	Manufacture	LC / FSC				
Coppel	LC	0.41	1.40	2.57	4.84	Bachoco	LC / FSC	0.50	0.24	0.09	0.03
Elektra	LC	2.18	1.78	1.67	5.89	Bafar	LC	0.76	0.35	1.04	0.89
Fragua	LC	0.88	0.46	1.67	2.66	Bimbo	LC	0.42	1.99	2.09	3.68
Gigante	LC	1.31	3.17	1.04	1.53	Femsa	LC / FSC	0.00	0.02	0.50	1.08
Liverpool	LC	0.59	2.10	2.73	4.23	GCorvi	LC	1.01	0.62	1.83	3.59
						Geupec	LC	0.36	1.70	2.02	2.73
Marti	LC	0.13	1.51	1.67	2.80	Gmodelo	LC	0.59	0.34	1.51	1.70
GPH	LC	1.06	5.83	1.73	2.80	Gmodern	LC	0.22	2.23	0.22	0.25
Saba	LC	0.85	4.08	0.05	0.20	Gruma	LC	0.92	1.54	0.07	0.23
Soriana	LC	1.28	1.71	2.04	2.83	Herdez	LC	0.31	0.62	0.96	1.78
Walmart	LC	0.27	3.24	1.99	2.70	Hilasal	LC	2.10	2.25	1.45	2.63
Communicatio	LC / FSC					Kimberly	LC	0.32	1.82	2.04	3.83
Cintra	LC	2.90	3.39	1.94	7.15	KOF	LC / FSC	0.75	0.06	0.14	0.60
Telmex	LC / FSC	1.30	3.02	3.33	4.49	Maseca	LC	1.14	1.04	0.42	0.59
Televisa	LC / FSC	1.48	2.23	3.27	5.47	Vitro	LC / FSC	0.49	3.88	1.57	4.85
TV Azteca	LC / FSC	0.37	0.41	0.49	0.93	Others	LC / FCS				
Services	LC / FSC					Alfa	LC / FSC	0.51	4.01	0.72	1.79
CMR	LC	0.64	0.94	1.08	1.35	CIE	LC	1.64	2.05	0.41	0.80
Posadas	LC	0.23	3.61	0.95	1.83	Desc	LC / FSC	1.50	6.42	1.09	2.31
Realtur	LC	0.50	1.87	0.45	2.80	Gcarso	LC	0.71	0.39	0.53	0.92
Construction	LC / FCS					Gissa	LC	1.88	3.40	2.19	3.66
Ara	LC	0.29	1.89	1.25	1.54	Gsanborn	LC	0.68	1.02	0.37	0.87
Cemex	LC / FSC	0.70	1.58	0.58	1.35	Imsa	LC / FSC	1.58	0.97	0.23	0.50
Ceramic	LC / FSC	0.36	3.25	1.35	3.92	T Test with Alfa 5% = 2.02.					
Cmoctez	LC	0.43	0.68	0.67	0.73						
GCC	LC	0.62	0.74	1.92	3.11	Statistical Significance Accepted H Alternative					
GEO	LC	1.23	1.77	1.59	3.31			ROE	DFL	DR	DER
GMD	LC / FSC	2.00	4.11	3.76	3.87	Accepted H Alternative		3	22	13	32
Hogar	LC	0.64	4.53	2.48	5.69	Rejected H Alternative		52	33	42	23
Lamosa	LC	0.04	1.36	1.17	2.46		Total	55	55	55	55

REFERENCES

Agrawal, A., Ch., Knoeber (1996). Firm performance and mechanism to control agency problems between managers and shareholders. *Journal of financial and quantitative analysis*. 31, 377-397.

Bebchuk, M. , Fried, J.M. (2003). Executive compensation as an Agency Problem. *Journal of Economic Perspective*. 17, 71-92.

Benston, G. (1973). Required disclosure and the stock market: An evaluation of the Security Exchange Act of 1934. *American Economic Review*. 63, 132-155

Bhagat, S., Romano, R. (2002). Event studies and the law: Part I Technique and corporate litigation. *American Law and Economics Review*. 4 (1),141-168.

Binder, J. (1985). Measuring the effects of regulation with stock price data. *The RAND Journal of Economics*. 16(2), 167-183.

Black, B.S., Jang, H., Kim, W. (2002). Does corporate governance affect firm value? Evidence from Korea. Working Paper. *Stanford Law School.*

Bushman, R.M., Smith, A. J. (2003). Transparency, financial accounting information and corporate governance. *FRBNY Economic Policy Review*. 9(1), 65-87.

Bushman, R.M., Smith, A. J. (2004). What determines corporate transparency?. *Journal of Accounting Research.* 42 (2), 207-252.

Campbell, C. Wasley, Ch. (1999). Stock based incentive contracts and managerial performance: the case of Ralston Purina company. *Journal of financial economics*. 51(2), 195-217.

CCE. Consejo Coordinador Empresarial (1999). Código de Mejores Prácticas Corporativas. *Comisión Nacional Bancaria y de Valores.*México.

Chiang, H., Chia, F. (2005). An empirical study of corporate governance and corporate performance. *Journal of American academy of business*. 6(1), 95-101.

Chong, A., Guillen, J., Lopez de Silanes F. (2009). Corporate governance reform and firm value in Mexico: an empirical assessment. *Journal of Economic Policy Reform*. 12 (3), 163-188.

CNBV (2000). Comision nacional bancaria y de valores. *Boletin Prensa 28 de Septiembre 1999*.

CNBV (2005). Comision nacional bancaria y de valores. *Boletin Prensa 7 de diciembre*.

Cohen, D., A. Dey, and T. Lys. (2005). Trends in earnings management and informativeness of earnings announcementes in the Pre and Post-Sarbanes Oxley periods.*NYU Working paper.*

Denis, D. (2001). Twenty five years of corporate governance research and counting. *Review of Financial Economics.* 10 (3), 191-212.

Drobetz, W., Schillhofer, A. & Zimmermann, H. (2003). Corporate governance and expected stock returns: Evidence from Germany. *European Financial Management*. 10(2), 267-293.

Epstein, M. Roy, M. (2005). Evaluating and monitoring CEO performance: evidence from US compensation committee reports. *Corporate Governance*. 5(4), 75-87.

Fama, E. (1970). Efficient capital markets A review of theory and empirical work. *Journal of Finance*. 25(2), 383-417.

Fama, E. , Fisher, L., Jensen, M., Roll, R. (1969). The adjustment of the stock prices to new information. *International Economic Review*. 10(1), 1-21.

Fama, Eugene, y Michael Jensen, (1983). Separation of ownership and control. *Journal of Law and Economics.* 26. 301-325.

Firend, I., Herman, E. (1964). The SEC through a glass darkly. *The Journal of Business*. 37(4), 382-405.

Gregory, H.J. (1999). *Comparison of board guidelines and practices*. Weil, Gotshal & Manges New York..

Hart, O. (1995). *Firms, Contracts, and Financial Structure*. Oxford University Press: London.

Holmstrom, B., Kaplan, S. (2003). The State of U.S. Corporate Governance: What's Right and What's Wrong? *European Corporate Governance Institute ECGI. Finance* Working Paper.

Jarrell, G. (1981). The economic effects of federal regulation of the market for new security issues. *Journal of Law and Economics*. 24, 613-.645

Jensen, M. Murphy, K (1990) Performance pay and top management incentives. *Journal of political economy*. 98(2). 225-264.

Jensen, M., Meckling, W. (1976). Theory of the Firm: Managerial behavior, agency costs, and ownership structure, *Journal of Financial Economics*. 3(4), 305-360.

Jensen, M. (1993). The modern industrial revolution, exit, and the failure of the internal control system. *Journal of Applied Corporate Finance*. 6(4), 831-880.

Jiraporn, P., Sang Kim, Y. , Davidson III, W. (2005). CEO Compensation, Shareholder rights and corporate governance: An empirical investigation. *Journal of economics and finance*. 29(2). 242-258.

Kang, S. , Kumar, P., Lee, H.(2006). Agency and corporate investment: the role of executive compensation and corporate governace. *The Journal of Business*. 79(3), 1127-1148.

Karpoff, J., Malatesta, P. (1995). State takeover legislation and share values: The Wealth effects of Pennsylvania´s Act 36. *Journal of Corporate Finance*. 1(3), 367-382.

Klapper, L., Love, I. (2004). Corporate governance, investor protection and performance in emerging markets. *Journal of Corporate Finance.* 10(5), 703-728.

La Porta, R. Lopez de Silanes, F. Shleifer, A. Vishny, R. (1998). Law and Finance. *Journal of Political Economy*, 106(6), 1113-1155.

La Porta, Rafel., Lopez de Silanes, F., Shleifer, A. , Vishny, R. (2002). Investor protection and corporate valuation. *Journal of Finance*. 57(3), 1147-1170.

Leuz, C.,Verrecchia, R.(2004). *Firms capital allocation choices, information quality and cost of capital*. University of Pennsylvania, USA.

Li, J., Lam, K., Qian, G., Fang, Y. (2006). The effect of institutional ownership on corporate governance and performance: An empirical assessment in Hong Kong. *Management International Review*. 46(3), 259-276.

Lombardo, D., Pagano, M. (2002). Law and Equity: A simple model. In McCahery, J., Moerland, P., Raaijamakers, T., Renneboog, L., Corporate Governance Regimes Convergence and Diversity (Eds.). *Oxford University Press* (343-362).

Lombardo, D., Pagano, M. (2000). Legal determinants of the return on equity. Centre for studies in economics and finance. *CSEF University of Salerno. Working Paper.*

Machuga, S., Teitel, K. (2007). The effects of the Mexican Corporate Governance Code on Quality of Earnings and its Components. *Journal of International Accounting Research*. 6(1), 37-55.

Margotta, D. , Williams, T. ,Williams, V. (1986). An analysis of the stock price effect of the 1986 Ohio takeover legislation. *Journal of Law, Economics and Organization*. 6(1), 235-251.

Mensah, M., Nguyen, H., Prattipati, S. (2006), Transparency in financial statements: a conceptual framework from user perspective. *Journal of the American Academy of Business*. 9(1).47-51.

Muth, J. (1961). Rational expectations and the theory of price movements. *Econometrica*. 29(3), 315-335.

Myers, P., Ziegenfuss, D (2006). Audit committee pre-Enron efforts to increase the effectiveness of corporate governance. *Corporate Governance*. 6(1), 49-63.

Nahar Abdullah, S. (2006) Directors remuneration, firm's performance and corporate in malaysia among distressed companies. *Corporate Governance*. 6(2), 162-174.

OECD. (1999). OECD Principles of corporate governance. Paris *OECD*.

Payne, Andros. (2006). Corporate governance in the USA and Europe They are closer than you might think. *Corporate Governance*. 6(1), 69-71.

Peltzman, S. (1976). Toward a more general theory of regulation. *Law and Economics*. 19(2), 211-240.

Perry, T., Shivdasani, A. (2005). Do boards affect performance? Evidence from corporate restructuring .*The Journal of Business*. 78(4), 1403-1432.

Petra, S. (2005). Do outside independent directors strengthen corporate boards. *Corporate Governance*. 5(1), 55-64.

Posner, R. (1974). Theories of Economics Regulation. *The Bell Journal of Economics and Management Science*. 5(2), 335-358.

Pugh, W., Jahera, J. (1990) State antotakeover legislation and shareholder wealth. *The Journal of Financial Research*. 13(3), 221-231.

Rubach, M., Picou, A. (2005). The enactment of corporate governance guidelines an empirical examination. *Corporate Governance*. 5(5), 30-38.

Ryngaert, M., Netter, J. (1988). Shareholder wealth effects of the Ohio antitakeover law. *Journal of law, Economcis and Organization*. 4(2), 373-383.

Schwert, G. W. (1981). Using Financial Data to Measure Effects of Regulation. *Journal of Law & Economics*, University of Chicago Press. 24(1), 21-58.

Shen, M., . Hsu, Ch., , Chen, M. (2006). A study of ownership structures and firm values under corporate governance. The case of listed and OTC companies in Taiwans Finance Industry. *Journal of American Academy of Business*. Cambridge. 8(1), 184-191.

Stewart, B. (2002). Market Myths, *The new corporate finance where theory meets practice*. Donald Chew. Mc Graw Hill.

Stigler, G.J.(1987). The theory of economic regulation. *The Bell Journal of Economcis and Management Science*. 2(1), 3-21.

Weiss, E., White, L. (1987). Of Econometrics and Indeterminacy: A study of investors reactions to changes in corporate law. *California Law Review*. 75(2), 551-607.

Yeh, Y., Lee, T., Ko, C. (2002). C*orporate Governance and Rating System*. Taipei: Sunbright Culture Eds.

EXPLORING GENDER COMMUNICATION VIA YOUTUBE

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ABSTRACT

This article reports on an assignment that used YouTube videos to explore communication styles of men and women. The article opens with a short description of barriers that affect the communication process. The article then examines challenges and opportunities focusing technology-mediated communication tools and gender communication. The following sections provide reality-based instructional strategies that can be used to prepare and/or give students perspective on business communication challenges in the workplace.

INTRODUCTION

Technology-mediated communication is unquestionably a game changer. Business communication has become increasingly virtual, intercultural, and change driven given new technologies, workforce diversity and the globalized business arena. Subsequently, common barriers such as gender, race, culture, choosing the most appropriate medium for a message, personal biases, change resistance and others continue to affect the communication process. These barriers can cause “what we see and/ or hear” to be objectively “flat-wrong.”

LITERATURE REVIEW

As business professionals grapple with keeping abreast of technologies, they must be cognizant that business communication has changed given innovative technological tools to aid interpersonal communications. In fact, reasonable minds may become blurred given the variety of technology mediated tools available. Selecting the right communication technology is challenging; it can become an enhancement or hindrance with respect to contextual and audience matters.

In citing the results of several research studies that focus common barriers that affect business communication, …. communication isn't as simple as saying what you mean. How you say what you mean is crucial, and differs from one person to the next, because using language is a learned behavior: how we talk and listen are deeply influenced by cultural expectations. For example, men and women are like people who have grown up in two subcultures - they have two broad different styles of speaking and establishing social status (Tannen, 1991a/b, 1994, 1995; Carli,2000; Chaney &Martin, 2000; Adler, Rosenfeld & Proctor, 2001; Beamer & Varner 2001; Gray, 2002; Sadri & Tran, 2002; Ashcraft& Allen, 2003; Vinas,2003; Dawkins, 2004; Field, 2005; Gallo, 2006; Weissman,2006; Muir, 2007; Lehman & DuFrene, 2008; Burress, 2008).

Subsequently, it’s plausible to posit that these same barriers related to how men and women communicate could be replicated and/or have their own culture, morals and expectations via virtual environments. In both instances, these miscommunications could affect technology-mediated communication that corporations use when performing various daily interactions or operational processes as well as maintaining the corporate web page-image. There are considerable benefits to be gained by paying close attention to the words of business leaders (Amernic & Craig, 2006). Similar benefits are gained by observing nonverbal signals, i.e. facial expressions, gestures, vocal characteristics, personal appearance and use of time and space (Graham & Unrue, 1991; Richmond & McCroskey, 2000, Lawlor, 2006).

With this in mind, business communication professors' can use technology-mediated communication to help students developing and/or enhancing skills required within a reality-based curriculum that are transferable to the real world of work. Some examples of technological tools that can be used include: online videos, virtual meeting spaces, electronic whiteboard, podcasts, blogs and videoconferencing. While these technology-mediated communication tools are innovative; they are viable tools to use when exploring real world problematic issues, e.g. communication styles of men and women, caused by common communication barriers.

THE ASSIGNMENT

Essentially all business communication courses and texts include discussions and assignments that focus miscommunications that can occur when managing a diverse workforce. The assignment discussed in this article, communication styles of men and women, was designed to give students the opportunity to explore a real world business issue and produce a diversity training video. Some instructional strategies that were used to help students develop or enhance skills during this assignment included the following.

• Discussion of theory integrated with real world or simulated (e.g. online videos of the television show - The Office) examples of men and women communication styles in various traditional and virtual business settings: daily operational interactions and task assignments, board meetings, presentations at stakeholders meeting and training sessions.

• Review of Relevant Literature- Have students locate articles independently or refer students to resources that discuss issues related to communication styles of men and women and strategies employed by various organizations for dealing with these differences.

• Real World Application -Conduct a field study (discuss identified differences from practical experiences) or interview business professionals (men/women) to obtain their perceptions on the issue of communication styles of men and women in the workplace.

• YouTube –Examine (gender based) diversity training videos documenting (points illustrated) at least five identified differences related to communication styles of men and women.

Technology-mediated communication was integrated throughout discussions to raise learners' awareness of the issue. To jumpstart and liven the discussions, we examined YouTube videos from the television show – The Office - The Office "Diversity Day" Promo (2007); The Office Diversity Day Full Episode and The Office: Diversity Day Jim & Pam. These videos provided humorous exposure to common gender barriers, e.g. use of exclusionary language that reinforces gender stereotypes, illustrated points of nonverbal gender behavior-extended eye contact used by male characters or smiles used by women characters that depicts lack of confidence, via online videos that prepare and engage students focusing communication style of men and women.

Students (diversity consultants) identified and discussed differences of communication styles of men and women while viewing the videos. The diverse findings provide lively discussions full of contextual and audience differences, some of which, was used by the students, when creating the diversity training videos. The YouTube videos allowed students to visualize and reflect on contextual and audience challenges from a diverse perceptive. Examples of learner outcomes included: understanding gender related perceptions in the organization, developed virtual training policies focusing making the work environment more gender equitable and recommended strategies for organizations to implement which could circumvent gender based miscommunications.

ASSESSMENT OF ASSIGNMENT FOR LEARNERS

Technology-mediated communication has made the world "flat." Learners benefited from exposure to various technologies while applying their understanding to the guiding principles-context matter and consider your audience. In addition to learning about issues associated with communication styles of men and women, learners benefited from hands on activities with technological tools which can be used to reduce occurrences of miscommunication in the diverse workforce. Preparing the diversity training videos provided application and assessment with respect to course objectives and learner outcomes inclusive of: critical thinking, technology, diversity, team environment, legal and ethical challenges.

Students' feedback on this assignment supports my assessment of effective messages: videos that capture the audience whiling building interest with convincing contextual findings; gained knowledge by using electronic media in a professional context and active participation rather than passive recipients. Findings from this assignment can be used to develop teaching and learning activities within the classroom which mirror business communication in our diverse workplace.

REFERENCES

Adler, R.B., Rosenfeld, L.B., Proctor, R.F. II (2001), *Interplay: The Process of Interpersonal Communication*, Oxford University Press, New York, NY.

Amerernic, J. & Craig, R. (2006). CEO Speak**,** *The Language of Corporate Leadership.* Montreal, Quebec, Canada: McGill-Queen's University Press.

Ashcraft, K.L., Allen, B.J. (2003). The racial foundation of organizational communication. *Communication Theory*, *13* (1), 5-38.

Beamer, L. & Varner, I. (2001). *Intercultural Communication in the Workplace*, (2nd ed). New York McGraw-Hill Irwin.

Chaney, L. & Martin, J. (2000). *Intercultural Business Communication*, (2nd ed.). Uppper Saddle River, N.J.: Prentice Hall.

Dawkins, J. (2004). Corporate responsibility: The communication challenge. *Journal of Communication Management*, *9*, (2), 108-119.

Field, A. (2005). What you say, what they hear. *Harvard Management Communication Letter*, *Winter*, 3-5.

Gary, J. (2002). *Mars and venus in the workplace*, New York: Harper-Collins.10, 25-27, 61-63.

Gallo, C. (2006, September 13). Grab your audience fast. *BusinessWeek*,19.

Graham, G. & Unrue, J. (1991). The impact of nonverbal communication in Organizations: A survey of perceptions. *Journal of Business Communication*, *28* (1), 45-62.

Kent, S. (December 6, 2007). The Office: Diversity Day Promo (Video file). Retrieved from http://www.youtube.com/watch?v=mTs5IHWHIb4&feature=related

Lawlor, C. (2006). Gender interactions in computer-mediated computer conferencing. *The Journal of Distance Education*, *21* (2). Retrieved from www.jofde.ca/index.php/jde/article/viewArticle/63

Muir, C. (2007). Communicating diversity at work. *Business Communication Quarterly*,*70* (1), 80-82. Richmond, V. & McCroskey. (2000). *Nonverbal behavior in Interpersonal Relation.* Boston: Allyn & Bacon. 153-157.

Rossetti, P. (1998). Gender differences in e-mail communication. *The Internet TESL Journal*, *4* (7).

Sadri, G.& Tran, H. (2002). Managing your diverse workforce through improved communication. *The Journal of Management Development*, 21 (3/4), 227-237.

Tannen, D. (1991). *You just don't understand: Women and men in conversation*. New York: Ballantine.

Tannen, D. (1991, May). How to close the communication gap between men and women. *McCall*,*118* (8), 99-102, 140.

Tannen, D. (1995). The power of talk: Who gets heard and why. *Harvard Business Review*, *73* (5), 138-148.

The Office Diversity Day Full Episode (Video file). Retrieved from http://www.youtube.com/watch?v=wM14ZbfCSx0&feature=related

The Office: Diversity Day Jim & Pam (Video file). Retrieved from http://www.youtube.com/watch?v=59Pu08CvzuQ&feature=related

Vinas, T. (2003, July 1). A place at the table. *IndustryWeek*, 22.

Weisseman, J . (2006). Presenting to win: The art of telling your story. Upper Saddle River, N.J.: Pearson Prentice Hall.

Zaidman, N. & Holmes,P. (2009). Business communication as cultural text: Exchange and feedback of promotional video clips. *International Journal of Intercultural Relations*, *33*, 535-549.

HOW COMMUNICATION HIERARCHY STRUCTURES AFFECT CREATIVITY AND INDIVIDUALISM WITHIN ORGANIZATIONS

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ABSTRACT

In July of 2010, the task of evaluating overall creativity and individualism of corporations based on communication hierarchy structures was undertaken by Plennie Vickery III. The purpose of the analysis was to determine if changes could be made to the current communication structure of either organization to create a sustainable competitive advantage by having an atmosphere conducive to employee empowerment and fostering intrinsic motivation.

Surveys were conducted in two companies (one of which is described as vertically structured, and another of which is horizontally structured). Secondary research was also undertaken for information relative to the project.

Major findings were:

- *Vertical hierarchies discourage inter-office social engagement*
- *Vertical hierarchies lack diverse stimuli*
- *Horizontal communication encourages open communication*
- *Communication barriers created by chains of command are low in horizontally oriented companies*
- *Creative/ independent problem solving is sought after in horizontal structures*

Recommendations to the organizations include the following:

- *Create company intranet/ VPN with message boards and IM*
- *Introduce job rotation*
- *Host employee social events*
- *Increase frequency of on-site meetings and include a larger group of people*
- *Acknowledge or award worthwhile suggestions*
- *Permit casual attire while maintaining acceptable clothing guidelines*

INTRODUCTION

This study investigated a possible relationship between corporate structure/culture and creative thinking. The authors hypothesized that as the level of formality increases and as vertical communication hierarchies are emphasized within an organization, you will find decreased levels of individualism, creativity, commitment, willingness, and intrinsic motivation. Without the ability to energize employees, out-think the competition, and maintain a sustainable competitive advantage, the company will ultimately suffer from stagnation and die.

Surveys were conducted in two organizations -- one that is formally structured ("Company V") and one that is less formally structured ("Company H"). Survey information gathered employees' personal thoughts and feelings regarding company 'flexibility' by asking opinion-questions and posing situational questions.

It was expected that the findings would either bolster or refute the theory that communication hierarchy structures affect creativity. Dependent on knowledge gathered from survey information, the authors were prepared to provide alternative methods for any structured company to benefit from, consider, or adopt.

COMPANY AND SAMPLE DESCRIPTIONS

The two companies used for this comparison are not in the same business; however they both operate in the service sector of private industry. Company V is a multi-billion dollar commercial insurance provider that operates globally. A total of 20 employees in Company V responded to the survey. Company V respondents have diverse, but evenly spread out length of service -- 20% have less than 1 year of experience and 25% have over 10 years of experience. One half of the respondents comprise the years in-between.

Company H is a multi-million dollar catering company that operates across five states. A total of 12 emplyees in Company H responded to the survey. Respondents from Company H have more concentrated years of experience -- 25% have 7-10 years of experience, while over 40% have over 10 years' experience.

In order to gain a broad perspective, clerical staff, middle managers, top managers, officers, and salesmen in both organizations participated in the study.

RESULTS

The complete survey results are displayed in Appendix B. The following brief outline of statistical data gathered by survey respondents represents a side by side comparison, describing elements of each company's culture.

First, only 5% of employees at Company V felt that their company had a 'fun culture', compared to 42% of employees at Company H. Company V's employees are required to dress according to a formal code that describes 'business attire,' while Company H's employees are generally allowed to wear clothes that are not regulated by company policy. Interestingly, most of the employees at V sit in cubicles or offices and do not engage in much customer interaction past electronic media, while H's employees work directly with customers, on location, in a 'face-to-face' atmosphere. The ideology seems to be counter intuitive – the authors wondered why would people who sit in a secluded office be required to 'dress up' while people who are in the field representing the company are allowed to wear shorts and a t-shirt? When asked, 25% of V's employees claimed they feel "much more confident" when required to dress in "business attire and 45% claimed to feel "somewhat more confident," while 8% and 33% of H's employees felt that way, respectively. Conversely, when allowed to dress comfortably, 42% of Company H respondents and 40% of Company V respondents claimed to feel "much more productive."

Information is shared quicker both officially and through the grapevine at company H. According to the survey results, supervisors generally can be reached within minutes at H, while it takes about an hour at V. Employees at Company H are more comfortable with sharing new ideas with their boss than employees at Company V. However, they are less comfortable with sharing new ideas with their co-workers than employees at company V. These findings suggest that there is more of a competitive atmosphere at company H.

Both companies have a suggestion box. Company V's employees are largely aware of it, but never use it. On the other hand, most of H's employees don't know they have one. One can conclude from these results that the need for a suggestion box is obsolete at H due to the fact that lines of communication are broad and easily accessible.

The survey investigated respondents' perceptions of the ways that creative thinking is encouraged in both companies. Results show that 67% of respondents at H were fully confident in the fact that problems that are solved in a creative or improvised manner are applauded by the company. In contrast, only 15% of respondents from V felt that way.

Regarding employee commitment and loyalty, the surveys showed that Company H's employees are more likely to participate in company-wide competitions, voluntarily stay after hours to work on projects and are 35% more loyal to their organization than employees of company V. Furthermore, 75% of respondents from Company H feel "very loyal" to the company, while only 45% of respondents from Company V feel "very loyal".

Finally, the surveys gathered longevity data. Results showed that 67% of H's employees have been with the company for more than 7 years, while only 30% of Company V's employees have worked there for more than 7 years.

DISCUSSION

From the survey results described above and in Appendix B (Exhibits 1 & 2), we can infer that in general, Company V has a more formal structure than Company H. If employers want to compete in the market, their company has to be malleable, agile and keep abreast of trends. It has been said that people are a product of their environment. That is, if people are physically and emotionally comfortable with their work environment, intrinsic motivation and productivity are likely to increase simply due to the fact that the monotony of formal codes of action are broken up. Both companies accommodate basic employee needs (i.e. lights, supplies, facilities) but the authors conclude that corporations need to go a step further than 'accommodate'… they need to get involved with the employees, get the employees involved with each other, and get them to actually meet each other. It is important, considering the results of this study, that companies foster employee relationships. By doing this a cold-climate corporation can grow into a warm family. No one wants to be a burden or purposefully hurt their family; they want to help their family.

In the book *Corporate Creativity; How Innovation and Improvement Actually Happen*, authors Alan Robinson and Sam Stern state, "for corporate creativity, the work environment is the dominant factor." According to Robinson, within the work environment there are six elements that inspire creative acts:

- **Alignment –** ensuring that the interests and actions of employees are directed towards company goals
- **Self-initiated Activity –** investigating or exploring new ideas without being required or asked to do so
- **Unofficial Activity –** activity that occurs without direct, official support
- **Serendipity –** discovery made by fortunate accident or in the presence of sagacity
- **Diverse Stimuli –** multiple facets of duties that stymie monotony
- **Within-Company Communication –** incorporating the fluid transfer of knowledge

According to the survey results, Company H's employees experience diverse stimuli and self-initiated activity simply because of the dynamic jobs that must be undertaken to provide such a wide array of services and the structure of the company. Recall the fact that ¾ of the employees surveyed at Company H felt 'very loyal' to their company. Is this attributable solely to the changing work environment and myriad of differing job tasks they subject themselves to on a daily basis?

In her article, "Creativity Adds to Your Bottom Line - Corporate Communication," author Jill Folan advocates that in order to develop a creative work environment that encourages innovative thoughts and ideas, (an employee) must surround themselves with diverse resources – "with sensory objects, including books, artwork, and toys. The purpose of these items is to fill your head with new information: random thoughts, knowledge, and images to be called upon as needed."

The following excerpt from Folan's article summarizes the idea behind having toys in one's office: "If you observe and experience a wide variety of sensory objects, they'll help you move easily between logical thinking and emotional thinking -- a journey that's often beneficial. They also provide an opportunity for your mind to 'percolate' on an issue or problem. How many of your "best ideas" arrive when you're in the shower? In the middle of the night? During your commute? It's because you took a break from your focus and let your mind wander around the issue. Sensory objects can help you do the same thing -- often in a more appropriate timeframe. (Remember) Play-Doh and LEGOS? One whiff of Play-Doh and you're four years old again! Remember how creative you were at four? A blanket over a table was a fort or a castle, a teddy bear was your child or your student. How many of you had an imaginary playmate? LEGOS, as well as Play-Doh, are good for our sense of touch, and allow us to give an actual shape to our concepts and ideas. The variety of colors of both LEGOS and Play-Doh also provide a visual stimulus."

The basic idea behind Folan's research is that by having keys to unlock forgotten sequences to problem solving, creativity can be pulled from experiences and morphed into a viable solution for a modern day problem.

Another aspect of encouraging creativity can stem from the physical layout of a person's work area. The entire dynamic of a company's culture can be changed by re-designing the workspace layout. Even though the job tasks may essentially stay the same, work can transform from a set of monotonous tasks a person performs in a small cubicle to a collaborative semi-social effort. Specialization generally results in increased efficiency; however, by expanding the knowledge base of all employees, in the long run time and energy will be saved because a single employee has the ability to solve diverse problems and offer different levels of service. This is particularly where Company H stands apart from Company V. For the most part, H's employees can accomplish tasks ranging from putting together proposals to fixing a washing machine. The empowerment and autonomy that employees have at H are keys to the company's success. Every time a unique problem is encountered and solved, the experience is shared and is made an example of. That way employees can play off of each other's experiences to gain a broader perspective of how to effectively solve problems.

If employees are subjected to tight controls and constrained to specific job tasks, they might not ever get the chance to get the 'bigger picture' of company operations and get a different perspective on how things work. With broader knowledge, they might have the chance to improve their immediate job functions, other job functions, or some aspect of the organization as a whole. By restricting delegation, authority, and knowledge, companies are not taking full advantage of employee potential. Furthermore, organizations with strict hierarchies may get so caught up in managing internal controls and processes that they lose sight of their external environment and miss opportunities to put themselves in better positions.

For example, the people at Pixar Films have emerged from small beginnings to become the dominant animated film producer in the movie making industry. They pioneered the world's first full feature animated film with the production of *Toy Story* in 1995. In his article, "How Pixar Fosters Collective Creativity," Ed Catmull says that Pixar encourages a peer-based culture where people can learn more from each other through constant interaction. In the article, Catmull states that the company operates with three principles in mind:

1. Everyone must have the freedom to communicate with anyone,
2. It must be safe for everyone to offer ideas and
3. We must stay close to innovations happening in the academic community.

By following these principles they are able to effectively implement cross-training, share decision making responsibilities and empower employees. In turn, more gets done and constant brainstorming creates new ideas. By having everyone on the same playing field, a huge knowledge base is integrated into one company instead of isolated pockets. Over the past 16 years teamwork and collective input have propelled Pixar to a whole new level of industry dominance.

Sometimes businesses can't see deficiencies in their own systems because of their own integration with the system (such as Company H). The key is being able to realize there is a problem (or lack of competitive advantage). Due to the uniqueness of every business, a possible solution could be to have an outside consultant with a "blank slate" come in and assess the problem and offer solutions or temporarily help out with tasks (such as re-engineering or change management). People in all levels of the company tend to get complacent with operations and sometimes lose the ability to take an objective inward look at how they do things. Though it may be somewhat costly, it could benefit the company by having a fresh outlook brought in to evaluate efficiency; it also saves managers some time and extra work.

CONCLUSIONS

Although people on an individual basis may be inherently creative, corporate structures can alter their perceptions of what constitutes creativity. By following strict guidelines or formal codes, people are indoctrinated with limitations, and deviation from the norm is discouraged. A small act of free will can be measured with this comparing logic: What may seem incredibly risky or creative within company boundaries could be a mundane, everyday occurrence in another business or outside the company. Over time vertical and horizontal structures seem to greatly affect people's overall perception of the value of creativity in the organization.

RECOMMENDATIONS

The authors offer suggestions for fostering creative thinking in the organizations studied. Job rotation, employee social events and on site job meetings are all ways to reduce the monotony of routine job functions. In the case of Company V, full job rotation is not practical because employees are specialized to a degree and would require months of training to perform multiple roles in the company. However, taking the responsibility of select tasks is feasible. By introducing new job tasks or rotating pieces of a role, employees will gain a broader outlook of how their company works, work alongside new faces, and concurrently learn new skills.

Social events can range anywhere from a simple, low-cost luncheon in the boardroom or an extended lunch hour designated for a company picnic outside. Another solution to encourage learning while discouraging sedentary job functions would be to include more people in company meetings or decision making; the goal is to get people who do not regularly see each other to meet and interact.

Once connections are made within the company, there has to be an easily accessible platform to maintain relationships. Establishing an intra-company message board or instant messaging system would promote timely and widespread communication, transparent idea sharing and employee-employee communication confidence. Recall the fact that 25% of the respondents from Company V claimed information was officially shared within minutes or hours, compared to 75% claiming information is shared via the grapevine in the same timeframe.

Furthermore, by taking the suggestion box seriously, the company can inspire employees to become actively involved in continuous improvement. Having a reliable, responsive place to voice ideas helps keep employees in alignment because if legitimate suggestions are being made, this means that employees are focusing on the wellbeing of the company, forecasting problem areas and looking to make things better. Non-monetarily awarding good suggestions and simply responding to suggestions in a timely manner can convey the fact that employee thoughts are valued. Of course, the reward for the outcome of the suggestion is situational and may warrant monetary compensation. However, people generally thrive on recognition and positive feedback. Open communication through multiple media/ platforms and face-to-face visiting can help break down the physical walls of separation and emotional walls people put up when working with strangers.

Lastly, any measure a company can take to reduce stress will enable employees to focus more on job performance. By enabling employees to dress more casually, a more relaxed atmosphere will be created. Recall that 40% of respondents from Company V and 42% of respondents from Company H claimed to feel "much more productive" when allowed to dress casually. An uncomfortable pair of high heels replaced by a comfortable pair of sneakers can do wonders for morale. Recall the Vietnam War, when clean, dry socks were an item of luxury and necessity. By keeping soldiers' feet in good shape, soldiers were able to perform at a higher level. Finally, it is recommended that guidelines for acceptable casual wear are maintained.

LIMITATIONS OF THE STUDY

Since the two companies differ in size, do not compete in the same arena for business or make use of the exact same job functions, a side by side performance evaluation (from a business performance perspective) based solely on communication hierarchy structures cannot be accurately made. However, due to the fact that both companies are service providers, a wide variety of respondents were used, and the survey issued by the principal investigator aims at evaluating employee attitudes/ performance on an individual level, this analysis provides an accurate depiction of how communication hierarchy structures affect employee morale, individualism and perceptions of creativity in business operations.

REFERENCES

Catmull, E. (2008, September). How Pixar fosters collective creativity. *Harvard Business Review*, *86*(9), Retrieved from http://web.ebscohost.com.unx1.shsu.edu:2048/bsi/detail?hid=12&sid=b025d174-2e17-4ff7-8417bdb64bc4251e%40sessionmgr13&vid=6&bdata=JnNpdGU9YnNpLWxpdmU%3d#db=bth&AN=33982981

Folan, J. (1999, August). Creativity adds to your bottom line - corporate communication. *Communication World*, Retrieved from http://findarticles.com/p/articles/mi_m4422/is_7_16/ai_59522044/pg_3/?tag=content;col1

Robinson, A, & Stern, S. (1998). Corporate creativity: how innovation and improvement actually happen. San Francisco: Berrett-Koehler Pub.

APPENDIX A- Consent Form

Dear survey participant:

Thank you for participating in this survey to evaluate creative differences between corporate structures. This survey is being administered by Plennie Vickery under the supervision of Dr. Gerry Hynes, Associate Professor, Department of General Business & Finance, Sam Houston State University.

Participation is voluntary and non-compensated. Your responses will be both anonymous and confidential.

You are under no obligation to complete this survey and may choose to terminate your participation at any time.

Contact Information:

Dr. Gerry Hynes: (936) 294-4149 gba_geh@shsu.edu

Consent Form:

I voluntarily agree to participate in the research regarding corporate creativity being administered by Plennie Vickery, under the supervision of Dr. Gerry Hynes.

I understand that I will not be compensated in any way for this survey and that I am under no obligation to complete the survey.

Signature: ____________________

Name: ____________________

Date: ____________________

APPENDIX B – Survey Questions and Results

Exhibit 1

This survey was taken by 20 employees selected randomly. All statistical data was compiled and interpreted by Plennie Vickery III.

Survey Questions: "Company V"

1.) How often are you required by company policy to provide official, written updates of company business/ progress?
A. Daily 10%
B. Weekly 30%
C. Bi-Weekly 15%
D. Monthly 30%
E. Bi-Monthly 0%
F. Never 0%

2.) Would you consider your work area to be physically or spatially segregated?
A. Yes 45%
B. No 50%

-Please briefly describe why:

____
____
____
____
____
____

3.) Is there a formal code of conduct established at your work place?
A. Yes 100%
B. No 0%

4.) Are there formal rules that outline acceptable attire? (If No, please skip to Question 4c.)
A. Yes 100%
B. No 0%

4b.)When required to dress in "business attire", do you feel more confident and productive?
A. Much more confident 25%
B. Somewhat more confident 45%
C. Don't know 15%
D. Somewhat less confident 5%
E. Much less confident 0%

4c.) When allowed to dress casually/ comfortably do you feel more productive?

A. Much more productive 40%
B. Somewhat more productive 20%
C. Don't know 20%
D. Somewhat less productive 15%
E. Much less productive 0%

5.) When problem solving how often do you follow procedures or steps outlined in a company handbook or article?

A. Always 10%
B. Usually 40%
C. Sometimes 35%
D. Rarely 15%
E. Never 0%

6.) How quickly is information spread officially through your organization?

A. Within minutes 10%
B. Within hours 15%
C. Within days 55%
D. Within weeks 15%
E. Within months 5%

7.) How quickly is information spread through the grapevine at your organization?

A. Within minutes 5%
B. Within hours 70%
C. Within days 25%
D. Within weeks 0%
E. Within months 0%

8.) How comfortable are you with approaching your boss with new ideas or suggestions?

A. very comfortable 75%
B. somewhat comfortable 25%
C. indifferent 0%
D. not very comfortable 0%
E. not at all comfortable 0%

9.) How comfortable are you with approaching your co-workers with new ideas or suggestions?

A. very comfortable 90%
B. somewhat comfortable 10%
C. indifferent 0%
D. not very comfortable 0%
E. not at all comfortable 0%

10.) If you asked to speak with a supervisor or manager, how long would it take before you actually spoke with him/ her?

A. instantly or in a few minutes 25%

B. less than an hour 40%
C. more than an hour 35%
D. more than one day 0%
E. 1 week or more 0%
F. I don't ask to speak with a supervisor/manager 0%

11.) My company's culture is: [please circle one]

(Fun)				(Serious)
1	2	3	4	5
5%	5%	55%	30%	5%

12.) Does your company have a suggestion box or similar method of submitting ideas/ improvements?
A. Yes 85%
B. No 10%

12 B.)- If Yes, how often have you used it to make operational suggestions?
A. Never 75%
B. Once 5%
C. A few times 5%
D. Many times 0%

12 C) If you have submitted ideas through an employee suggestions system, how satisfied were you with the outcome?
A. Very satisfied 0%
B. Satisfied 15%
C. Dissatisfied 0%
D. Very dissatisfied. 0%

12 D.)If No, would you like to have a communication channel like this established?
A. Yes 15%
B. No 0%
C. No opinion 25%

13.) If there was a company- wide competition that awarded creative thinking and ideas for improving operations, how likely would you be to participate? Please briefly explain your answer.
A. very likely 15%
B. somewhat likely 50%
C. indifferent likely 5%
D. not very likely 5%
E. not at all likely 0%
F. Don't know 25%

14.) If you were to come up with an on-the-spot solution to a company problem, please rate how your company would feel about your actions on the scale below:

(Applaud)				(Punish)
1	2	3	4	5
15%	55%	25%	5%	0%

15.) How often are you required to come up with original solutions to problems at your workplace?

A. Regularly 45%
B. Occasionally 30%
C. Rarely 20%
D. Not at all 5%

16.) Having authority to think and act creatively at work gives me motivation to outperform my peers.

A. strongly agree 50%
B. agree 35%
C. disagree 15%
D. strongly disagree 0%

17.) Choose the level of loyalty you have to the organization you currently work for below:

Very loyal				Not at all loyal
1	2	3	4	5
45%	40%	15%	0%	0%

18.) How likely are you to voluntarily stay after hours to work on projects or tasks?

A. very likely 75%
B. somewhat likely 20%
C. don’t know 0%
D. not very likely 0%
E. not at all likely 0%

19.) Please indicate the length of time you’ve worked for the company

A. less than 1 year 20%
B. 1-3 years 25%
C. 4-6 years 25%
D. 7-10 years 5%
E. more than 10 years 25%

Exhibit 2

This survey was taken by 12 employees, randomly selected. All statistical data was compiled and interpreted by Plennie Vickery III.

Survey Questions: "Company H"

1.) How often are you required by company policy to provide official, written updates of company business/ progress?
A. Daily 17%
B. Weekly 8%
C. Bi-Weekly 0%
D. Monthly 25%
E. Bi-Monthly 0%
F. Never 50%

2.) Would you consider your work area to be physically or spatially segregated?
A. Yes 75%
B. No 25%

-Please briefly describe why:
____

3.) Is there a formal code of conduct established at your work place?
A. Yes 83%
B. No 8%

4.) Are there formal rules that outline acceptable attire? (If No, please skip to Question 4c.)
A. Yes 58%
B. No 42%

4b.) When required to dress in "business attire", do you feel more confident and productive?
A. Much more confident 8%
B. Somewhat more confident 33%
C. Don't know 8%
D. Somewhat less confident 8%
E. Much less confident 8%

4c.) When allowed to dress casually/ comfortably do you feel more productive?
A. Much more productive 42%
B. Somewhat more productive 17%
C. Don’t know 33%
D. Somewhat less productive 0%
E. Much less productive 0%

5.) When problem solving how often do you follow procedures or steps outlined in a company handbook or article?
A. Always 8%
B. Usually 42%
C. Sometimes 8%
D. Rarely 0%
E. Never 42%

6.) How quickly is information spread officially through your organization?
A. Within minutes 42%
B. Within hours 0%
C. Within days 58%
D. Within weeks 0%
E. Within months 0%

7.) How quickly is information spread through the grapevine at your organization?
A. Within minutes 50%
B. Within hours 8%
C. Within days 42%
D. Within weeks 0%
E. Within months 0%

8.) How comfortable are you with approaching your boss with new ideas or suggestions?
A. very comfortable 83%
B. somewhat comfortable 0%
C. indifferent 17%
D. not very comfortable 0%
E. not at all comfortable 0%

9.) How comfortable are you with approaching your co-workers with new ideas or suggestions?
A. very comfortable 75%
B. somewhat comfortable 25%
C. indifferent 0%
D. not very comfortable 0%
E. not at all comfortable 0%

10.) If you asked to speak with a supervisor or manager, how long would it take before you actually spoke with him/ her?
A. instantly or in a few minutes 83%

B. less than an hour 17%
C. more than an hour 0%
D. more than one day 0%
E. 1 week or more 0%
F. I don’t ask to speak with a supervisor/manager 0%

11.) My company’s culture is: [please circle one]

(Fun)				(Serious)
1	2	3	4	5
42%	33%	25%	0%	0%

12.) Does your company have a suggestion box or similar method of submitting ideas/ improvements?
A. Yes 17%
B. No 83%

12 B.)- If Yes, how often have you used it to make operational suggestions?
A. Never 0%
B. Once 0%
C. A few times 8%
D. Many times 8%

12C) If you have submitted ideas through an employee suggestions system, how satisfied were you with the outcome?
E. Very satisfied 8%
F. Satisfied 8%
G. Dissatisfied 0%
H. Very dissatisfied. 0%

12 D.)If No, would you like to have a communication channel like this established?
A. Yes 0%
B. No 42%
C. No opinion 42%

13.) If there was a company- wide competition that awarded creative thinking and ideas for improving operations, how likely would you be to participate? Please briefly explain your answer.
A. very likely 50%
B. somewhat likely 17%
C. indifferent likely 8%
D. not very likely 25%
E. not at all likely 0%
F. Don’t know 0%

14.) If you were to come up with an on-the-spot solution to a company problem, please rate how your company would feel about your actions on the scale below:

(Applaud)				(Punish)
1	2	3	4	5
67%	25%	8%	0%	0%

15.) How often are you required to come up with original solutions to problems at your workplace?

A. Regularly 75%
B. Occasionally 8%
C. Rarely 17%
D. Not at all 0%

16.) Having authority to think and act creatively at work gives me motivation to outperform my peers.

A. strongly agree 58%
B. agree 25%
C. disagree 17%
D. strongly disagree 0%

17.) Choose the level of loyalty you have to the organization you currently work for below:

Very loyal				Not at all loyal
1	2	3	4	5
75%	25%	0%	0%	0%

18.) How likely are you to voluntarily stay after hours to work on projects or tasks?

A. very likely 83%
B. somewhat likely 17%
C. don't know 0%
D. not very likely 0%
E. not at all likely 0%

19.) Please indicate the length of time you've worked for the company

A. less than 1 year 8%
B. 1-3 years 8%
C. 4-6 years 17%
D. 7-10 years 25%
E. more than 10 years 42%

UNIVERSITY STUDENTS COMPUTER SECURITY PRACTICES IN TWO DEVELOPING NATIONS: A COMPARATIVE ANALYSIS

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ABSTRACT

We, as university teachers, are perturbed by the constant barrage of reports indicating that computer systems and proprietary information all over the world are being successfully compromised. The nefarious success of these viral intrusions is partly an indication, we believe; that employees do not have the requisite information and security procedures to protect these systems. We therefore designed this study to investigate and compare security practices of university students (prospective employees) in two cultures, Nigeria and Turkey, since these two countries have embraced technology with avid interest. The justification for studying students is based on the fact that they (students) are the corporate employees of the future and must possess the required knowledge and practical procedures required for systems protection. The findings reveal significant differences in computer security practices between the two groups and also between genders. More important is the fact that the students in this study do not use sophisticated security measures such as biometric authentication, multifaceted authentications, placement of passwords on email attachment before sending etc.

INTRODUCTION

Files, data, and computer systems vulnerabilities are discomforting attributes of contemporary computing that can no longer be excused. The continuous vulnerability of data is partly a function of the lack of appropriate knowledge and unwillingness of end-users to apply known security measures with ardent and purposeful interest. This end-user laxity is more apparent among young college graduates who carry to the workplace the same college-days computer security disinterest that were perpetrated in college. This study therefore compares college students' interest and applications of selected security measures in their interactions with computers in two developing countries - Nigeria and Turkey. The justification for studying students is based on the fact that students are the corporate employees of the future and understanding their stance on computer security issues of today will provide a better handling or alleviation of the problems of the future. These security practices investigated here are use of simple passwords, use of sophisticated passwords, daily computer system scan, scan of email attachments, use of anti-virus software to check for viruses, placement of passwords on email attachments, functions of biometric authentication, functions of firewalls, functions of intrusion detection systems, and functions of multifaceted authentication systems.

The boost in the use of computer technology and the Internet in developing countries has increased the likelihood that vital information will be stolen and misused (Yin and Prostakova, 2003). A particular concern is information security and university students' regularity in practicing safety and security measures in their digital environments. Globally, millions of university students log on the Internet routinely. Stoller (2009) contended that the majority of computer breaches are committed by individuals who have gained access to information on computer network systems either legitimately or illegitimately. Thus, it is pertinent for individuals such as university students to have computer security practices in place to protect information for themselves and their prospective employers.

RELATED LITERATURE

Several factors call for a reexamination of the security of our electronic information in contemporary society. It is common knowledge that computer technology and Internet utilization are intertwined and are growing geometrically; it is also known that within the last decade students in developing countries have become savvier in the use of these technologies. A cursory look at the news on media outlets detects reports of computer security violations, successful intrusions, malware, and virus invasions into files to compromise of computer systems. These continuous growth and system vulnerabilities add to the likelihood that vital information will be stolen and misused increasingly (Yin and Prostakova, 2003). A recent case in point is the charge against Private First Class Bradley E. Manning currently imprison for wrongfully introducing classified United States Department of State cables into unsecured system (http://www.fas.org/irp/news/2010/07/manning070510.pdf). In a related publication (Jacob. J., 2010) reported that Bradley E. Manning is suspected of being a source of the world wide leaks of confidential government information to *WikiLeaks.* The state of continuous connectivity of government, corporate, and academic computer systems to the World Wide Web adds to this unparalleled defenselessness (Crowley, 2003). Millions of university students navigate the Internet daily. Since this large group of users will eventually become the next group of corporate and government employees, it is pertinent to determine their computer security practices before they graduate from college and join the global workforce.

Globally, there are many security concerns that are similar; however, the importance that each country places on security measures varies (Chen *et al*., 2008). Also, different countries place varying conduct codes to information technology use to enhance information security awareness and ethics (Bia and Kalika, 2007).

Yin and Prostakova's (2003) research revealed that as individuals rely more on computers, there is an increase in the inappropriate use of computers and an increased need to secure information stored on them. CompTIA researched information technology breaches and found that the main reason was human error (Gross, 2003; Stoller, 2009). They recommended more training and certification of information technology workers to help deter cyber-threats.

Smith (2003) reported that hardware failure is the main reason (40%) for data loss, human error such as deleting information is 29%, and hardware damage, software corruption, viruses, and theft account for 31%.

According to Yin and Protstakova (2003), there are various ways to protect information that is stored in computers and as it travels over the Internet. The authors recommend using a combination of security measures such as protecting information with passwords, installing anti-virus software, formulating a plan, using encryption, securing laptops, and training employees, faculty, and students.

Passwords

Protecting information with passwords has drawbacks because people tend to choose poor passwords (Birget *et al.*, 2006) that are short and derived from personal data that are easy to guess (Brown *et al*., 2004). Simple passwords are easy to hack, makes authentication easy to execute, and are easy to use to access information systems. However, sophisticated passwords are harder to figure out and consist of a combination of consonants and vowels, numbers, and unusual characters, which make them more hacker-proof (Weinshall and Kikpatrick, 2004).

An intruder can gain access to a password since they may be written and revealed in various ways (Stoller, 2009). Mitnick, who was once a hacker, but is now a security consultant, maintains that it is easier to trick individuals into giving their password than it is to hack into a computer system to obtain them. Hackers play a sophisticated con game called social engineering, which results in employees and students giving them the information to access their computer systems (Mitnick and Simon, 2002).

Yin (2004) reported that a social engineer gains computer access to information by two ways: hacking into the computer information system off-site and through their physical presence on-site by gaining a person's trust. Orgill *et al*. (2004) studied social engineering threats physically posing as an employee in a business's computer support department. The researcher asked the participants specific information such as their usernames and passwords. The study's findings revealed that 80% of the participants provided their usernames and nearly 60% provided their passwords. Greening (1996) studied undergraduate computer science students at Sidney University using an email approach. Emails were sent to the students requesting their usernames and passwords under the disguise of intrusion detection and computer information system upgrade. Forty-seven percent of the students provided their usernames and passwords.

Computer System Scan

Computer system scans can be programmed in computers to be automatic or they can be performed manually. An automatic computer system scan occurs each time the computer is turned on. Edge (2010) recommends using the following five SOLID software principles to protect your computer network: 1) Simplicity (how easy to access the network), 2) Obscurity (easy or difficult to understand), 3) Layering (build layers of defense), 4) Impeding (hinder intruders), and 5) Diversity (use diverse computer platforms). The researchers recommend running a complete scan of the computer system with anti-virus and anti-spyware software every week.

Antivirus Software for Virus Check

Anti-virus software is designed to protect computer systems from being infected by viruses. The first virus occurred in 1987 when ARPANET was infected. Now, computer virus infections are an epidemic with new viruses being introduced weekly (Schulz, 2004). The more recent polymorphic viruses are of particular concern since they can change their signature when they replicate and infect different file types to prevent detection (Teer *et al*., 2007).

Teer *et al*. (2007) researched the security practices of undergraduate students majoring in Art, Computer Information Systems, and Integrated Science and Technology. The majority of the students (91%) used an antivirus program, 71% regularly updated their antivirus program, and 43% conducted an antivirus scan weekly. Forty-nine percent of the undergraduate students had no viruses in the last 12 months, 47% had from less than five to more than ten viruses, and 3% were unsure whether they had a virus in their computers.

Biometric Technology

Orlowski (1997) contends that encryption is a basic tool that is used to protect information technology. However, Piper (2005) maintains that encryption does not prevent interception of information while it travels over the Internet or when it is stored in the computer. Furthermore, individuals can read the information at the sending and receiving end of the transmission if the environment is insecure. However, stronger protection for computer systems is being developed using biometric technology. It uses an individual's biometrics such as fingerprint to encrypt other data. With biometric technology, the individual's biometric encrypted template is retained. Therefore, if the hackers access the biometric, they will not get the biometric template, they get a meaningless password that the individual's biometric was used to encrypt (Stoller, 2009).

According to Jain (2004), fingerprint recognition is the most used method of biometric authentication and it is considered a secure authentication method since it is unique to each individual. Al-harby *et al*. (2008) maintained that a major drawback with biometric authentication such as fingerprint and face recognition is acceptance and trust. If the authentication system is secure or efficient it is still not beneficial if people are not willing to use it. The researchers' study focused on the feasibility of biometric authentication systems in e-commerce in Saudi Arabia. The study revealed that the participants were in favor of the use of biometric authentication, and the majority of the respondents (81.2%) self-reported that they preferred the fingerprint authentication system.

Firewall Protection

Another way to secure information is to use a firewall. There are two basic types of firewalls: software and network. The software firewall is specialized software that runs on an individual computer. The network firewall is a dedicated device that protects one or more computers. Firewalls protect information by preventing unauthorized access to networks connected to the Internet; however, it limits access to information. Firewalls are usually the first defense mechanism against hackers especially since more broadband connections are on continuously, which make computer intrusion more likely (Meiselwitz, 2008).

Teer *et al*.'s (2007) study found that 53 percent of the undergraduate students use firewall protection, 33 percent do not use a firewall, and 14 percent were unsure of the presence of a firewall on their computers systems.

Intrusion Detection System

Computer technology intrusion detection systems are tools that assist in keeping information secure using automated systems or manual devices. Intrusion detection is defined as "the primarily reactive security work of monitoring network activity for signs of malicious or abnormal behavior", (Goodall *et al*., 2009). Network security is a pressing concern for organizations, and costs for a security breach can be as much as $14 million. Another concern is new forms of cyber warfare which can virtually shut down Web sites for extended periods of time (Hall, 2007).

Intrusion detection systems (IDSs) assist preventative controls which include anti-virus software and firewalls. IDSs assist in securing information by detecting intrusions of external hackers who bypassed preventative controls as well as intrusions of internal hackers (Escamilla, 1998).

Multifactor Authentication Systems

Using more than one authentication factor at the same time increases hacker frustration prevents ease of intrusion. Multi-factor authentication combines three distinct factors: 1) password (something you know), 2) smart card (something you have), and 3) fingerprint (something you are). However, multifactor authentication systems though sophisticated, are expensive considering the cost for cards, associated equipment, technical maintenance, and management.

Even with the high expense, smart-card technology is growing fast since it has been widely adopted in the retail industry. In addition, cellular phones and landline phones are emerging on the scene as second factor authentication devices because they are ubiquitously owned. Cellular phones are equipped with software that interact with smart cards that can be installed on a landline phones or laptop computers (Stoller, 2009).

Gender vs. Technology

There are mixed findings among the topics of learning differences in technological fields between genders. Among many self-evaluation survey results, He and Freeman (2010) suggested that females feel less confident with computers because they have learned less and practiced less, and feel more anxious about using computers when compared with male counterparts. However, Wasburn and Miller (2006) stated that females expressed confidence in their own abilities in technology. Shannon (2007) also found that females have a higher level of communication skills than the males evaluated themselves. In addition, there was no significant difference between genders when comparing the comfort levels with digital life environment (Shannon, 2007). Considering the issue of digital divide, males and females have not been found to demonstrate significant differences in technology knowledge and learning outcomes (Coolbaugh, 2004; Lipinski, 2005).

RESEARCH METHODOLOGY AND DATA COLLECTION

This study uses part of the data from an original broader study that explored practical applications and familiarity with information systems security measures among Nigerian public university students in fall 2008. A section of the constructs that formed the original survey (see Appendix A for English version and B for Turkish version) adapted from (Lomo-David and Shannon, 2009) for the previous study was translated into Turkish, administered to Turkish public university students in spring 2009, and the results were compared with the Nigerian university students' survey. In the current study, ten survey questions focused on the regularity of usage of computer security practices on the one hand and eight demographic characteristics questions on the other. The first ten constructs specifically requested respondents to indicate how often (<10%, 11-30%, 31-50%, 51-80%, >80%) they have practiced usage of the ten computer security measures (see Table 1) in the past twelve months. For analysis purpose, the percentage of frequency was converted to the scale of 1 to 5 which 1 is less than 10% and 5 is greater than 80%. In Turkish version of the survey "never, rarely, sometimes, most of the time, always" scale was used instead of (<10%, 11-30%, 31-50%, 51-80%, >80%). There were a combined total of 1,117 (Turkish = 575 and Nigerian = 542) students whose survey responses were used in the study. Based on the standards of minimal total sample sizes for different hypothesis tests with alpha at .05 level of significance and with statistical power at .7 level, 620 is the recommended sample size (Gall, Gall, & Borg, 2003). The usable sample size of 1,117 from this study is greater than the minimum of 620 which provided a sufficient data to continue the analysis process.

Demographics Characteristics

Demographic characteristics of the respondents revealed Turkish males to be (225 or 39.13%) and females (350 or 60.87%); and Nigerian males (264 or 48.71%) and females (278 or 51.2%). The age range for Turkish students is 18 to 30 and for Nigerian students it is 18 to above 50 years. The computer experiences of participants included experts, very good, good, poor, and novice (see Appendix A). For analysis purpose, the responses were converted to a scale of 1 to 5 which1 is expert and 5 is novice. Since the questionnaire requested participants to self-report their level of expertise with computers, the reported levels of expertise were not verified. These results were obtained by analyzing the data with SPSS 17 employing descriptive statistics and t-tests.

DATA ANALYSIS

The most regularly used security measure by respondents was anti-virus software to check for viruses (Mean: 2.84, S.D.: 1.29). Other more regularly used security measures were simple passwords, e-mail scan for viruses, and daily computer system scan (Table 1). The least regularly used security measure by respondents was biometric technology (Mean: 1.46, S.D.: 0.83). Other least regularly used security measures were multifaceted authentication systems, placement of passwords on email attachments, and intrusion detection systems. These results show that undergraduate students in these countries do not use sophisticated computer security measures. This validates other studies (Teer *et al*., 2007; Orgill *et al*., 2004; Greening, 1966) that have reported minimal security consciousness among end-users and undergraduate students.

Table 1: Descriptive Statistics of Students' Regularity of Security Practice

Computer Security Measures	Mean	Std. Deviation
Use of anti-virus software to check for viruses	2.84	1.29
Use of simple passwords to protect your computer data and usage	2.72	0.96
Scan of email attachments	2.72	0.96
Daily computer system scan	2.70	0.93
Use of sophisticated passwords to protect your computer data and usage	2.19	1.23
Functions of firewalls as security measures	2.02	1.10
Functions of intrusion detection systems as security measures	1.82	1.07
Placement of passwords on email attachments	1.71	0.97
Functions of multifaceted authentication systems as security measures	1.66	1.01
Functions of biometric technology as security measures	1.46	0.83

(N=1117)

Differences between Turkish and Nigerian Students' Regularity of Security Practice

Responses from Turkish students indicate that 30.6% of respondents always practiced the use of anti-virus software to check for viruses. Also, more than 45% of them use placement of passwords on email attachments less than 10% of the time. The most regularly used security measure by Turkish students was anti-virus software to check for viruses. The least regularly used security measure by Turkish students was functions of biometric authentication (56% never use it and 1.7% always use it) (Table 2).

Table 2: Regularity of Security Practice in Turkey

	Never	Rarely	Sometimes	Most of the time	Always
Use of simple passwords	16.0	24.2	31.7	22.1	6.1
Use of sophisticated passwords	20.7	21.0	21.9	27.0	9.4
Daily computer system scan	22.1	27.8	28.3	14.3	7.5
Scan of email attachments	25.7	25.6	23.7	16.7	8.3
Use of anti-virus software to check for viruses	14.3	13.4	19.3	22.4	30.6
Placement of passwords on email attachments	45.9	26.4	17.6	8.0	2.1
Functions of biometric technology	56.0	23.3	13.0	5.9	1.7
Functions of firewalls	25.2	33.0	22.3	12.0	7.5
Functions of intrusion detection systems	36.7	28.5	17.6	11.5	5.7
Functions of multifaceted authentication systems	36.7	30.1	18.4	10.6	4.2

The percentage of times responds practiced security measures in the past twelve months.

Nigerian respondents (Table 3) used all the listed security measures less than 51% of the time during the past 12 months of the study. Specifically, 92% of Nigerian respondents used scan of email attachments between 30% to 50% of the time; and 89% used a daily computer system scan 31% to 50% of the time. Regarding simple passwords, 80% of respondents used it 31% to 50% of the time; while 59% used sophisticated passwords less than 10% of the time.

Table 3: Regularity of Security Practice in Nigeria

	< 10% %	11%-30% %	31%-50% %	51%-80% %	>80% %
Use of simple passwords	14.0	5.5	80.4	0.0	0.0
Use of sophisticated passwords	59.0	30.3	10.7	0.0	0.0
Daily computer system scan	5.2	5.5	89.3	0.0	0.0
Scan of email attachments	3.0	5.0	92.1	0.0	0.0
Use of anti-virus software to check for viruses	20.8	36.2	43.0	0.0	0.0
Placement of passwords on email attachments	71.2	10.3	18.5	0.0	0.0
Functions of biometric technology	85.2	12.9	1.8	0.0	0.0
Functions of firewalls	59.8	22.5	17.7	0.0	0.0
Functions of intrusion detection systems	71.0	18.3	10.7	0.0	0.0
Functions of multifaceted authentication systems	88.7	9.4	1.8	0.0	0.0

The percentage of times respondents practiced security measures in the past twelve months.

HYPOTHESES TESTED

1. *Nigerian and Turkish undergraduate students use computer security measures with the same level of regularity.*
2. *Female and male undergraduate students use computer security measures with the same level of regularity.*

The primary interest of this study was to test for statistically significant differences between Nigerian and Turkish students regarding regularity of computer security practice. Mean comparison using independent samples t-test reveals that there was a significant difference between Nigerian and Turkish students for all listed computer security practices at the 5% level (Table 4). The results show that Turkish students use all of the listed security practices except daily computer system scan and scan of email attachments more regularly than Nigerian students.

Table 4: Results of Independent T-Test between Nigerian and Turkish Students

	Nigerian Students		Turkish Students		
	Mean	S.D.	Mean	S.D.	p
Use of simple passwords	2.66	0.71	2.78	1.14	0.039*
Use of sophisticated passwords	1.52	0.68	2.83	1.29	0.000*
Daily computer system scan	2.84	0.49	2.57	1.19	0.000*
Scan of email attachments	2.89	0.40	2.56	1.26	0.000*
Use of anti-virus software to check for viruses	2.22	0.77	3.42	1.41	0.000*
Placement of passwords on email attachments	1.47	0.79	1.94	1.07	0.000*
Functions of biometric technology	1.17	0.42	1.74	1.01	0.000*
Functions of firewalls	1.58	0.77	2.43	1.20	0.000*
Functions of intrusion detection systems	1.40	0.67	2.21	1.22	0.000*
Functions of multifaceted authentication systems	1.13	0.39	2.15	1.15	0.000*

* indicates significant at the 0.05 level

Differences between Male and Female Students' Regularity of Security Practice

The second hypothesis was to test for a statistically significant relationship between gender and regularity of security practice. T-test results show that there was a significant difference between male and female students in 4 of 10 listed security practices at the 5% level (Table 5). There were 43.8% (N=489) of males and 56.2% (N=628) of females. Significant differences exist between males and females in the following security practices: daily computer system scan, placement of passwords on email attachments, functions of firewalls, and functions of intrusion detection systems. Females' mean score is higher than males for only placement of passwords on email attachments. (Females' mean: 1.76, Males' mean: 1.65). It is interesting to note that there is a pattern of practicing on the security items which males had a higher frequency than females did. This pattern could suggest any further investigation in the phenomena of females practiced security protection less frequent than the males did.

Table 5: Results of Independent T-Test between Male and Female Students

	Female Students		Male Students		
	Mean	S.D.	Mean	S.D.	p
Use of simple passwords	2.72	0.94	2.72	0.98	0.992
Use of sophisticated passwords	2.19	1.24	2.20	1.21	0.922
Daily computer system scan	2.61	0.96	2.82	0.87	0.000*
Scan of email attachments	2.68	1.00	2.78	0.91	0.068
Use of anti-virus software to check for viruses	2.81	1.27	2.87	1.31	0.436
Placement of passwords on email attachments	1.76	0.99	1.65	0.95	0.050*
Functions of biometric technology	1.44	0.82	1.49	0.85	0.306
Function of firewalls	1.94	1.00	2.12	1.22	0.008*
Functions of intrusion detection systems	1.69	0.94	1.97	1.20	0.000*
Functions of multifaceted authentication systems	1.62	0.94	1.71	1.09	0.156

* indicates significant at the 0.05 level

CONCLUSION AND DISCUSSION

The main aims of this study are to investigate the differences in computer security practices of Nigerian and Turkish university students and to compare gender differences in computer security practices. Based on data produced by the descriptive statistics, the four most regularly used computer security measures are the use of antivirus software to check for viruses, use of simple passwords, scan of email attachments, and daily computer system scan, where each has a mean not less than 2.70. The study results indicate that undergraduate students in both countries do not use sophisticated computer security measures. This finding supports previous research results. According to the results of this study, Turkish students use all of the listed security practices except daily computer system scan and scan of email attachments more regularly than Nigerian students. Significant differences between genders are found in the following security practices; daily computer system scan, placement of passwords on email attachments, functions of firewalls, and functions of intrusion detection systems. The males' mean score is higher than females' for all security measures except placement of passwords on email attachments. Male students are more cautious about computer security than female students.

The lack of implementation of system security can contribute to reduced productivity and thus lack of bottom line growth. Students are prospective human resource personnel and are expected to contribute to productivity enhancement while employed. Universities have the duty to ensure that students are equipped with computer security practices as they graduate and join the workforce. These computer security measures must be properly implemented to ensure reduced time lost to system downtime in case of successful intrusions. Training undergraduate students to avoid disastrous computer activities before graduation from university could save corporations millions of dollars in the cost of information security risk management in the future and also reduce potential problems on campus (Booker *et al*., 2009).

The results documented in this study lead us to believe that teaching computer security measures is a critical and important duty for education institutions today. Whatever the students' discipline, the curriculum should present information system security measures with equal interest as other components of the subject. It is expected that as students are taught computer security threats and these measures, they will use computers with carefulness on campus and in business.

REFERENCES

Al-harby, F., R. Qahwaji, & M. Kamala (2008). "The feasibility of biometrics authentication in E-Commerce: User acceptance. *IADIS International Conference,* Freiburg, Germany, 527-531.

Bia, M. & M. Kalika (2007), Adopting an ICT code of conduct: an empirical study of organizational factors. *Journal of Enterprise Information Management,* 20(4), 432.

Booker, Q.E., C. Rebman, & F. L. Kitchens (2009). "The impact of computer and Internet security training for undergraduate students: attitudinal changes. *Issues in Information Systems*, 10(1), 191-197.

Brown, A.S., E. Bracken, S. Zoccoli, & K. Douglas (2004). Generating and remembering passwords, *Applied Cognitive Psychology,* 18(6), 641-651.

Birget, J.C., D. Hong, & N. Memon (2006). Graphical passwords based on robust discretization. *IEEE Transactions on Information Forensics and Security,* 1(3), 395-399.

Chen, C.C., D. B. Medlin, & R.S. Shaw (2008). A cross-cultural investigation of situational information security awareness programs. *Applied Cognitive Psychology,* 18(6), 360-376.

Crowley, E. (2003). Information system security curricula development. *Proceedings of the 4th Conference on Information Technology Curriculum, Lafayette, IN,* 249-255.

Coolbaugh, A.M. (2004). Assessing technology proficiency in higher education: An observation study to identify critical issues (Doctoral dissertation, Capella University, 2005) *Dissertation Abstracts International,* 65(09), 3346A. (UMI No. 3146570).

Edge, I.E. (2010). Employ five fundamental principles to produce a SOLID, secure network. *Information Security Journal: A Global Perspective*,19, 153-159.

Escamilla, T. (1998). *Intrusion Detection: Network Security Beyond the Firewall*, New York: John Wiley and Sons.

Gall, M.D., Gall, J.P., & Borg, W.R. (2003). *Educational Research*. New York: Pearson Education.

Goodall, J.R., W. G. Lutters, & A. Komlodi (2009). Developing expertise for network intrusion detection. *Information Technology & People*, 22)2) 92-108.

Greening, T. (1966). Ask and Ye Shall Receive: A Study in Social Engineering. *ACM SIGSAC Review* 14(2), 8-14.

Gross, G. (2003), CompTIA: Human error causes security breaches, IDG News Service, available at http://www.nwfusion.com/news/2003/0318comptia.html (retrieved July 25, 2010).

Http://www.fas.org/irp/news/2010/07/manning070510.pdf. (Retrieved December 14, 2010).

Hall, M. (2005). Price of security breaches…at: http://www.computerworld.com/s/article/ 106180/Price_of_Security_Breaches_... (retrieved July 25, 2010).

He, J., & Freeman, L.A. Are men more technology-oriented than women? The role of gender on the development of general computer self-efficacy of college students. *Journal of Information Systems Education*. 21(*2*). 203-213.

Jacob, J. (2010), "Who is Bradley Manning", retrieved December 14, 2010 from at http://www. Ibtimes.com/art/services..

Jain, A.K. (2004). Biometric recognition: How do I know who you are? *Proceedings of the IEEE 12th Signal Processing and Communications Applications Conference, SIU*, 3-5.

Lipinski,E.R. (2005). Using technology in higher education: Differences among outcomes, learning styles, gender, computer self-efficacy, course contexts and ethnicity (Doctoral dissertation, Capella University, 2006)ProQuest *Dissertation Full Text* (ProQuest document ID 994236241).

Lomo-David, E. & L. J. Shannon (2009). Information systems security and safety measures: the dichotomy between students' familiarity and practice. *Academy of Information and Management of Sciences Journal*, 12(1-2), 29-47.

Meiselwitz, G.H. (2008). Information security across disciplines, *Proceedings of The 9th ACM SIGITE Conference on Information Technology Education, Cincinnati, OH*, 99-104.

Mitnick, K.D. and W. L. Simon, (2002). *The Art of Deception: Controlling the Human Element of Security*, New York: John Wiley and Sons.

Orgill, G.L., G. W. Romney, M.G. Bailey, & P.M. Orgill (2004). The urgency for effective user privacy-education to encounter social engineering attacks on secure computer systems. *Proceedings of the 5th Conference on Information Technology Education, Salt Lake City, UT*,177-181.

Orlowski, S. (1997). Government initiatives in information technology security. *Information Management & Computer Security* 5(3), 111-118.

Piper, F. (2005). Turing lecture: Cyberworld security—the good, the bad and the ugly. *The Computer Journal*, 48(2), 145-156.

Sasse, M.A., S. Brosto & D. Weirich (2001). Transforming the 'Weakest Link' a Human Computer Interaction Approach to Usable and Effective Security. *BT Technology Journal* 19(3),122-131.

Schulz, E. (2004). Worms and viruses: Are we losing control? *Computers & Security*, 23(3),179-180.

Shannon, L.Y. (2007). A Study of the Millennial Generation Regarding Information and Communication Technology Literacy Levels and Comfort Levels with Digital Life Environments. Doctoral Dissertation, *Sam Houston State* University, Dissertation Abstracts International, DAI-A 68/04.

Slatalla, M. (1996). *The Master of Deception: The Gang that Ruled Cyberspace*, New York: Harper Perennial.

Smith, D.M. (2003). The cost of lost data. *Graziadio Business Review*, 6(3). Retrieved December 6, 2010, from http://gbr.pepperdine.edu/2010/08/the-cost-of-lost-data/.

Stoller, J. (2009). Authentication—passwords and beyond. *CMA Management,* 44-46.

Teer, F.P., S.E. Kruck, & G.K. Kruck (2007). Empirical study of students' computer security practices/perception. *Journal of Computer Information Systems*, 47(3), 105-110.

Wasburn, M.H. & Miller, S.G. (2006). Still a chilly climate for women students in technology: A case study. In M.F.Fox, D.G.Johnson, & S.V. Rossser (Eds.), *Women, gender, and technology* (pp.60-79). Champaign, IL: University of Illinois Press.

Weinshall, D. & S. Kirkpatrick (2004). Passwords you will never forget. *ACM*, Vienna, Austria, 1399-1402.

Yin, L.R. (2004). The new hacker – the social engineer. *Business Education Forum*, 59(1), 51-53.

Yin, L.R. & A. Prostakova (2003). Top ten errors in electronic information security. *Business Education Forum,* 58(1), 51-53.

Appendix A

Survey in English

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INFORMATION TECHNOLOGY SECURITY MEASURES QUESTIONNAIRE©

This survey is designed to obtain information about security practices regarding computer and information technology usage. You and your university responses will remain anonymous and you will not be identified in any way. Confidential/copyrighted, Ewuuk Lomo-David

REGULARITY OF SECURITY PRACTICE

Which of the following do you actually practice on a regular basis while computing? Please indicate percentage of time of usage.

	<10%	**11-30%**	**31-50%**	**51-80%**	**>80%**
Use of simple passwords to protect your computer data and usage.	<10%	11-30%	31-50%	51-80%	>80%
Use of sophisticated passwords to protect your computer data and usage.	<10%	11-30%	31-50%	51-80%	>80%
Daily computer system scan	<10%	11-30%	31-50%	51-80%	>80%
Scan of email attachments	<10%	11-30%	31-50%	51-80%	>80%
Use of anti-virus software	<10%	11-30%	31-50%	51-80%	>80%
Placements of passwords on email attachments before sending to preclude others but the intended recipient from opening your attachments. You must send the password to the intended recipient through a different communication medium.	<10%	11-30%	31-50%	51-80%	>80%
Functions of biometric technology as security measures	<10%	11-30%	31-50%	51-80%	>80%
Functions of firewalls as security measures	<10%	11-30%	31-50%	51-80%	>80%
Functions of intrusion detection systems as security measures	<10%	11-30%	31-50%	51-80%	>80%
Functions of multifaceted authentication systems as security measures	<10%	11-30%	31-50%	51-80%	>80%

DEMOGRAPHIC INFORMATION

Please check your gender.	Female	Male			
Please check your age range	18-25	26-30	31-45	46-50	>50
Please check your classification	Undergraduate	Graduate			
Please check what you are studying at the university	Arts & Science	Business	Engineering	Other ______	
Please rate your knowledge and experience with computers (check your choice)	Expert	Very Good	Good	Poor	Novice
Please check number of hours you have waited in past one year for your computer to be repaired after a malfunction.	< 24 hrs/ Did not malfunction	1-3 days	4-7 days	8-14 days	>14 days
How many times have you changed your password in the past 12 months?	0 times	1-4 times	5-10 times	11-30 times	
Do you own a mobile device (Cell phone, PDA etc.)?					
Thanks for participating in this survey. Please write any comments here: ______________________________________					

Appendix B

Survey in Turkish

BİLGİ TEKNOLOJİLERİ GÜVENLİK ÖNLEMLERİ ANKETİ					
GÜVENLİK ÖNLEMLERİNİ UYGULAMA SIKLIĞI					
Lütfen, son altı ay içerisinde aşağıdaki güvenlik önlemlerini ortalama olarak hangi sıklıkla uyguladığınızı / kullandığınızı belirtin!					
	Hiçbir zaman	**Çok az**	**Bazen**	**Çoğu zaman**	**Daima**
Bilgisayardaki bilgi ve programlarınızı korumak için **basit** şifreler kullanmak.	□	□	□	□	□
Bilgisayardaki bilgi ve programlarınızı korumak için karmaşık şifreler kullanmak.	□	□	□	□	□
Günlük bilgisayar sistem taraması yapmak.	□	□	□	□	□
E-posta eklentilerinin virüs taramasını yapmak.	□	□	□	□	□
Virüs taraması yapmak için Anti-virüs programı kullanmak.	□	□	□	□	□
E-posta ile gönderilecek dosyalara şifre koymak.	□	□	□	□	□
Bir güvenlik önlemi olarak biyometrik teknolojinin işlevlerini kullanmak.	□	□	□	□	□
Güvenlik önlemleri olarak güvenlik duvarlarının işlevlerini kullanmak.	□	□	□	□	□
Güvenlik önlemleri olarak saldırı tespit sistemlerinin işlevlerini kullanmak.	□	□	□	□	□
Çok yönlü kimlik doğrulama sistemlerinin işlevlerini kullanmak.	□	□	□	□	□

DEMOGRAFİK BİLGİLER					
Cinsiyetiniz	□ Kadın	□ Erkek			
Yaşınız	**□18-25**	**□26-30**	**□31-45**	**□46-50**	**□50'den büyük**
Öğrenim durumunuz	□Lisans	□Lisansüstü			
Bölümünüz	**□Sanat/Bilim**	**□İşletme**	**□Mühendislik**	**□İktisat □Kamu Yön.**	**□Diğer**
Bilgisayarlarla ilgili bilgi ve tecrübe düzeyiniz	□Uzman	□Çok iyi	□İyi	□Zayıf	□Acemi
Son bir yıl içinde bilgisayarınız arızalandığında tamiri için kaç saat beklediniz?	**□Arızalanmadı □24 saatten az**	**□1-3 gün**	**□4-7 gün**	**□8-14 gün**	**□14 günden fazla**
Son bir yıl içinde şifrenizi yaklaşık olarak kaç kere değiştirdiniz	□ Hiç	□ 1-4 kere	□5-10 kere	□11-30 kere	□30 dan fazla
Taşınabililir cep telefonu, cep bilgisayarı vb. sahip misiniz?	**□ Evet**	**□ Hayır**			
Anketimize katıldığınız için teşekkür ederiz.					

Technical Analysis of the Danish Stock Market

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INTRODUCTION

Technical analysis is based on the idea that prices move in trends, which are determined by the changing attitudes of traders towards various economic, political and psychological forces. As Pring (1991, p. 3) notes, "The art of technical analysis, for it is an art, is to identify a trend reversal at a relatively early stage and ride on that trend until the weight of evidence shows or proves that the trend has reversed". Murphy (1999) defines technical analysis as the study of market action, including price, volume, and open interest, through the use of charts for the purpose of forecasting future prices. We therefore define technical analysis as a method of evaluating commodities and stock prices by analyzing statistics generated by market activities, volume, open interest, past prices, and various indicators based on prices and volumes. Technical analysts do not attempt to measure a security's intrinsic value; instead, they look for patterns and indicators on the charts that will determine whether you should go long or short or stay neutral for any security. Over a century, practitioners have been using the qualitative aspect of technical analysis which involves pattern recognition such as head and shoulder, tops and bottoms formations, double and triple tops and bottoms, rectangle tops and bottoms, rounding tops and bottoms, diamond formation, V-formation, broadening formation, triangles, wedges and pennants formations and so on. The purpose of this paper is to determine whether technical analysis can have predictive power and can discern recurring price patterns in the Danish stock market given the data period from 1993 to 2010. Our results confirm the predictive power and indicate a particular rule of technical analysis as the best indicator. Section II discusses a brief literature review. The data and methodology are shown in Section III. Section IV presents our findings and the final section concludes.

LITERATURE REVIEW

In his renowned article for the Efficient Market Hypothesis (EMH), Fama (1970) defined an efficient financial market in which the market prices fully reflect all available information. The nature of unpredictable news will also lead unpredictable price changes which may follow a random walk. Followers of the EMH believe that investors cannot drive profits above a buy-and-hold strategy by applying any trading rule which depends solely on the past market information such as price or volume. In 1960s and 1970s, many researchers documented the futility of technical analysis to support the market efficiency hypothesis (e.g. Larson, 1960; Granger and Morgenstern, 1963; Fama, 1965; Fama and Blume, 1966; Jensen and Benington, 1970). By the end of 1970s, as a result, most of finance and economics professors believed in the EMH and ruled out the predictability of stock market by technical analysis.

Since the 1980s, the EMH has been challenged on both theoretical and empirical ground. One important theoretical challenge comes from the behavioral finance theorists who have challenged the rationality of investors by suggesting cognitive psychology to describe investor's behavior. They have also challenged the theoretical foundation of EMH by arguing that arbitrage is risky and limited in the real world. Many articles have been published to support the usefulness of technical trading rules. Sweeney (1986) applied various filter rules in the foreign exchange markets to conclude that one third of the cases directed by trading rules were significantly profitable in statistics. Lukac et al. (1988) used a variety of technical trading rules on 12 US futures markets to support the profitability of technical analysis. Brock et al. (1992), the cornerstone article for technical analysis, analyzed moving averages and trading range breaks on the Dow Jones Industrial Index from 1897 to 1985. They tested both long and short moving averages to confirm the predictive power of technical analysis in stock market.

Based upon the methodology in Brock et al. (1992), many other researchers have tested various technical trading rules for different financial markets to generate a myriad of articles mostly in favor of technical analysis. Park and Irwin (2004, 2007) in their excellent survey articles summarized most of these researches by 2007. Loh (2007) applied moving average in conjunction with practitioners approach for five Asian countries to confirm the predictive power of technical trading in forecasting the stock price. Although McKenzie (2007) tested technical trading rules in seventeen emerging markets and concluded that there is no trading rule systematically generating significant forecasting accuracy, market conditions appear to be important in determining the usefulness of trading rules. Savin et al. (2007) used the Head and Shoulder (H&S) price formation to conclude that the H&S price pattern trading should be used with a passive indexing strategy to improve the risk return trade off. They showed that the passive index strategy combined with H&S strategy can reproduce the volatility of the market and yield excess return up to 8%. Qi and Zhao (2008) applied two moving average indicators (i.e. Breath and Trin) for both large-cap and small-cap stocks and found that the Breath indicator can generate significant profits net of transaction costs especially for small-cap stocks. Metghalchi et al. (2008) used various moving average trading rules to the Swedish stock market and showed that some moving average strategies could beat the buy-and-hold strategy even accounting for transaction costs and data snooping. Andrea-Felix and Fernández-Rodríguez (2008) employed a wide category of mechanical trading rules through statistical learning methods for the NYSE composite index to conclude that although their model is unable to overcome the returns of the buy-and-hold (B&H) strategy during rising price periods, it does beat the B&H during falling periods. Zhu and Zhou (2009) investigated the use of moving average rules from an asset allocation perspective based upon the S&P 500 data from 1926 to 2004. Their results showed how investors can add value to their investment by using technical analysis. Metghalchi et al (2009) confirmed the predictive power of moving average technical trading rules by recurring-price patterns in four Asian markets. Finally, Balsara et al. (2009) investigated major U.S. stock indexes from 1990 to 2007 and found that the regular applications of moving average, trading breakout, and Bolinger Band rules underperform the B&H strategy;

however, they indicated that significant positive returns can be generated by the contrary version of the three trading rules, even considering a .5 percent one-way trade on all transactions.

DATA AND METHODOLOGY

In this study, we choose the daily closing level of the OMXC20 stock index, a market value weighted index that consists of the 20 most-traded stocks in the Copenhagen stock exchange, from July 1st of 1993 to June 30th of 2010, to explore the predictive power of technical analysis in the Danish stock market. The starting date of the study is defined based on the availability of open, high, low index prices required for various indicator estimations. For the money market rate, we use the Denmark Interbank 3-month offered rate. All data are collected from DataStream and are expressed in Danish Krone.

Six technical trading rules are examined including Standard Moving Average (SMA), Increasing Moving Average (IMA), Relative Strength Index (RSI), Parabolic Stop And Reverse (PSAR), Directional Movement System (DMS), and Moving Average Convergence Divergence Histogram (MACDH). Except the commonly used SMA and IMS, the other four trading rules are explained in the following. The RSI developed by Wilder (1978) is a ratio of the upward price movement to the total price movement over a given period of days in which the Market Master, Welles Wilder, suggested using 14 days. In our study, in addition to 14 days, we also test 9 and 3 days. The simple trading rule of RSI is that we will be in the market if RSI is greater than 50 and out of the market if RSI is less than 50. The PSAR is also developed by Wilder (1978). It counts a value of .02 for the accelerating factor and caps it at .2 in which a buy signal is emitted when the index level is above the value of PSAR, and a sell signal is emitted when the price level is below the value of PSAR. The DMS indicator, also designed by Welles Wilder, compares two directional indicators called +DI and –DI. A buy signal is emitted when +DI is above –DI and a sell signal is emitted when +DI is below –DI. The last one, MACDH indicator, is developed by Appel (1974). Gerald Appel first estimated MACD as the difference between two Exponential Moving Average (EMA) of closing prices of 12 and 26 days. He then built the signal line which is the 9-day moving average of MACD. Based upon MACD Histogram (MACDH) divergence, the MACDH is then estimated by subtracting the signal line from MACD. A buy (sell) signal is emitted when the MACDH is greater (less) than zero.

The following summaries the 29 models examined in our study based on the above indicators:

1. SMA 20 - a buy signal is emitted when the index level breaks the 20-day Moving Average (MA20) from below and a sell signal is emitted when the index level breaks the MA20 from above.
2. IMA 20 - a buy signal is emitted when the index level breaks the MA20 from below and the MA20 is increasing, and a sell signal is emitted when the index level breaks the MA20 from above or the MA20 is decreasing
3. RSI14 -a buy signal is emitted when the 14-day RSI (RSI14) is above 50, otherwise it is a sell signal.
4. RSI9 - a buy signal is emitted when the 9-day RSI (RSI9) is above 50, otherwise it is a sell signal.
5. RSI3 - a buy signal is emitted when the 3-day RSI (RSI3) is above 50, otherwise it is a sell signal.

6. PSAR - Using Wilder's recommended value of .02 for accelerating factor and cap it at .2, a buy (sell) signal is emitted when the index level is above (below) the value of PSAR.
7. Histogram – a buy (sell) signal is emitted when MACDH is greater (less) than zero.
8. DMS - a buy a (sell) signal is emitted when plus DI is greater (less) than minus DI.
9. Stochastic1 - a buy signal is emitted when 14-day %D is above 14-day %K and percent K is increasing, otherwise we will be out of the market (sell day)
10. Stochastic2 - a buy signal is emitted when 14-day %D is above 14-day %K, otherwise we will be out of the market (sell day)
11. Stochastic3 - a buy signal is emitted when 9-day %D is above 9-day %K, otherwise we will be out of the market (sell day)
12. Combination of IMA20 and Stochastic1
13. Combination of DMS and Stochastic1
14. Combination of RSI3 and Stochastic1
15. Combination of RSI3 and MA20
16. Combination of RSI3 and DMS
17. Combination of RSI3 and PSAR
18. Combination of RSI3 and MACDH
19. Combination of RSI3 and Stochastic2
20. Combination of RSI3 and Stochastic3
21. Combination of RSI9 and Stochastic1
22. Combination of RSI9 and Stochastic2
23. Combination of RSI9 and Stochastic3
24. Combination of RSI3 and Stochastic2 and MA20
25. Combination of RSI3 and Stochastic2 and DMS
26. Combination of RSI3 and Stochastic2 and PSAR
27. Combination of RSI3 and Stochastic2 and MACDH
28. Combination of RSI9 and Stochastic2 and MA20
29. Combination of RSI9 and Stochastic2 and DMS

We assume that a daily trader can look at these indicators a few minutes before the close of the market then execute an order to buy or sell securities in order to adjust his holdings for the following day. If at the end of the day a buy (sell) signal is emitted, then the next day is a buy (sell) day. The next day's return will be the difference between the logarithm of the closing price next day and the logarithm of closing price the previous day.

EMPIRICAL FINDINGS

Table 1 displays the results of models from (1) to (11), based on single indicator trading rule for the entire 17 years. In Table 1, X_B denotes the mean daily buy; X_S denotes the mean sell; number of buy and sell days are N_B and N_S respectively; and their standard deviations are denoted by SD_B and SD_S. The average daily return for the buy and hold (BH) strategy is 0.00033, or .033 percent per day with standard deviation of 0.01223.

Following Kwon and Kish (2002), the test statistic for the mean buy days over the mean buy-and-hold return is defined as

$$t = \frac{X_{\mathrm{B}} - X_{\mathrm{H}}}{\sqrt{\mathrm{VAR}_{\mathrm{B}} / N_{\mathrm{B}} + \mathrm{VAR}_{\mathrm{H}} / N}} \tag{1}$$

where $\mathrm{VAR}_{\mathrm{B}}$ and $\mathrm{VAR}_{\mathrm{H}}$ are the variances of buy and buy-and-hold returns respectively and X_H is the daily mean of BH strategy. Equation (1) is also used to test the mean sell return over the mean buy-and-hold return and the mean buy return over the mean sell return by replacing the appropriate variables in the *t*-statistic formula. In this paper, we compare all t-statistics with 1.96, the critical t-value at 5 percent level for large numbers of observations for a two-tailed test.

Table 1: Results for Single Indicator Trading Rules

Rules	**Buy X_B**	**Sell X_S**	**$X_B - X_S$**	**SD_B**	**SD_S**	**N_B**	**N_S**
MA20	0.00070 (1.37)	–0.00022 (–1.40)	0.00099 (2.30)*	0.01027	0.01463	2641	1794
IMA20	0.00071 (1.37)	–0.00007 (–1.13)	0.00078 (2.11)*	0.00994	0.01425	2276	2159
RSI14	0.00060 (1.04)	–0.00012 (–1.07)	0.00072 (1.72)	0.00984	0.01536	2753	1682
RSI9	0.00067 (1.29)	–0.00020 (–1.32)	0.00087 (2.15)*	0.01013	0.01486	2677	1758
RSI3	0.00089 (2.01)*	–0.00041 (–2.02)*	0.00130 (3.41)*	0.01071	0.01395	2516	1919
PSAR	0.00035 (0.08)	–0.00030 (–0.08)	0.00065 (0.13)	0.01076	0.01397	2539	1896
MACDH	0.00051 (0.59)	–0.00014 (–0.56)	0.00055 (0.99)	0.01135	0.01309	2264	2171
DMS	0.00062 (1.09)	–0.00003 (–0.95)	0.00065 (1.70)	0.00981	0.01461	2419	2016
Stochastic1	0.00095 (1.81)	–0.00009 (–1.39)	0.00104 (2.77)*	0.01230	0.01217	1774	2661
Stochastic2	0.00095 (1.81)	–0.00026 (–1.39)	0.00121 (2.77)*	0.01233	0.01211	2158	2277
Stochastic3	0.00090 (1.81)	–0.00021 (–1.39)	0.00111 (2.77)*	0.01229	0.01216	2157	2278

Note: The numbers marked with * denote statistical significance at the 5% level for a two-tailed test. The figures inside the brackets are the t-statistics.

The results of Table 1 are mixed. Only the RSI3 mean buy (sell) returns are positive (negative) with all significant t-statistics which reject the null hypothesis that the mean buy (sell) returns equal the mean buy and hold return. However, if we check buy minus sell returns, the results are much better in which 7 out of 11 single indicator trading rules are positive with significant t-statistics to beat the equality of the mean buy with the mean sell days. For all 11 trading rules, the numbers of buy days are generally a little bit more than those of sell days. In addition, the standard deviations of buy days are smaller than those for sell days in all 11 trading rules. The results imply that the market is less volatile for buy periods than sell periods. The mixed results for using a single indicator cannot confirm the predictive power of technical analysis. We next investigate the rules combining the indicators to seek the improved predictive power.

Table 2 presents the results of trading rules combining two indicators, models (12) to (23).

Table 2: Results for Two-Indicator Trading Rules

Rules	**Buy** X_B	**Sell** X_S	$X_B - X_S$	SD_B	SD_S	N_B	N_S
IMA20 & Stochastic1	0.00115 (2.21)*	0.00011 (–0.77)	0.00104 (2.68)*	0.00984	0.01279	939	3496
DMS & Stochastic1	0.00114 (2.21)*	0.00011 (–0.77)	0.00103 (2.68)*	0.00972	0.012282	948	3487
DMS & Stochastic1	0.00102 (1.82)	0.00010 (–0.79)	0.00092 (2.30)*	0.01106	0.01258	1081	3354
RSI3 &MA20	0.00098 (2.07)*	–0.00020 (–1.57)	0.00118 (3.12)*	0.01016	0.01380	2085	2350
RSI3 & DMS	0.00087 (2.01)*	–0.00003 (–2.02)*	0.00090 (3.41)*	0.00969	0.01365	1765	2670
RSI3 & PSAR	0.00073 (1.34)	–0.00003 (–0.92)	0.00076 (1.96)*	0.01034	0.01346	1886	2549
RSI3 & MACDH	0.00086 (1.69)	–0.00002 (–1.11)	0.00088 (2.42)*	0.01078	0.01309	1759	2676
RSI3 & Stochastic2	0.00112 (2.45)*	–0.00018 (–1 .66)	0.00130 (3.58)*	0.01117	0.01285	1740	2695
RSI3 & Stochastic3	0.00110 (2.35)*	–0.00014 (–1.54)	0.00124 (3.40)*	0.01109	0.01286	1685	2750
RSI9& Stochastic1	0.00110 (2.21)*	0.00004 (–0.99)	0.00106 (2.84)*	0.01027	0.01288	1206	3229
RSI9& Stochastic2	0.00112 (2.43)*	–0.00006 (–1.29)	0.00118 (3.28)*	0.01029	0.01307	1462	2973

RSI9& Stochastic3	0.00105 (2.19)*	–0.00001 (–1.11)	0.00106 (2.92)*	0.01023	0.01305	1411	3024

Note: The numbers marked with * denote statistical significance at the 5% level for a two-tailed test. The figures inside the brackets are the t-statistics.

Compared with Table 1, the results of Table 2 are much stronger to support predictive power of technical trading rules. 9 out of 12 two-indicator trading rules show the mean buy return beats the mean buy and hold return significantly. Furthermore, as for buy minus sell days, all the 12 two-indicator combinations are positive with highly significant t-statistics rejecting the null hypothesis of equality of the mean buy with the mean sell days. The predictive power of technical trading rules is confirmed.

Finally, we test the more complicated three-indicator trading rules for predictive power in Table 3. The results of the six trading rules, models (24) to (29), are similar to those in the two-indicator models. All buy minus sell returns are positive with highly significant t-statistics, rejecting the null hypothesis of equality of the mean buy with the mean sell days. In addition, 4 out of 6 buy days returns beat the mean buy and hold return. However, compared with the results in Table 2, it seems that the best results of technical trading would be to combine two indicators for trading and in the case of the Danish stock index. The most interesting finding here is that among the six single indicators, the combination of RSI3 and any one of the other five indicators expresses the strongest predictive power. RSI3 can serve as the best indicator of technical analysis in the Danish stock market.

Table 3: Results for Three-Indicator Trading Rules

Rules	**Buy** X_B	**Sell** X_S	$X_B – X_S$	SD_B	SD_S	N_B	N_S
RSI3 & Stochastic1 & MA20	0.00117 (2.48)*	0.00004 (–1.24)	0.00113 (3.28)*	0.01046	0.01291	1347	3088
RSI3 & Stochastic1 & DMS	0.00119 (2.21)*	0.00004 (–0.77)	0.00115 (2.68)*	0.00972	0.012282	1110	3325
RSI3 & Stochastic1 & PSAR	0.00094 (1.69)	0.00011 (–0.77)	0.00083 (2.18)*	0.01073	0.01273	1186	3249
RSI3 & Stochastic1 & MACD	0.00116 (2.13)*	0.00006 (–0.96)	0.00110 (2.72)*	0.01129	0.01251	1095	3340
RSI9 & Stochastic1 & MA20	0.00119 (2.56)*	–0.00005 (–1.27)	0.00124 (3.89)*	0.01032	0.01297	1362	3073
RSI9 & Stochastic1 & DMS	0.00115 (2.37)	0.00005 (–0.95)	0.00110 (2.97)*	0.00982	0.01293	1117	3318

Note: The numbers marked with * denote statistical significance at the 5% level for a two-tailed test. The figures inside the brackets are the t-statistics.

CONCLUSION

In this paper we investigate the predictive power of various trading rules with different combination of the popular six indicators in technical analysis for the Danish stock index over the period of July 1st of 1993 to June 30th of 2010. Theoretically, if markets exhibit weak form efficiency; that is, all past prices of a stock are reflected in today's stock price, then we should observe that the buy days returns do not differ appreciably from sell days returns. Our empirical results for the Danish stock index show that all the buy-sell differences under trading rules of either two-indicator or three-indicator combinations are positive with significant t-stats to reject the Efficient Market Hypothesis. Technical analysis has been proved again to have solid predictive power in stock market and can discern recurring-price patterns in the case of the Danish stock index in which RSI3 serves as the best indicator in any combination with other indications for trading rule development.

REFERENCES

Appel, Gerald. 1974. *Double **Y**our **M**oney **E**very **T**hree **Y**ears*. Windsor Books. Brightwaters, NY.

Andrada-Félix, J. and F. Fernández-Rodríguez. 2008. Improving Moving Average Trading Rules with Boosting and Statistical Learning Methods. *Journal of Forecasting*, Vol. 27, No. 5, 433-449.

Balsara, N., J. Chen, and L. Zheng. 2009. Profiting from a Contrarian Application of Technical Trading Rules in the U.S. Stock Market. *Journal of Asset Management*, Vol. 10, No. 2, 97-123.

Brock, W., J. Lakonishok, and B. Lebaron. 1992. Simple Technical Trading Rules and the Stochastic Properties of Stock Returns. *Journal of Finance*, Vol. 47, No. 5, 1731–1764.

Fama, E. 1965. The Behavior of Stock Market Prices. *Journal of Business*, Vol. 38, 34-105.

Fama, E. 1970. Efficient Capital Markets: A review of theory and empirical work. *Journal of Finance*, Vol. 25, 383-417.

Fama, E. and M. Blume. 1966. Filter Rules and Stock Market Trading Profits. *Journal of Business*, Vol. 39, 226-341.

Granger, C. and O. Morgenstern. 1963. Spectral Analysis of New York Stock Market Prices. *Kyklos*, Vol. 16, 1-27.

Jensen, M. and G. Benington. 1970. Random Walks and Technical Theories: Some Additional Evidence. *Journal of Finance*, Vol. 25, 469-482.

Kwon, K. and R. Kish. 2002. A comparative study of technical trading strategies and return predictability: An extension of Brock, Lakonishok and LeBaron 1992 using NYSE and NASDAQ indices. *Quarterly Review of Economics and Finance*, Vol. 42, No. 3, 611-631.

Larson, A. 1960. Measurement of Random Process in Futures Prices. *Food Research Institute*, Vol. 1, 313-324.

Loh, E. 2007. An Alternative Test for Weak Form Efficiency based on Technical Analysis. *Applied Financial Economics*, Vol. 17, 1003-1012.

McKenzie, M. 2007. Technical Trading Rules in Emerging Markets the 1997 Asian Currency Crisis. *Emerging Markets Finance and Trade*, Vol. 43, No. 4, 46-73.

Metghalchi, M., Y. Chang, and Y. Marcucci, 2008. Is the Swedish Stock Market Efficient? Evidence From some simple Trading Rules. *International Review of Financial Analysis*, Vol. 17, No. 3, 475-490.

Metghalchi M, J. Du, and Y. Ning. 2009. Validation of Moving Average Trading Rules: Evidence from Hong Kong, Singapore, South Korea, Taiwan. *Multinational Business Review*, Vol. 17, No. 3, 101-122.

Murphy, J. 1999. *Technical Analysis of the Financial Markets*, New York Institute of Finance, NY.

Park, C. and S. Irwin. 2004. The Profitability of Technical Analysis: A Review. *AgMas Project Research Report* 2004-04. htpp://ssrn.com/abstract=603481

Park, C. and S. Irwin. 2007. What Do We Know about the Profitability of Technical Analysis? *Journal of Economic Surveys*, Vol. 21, No. 4, 786-826.

Pring M. 1991. *Technical Analysis: Explained*. McGraw-Hill New York, NY.

Qi, M. and X. Zhao. 2008. Market Breath, Trin Statistics, and Market Returns. *Journal of Investing*, Spring, 65-73.

Savin, J., P. Weller, and J. Zvingelis. 2007. The Predictive Powers of Head and Shoulders, Price Patterns in the U.S. Stock Market. *Journal of Financial Econometrics* Vol. 5, No 2, 243-265.

Sweeny, R. 1986. Beating the Foreign Exchange Market. *Journal of Finance*, Vol. 41, No. 1, 163-182.

Wilder, J. Welles. 1978. *New Concepts in Technical Trading Systems*. Trend Research, McLeansville, NC.

Zhou, Y. and G. Zhou. 2009. Technical Analysis: An Asset allocation Perspective on the Use of Moving Averages. *Journal of Financial Economics*, Vol. 92, 519-544.

STUDY OF RELATIONSHIP BETWEEN CORPORATE GOVERNANCE AND BOARD OF DIRECTORS

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ABSTRACT

According to agency theory it is possible that managers of companies don't use companies' resources optimally towards increasing shareholders' assets due to conflict of interest between managers and investors. Today, authorities consider the improvement of corporate governance as the best solution for this problem. Corporate governance includes criteria which can minimize managers' authority in dealing with their personal interest and can improve the performance of companies' board of directors by increasing non-centralization in control of companies. The goal of this research is to rank the companies from the respect of corporate governance and to investigate its effect on the performance of companies' board of directors. In this research, ranks of sample companies were measured using a comprehensive questionnaire containing 20 criteria of corporate governance. These criteria have been taken from the contents of guidance system bylaw of accepted companies in Tehran stock exchange (TSE) and are in classes namely information transparency, structure of board of directors and ownership structure. For this purpose, 4-year information of 80 companies was investigated and research hypotheses were tested using regression correlation method. The results indicate that there is a significant relation between the principles of corporate governance and performance of company's board of directors.

INTRODUCTION

The issue of corporate governance, for the first time in 1990s in England, US and Canada was put forward in response to problems with regard to performance of big companies' board of directors. After a short while, financial crises in recent years have led to more emphasis on establishment of corporate governance in these lands and other countries. The main cause of the mentioned crises was companies and institutes whose controlling and supervisory criteria were determined by people who had international connections. Control criteria which were considered to reduce agency problems were not only efficient but also did not execute minimum supervision. In fact, all the mentioned criteria were superficial and only for compliance with laws without being able to protect shareholders' interest against managers. As economy grows and businesses become larger, shareholders' control power reduces in practice, because distribution of ownership structure widens and majority of owners are small shareholders. In such condition, only a few shareholders have the possibility to play a role in election of members of board of directors as well managing director. This problem will be more serious when shareholders are interested in investment for gaining profit (short term vision) instead of controlling the company (long term vision).

There is closer relationship between corporate governance and performance of board of directors and it is simply understandable. By composition of suitable and strong standards for corporate governance, process of board of directors' performance can be improved. By integrating board of directors' performance and internal systems, composition of corporate governance strong standards can be ensured.

Now, given the above explanations, this question arises: is it possible through application of corporate governance to improve performance of board of directors?

Shleifer and Vishny (1997) define corporate governance as referring to the way in which suppliers of finance assure themselves a return on their investment. Because returns to suppliers of finance depend on myriad legal and contractual arrangements, the operation of various markets, and the behavior of different types of players, corporate governance has evolved into various sub-literatures (e.g., Zingales, 1998; Becht, Bolton, and Roell, 2003; Hermalin, 2009). Below we discuss in turn two important areas of corporate governance research, each of which is represented by a paper in this special issue.

Shareholders

Berle and Means (1932) identified what appeared to be a fundamental contradiction in the corporate form of organization: While dispersed shareholders collectively have incentives to monitor the management of the firms for which they own stock, individually, the free-rider problem can ruin such incentives, leading to a lack of shareholder involvement in firms. Given that the distribution of stock ownership is important because of these free-riding considerations, Shleifer and Vishny (1986) pointed out that large percentage block shareholdings are more prevalent in the United States than previously thought (no one doubted their existence outside the U.S.).

Morck, Shleifer, and Vishny (1988) and many follow-up studies have documented a robust empirical relation between these large shareholdings and corporate performance, holding in a wide variety of samples spanning a number of countries and time periods. The underlying reasons, however, for this relation between ownership structure and firm performance are not clear. The main explanation discussed in the Shleifer and Vishny (1986) article is through the possibility of hostile takeover, because such takeovers can be more profitable for a shareholder who already owns a large block of shares than for one who does not (see also Grossman and Hart, 1980). Yet, the empirical relation between ownership and performance appears to be too robust to be explained by hostile takeovers alone, since the same relation exists in countries and time periods in which there is no possibility of a hostile takeover.

Another possibility is that the relation could occur because of other actions taken by blockholders. Financial economists have accordingly been increasingly looking at the effects of shareholder actions. There have been a number of studies that have examined the effect of public pension funds and other institutional investors on the firms in which they invest [see Del Guercio and Hawkins (1999), Gillan and Starks (2000), Hartzell and Starks (2003), as well as Karpoff (2001) and Gillan and Starks (2007) for surveys]. In recent years, the most important players in the activism landscape have been activist hedge funds. The activities and payoffs of such hedge funds, which are willing to make substantial investments in engagement with companies, are the subject of recent studies by Brav, Jiang, Thomas, and Partnoy (2008), Greenwood and Schor (2009), and Klein and Zur (2009).

Becht, Franks, Mayer, and Rossi (2009), a study included in this special issue, utilizes privately obtained data from Hermes, the fund manager owned by the British Telecom Pension Scheme, on engagements with management in companies targeted by its U.K. Becht, Franks, Mayer, and Rossi (2009) is a significant study because it provides a window into the nature of behind the scenes‘ activism and shows that such activism can be important. The study suggests that financial institutions can increase in value not just by buying and selling securities strategically, but also by creating value inside of firms by providing monitoring services. It provides an example of the way in which it is possible to learn a great deal from the details of the actions of a single (particularly interesting) financial institution.

The financial crisis has intensified the ongoing debate about the role that shareholders should play in corporate governance. To some, increasing shareholder power and facilitating shareholder intervention when necessary is part of the necessary reforms. To others, activism by shareholders who potentially have short-term interests is part of the problem, not a solution. To what extent (and when) can shareholder activism improve firm value and performance? To what extent (and when) can shareholder activism produce distortions that make matters worse? Research by financial economists that seeks further light on these questions will provide valuable input to the questions with which decision-makers are wrestling.

Boards of Directors

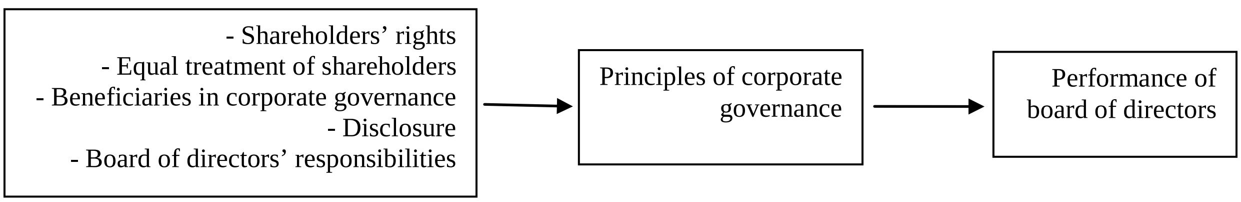
An alternative to direct monitoring by shareholders is governance through the board of directors, who are elected by shareholders. Yet, as has been recognized at least since Smith (1776) and Berle and Means (1932), directors‘ interests may not fully overlap with those of shareholders. The complex three-way relationship among shareholders, boards, and top management has been the subject of a large literature [see Hermalin and Weisbach (2003) and Adams, Hermalin, and Weisbach (2009) for surveys].

How do we make boards work better? One recipe that has been increasingly suggested by public and private decision-makers is to have independent boards [see Gordon (2007) on the rise of independent directors]. Indeed, a common policy response to observed ‗governance crises' has been to adopt reforms designed to strengthen the independence of boards. For example, following the Enron and WorldCom scandals in 2002, the exchanges increased independence requirements, and the Sarbanes–Oxley Act of 2002 required the independence of audit committees. The financial crisis has similarly led to the consideration of legislation aimed at bolstering the independence of compensation committees.

Why impose regulatory limits on the composition of the board? Hermalin and Weisbach (1998) present a model in which directors imposed on the firm by regulations are likely to be less effective than those picked through the endogenous selection process that would occur in the absence of regulation. At the same time, regulators are typically concerned that, without regulation, opportunism by insiders might lead to insufficient independence of directors. Nonetheless, given the growing importance of independent directors, whether due to regulation or to choices made by firms, it is important to study empirically the effects of director independence. Initial work on the subject failed to find a link between board independence and higher firm value (Hermalin and Weisbach, 1991; Bhagat and Black, 1999, 2002).

The Ravina and Sapienza (2009) study, and the other recent works discussed in this section, highlight the value of the work by financial economists on independent directors, who play a major role in corporate decision-making. Financial economists should not generally assume that independent directors seek to maximize shareholder value; rather, the decisions of independent directors, like those of other economic agents, might well be influenced by their incentives, which in turn are a product of various features of the environment in which they operate. The information that independent directors have should be similarly recognized to be endogenously determined by corporate structures and processes, rather than to be exogenously given. Additional work on the incentives and information of independent directors would be worthwhile.

Research Model:



RESEARCH HYPOTHESES

Primary hypothesis:

There is significant relationship between principles of corporate governance and performance of board of directors of companies admitted to Tehran Stock Exchange.

Secondary hypotheses:

H1. There is significant relationship between shareholders' rights and performance of board of directors of companies admitted to Tehran Stock Exchange.

H2. There is significant relationship between equal treatment of shareholders and performance of board of directors of companies admitted to Tehran Stock Exchange.

H3. There is significant relationship between beneficiaries in corporate governance and performance board of directors of companies admitted to Tehran Stock Exchange.

H4. There is significant relationship between disclosure and performance of board of directors of companies admitted to Tehran Stock Exchange.

H5. There is significant relationship between board of directors' responsibilities and performance of board of directors of companies admitted to Tehran Stock Exchange.

METHODOLOGY

Present research, in terms of classification of the research based on method is a descriptive research. In this research, relationship of principles of corporate governance with performance of board of directors of companies admitted to Tehran Stock Exchange is investigated.

Population of present research includes managing directors and senior experts of 200 companies admitted to Tehran Stock Exchange from which, given the created limitations, a sample size of 80 companies is selected using cluster sampling method.

In present research, for collecting information library study and field study method (questionnaire) have been mainly used. The questionnaire's validity of 83.31 percent using Cronbach Alpha Method is obtained which indicates high validity of measurement tool.

HYPOTHESIS TESTING

Results obtained from Pearson Correlation Test

Primary hypothesis:

There is significant relationship between principles of corporate governance and performance of board of directors of companies admitted to Tehran Stock Exchange.

H0: There is no correlation between principles of corporate governance and performance of board of directors.

H1: There is correlation between principles of corporate governance and performance of board of directors.

Correlation between principles of corporate governance and performance of board of directors of companies is indicated in table 1.

Table 1
COEFFICIENT OF CORRELATION

Variable	performance of board of directors	df	Sig	Result
Principles of corporate governance	0.558	78	.000	H0 Rejected

As it is indicated there is correlation between principles of corporate governance and performance of board of directors. Also since sig = 0.00 < 0.05, therefore null hypothesis is rejected and the alternative hypothesis is confirmed. So there is significant relation between principles of corporate governance and performance of board of directors of companies admitted to Tehran Stock Exchange.

Secondary hypotheses:

H1: There is significant relationship between shareholders' rights and performance of board of directors of companies admitted to Tehran Stock Exchange.

H0: There is no correlation between shareholders' rights and performance of board of directors.

H1: There is correlation between shareholders' rights and performance of board of directors.

Correlation between shareholders' rights and performance of board of directors of companies is indicated in table 2.

Table 2
COEFFICIENT OF CORRELATION

Variable	shareholders' rights	df	Sig	Result
performance of board of directors	0.208	78	.064	H0 Not Rejected

With regard to association of shareholder's rights with performance of board of directors of companies admitted to Tehran Stock Exchange, given sig = 0.064 > 0.05, this association is not significant. Therefore the null hypothesis accepted and there is no correlation between shareholders' rights and performance of board of directors.

H2: There is significant relationship between equal treatment of shareholders and performance of board of directors of companies admitted to Tehran Stock Exchange.

H0: There is no correlation between equal treatment of shareholders and performance of board of directors.

H1: There is correlation between equal treatment of shareholders and performance of board of directors.

Correlation between equal treatment of shareholders and performance of board of directors of companies is indicated in table 3.

Table 3
COEFFICIENT OF CORRELATION

Variable	equal treatment of shareholders	df	Sig	Result
performance of board of directors	0.582	78	.000	H0 Rejected

As it is indicated there is correlation 0.582 between equal treatment of shareholders and performance of board of directors. Also since sig = 0.00 < 0.05, therefore null hypothesis is rejected and the alternative hypothesis is confirmed. So there is significant relation between equal treatment of shareholders and performance of board of directors of companies admitted to Tehran Stock Exchange.

H3: There is significant relationship between beneficiaries in corporate governance and performance board of directors of companies admitted to Tehran Stock Exchange.

H0: There is no correlation between beneficiaries in corporate governance and performance of board of directors.

H1: There is correlation between beneficiaries in corporate governance and performance of board of directors.

Correlation between beneficiaries in corporate governance and performance of board of directors of companies is indicated in table 4.

Table 4
COEFFICIENT OF CORRELATION

Variable	beneficiaries in corporate governance	Df	Sig	Result
performance of board of directors	0.335	78	.002	H0 Rejected

As it is indicated in table 4, sig = 0.002< 0.05, therefore null hypothesis is rejected and the alternative hypothesis is confirmed. So there is significant relation between beneficiaries in corporate governance and performance of board of directors of companies admitted to Tehran Stock Exchange.

H4: There is significant relationship between disclosure and performance of board of directors of companies admitted to Tehran Stock Exchange.

H0: There is no correlation between disclosure and performance of board of directors.

H1: There is correlation between disclosure and performance of board of directors.

Correlation between disclosure and performance of board of directors of companies is indicated in table 5.

Table 5
COEFFICIENT OF CORRELATION

Variable	Disclosure	df	Sig	Result
performance of board of directors	0.568	78	.000	H0 Rejected

As it is indicated there is correlation 0.568between disclosure and performance of board of directors. Also since sig = 0.00 < 0.05, therefore null hypothesis is rejected and the alternative hypothesis is confirmed. So there is significant relation between disclosure and performance of board of directors of companies admitted to Tehran Stock Exchange.

H5: There is significant relationship between board of directors' responsibilities and performance of board of directors of companies admitted to Tehran Stock Exchange.

H0: There is no correlation between board of directors' responsibilities and performance of board of directors.

H1: There is correlation between board of directors' responsibilities and performance of board of directors.

Correlation between board of directors' responsibilities and performance of board of directors of companies is indicated in table 6.

Table 6
COEFFICIENT OF CORRELATION

Variable	board of directors' responsibilities	df	Sig	Result
performance of board of directors	0.208	78	.154	H0 Not Rejected

With regard to association of board of directors' responsibilities with performance of board of directors of companies admitted to Tehran Stock Exchange, given sig = 0.154 > 0.05, this association is not significant. Therefore the null hypothesis accepted and there is no correlation between board of directors' responsibilities and performance of board of directors.

CONCLUSION

Results obtained from the research indicate that board of directors next to shareholders and managing director has a key role in interest of beneficiaries. Given confirmation of relationship between two variables (corporate governance and performance of board of directors of companies admitted to Tehran Stock Exchange) and considering comprehensive definition of corporate governance, all beneficiaries including creditors, banks and especially shareholders require call for a stronger application of corporate governance in order to produce more wealth which is indeed the expectation of companies' financial managers. As a result, application of corporate governance principles leads to creation of confidence among investors and shareholders and promotion of competitive sense and eventually improvement of enterprise's economic growth.

There is significant relation between shareholders rights and performance of board of directors of companies admitted to Tehran Stock Exchange. Given results of the inferential test and confirmation of relationship between equal treatment of shareholders and board of directors' performance, control of the capital which is entrusted to company by shareholders, regardless of the confidence which it has for investor, will lead to improvement of board of directors' performance. Therefore, solutions which by spending less time and money restitute the infringed rights can have positive effect on performance. In addition, it is suggested that shareholders' different rights including future rights and the rights based on the past to be used for creating trust.

Given the results and confirmation of relationship between extent of disclosure and board of directors' performance, information disclosure is a strong tool to influence companies' performance and proper disclosure will lead to cost reduction, proper resource allocation and eventually better performance of board of directors. It seems necessary that companies, particularly with regard to important progress in better performance, more information to be provided to the public. Presence of relationship between responsibilities of board of directors including paying enough attention to and observing social and environmental standards and board of directors' performance is has been rejected. In other words, based on the results obtained from Pearson Correlation Test there is no association between board of directors' responsibilities and performance of board of directors of companies admitted to Tehran Stock Exchange.

REFERENCES

Adams, R., B. E. Hermalin, and M. S. Weisbach (2009). The Role of Boards of Directors in Corporate Governance: A Conceptual Framework & Survey. *Journal of Economic Literature*, forthcoming.

Becht, M., P. Bolton, and A. Röell (2003). Corporate Governance and Control. In George M. Constantinides, Milton Harris, and René M. Stulz (eds.), *Handbook of the Economics of Finance*, Amsterdam: North Holland.

Becht, M., J. Franks, C. Mayer, and S. Rossi (2009). Returns to Shareholder Activism: Evidence from a Clinical Study of the Hermes U.K. Focus Fund. *Review of Financial Studies*, this issue.

Berle, A. A., and G. C. Means (1932). *The Modern Corporation and Private Property*. New York, NY: MacMillan.

Brav, A., W. Jiang, R. S. Thomas, and F. Partnoy (2008). Hedge Fund Activism, Corporate Governance, and Firm Performance. *Journal of Finance* 63:1729–75.

Del Guercio, D., and J. Hawkins (1999). The Motivation and Impact of Pension Fund Activism. *Journal of Financial Economics* 52:293–340.

Gillan, S. L., and L. T. Starks (2000). Corporate Governance Proposals and Shareholder Activism: The Role of Institutional Investors. *Journal of Financial Economics* 57:275–305.

Gillan, S. L., and L. T. Starks (2007). The Evolution of Shareholder Activism in the United States. *Journal of Applied Corporate Finance* 19:55–73.

Gordon, J. N (2007). The Rise of Independent Directors in the United States, 1950-2005: Of Shareholder Value and Stock Market Prices. *Stanford Law Review* 59:1465–568.

Greenwood, R., and M. Schor (2009). Investor Activism and Takeovers. *Journal of Financial Economics* 92:362–75.

Grossman, S., and O. Hart (1980). Takeover Bids, the Free-Rider Problem, and the Theory of the Corporation. *The Bell Journal of Economics* 11:42–64.

Hartzell, J. C., and L. T. Starks (2003). Institutional Investors and Executive Compensation. *Journal of Finance* 58:2351–74.

Hermalin, B. E., and M. S. Weisbach (2003). Boards of Directors as an Endogenously Determined Institution: A Survey of the Economic Literature. *Economic Policy Review* 9:7–26.

Hermalin, B. E., and M. S. Weisbach (2009). Information Disclosure and Corporate Governance. Working Paper, Ohio State University.

Karpoff, J. M (2001). The Impact of Shareholder Activism on Target Companies: A Survey of Empirical Findings. Working Paper, University of Washington.

Klein, A., and E. Zur (2009). Hedge Fund Activism. *Journal of Finance*, forthcoming.

Morck, R., A. Shleifer, and R. W. Vishny (1988). Management Ownership and Market Valuation: An Empirical Analysis. *Journal of Financial Economics* 20:293-315.

Ravina, E, and P. Sapienza (2009). What Do Independent Directors Know? Evidence from Their Trading. *Review of Financial Studies*, this issue.

Roe, M (2003). *Political Determinants of Corporate Governance*. Oxford: Oxford University Press.

Shleifer, A., and R. Vishny (1986). Large Shareholders and Corporate Control. *Journal of Political Economy* 94:461–88.

Shleifer, A., and R. Vishny (1997). A Survey of Corporate Governance. *Journal of Finance* 52:737–83.

Smith, A (1776). *An Inquiry into the Nature and Causes of the Wealth of Nations*. Indianapolis, IN: Liberty Press.

Zingales, L (1998). Corporate Governance. In P. Newman (ed.), *The New Palgrave Dictionary of Economics and the Law*, New York, NY: MacMillan.

INTELLECTUAL CAPITAL AND ECONOMIC VALUE ADDED

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ABSTARCT

Value creation is a new paradigm in business and applying of organizational goals. For revival in continuation of profit and creation of new wealth, all economic agencies may have special attention to this phenomenon and it may enter into operational value chain.

In this article, we tested the relation between intellectual capital and economic value added as the modern index of measuring the function in the framework of value creation thought and based upon management by " Ethiner" & " Larker" for all accepted companies in Stock Exchange Companies for a 5-years period from 2004 up to 2008.

From the point of view of applicable goal and manner of performance, the research method of this study is explanatory – measuring based upon combination. In order to test any theories we used test T and to estimate any regression model parameters we used minimum squares. We extracted all research data from financial statements and financial reports available in archiving of Tehran Stock Exchange Organization. The intellectual capital was measured in accordance with four-fold financial patterns.

According to the results, it was revealed that there is not a meaningful relation between intellectual capital and economic value added. This relation is negative from validity point of view of regression model. Also the results may reveal that there is not an equal severity that means changes of economic value added out of intellectual capital on four-folded patterns.

INTRODUCTION

Recent changes in business and ever-increasing needs of managers and economic pioneers in information caused a fundamental change in points of view and managerial methods with continuous changes. One of these changes is a modern paradigm under the title of "Value & Value Creation". Management thinking based upon value and introducing of modern indexes for measuring of function including economic value added are the other events of knowledge decade and a new economic attitude under the title of "Economy based upon knowledge".

Value and value creation as a new-coming phenomena has a direct relation with other phenomena including intellectual capital. This is because the value of the organization includes of intellectual capital and financial capital. Also any pay attention to different indexes is important for measuring of function for necessary attention to function evaluation and inevitable duty of special & effective management of economic agencies. The attitude of value added and economic value added model and its relation with intellectual capital in this process are so much important.

By an integrated specifying of scientific bases in relation with subject of study as the scientific goal, the current article has pay attention to rest any relation of intellectual capital with value added for measuring the function as the applicable goal in order to find enough proofs for answering all research questions and further problems. Then it is possible to reveal necessary attention to intellectual capital in any decision making and evaluations. This article includes 4 major parts including of scientific bases and history of studies, methodology, analysis of data and testing the theories and conclusion along with submission of proposals.

LITERATURE REVIEW

Intellectual capital

Intellectual capital is one of the most important subjects which has been added to its role and effects in decision making, investing, risk analysis and measuring of function by creation of Infra-information decade that means Age of Knowledge.

According to Andriessen (2004), all the organizations may consider intellectual capital for different goals such as: 1) Betterment of internal management, 2) Betterment of reporting to the outside of organization and other beneficiaries, 3) Transactions of this capital and 4) Legal reasons of betterment of accounting. There are different descriptions about intellectual capital in different context and researches. Following there are some samples of the said relation: Edvinsson et. al (1997) believes that intellectual capital is a set of information and applicable knowledge for value creation in an organization. Marr (2004) considers intellectual capital as a set of knowledge-based assets belonging to an organization which may lead towards organization competition by increasing the value for key beneficiaries of the organization.

Swart (2006) introduces the intellectual capital as knowledge for further values. It may change into wealth and values and further value creation. According to the researches, it was revealed that intellectual capital management in knowledge based agencies would be applied with two different attitudes.

The first one is based upon any increase of knowledge reserves for further development and long-term benefits. The second attitude has been resulted from economic theories with intellectual capital as an economic asset in its framework. The role of intellectual capital has been highlighted from the point of view of value creation paradigm. Accordingly, it is necessary to pay attention to both dimensions of intellectual capital and financial capital in calculation of organizational value. Intellectual capital includes three basic dimensions such as: 1) Human capital, 2) Structural (Organizational) capital and 3) Customer capital.

Anvari Rostami and Rostami (2003) consider in a research the financial capital (value) as the central & common point of all three-fold dimensions.

Intellectual Capital Measuring Models

There are wide ranges of research about measuring of intellectual capital. Then it is possible to classify all presented methods and models in four groups such as Direct Intellectual Capital Models (DIC), Market Capitalization Models (MCM), Return on Assets Methods (ROA) AND Score card Methods (SC).

Regarding the considered economic attitude that means economic value added this article intends to consider all intellectual capital models from the point of view of Return of investment group and based upon considered economic patterns. Firstly it is in compliance with research goals. Secondly it is the economic patterns of development and completion of financial patterns and related accounting with output rate of investment, shareholders equity and capital output rate which in addition to benefiting from financial patterns for calculation of intellectual capital may use different measuring models of intellectual capital based upon economic patterns including economic value added for better understanding of economic value added.

The Economic Value Added model is one of the output models for measuring of intellectual capital introduced by Stewart in 1991. At first this model was applied as an index for measuring of internal function and evaluation the effectiveness of applying relevant investments in companies. But by its development and effectiveness, it was used with a more complete form in measuring of financial management. Generally it is possible to consider economic value added as the result of comparing both concepts of "Capital output" and "Costs of capital output creating factors". According to the concepts of value added the base of any value creation for shareholders means "Maximization of any difference between market value of company and book value of shareholders capital". It is the real meaning of market value added and/or current economic value added in compliance with one of the descriptions of intellectual capital based upon the idea of Q-Tubin that means the difference between both values.

In addition to the economic value added model for measuring of intellectual capital, it is possible to point out to another model under the title of Value Added Intellectual Coefficient (VAIC) based upon the value added attitude which was introduced by Ante Pulic in 2000. It is possible to calculate the coefficient of capital value added, value added of human capital and value added of structural capital by the use of financial / economic rates.

In his research, Sveiby, (1998-2001) has recognized all measuring patterns of intellectual capital as mentioned in table (1) as a summary.

Table 1
Measuring methods of intellectual capital

Pattern	Researcher	Attitude	Description of measuring method
Innovation Registration right	Bontis	DIC	Technology factor would be calculated in accordance with number of made innovations in organization. The intellectual capital operation would be calculated in accordance with any effects of index sets including number and costs of registration the innovations.
Integrated Evaluation Method	Mack Ferson (1998)	DIC	It may use classification of combined weighted indexes in which the focus is on estimated not absolute values. Value= Monetary value added + combined intangible value added
Value Researcher	Andrisen & Tebsen (1998)	DIC	Value calculation is through recognition of five types of intangible assets: 1- Primary assets

			inventories, 2-Skills & additional knowledge, 3- Social values & orders, 4-Technology & absolute knowledge, 5- Major & managerial processes
Intellectual assets evaluation	Sullivan(2000)	DIC	It is a method for measuring of intellectual ownership value
Total evaluation	Anderson & Mack Lin	DIC	It is a plan for benefiting from reduced monetary currencies and for re-evaluation of accidents effects on programmed activities.
Accounting for future	Nesh (1998)	DIC	It is a method for reduced monetary currencies. In this method it is assumed the difference between accounting value (for future) at the end and beginning of a value added course.
Q Tobin	Stewart (1997) & Bontis (1999)	MCM	Q Tobin is the rate of value against a registered (book) value of assets. Stewart puts the replacement costs of tangible assets instead of registered value of tangible assets. Any changes in q Tobin may provide an index for measuring of function. It is expected to have this rate in long-term towards 1. Q Tobin=Market value / book value
Determined market value by investing	Standfild (1998)	MCM	It is possible to interpret real value as the market value of assets and divide it into tangible capital, real intellectual capital (non-movable) and intellectual capital corrosion and fixed competitive advantage.
Market value against book value	Stewart (1997) & Looti (1998	MCM	It may consider the intellectual capital in difference between market value and its registered value. Market value= Registered value + intellectual capital
Accounting & pricing of human resources	Johansson(1996)	ROA	It may calculate the effect of non-fixed related costs with human resources on reducing of economic unit profit. It is possible to measure intellectual capital by calculation of the shares of human assets, dividing on investing costs on Human Force (Salary & allowances)
Evaluating of human capital	Libowitz & Right (1999)	ROA	It is based upon pricing functions and benefits from real costs accounting convention. It is able to have an integrated evaluating of human capital by traditional accounting patterns.
Calculated intangible value	Stewart (1997) & Looti (1998)	ROA	It may calculate the return of physical assets additions. Then it may consider the result as a base for determining the return rate f intangible assets.
Knowledge Capital allowances	Loo (1999)	ROA	It may estimate the results of knowledge capital as the normalized receipts more than attributable receipts of registered assets.
Intellectual value added coefficient	Polik (1997)	ROA	Any measuring the amount and output of intellectual capital and created value due to the intellectual capital is based upon three major elements: 1-Applied capital, 2- Human capital and 3- Structural capital
Human Capital Intelligent	Jack Fitz-Onz (1994)	SC	Like accounting and pricing of human resources, it may collect and measure human

			capital indexes.
Board of advantages of value chain	Loo (2002)	SC	It is a matrix of non-financial indexes in three logical process such as : Innovation & Learning, Implementation and Commercialization

Value & Value creation & thinking based upon value

With his wide scope of research, Rahnamay Roodposhti et al. (2007, 2008, 2009) believes that "Value is a deep, fundamental and wide meaning with a long-term history. But it has been presented in scientific literature with a new attitude, while it may inspire the meaning of life- making. It may provide a meaning of human greatness as the base of life and inevitable principles of intelligent business and value creation. It may enter from social gate and managerial thought of business. Then it may search its end in finding the special position, group, organization and world society. It is legal to have value and value creation base, scientific & practical attention to human beings and satisfying their needs. The value of considered concepts of life is in its all dimensions for which is necessary to be considered. More important is the organizational acceptance of which in behavior, speech and works in the framework of life ethics more than before.

The term "Competition" has another meaning and the health, truth and acceptance the interests of all beneficiaries are different meaning origins of these changes. Value is the accepted reality of life upon which all different aspects of life may grow and complete. Personal, social and economic relations are accepted realities of life based upon value.

Value as a form is a key word with its practical wideness in social & economic life in relevant effects of it. This may describe from different aspects such as social value, economic value, financial value, accounting value and something like that.

Such a consideration of this word shows a wide scope of meaning with relevant relations with different fields and specialties. Value is the inevitable necessity of life of a person thinking in success. It is the real aspect of life especially in economic business. This is because of its effects on survival and business life continuation. Then we have wealth creation as a suitable field of fixed development.

Lends, Davids (2005) points out to a phrase of an Arabian bank clerk for providing a more clear meaning of value & wealth creation and says:"We have money but we are not rich. Richness means knowledge, skill, specialty, knowhow and work creation (value creation). We are like a baby who has inherited a lot of money but nobody teaches him how to expend his money. If you do not know how to use you money, you are not a rich person".

The above-mentioned meaningful sentence is true about most counties and the owners of raw material and natural wealth. Most important is a clear specification of wealth in job creation and creating of necessary values. This is because job creators are the real wealth creators with required innovation for accepting any risks. They know how to use money and resources with their own knowledge, skills and specialty. They consider required management as the necessary provision for business which will lead to wealth creation.

Lends, Davids (2005) says:"The values are really our obligations for reflection of what is good and what is bad. These are criteria according which the persons may compare and judge their actions with others' reactions". Therefore, it is the criteria of judgment. Then it could be considered the criteria of evaluation for revealing the results of value creation. As a result, it is possible to name it a goal. This is because of this reality that values are different criteria informing us which goals are important for people. For this purpose, Brian Tracy (2006, p.45) says: "Life is a subject of the interior. As a result, your personality is based upon your values. Your values make you as they are. Every works you doe would be organized in accordance with your values. More information about your internal self-conscious values may lead to more effective of your external functions. Your external functions specify your goals". He continues that: "Aristotle believed that the final goal and ideal of human life is finding the luck. When it is possible for you reach to the highest level of luck that you have parallel internal values with all in your external position. It is necessary to have harmonized goals in compliance with your values. Then it is possible to say that any specification of our own values is the start point of valuable goals".

Value creation means creating of value out of humanistic & managerial works along with wealth. This is in compliance with the logic and researches made by Ardebili Halleh (2001) under the title of:" Value means a special meaning for different conditions and phenomena accordingly economic values are those values create by different tools and through the time. Then the relevant results are measurable and reported in the form of accounting values". There is a close and multi-purpose relation between value creation and business success. In this paper, the researcher intends to specify the value and value creation from economic business point of view. As a result, the base and criteria of value creation is meeting the customers' expectations in the format of the luck of all beneficiaries. All changes in this field means value creation and value chain and its concepts were the subject of different researches made by "Ethiner" and "Larker" in 2002 under the title of management based upon Value (I). This item and economic value added model may attract the interest of organizations within recent years.

"Ethiner" & "Larker" has considered different criteria based upon economic value as one of major three subjects for further researching. They found long-term benefits in different criteria based upon economic value. They may research about any success of companies which may accept managerial thinking based upon value in comparison with the companies in contrast. Teemu et al (2003) started to apply management based upon value and any researches made by other thinkers. For example “Valaei" noticed that the success rate is more in the companies benefit from economic value added model as criteria for compensating of motivation against other companies. "Klayman" focused on "Economic value added" and found out they have better market share than other industrial competitors."

Management based upon value which was introduced by "Ethiner" & "Larker" has different principles for introducing of its framework and show different applications of this thought as follows:

1- The general goal is to increase value of shareholders.
2- Strategy selection and organizational plans are in compliance with selected subjects (Determining the special organizational goals)
3- Strategy development and selection of organizational plan for value creation
4- Determining the value motivations
5- Evaluation and successful work programming and management of organizational evaluation mean development of activity plan, selecting the results and regulation of the goals.
6-Evaluation of function

In addition to all above-mentioned principles which are possible to be assumed in the format of executive steps, "Ethiner" and " Larker" have also proposed firstly the practical & executive guideline of integrated index of operation measurement (Balanced Score Card) is the same managerial thought based upon value. Secondly they presented different accounting systems of strategic management and believe in heir combination. It means to combine balanced score card with strategic management accounting. Furthermore, it is possible firstly to evaluate the value of shareholders and secondly present managerial applications based upon value in following fields:

1-Goal making
2- Evaluation & measuring the function
3- The base of payment of allowance & compensation of services
4- Decision making & its betterment
5-Selecting the strategies & strategic decisions
6-Work programming & executive decisions

Table 2 shows the obtained results of applying mentioned six-fold applications and any management solution based upon value.

Table 2
A summary of management solution based upon value for decision making & management control

Different dimensions used for management based upon value	The solution of management based upon value
1-Strategies & management control goals	Maximization of shareholders wealth, Economic value added (or value motivation) as the organizational goal Value creation strategy through possible solutions, designing of considered strategy that means reliability against commercial units of strategic programming
2-Measuring of function	Benefiting from economic profit index and value motivations from up to down for measuring the function
3-Goal making	Betterment of current level of economic value added. In this situation, the minimum acceptable level of economic value added is zero along with compliance goals with relevant value motivations

There are various researches about applying the value creation though and business success including the researches made by Winther & Tobia (2002) about value creation and optimization of profit and IT Gov. Institute (2005) about value creation and function management in developed company, Weissernrieder (1997) about application of value creation and value in pricing of product.

Economic value added

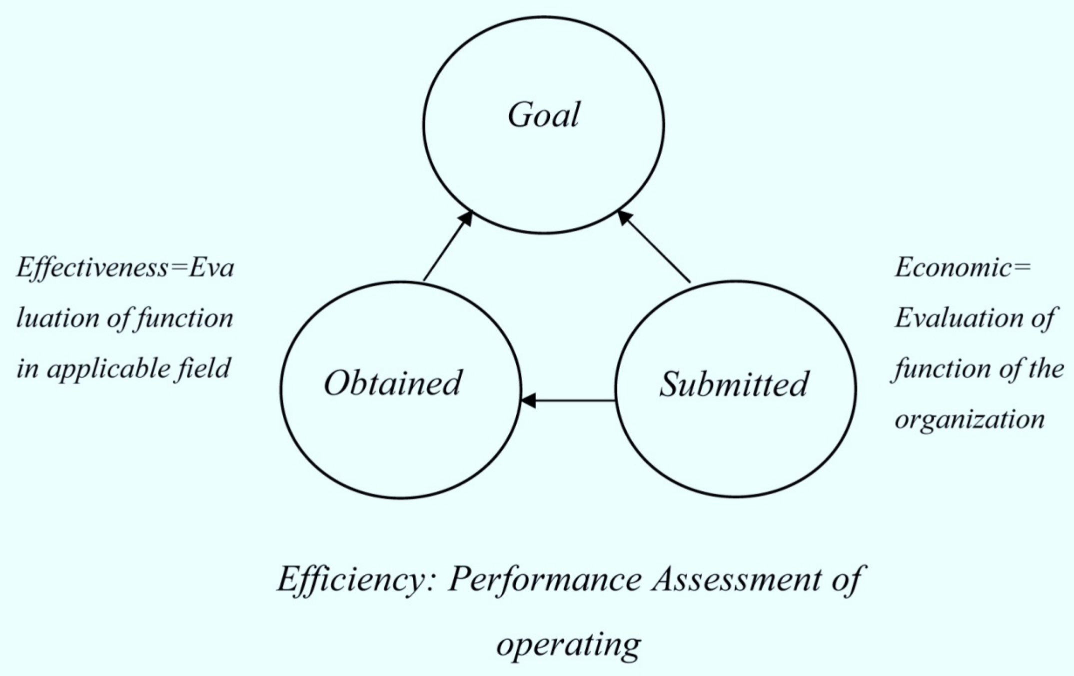
According to the idea of financial economists the economic value added is named as economic profit and/or remained interest. Economic value added is described as the net operation profit after deduction of tax and financial costs. In order to calculate the financial costs it is possible to use average coefficient of Capital costs rate (WACC) in applied capital that means the total capital in book value. Economic value added is an index based upon management and value for controlling of total created value in a business. Economic value added is a common language in an organization when the growth of sale and market share is considered for any writing of strategy. Then it is possible to determining current net value and internal output rate in any investment. Economic value added has various applications including internal & external usages.

The most important internal applications of economic value added are:
1)Managerial tools for operation measuring (Chow 1997), 2) Integrated criteria of output measurement (Piter Draker), 3) Ownership specifying tools with company's management (Rojerson), 4)Compliance tools of costs with income (Rojerson & Lefkotis 1999) and the most important external applications of it are: 1)A tool for investment (Tooli 1998, Lefkotis 1999), 2)A criteria for estimation of share price (Titel Yam 1997), 3)Measuring tools of value creation (Stern, Stewart 2001), 4) A framework for financial management (Mors 2001) and 5) AN effective framework on organizational culture & upgrading the work quality of occupants (Moris 2001).

Measurement of operation

The real meaning of operation evaluation in operational field includes the applicable field and/or relevant effectiveness. Alirezaei et. al (2003) presented the relation of applicable concepts and economic situation with operation measurement meaning in Figure 1.

Figure 1:



In order to evaluate the function we should consider various goals the most important of which in accordance with researches of Mehrgan (2004) are: 1) Continuous control of affairs in organization and establishment of utilization management, 2) Recognition of weak/power points of the organization, 3) Optimization of decisions, 4) Optimization of allocation & consumption of resources, 5) Upgrading the reliability of programs, 6) Upgrading the facilities of organization.

Any consideration of measuring models of intellectual capital show that operation measure includes in different classifications out of 4 common classifications known as "Score card Methods" including Balance Score Card (BSC) of Kaplan & Norton (1992), Holistic Accounts model (HA) of Romtoll Group (1995), Skandia Navigator Model of Edvinson & Malone (1997), Intangible Assets' Monitor (IAM) of Sveiby (1997) and Intellectual Capital Index (ICI) of Ross et. al, Value Creation Index (VCI) of Beum et. al (2000), Knowledge Audit Cycle (KAC) of Marr & Schiuma (2001), Value chain Scoreboard (VCS) of Baruch (2001), Measurement Model for Knowledge Assets and Intellectual Capital (MMIKAIC) of OECD (2001), Intellectual Capital Rating Model of Edvinsson (2002), Intellectual Capital Dynamic Value (IC-dval) of Bounfour (2003), Measuring and Accounting IC (MAGIC) of European Commission (2004) and Business Intelligent Model .

Determining the relation of intellectual capital & business function measurement

Optimization of function level in companies will be performed by developing and creation of special resources which is the same different sets of knowledge in it and a sign of intellectual capital. Any application of it needs high dependency in investment and developing of special resources which may apply innovations and using knowledge in their business activities. Any consideration of scientific basics show that business function measuring index, evaluation of intellectual capital with assets output process are in the framework of similar value model of economic value added with a close and inseparable relation. Then it is possible to use intellectual capital index as a replacing criteria for economic value added and for evaluation of the function.

Research methodology

The current research method is applicable for the aim and explanatory –measuring for performance. Data collection is on library basis along with benefiting from Fisher test for measuring the validity of models and T test for examining the meaningful relation between variants (theories test) and R^2 Durbin-Watson tests for estimation of relation of variants in regression model. Research statistical population is all accepted companies at Tehran Stock Exchange Organization selected from different industries with some determined specifications in this research. Followings are different mentioned specifications:

1) With continuous activity within 7 years of study, 2) They should not experience any losses and with no more negative shareholders equity, 3) There should not have a fiscal year change, 4) Their fiscal year should be ending on 20.March, 5) All required data for calculation of intellectual capital should be provided in accordance with specified financial methods in research, 6) They should not be included in investing industrial companies.

Research variants & calculation method

Intellectual capital: It means any efforts for effective benefit from current knowledge & intangible assets for creating a value.

Financial pattern: It means economic activity that may show the company's function

Value (financial capital): It means economic value added (EVA)

Followings are the used methods and formulations for calculating the intellectual capital:
1-I_{c1}: In this method it is possible to calculate intellectual capital from following relation

$$I_{C1} = \frac{R_C - R_1}{WACC}$$

Where:
IC: Intellectual capital
RC: Company's income in T
R_1: Average income of current companies in similar industry through T
WACC: Weighted average of capital costs which was about %15.5 in this research and as WACC.
2-I_{c2}: In this method it is possible to calculate intellectual capital from following relation

$$I_{C2} = (\mu_c - \mu_1)\ x\ T_A$$

IC: Intellectual capital
RC: Company's income in T
μ_1: Average output of current companies in similar industry through T
T_A: The average of company's assets through T (Total value of assets)

3-I_{c3}: In this method it is possible to calculate intellectual capital from following relation

$$I_{C3} = \frac{(Q) x\ T_A}{WACC_\mu}\left[\frac{1}{1 + \mathrm{I_{nfi}}}\right]$$

$(\mu_c - \mu_1)$ 1 Q is the output addition of company against the average output of industry through T
T_A= It is the average of company's assets through T
WACCμ=It is the weighted average of company's capital through T
$\mathrm{I_{nfi}}$: The average inflation rate through T (Within first to third three years, %14.5 and in fourth & fifth years equal to %16.5 according to the Central Bank of Iran rate.
4-I_{c4}: In this method, the value of intellectual capital is as follows:

$$I_{C4} = \frac{\left(MV_\mu - BV_\mu\right)}{(1 + \mathrm{I_{nfi}})}$$

MV μ: Company's average market value within T
BV μ: Company's average book value within T
$\mathrm{I_{nfi}}$: Average inflation rate within T for years 2004 up to 2006 with a rate of %14.5 and for 2007 up to 2008 it is %16.5 according to the report of Central Bank.

RQI calculation method in this research:

In order to calculate EVA, we benefit from following formulation:

Economic Value Added = (Total capital with book value of the beginning x weighted average of capital rate – net operational profit after tax deduction).

RESEARCH HYPOTHESIS

Major hypothesis:

H1-There is a meaningful relation between intellectual capital & Economic Value Added.

H2-There is a meaningful difference between different calculation methods of intellectual capital based upon financial patterns with ROI.

Indirect hypothesis:

HI: There is a meaningful relation between calculated intellectual capital with I_{c1} method & EVA.
H2: There is a meaningful relation between calculated intellectual capital with I_{c2} method & EVA.
H3: There is a meaningful relation between calculated intellectual capital with I_{c3} method & EVA.
H4: There is a meaningful relation between calculated intellectual capital with I_{c4} method & EVA.

Tests & Results analysis

In order to further analysis of theories, we use regression model in this research. We used Durbin-Watson for testing of Auto-regression and for testing of meaningful relation of regression we used Fistcher test and in order to test meaningful relation of considered variants we used T test.

According to the results of D-W test, it was revealed that there is no more relation between the remained amounts of auto-regression. In other world, there is not auto-regression in estimation model of auto-regression. The results of meaningful test of regression model, and by the use of F statistics at ensured level of %95 in which the meaningful level is lower than 0.05, it shows that there is a meaningful relation.

Testing of indirect hypothesis

Following tables are about a summary of major results of testing the relation of variants (Testing of indirect theories) separately for indirect theories.

The results of 1st indirect hypothesis:

According the results, it was revealed that firstly R^2 is equal to 0.113. This may show that about %11 of changes in economic value added would be specified by changes of intellectual capital and in accordance with first pattern. Secondly the results of t test provide proofs that meaningful level is more than 0.01 and at %99 level, there is not a meaningful relation between intellectual capital by 1st method and economic value added rate. Therefore it is impossible to confirm first indirect Hypothesis.

Table 3: Model Summary										
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	DF1	Df2	Sig.F Change	
1	.335	.113	.076	9.68172	.113	3.042	1	24	.094	1.671

The results of second indirect hypothesis test

According to the results, it was revealed that firstly R^2 is equal to 0.050. This may show that about %5 of changes in economic value added would be specified by changes of intellectual capital and in accordance with second pattern.

Secondly the results of **t** test provide proofs that meaningful level is more than 0.01 and at %99 level, it is impossible to confirm 2nd method for all considered companies. It means that there is not a meaningful relation between intellectual capital in 2nd method and economic value added.

Table 4 Model Summary										
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	DF1	Df2	Sig.F Change	
1	.225	.050	.011	10.014	.050	1.276	1	24	.270	1.581

The results of third indirect hypothesis test

According to the results, it was revealed that firstly R^2 is equal to 0.05. This may show that about %5 of changes in economic value added would be specified by changes of intellectual capital and in accordance with third pattern.

Secondly the results of **t** test provide proofs that meaningful level is more than 0.01 and at % 99 levels. As a result it is impossible to confirm third indirect theory means there is not a meaningful relation in accordance with third pattern with economic value added.

Table 5 Model Summary										
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	DF1	Df2	Sig.F Change	
1	.224	.050	.011	10.0157	.050	1.269	1	24	.271	1.581

The results of fourth indirect hypothesis test

According to the results, it was revealed that firstly R^2 is equal to 0.051. This may show that about %5 of changes in economic value added would be specified by changes of intellectual capital and in accordance with fourth pattern. The remained are related to other factors which we did not consider anymore.

Secondly the results of **t** test provide proofs at %99level the sig level was more than 0.01. As a result the statistical zero theory is confirmed and fourth indirect theory would be rejected. This means that there is a meaningful relation between intellectual capital in 4^{th} method and economic value added.

Generally the results of indirect theories show any lack of meaningful relation for first, second and third indirect theories and fourth theories, but the severity of variants are not equal. That means the highest rate of intellectual capital is in accordance with first pattern and the lowest is related to second, third and fourth patterns with equal amounts. Furthermore the obtained results show a positive relation from validity of all four patterns.

Table 6
Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	DF1	Df2	Sig.F Change	
1	.227	.051	.012	10.0093	.051	1.301	1	24	.265	1.587

TESTING OF MAJOR HYPOTHESIS

The results of first major hypothesis test

Table 7 shows the obtained results of testing the first major theory.
The results of testing the major first hypothesis show that any intellectual capital variant based upon 2^{nd} pattern is depending upon Partial Correlation test due to the meaningful of Collinerarity statistic and would be extracted from the model and the remained will stay in it. Secondly R^2 is equal to 0.200. It means that about %20 of changes are explained in economic value added and by intellectual capital changes.

Thirdly the results of **t** test of indirect theories and the results of **t** test of major one show that there is not a meaningful relation between intellectual capital and economic value added. As a result it is impossible to confirm major theory about considered companies.

Table 7
Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	DF1	Df2	Sig.F Change	
1	.447	.200	.091	9.6027	.200	1.830	3	22	.171	1.786

The results of 2^{nd} major hypothesis:

Upon consideration of the results of indirect theories, there are different proofs that there is a meaningful relation between the calculated intellectual capitals in four-fold pattern with ROI. The results of R^2 may confirm this matter.

CONCLUSION & DISCUSSION

Value creation is a new-coming phenomenon of economy knowledge of third millennium. Value creation is one of the major strategies of agencies. There is a different position for intellectual capital in this age. Intellectual capital is one of intangible organizational assets at knowledge age.

It is phenomenon according to which it is possible to have decision making, operation evaluation and analysis of investment in an applicable and economic form. All discussed theoretical principles in this essay provide enough and necessary proofs for introducing of intellectual capital in economy knowledge and basics of value creation which is necessary to be considered. All discussed and presented models in measuring of intellectual capital are important subjects in the field of intellectual capital. It is important and necessary to have a good understanding about the relation of intellectual capital and all its three-fold dimensions and also its dealing with financial capital in organizational value creation. Management based upon value is included in thoughts of knowledge age. This is the major paradigm of business in third millennium. Applying of VBM thinking is directly related to the role and effect of different phenomenon. Intellectual capital is one of the most important of these variants which may be calculated in accordance with the results of company's value and applied in operation measuring of agencies. With a scientific goal, this article intends to determine theoretically all discussions and any relation of intellectual capital based upon financial pattern and economic value added. According to the results, it is obvious that firstly there is not any meaningful relation between intellectual capital with economic value added in accordance with four-fold financial pattern. Secondly, there are positive results of validity model for indirect first, second, third and fourth theories. Generally it is positive for major theory. The obtained results show that all pioneers of capital market and users of financial information may consider intellectual capital as an important variant in their decision making for purchase of shares and evaluating the operation of considered companies. Also, we propose to all future researches to test any relation between intellectual capital based upon other measuring models rather than this article with different subjects including return of investment, return of shareholders equity and other indexes based upon the value, type of company either from growth and/or value and type of shares and accounting, financial, economic, human and business points of view.

REFERENCES

Andriessen, D. G., & Stem, C.D. (2004). Intellectual capital of the European Union: Measuring the Lisbon Agenda Version 2004. Center for Research in Intellectual capital, in Holland University of Professional Education, Alkmaar.

Bassi, L.J. and van Buren, M.E. (1999). valuing investments in intellectual capital. *International Journal of Technology Management,* Vol. 18, No.5, PP.414-432.

Chang, Shu-Lien (2007). Valuing Intellectual Capital and Firms. Performance: Modifying Value Added Intellectual Coefficient (VAICTM) in Taiwan IT Industry. Doctoral Dissertation. Golden Gate University.

Chen, M.C., Cheng, S.J. and Hwang, Y. (2005). An empirical investigation of the relationship between intellectual capital and firms' market value and financial performance, *Journal of intellectual capital,* Vol.6, No.2, PP.159-176.

Edvinsson, L. and Malone, M.S. (1997). Intellectual capita: realizing your company's true value by finding its hidden brainpower, 1st ed., Collins, New York, NY.

Pulic, A. (1998). Measuring the performance of intellectual potential in knowledge economy, From at: http://www.measuring-ip.at/papers/Vaictxt/vaictxt.html.

Pulic, Ante (2004). Intellectual Capital- Does it Create or Destroy alue? *Measuring Business Excellence*, Vol.8, No.1, PP.62-68.

Pulic, Ante (2005). *Intellectual Capital for Communities-Nations, Regions, Cities and other Communities* (*First Edition*). Boston, Elsevier Butterworth Heinemann.

Roos, J. Roos, G. Dragoneti, N. and Edvinsoon, L. (1997). *Intellectual Capital: Navigating in the New Business Landscape.* Macmillan Business, London.

Roos, G. and Roos, J. (1997). Measuring your company's intellectual performance. *International Journal of strategic Management*, Vol.30, No.3, pp.413-426.

Stewart, T.A. (1997). Intellectual Capital: The New Wealth of Organizations. Doubleday, New York, NY.
Sveiby, K. E. (1998). *Measuring intangibles and intellectual capital an emerging first standard.* from at: www.seiby.com/articles/EmergingStandard.html.

Sveiby, K. E. (2001). The new organizational wealth: managing and measuring knowledge based assets. Berret Koehler, San Francisco.

Swart, J. (2006). Intellectual Capital: Disentangible an Enigmatic Concept. *Journal of Intellectual Capital,*Vol. 7, No.2.

Teemu and et.al. (2003). Value Based Management (VBM) Practices. *Management Accounting research*. Vol 14, PP.235-254.

Wang, J. (2008) Investigating market value and intellectual capital for S & P 500. *Journal of Intellectual Capital*, Vol.9, No.4, pp.546-563.

Weissernrieder, F (1997), *Value Based Management Economic Value Added or Cash Value Added.* From: http://anelda.com

Pulic, Ante (2000). VALCTM- an Accounting Toll for IC Management. *International Journal of Technology Management*, Vol.20, No.5-8, PP.702-714.

LABOR NEGOTIATIONS AND COLLECTIVE BARGAINING AGREEMENT: THE NATIONAL FOOTBALL LEAGUE'S DILEMMA?

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ABSTRACT

With the expiration of the National Football League's (NFL) current collective bargaining agreement (CBA) in March 2011, a few of the key issues, on which both sides cannot agree upon, are the current salary structure of the league, the number of games played in a season, and how to compensate players that sustain career ending injuries. Furthermore, among the four largest and most profitable professional sports leagues in the country, including Major League Baseball (MLB), the National Hockey League (NHL), and the National Basketball Association (NBA), the NFL is the only league that does not offer guaranteed player contracts. In the NFL, teams may opt out of a player's contract and, subsequently, their financial responsibility to that individual by simply cutting the player or placing him on waivers. While guaranteed contracts for NFL players would not resolve all the current obstacles within the currently expired CBA, they would provide a form of financial security lacking on behalf of the players, thus, alleviating a few of the difficulties the two sides are experiencing in reaching an agreement. The NFL owners continue to maintain that they will vehemently oppose the consideration of guaranteed contracts, so the players are instead attempting to provide for resolutions for the issues created by not having the same guaranteed contract structure as other leagues. The expiration of the current CBA has led to the decertification of the NFL Players Association (NFLPA), and, subsequently, an owner initiated lockout of the players. During a lockout there can be no transactions between owners and players effectively canceling a 2011 football season. The players in turn filed a lawsuit against the NFL seeking to stop the lockout. Besides the lockout, the lawsuit from the players, filed under the 1890 Sherman Antitrust Act, is also challenging rookie salary limitations and the franchise and transition player designations. This paper will evaluate the elements and options presented by the ensuing labor dispute, and explore potential resolutions available to both the owners and players within the league.

SUGGESTIONS TO IMPROVE THE QUALITY OF VIETNAMESE ACCOUNTING SYSTEM

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ABSTRACT

Vietnam has issued and applied a set of accounting standards. Specifically, there have thus far been 26 accounting standards in Vietnam. The issuance and application of such accounting standards have brought the Vietnamese accounting system closer to the international accounting system (IAS). However, there still exist gaps between the Vietnamese accounting system and its counterpart. Thus, the objectives of this study are twofold. The first is to analyze causes for such differences that have negative impacts on the quality of the Vietnamese accounting system, and the second is to propose suggestions to speed up the integration of the Vietnamese accounting system into the international accounting system.

FUNDAMENTAL DIFFERENCES BETWEEN THE VIETNAMESE ACCOUNTING SYSTEM AND THE INTERNATIONAL ACCOUNTING SYSTEM

Absence of a Concrete Conceptual Framework for Accounting Standards

The Vietnamese accounting system has not been constructed in a systematic manner and not been based on a concrete conceptual framework rooted in the international accounting system (VAS, 2006). Specifically, the system is scattered by various accounting standards and guiding documents for implementation. This fact might be considered as a cause for inconsistencies and even conflicts among relevant accounting concepts.

It should be noted that in almost all the countries, such a concrete conceptual framework for accounting and accounting standards are very often prepared by professional organizations while in Vietnam the framework is prepared and issued by the governmental agencies. As a result, such accounting concepts, standards, and principles have been affected by an administrative thinking rather than by professional knowledge (Dang, 2007).

Discrepancies in the Financial Reporting System

Financial statements are considered as products of financial accounting that can be utilized to evaluate financial position and business performance of a business entity. Users of financial statements are mainly from outsiders who cannot access to complete and sufficient information of businesses. In order to meet requirements for information for the purposes of decision making, international accounting standards clearly state the objectives of and requirements from financial statements. However, these objectives have not been mentioned in the VAS. In addition, the users of financial statements in Vietnam are also not clearly identified. For example, the Vietnamese accounting regulations only require that business establishments prepare and submit financial statements to financial, tax, and statistic authorities. This may lead people to misunderstand that the objectives of accounting are only for the governmental administration. Such a kind of thinking is very likely to have negative impacts on financial reporting activities. One of these impacts is that non-public entities often consider accounting as an instrument of the government for tax purposes. As a result, accounting frauds have been conducted by these business entities in order to minimize their tax liabilities (Nguyen, 2005).

In contrary to the Vietnamese accounting standards, the international accounting standards clearly specify what information is required to be presented in financial statements. However, businesses are not required to follow specific reporting forms. It is totally different from the situation in Vietnam where businesses are required to prepare and present their financial statements based on prescribed reporting forms. This practice makes the Vietnamese accounting less flexible and become unsuited to businesses which are operating in different fields with different specific and material information required to be disclosed in financial statements. In international accounting, there are cases where businesses are allowed not to follow common requirements such that their financial information is truly and fairly presented, especially when the compliance with the common regulations may lead to their financial misstatement. However, it should be noted that these businesses are required to explain why they do not follow the common regulations.

IAS 1 requires businesses to present changes in equity, but it is surprising that this requirement is absent in the Vietnamese accounting regulations. In the Vietnamese financial reporting system, changes in equity are not presented as a separate report. Instead, it is presented as a part in the Notes to Financial Statements (MF, 2006).

In addition, in certain financial statements, the presentation and calculation of some items are inconsistent in some points. For example, the "issued bond" in long-term liabilities on the Balance Sheet is calculated by adding bond premium to par value and deducted discounts. This calculation approach results in incorrect long-term liabilities since debts from bond issuing shall only be the face value of bonds.

Another example is that payables including long-term payables from financial leases and purchases on credit are together put in the Payable Account. This leads to the incorrect calculation of the net cash flows in the statement of cash flows.

Still another example is that in the income statement, financial income and financial expenses are included in net operating profit. Doing so is very likely to create difficulties for users of financial statements to forecast operating results of a business due to the fact that its financial activities are often unstable and irregular.

Discrepancies in Certain Requirements of Accounting Treatment

Requirements by the Vietnamese accounting regulations for the accounting treatment of certain items are much different from that of the international accounting system.

International accounting allows the use of both accounting methods - perpetual inventory and periodic inventory depending on the specific nature of each entity’s business activities and types of inventory. However, the Vietnamese accounting regulations do not allow businesses to apply these two methods simultaneously. Businesses are only allowed to adopt one of these two accounting methods. Furthermore, while the LIFO method is not allowed by IAS for inventory accounting, it is still adopted in Vietnam (Chuc & Pham, 2010).

With regard to goodwill: IFRS 03 – "Business Combinations" provides that: Goodwill is an asset representing the future economic benefits arising from other assets acquired in a business combination that are not individually identified and separately recognized. According to the international accounting standards, goodwill is not amortized but is subject to an impairment test at least annually as required by IAS 38. However, it is provided for in paragraph 53 of the Vietnamese Accounting Standard VAS 11 that: "Goodwill is recognized in expenses (if it is of small value) and otherwise amortized in a uniform manner during its estimated useful life (if it is of big value). The useful life of goodwill should be properly estimated as with the time during which sources embodying economic benefits are recovered by the entity". Given this provision, the following question arises: If goodwill means assets that are not individually identified and separately recognized, how can we estimate the useful life of goodwill and the economic benefits recovered by the entity from such goodwill? Obviously, amortization of goodwill is not practical and makes Vietnamese accounting diverge from international accounting (Tran, 2009).

DISCREPACIES IN ACCOUNTING PRACTICE

Accounting Regime Is Inflexibly Applied

In accounting practice, business entities normally have to follow provisions of an accounting regime and guiding documents. Terms "be required to", "only allowed to", "not allowed to", etc. are often used in different regulations on accounting. The issuance of accounting regime and guiding documents has its own advantages (for example, allowing those who do not study accounting standards to be able to perform accounting records). However, the strict regulations on booking entries for each economic transaction done are very likely to make the Vietnamese accounting system become inflexible and boring (IFRSs & VASs, 2009).

The over strict regulations with too much details in the accounting regime may also cause businesses' neglect of accounting standards and businesses may become passive and dependent on the accounting regime. The accounting regime is studied and developed by experts. As such, any misunderstanding of the accounting standards is very likely to lead to misled guidelines which will surely affect the quality of accounting information. For example, item a, paragraph 08, VAS 01 provides that: "Entities are required to make provisions but not too high". In cases where this provision is applied, if the difference between the realizable net value of assets as at the date when provision is made and their cost is too significant, accountants will not make enough provision as regulated. This practice makes favorable conditions for accountants to fail to truly and fairly reflect the financial position of the entity. As a consequence, unreliable accounting information is generated and the accounting prudent principle is breached (Tran, 2009).

In addition, the accounting regime often goes behind the evolution of business practices. Given this, the incomplete or unspecific guidance for accounting treatments is very likely to make businesses confused of how to record new business transactions that should have been specified in the accounting regime (Phuong, 2010).

There Are Confusions between Financial Accounting and Tax Accounting

We observe a rather serious issue in accounting practice in Vietnam that there are confusions between financial accounting and tax accounting. Many regulations guiding the implementation of the law on corporate income tax such as regulation on making provision, regulation on depreciation, etc, are misunderstood as financial accounting regulations by businesses. This has resulted in a fact that businesses focus only on implementing the guiding documents and neglect provisions of accounting standards. As such, many accounting principles have been breached. The confusion between financial accounting and tax accounting can be considered as one main reason for making accountants focus on fraudulent tricks for tax evasion purposes. The application of tax law provisions in financial accounting has been creating confusions for our accounting system, i.e. confusions between financial accounting and tax accounting. Such a problem is making our accounting system become “unbelievable” and “non-understandable” to anyone (Phuong, 2010).

Improper Attention to Management Accounting

Currently, the accounting system adopted by almost all of enterprises in Vietnam focuses only on financial accounting and tax accounting (which in substance is something not really financial accounting and not purely tax accounting) but not on management accounting. Managerial accounting of almost all of the entities is in the primary stage. This situation is resulted from both the accountants and managers (Nguyen, 2005).

From the managers: they lack knowledge in accounting in particular and management in general. They do not fully understand the role of accounting system and do not know how accounting can help them make decisions (or even never use accounting information for the purpose of their decision making). To put it another way, they seem to have no need for use of accounting information.

From the accountants: they are not adequately trained on accounting to organize and provide useful information for their decision making. Since many accountants are not standing at the position of enterprise management, they have no chance to introduce the role of accounting in the decision making process.

Obviously, there is a gap between accountants and managers. This fact is very likely to impair the role and position of accounting in the enterprise (Kaplan, 1995).

SUGGESTIONS FOR OVERCOMING THE ABOVE PROBLEMS

An accounting system plays an important role in each enterprise. Through the accounting system, management is equipped with all information of the enterprise’s business performance aimed at helping them to make right decisions. For external users, the accounting system provides information for evaluation of financial situation and business performance. No one dares to invest in an enterprise where they are unable to assess its financial situation as well as its business performance. As a result, the enterprise is very unlikely to raise capital from share issuance, access credit sources or purchase goods on credit terms from its suppliers if the enterprise is proved to have an unreliable and non-transparent accounting system.

Further, a reliable and fairly accounting system has an important impact on the economic development of each country. Investors invest only in a country where they are able to control how their invested money will be used and how efficient their investment is, etc. A good business plan will become nothing if the accounting system is not reliable and transparent. Thus, it is more urgent than ever that the accounting system is to be improved in order to make favorable conditions for the country's economic development and integration into regional and international economies.

In order to improve the Vietnamese accounting system in response to the requirements of the international economic integration, we would like to propose the following suggestions:

Building a concrete conceptual framework based on the study of the international conceptual framework and accounting standards.

Eliminating gaps between the Vietnamese accounting and international accounting in a manner such that the less different the better. To achieve this objective, we need to do a thorough and serious research on the international accounting standards and practices with the help of international accounting experts such that the unnecessary differences are minimized.

Being aware of the fact that an accounting regime is not a legal document that enterprises are required to mandatorily and strictly follow. Such a mandatory and strict implementation makes the Vietnamese accounting system inflexible and lose creativeness. In many cases, this compliance may make accounting information become no longer reliable and relevant. It should be noted that accounting training in some universities focuses only on helping students be familiar with book recording in accordance with the requirements of accounting regime while accounting standards and accounting principles have been neglected. The Ministry of Finance should study the adverse impacts of the requirements for mandatory compliance with accounting regime in order to consider treating accounting regime merely as guiding documents and later accounting regime will no longer be promulgated like in other countries. The fact that accounting regime is no longer promulgated will make universities pay more attention to helping students properly understand and apply accounting standards and principles.

Accepting and issuing guides for tax accounting. Tax accounting is abode by provision of tax law for the purpose of providing information for tax declaration. Persons interested in information provided by this accounting module are merely enterprises and tax authorities. It is incidental that certain rules of this accounting module are the same as the requirements of accounting standards and accounting principles. Such an accounting module is called tax accounting. Recognizing the existence of tax accounting within enterprises will help accountants clearly understand the difference between financial accounting and tax accounting, clearly and transparently differentiate forms of accounting, help avoid the confusion among different forms of accounting which will ensure information quality of both financial accounting and tax accounting.

Provide regular trainings and re-trainings for accountants so that they can update and enhance their accounting knowledge. Universities should make a change in their existing way of approaching and teaching accounting; instead of teaching students recording of financial transactions, universities need to train them from scorekeepers of the past and to become the designers of the organization's critical management information systems. Accountants must be involved in the process of planning and implementing businesses' strategies. Teaching of management accounting should be conducted more intensively to students of accounting and business management in order for them to understand and be able to practice management accounting in daily business operations.

Setting up an Association of Accountants by gathering highly qualified accounting experts to assume the role of improving the Vietnamese accounting system in responding to the requirements of economic development and international economic integration. Preparing a concrete conceptual framework for accounting standards, building codes of ethics for accountants and enhancing technical knowledge and capability of accountants, etc. should be assigned to this professional organization.

Having regulations on annual knowledge updates for accountants. This should be considered as required conditions for accountants' practices.

CONCLUSION

We are now in the transition from the centralized planning economy to the market economy and the differences between the Vietnamese accounting and international accounting is inevitable. A reliable, transparent and efficient accounting system needs to be developed such that the Vietnamese accounting can soon integrate into that of regional and international economies that can make favorable conditions for Vietnam to grow and develop. We need to bravely perform necessary innovations aimed at eliminating the gaps between the Vietnamese accounting and international accounting. We strongly believe that with the aforementioned suggestions, this objective can be reachable.

REFERENCES

Vietnamese Accounting System. *Journal of Finance*, 2006

Ministry of Finance (2006). Decision 15/2006/QD-BTC dated 20/3/2006.

Dang, D.S. (2007). Building and improving concept frame for accounting standards in the context of transitional economy of Vietnam. *Securities Magazine*.

Nguyen, P.M. (2005). Vietnamese accounting standards: the less specifics the better. *Securities Investment Magazine*, *8*(5).

Kaplan, R.S. (1995). *New roles for management accountants*. *Journal of Cost Management*, *9*, 6–13.

IFRSs., & VASs. (2009). A pocket comparison. Deloitte Vietnam.

Chuc, A.T., & Pham, T.P.A. (2010). Differences among current regulations on accounting treatments. *Accounting Magazine*.

Tran, X.N. (2009). Comparison of Vietnamese accounting standards against international accounting. *Securities Investment Magazine, 59* (http://www.vacpa.org.vn).

Phuong, L. (2010). Vietnam is still doing "not just anybody" (http://tuanvietnam.net/2010-07-12-viet-nam-van-lam-an-khong-giong-ai).

PREDICTING PRODUCTIVITY IN A COMPLEX LABOR MARKET: A SABERMETRIC ASSESSMENT OF FREE AGENCY ON MAJOR LEAGUE BASEBALL PLAYER PERFORMANCE

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ABSTRACT

This study analyzed Major League Baseball player performance using sabermetric measurements of offensive productivity in order to determine how player production was impacted as a result of free agency. The theoretical framework for this research is based on two competing theories of social and organizational behavior: J. S. Adams' Equity Theory and Victor Vroom's Expectancy Theory. Both equity theory and expectancy theory were developed to predict worker performance under conditions of inequity in terms of under-reward and over-reward. In conjunction with both theories, this study assumed the following: (1) that players in the final year of their contracts, just prior to becoming eligible for free agency, perceived inequitable conditions of under-reward, and (2) that players who signed a new multi-year free agent contract perceived inequitable conditions of over-reward in the first year of a new contract. Sabermetric measurements, OPS, Runs Created, and Win Shares, were utilized to assess performance improvements or decrements for players in each of the following three years: (1) pre-option year- the year prior to a player becoming a free agent, (2) option year- the last year of a player's contract, and (3) post-option year- the first year of a player's new contract. Subjects consisted of Major League Baseball free-agents who signed multi-year contracts of at least two years or more with a their current team or another major league franchise between the years of 1976 and 2003 (n = 234). In order to qualify for inclusion, players must have had a minimum of 250 at-bats in each of the three individual years being examined: pre-option year, option year, and post-option year. Covariates, age and team winning percentage, were incorporated into this study in an attempt to control for specific factors thought to impact individual player performance. Results of multivariate analyses of variance (MANOVA) revealed that free agency had a significant impact on each of the three performance measures. Follow-up univariate analyses of variance (ANOVA) indicated that player performance significantly declined for each of the dependent variables following free agency. When controlling for age, multivariate analyses of covariance (MANCOVA) revealed no significant effects with regards to the impact of free agency on player performance. When controlling for team winning percentage, however, multivariate and univariate analyses indicated that post-option year team winning percentage significantly affected the impact of free agency on player productivity. For each of the dependent variables, significant findings were consistent with expectancy theory predictions.

THE WINDFALL ELIMINATION PROVISION

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ABSTRACT

The Windfall Elimination Provision (WEP), a Social Security law enacted in 1983, was designed to differentiate between career low-wage earners and the low-wage earners who had other positions in the public sector and therefore did not pay into Social Security for the duration of their working careers. Research has shown the WEP adversely affects the low wage earner who had employment in both the private and public sectors, and in many cases gives the wealthy more Social Security income. Those "WEPed" paid into Social Security the same percentage amount as those not "WEPed"; however the "WEPed" retirees are denied the full benefits they paid for, including benefits to their spouses and surviving spouses. All of the proposed legislation to correct the problems since the WEP was instituted has died in the House Ways and Means Committee. This paper recommends two changes which have not been considered yet: require all employed in the United States to pay into Social Security, and "WEP" only those with incomes of $200,000 and above, those who are least likely to become the new poor. Further research is recommended because there is no clear accounting of the trillions saved by instituting the WEP.

INTRODUCTION

Gone are the days when the majority of workers have only one employer for an entire career, and thus, one retirement check. Today, having two or more positions and crossing the employment line between the private sector and the public sector is common. People who have worked in both sectors are entitled to two retirement checks, one from Social Security representing the private sector, and another check from the public sector for the public retirement benefits. The workers who have two retirement checks have reason to expect financial security in their retirement years. However, due to a Social Security law passed in 1983 known as the Windfall Elimination Provision (WEP), a portion of those who worked in both sectors will have their earned Social Security benefits reduced, whether fairly or unfairly. This paper will look at the law and its history, the amount of reduction in benefit checks, the policy model, strengths and limitations of the WEP, ethical issues, and recommendations for changes.

HISTORY

Until the 1980's, those workers who were entitled to retirement checks from both sectors received their Social Security based on the same benefit formula used for those workers who had only private sector employment. In the early 1980's, President Reagan set up the bipartisan National Commission on Social Security Reform, chaired by Alan Greenspan, to make Social Security recommendations which would shore up its finances (Gale Encyclopedia of US History, n. d., p. 4). The Windfall Elimination Provision (WEP), Public Law 98-21, enacted on April 20, 1983, was a result. The new law changed the original Social Security benefits formula for workers employed in both sectors who met certain criteria, and the result was a lower Social Security benefit for them (Social Security Administration, 2010, *Windfall Elimination*).

According to Warren (2010), a Social Security office manager for 15 years, the thinking behind the WEP was to prevent double dipping from two retirement plans, public and private. The government believed that an individual who had two retirement plans would be better off financially than those who had only one plan, Social Security. The rationale was that the public retirement plan would be sufficient, and Social Security benefits would become a supplemental amount. The WEP makes a clear distinction between the two types of workers who are eligible for Social Security benefits according to the American Federation of State, County and Municipal Employees (2011):

- Those who draw good pensions from primary jobs in non-covered employment, but whose low-wages or short work records in secondary jobs make them appear to be low-wage careerists to Social Security
- Workers who actually spent their entire work lives in low-wage jobs

The Social Security Administration in its Bulletin No. 05-10045 (2010) provides the following statement as its explanation of the WEP:

> The Windfall Elimination Provision primarily affects you if you earned a pension in any job where you did not pay Social Security taxes and you also worked in other jobs long enough to qualify for a Social Security retirement or disability benefit. The Windfall Elimination Provision affects how the amount of your retirement or disability benefit is calculated if you receive a pension from work where Social Security taxes were not taken out of your pay. A modified formula is used to calculate your benefit amount, resulting in a lower Social Security benefit than you otherwise would receive.

The financial impact of the WEP is profound. Given two workers who have public and private sector employment, it is very possible that one will receive full Social Security benefits, the other very little. The formulas used for both the regular Social Security benefits and the WEP adjustment are identical except for the first threshold multiplier: 90% versus 40% of the first $761 of the AIME **(**Average Indexed Monthly Earnings**)**. The AIME is computed by adding up all the payroll income for 35 years and dividing by 420 months to get that average monthly amount (Shelton, 2010). What does this mean in terms of actual dollars?

Two workers with the same AIME of $2,000, one affected by the WEP, the other not, would receive monthly Social Security benefits of $700.88 and $1,081.38, respectively, a difference of $380.50. In one year, the “WEPed” worker would receive $4,566.00 less and in ten years $45,660.00 less. In twenty years, at age 82, the “WEPed” worker would have received a total of $91,320.00 less in Social Security benefits. The WEP reduction also goes beyond the worker to affect that person’s spouse or surviving spouse benefits. The spouse or surviving spouse benefits are administered through the Government Payroll Offset (GPO), whose official benefit statement according to Lingg (2008) is as follows:

> The GPO provides that a person’s Social Security benefits as a spouse or surviving spouse is [sic] reduced by two-thirds the amount of any government pension the person received based on his or her own work in Federal, State, or local government employment not covered by Social Security.

In addition to the two-thirds reduction clause, the GPO formula can also totally eliminate any benefits for spouse and surviving spouse (Grobe, 2007).

POLICY MODEL

The WEP is a broad, politically contentious institutional act which affects millions of Americans. As part of Social Security, the WEP is federally mandated by Congress with the President's approval. The policy model, therefore, is one of legitimation (Kraft & Furlong, 2009). Proposals for Social Security change are submitted to the House Committee on Ways and Means, which then refers them to the Social Security subcommittee (*House Committee on Ways*, n.d.). The Social Security Administration history site gives the cost benefits for instituting the WEP: "The provision decreases the cost of the program by $0.1 billion for 1983-89 and has a long-range saving of .04 percent of taxable payroll" **(**Social Security Administration, 2011, *Social Security Amendments*). About 3.3% of the approximately 1.2 million Social Security beneficiaries were affected by the WEP as of December 2009 (Shelton, 2010). According to the Social Security Administration in 2009, the estimated cost to repeal the WEP "would increase the long-range deficit of the Social Security Trust Fund by 3%" (Congressional Research Service, 2009).

STRENGTHS AND LIMITATIONS

The Social Security decisions in 1983 were instituted to rescue Social Security finances, and the WEP was one of those results (Shelton, 2010). However, Social Security's official stance is that workers with two retirement plans, public and private, would possibly benefit from provisions aimed at low-wage earners and receive a windfall: "The impact of the WEP is as intended: it helps to ensure that workers with pensions from noncovered employment do not receive the advantage of the weighted benefit formula that is intended for career-long low earners" (Lingg, 2008). Research has shown minimal strengths for the WEP.

Once the WEP became law, efforts were immediately made to repeal it on the basis that it had unwanted implications for low-wage earners while benefiting the wealthy. A look at only three aspects gives a strong indication of the many inherent problems. First, an unfairness stems from the arbitrary fashion in which the WEP benefits are applied, such as the exemptions list (Social Security Administration, 2010, Bulletin 05-10045). Second, all workers contributing to Social Security pay the same percentage (6.2% in 2010) of Social Security tax known as FICA (Federal Insurance Contributions Act) for payroll deductions (Darwin, 2011). However, the "WEPed" do not receive their proportionate amount of benefits. Third, the worker's total retirement amount, private and public, is not considered before the WEP application. Contrary to an assumption made by Congress when they formulated the WEP, not all public employees are high wage earners, and therefore, the WEP created more low-income retirees (American Federation of State, County and Municipal Employees, 2011). As Shelton (2010) indicates in her analysis of the WEP, "SSA estimated that in 2000, 3.5% of recipients affected by the WEP had incomes below the poverty line."

Benefits to the wealthy are well hidden in the WEP formula. A brief look at two of them gives some indication of their magnitude. In her analysis of the WEP, Shelton (2010) refers to a 2008 extensive study of the WEP by Brown and Weisbenner which concludes that "for some high-income households, applying the WEP to covered earnings even provides a higher replacement rate than if the WEP were applied proportionately to all earnings, covered and non-covered." Another benefit for the wealthy is that once the annual payroll threshold of $106,800

(2010) is met, no more Social Security (FICA) deductions are taken out for the remainder of the year (Darwin, 201). Social Security benefits are based on the AIME, which averages all the payroll income amounts for 35 years. According to Nobel Laureate economist Milton Friedman, "High wage earners pay a lower percentage of their total income because of the income caps" (West Encyclopedia of Law, n.d.).

ETHICAL ISSUES

A brief look at Social Security sheds light on the complicated ethical aspects of the Windfall Elimination Provision. The original philosophy behind Social Security as a pension plan was twofold: to keep a large portion of those over age 65 from becoming a financial burden on the rest of society and to give this same portion of society purchasing power, which contributes to the overall welfare of the nation. President Franklin D. Roosevelt when setting up Social Security in 1935 expressed it well: "We put those *payroll* contributions there so as to give the contributors a legal, moral, and political right to collect their pensions." He went on to say, "With those taxes in there, no damn politician can ever scrap my social security program" (Gale Encyclopedia of US History, n.d.). Today there is a valid question as to whether or not these rights are still protected.

Three main ethical issues stand out: the inequalities in the implementation of the WEP; the disregard for the adequacy of retirees' total retirement income, public and private; and the political basis for the WEP formula. A clear look at the WEP shows two implementation inequities. First, there is a list of arbitrary exceptions as to who will not be affected by the WEP, even though these workers may meet the criteria (Social Security Administration, 2010, How the windfall). The second inequity is that in federal, state and local governments, approximately 25% of employees, including teachers, police, fire fighters, and general employees work in Social Security exempt positions and therefore cannot contribute (Benson, 2010). Workers within the same career category such as teachers are not treated the same: some school districts require Social Security to be withheld, others do not. The disparity ranges from state to state or within the same state, which can affect relocating workers (Shelton, 2010).

The second ethical issue is that the WEP has no formula for factoring in the retirees' total retirement income from both public and private employment (if applicable). Workers who receive low pay from their public positions often supplement their income with a second job in the private sector and become the very ones penalized by the WEP because of their low AIME.

The third ethical issue is a political compromise that appears arbitrary. While the WEP formula was designed, the House of Representatives proposed using the same benefits formula with the exception of the first threshold multiplier. They proposed a 61% first threshold multiplier to replace the 90% one, which was currently being used for all retirees. The proposal would result in a 30% reduction in benefit dollars. The Senate proposed a 32% first threshold multiplier, which would result in a 58% benefit dollar reduction. The compromise became the current 40% multiplier, which is a reduction of 50% of benefit dollars from the original formula for those now targeted (Shelton, 2010). The financial welfare of over a million retirees was affected by this arbitrary and politically motivated compromise.

Although not strictly an ethical issue, the WEP situation is a misleading semantics game. Windfall and double dipping have very deep connotations. No one wants to be known as condoning windfall money and double dipping, particularly when the funds come out of a federal agency. The rhetoric made the WEP changes easy for the public to accept without delving deeply into the matter.

RECOMMENDATIONS

Three proposals were introduced in the 111th Congress to change the WEP which died in committee:

- The Social Security Fairness Act of 2009, S.484/H.R.235 asked for a complete repeal of the WEP and the GPO (Shelton, 2010).
- The Public Servant Retirement Protection Act of 2009, S. 490 /H.R. 1221) proposed a new formula which would factor together both the private (covered) and public (non-covered employment) before making any adjustment in Social Security benefits (Shelton, 2010).
- The Windfall Elimination Provision Relief Act of 2009, H.R. 2145 proposed a modification based on both noncovered and covered pensions amounts, and a baseline of $2,500 for the minimum Social Security benefit before any WEP type reduction can be used (Lingg, 2008).

I concur with all three possibilities with the exception of the $2,500 baseline in the Windfall Elimination Provision Relief Act of 2009. My recommendation is that this baseline amount should be raised to $4,000 or higher. Given the inflation rate and the cost of living increases, a higher amount would help cover future living expenses for retirees. In addition to these proposals which need to be reintroduced in the 112th Congress, the following recommendations are given for consideration:

- Require that Social Security be deducted from all employment in the United States. No group then would be exempt from paying into Social Security, and no group would be subjected to reductions of benefits created by the WEP or the GPO. This change would potentially add income to Social Security.
- Apply a modified inverse formula similar to the WEP only to the wealthy, taking into account both private and public employment amounts. This is the group who has excellent retirement benefits. Develop a formula that begins with those whose AIME is over $200,000 a year ($16,667 per month) with a sliding scale upwards. This "WEP style inverse" has the advantage of affecting only those who will have more comfortable retirement incomes and who will not be on the borderline of becoming the new poor. Their Social Security benefits would indeed become true supplemental income. The precedent for limiting benefits has already been legally set by the WEP law in 1983; the only change would be the group affected. The amount contributed by the wealthy would most likely offset the administration costs, and potentially add income to Social Security.

PROGNOSIS

The current political and economic climates are unstable. With a Republican majority in Congress for the next two years, the prospects of any valuable overhaul of the Social Security system appear dim. However, President Obama recently appointed the Deficit Commission to review Social Security and give recommendations (Lassiter, 2010). Hopefully, the Commission will recommend changes which will prevent scenarios such as the following posted on WashingtonWatch.com (2011), a blog for personal comments about the WEP:

Arlene Smith June 16, 2009, 11:26am
I work for a school district in Texas and although I have my 40 quarters in from previous work, I will not be entitled to my full social security. I feel that this is unfair since I have had not choice as to whether I pay social security or teacher retirement. I feel that I have earned both and I think I can speak for many people in my position.
Cath June 16, 2010, 1:32am
I worked in the private sector from age 18 until 30, and paid full Social Security. Then I taught for 25 years in Texas, and retired with a teacher pension. I went back to the private sector for the last 4 years, to total 16 years under Social Security so far. I don't understand why I get the retirement benefits from my teacher years, but will only get a fraction of the benefits from my private sector years. It would have been more beneficial to choose one or the other and stick to it all my life. The interesting thing is that 12 school districts in Texas subscribe to Social Security as well as Teacher Retirement and will get no WEP. I, like most of you, only learned of all this after it was too late. A Texas teacher can get wise and move to one of the "lucky" districts, but you have to be there 5 years for this to work. Also, you would have to be able to relocate….

The complexity and difficulty of making a well-balanced public policy is evident. The WEP is an unethical and inequitable law, which adversely affects the low-income workers and benefits the wealthy. Besides repealing the WEP, viable options for a fairer distribution of Social Security benefits include the federal requirement for all workers to contribute, and a renamed "WEP style inverse" for the wealthy. President Roosevelt's original Social Security philosophy to keep the nation from having a large population of retired poor would then be upheld.

FUTURE RESEARCH

The WEP was instituted in 1983 for two main reasons: to shore-up Social Security, and to create a savings buffer for the time when the Baby Boomers retire. The savings buffer came from the annual Social Security payroll contributions income (FICA) not spent in retirement benefits each year. For the past 28 years the excess funds were transferred into the Social Security Trust Fund which has a current estimated value of over $15 trillion (Social Security Administration, 2008, July, Actuarial Note 2008.1). Because federal government agencies can 'borrow' from that account, several questions arise:

- Are there any funds left to compensate for the many Baby Boomers now retiring?
- Has the federal government been supported by those "WEPed" and the annual surplus balance of Social Security funds instead of the full population?
- Is this how the government managed, in part, to stay in business without raising taxes?

A full study of this issue and its impact on the future generations of workers and the Baby Boomers now retiring is recommended.

REFERENCES

American Federation of State, County and Municipal Employees, (2011). *Q & A: Social Security's Windfall Elimination Provision*. Retrieved February 23, 2011, from http://www.afscme.org/retirees/1721.cfm

Benson, R. F. (2010, June 6). *The Windfall Elimination Provision: How Does It Work? To Whom Does It Apply?* Retrieved February 23, 2011, from FedSmith.com website: http://www.fedsmith.com/article/2465/windfall-elimination-provision-how-does-work-whom.html

Congressional Research Service. (2009, June 9). *Congressional Research Service examines the Windfall Elimination Provision*. Retrieved February 23, 2011, from CCH website: http://hr.cch.com/news/uiss/060909a.asp

Darwin [sic]. (2011, February 2). *FICA Tax Rates 2011 – How They Work and Why They Matter*. Retrieved February 23, 2011, from http://www.darwinsfinance.com/fica-tax-rate-2009-2010/

Gale Encyclopedia of US History. (n.d.). *Social Security*. Retrieved February 23, 2011, from Answers.com website: http://www.answers.com/topic/social-security-united-states

Grobe, J. (2007, September 26). *Windfall Elimination and Your Retirement Future*. Retrieved February 23, 2011, from FedSmith.com website: http://www.fedsmith.com/article/1376/windfall-elimination-your-retirement-future.html

House Committee on Ways and Means. (n.d.). Retrieved February 23, 2011, from GovTrack.com website: http://www.govtrack.us/congress/committee.xpd?id=HSWM

How the Windfall Elimination Provision Can Affect Your Social Security Benefit. (2010, November). Retrieved February 23, 2011, from Social Security Administration website: http://www.socialsecurity.gov/retire2/wep-chart.htm

Kraft, M., & Furlong, S. (2009). *Public Policy*. Washington, D.C.: CQ Press.

Lassiter, M. (2010, August 5). *Social Security Board of Trustees: Long-Range Financing Outlook Remains Unchanged* [Press Release]. Retrieved February 23, 2011, from Social Security Administration website: http://www.socialsecurity.gov/pressoffice/pr/trustee10-pr.htm

Lingg, B. A. (2008). *Social Security Beneficiaries Affected by the Windfall Elimination Provision in 2006*. Retrieved February 23, 2011, from Social Security Administration website: http://www.socialsecurity.gov/policy/docs/ssb/v68n2/v68n2p21.html

Shelton, A. M. (2010, January 29). *Social Security: The Windfall Elimination*. Retrieved February 23, 2011, from Congressional Research Service website: http://aging.senate.gov/crs/ss11.pdf

Social Security Administration. (2010, January). *Windfall Elimination Provision* [SSA Publication No. 05-10045]. Retrieved February 23, 2011, from http://www.socialsecurity.gov/pubs/10045.html

Social Security Administration. (2008, July). Actuarial Note 2008.1. In *Unfunded Obligation and Transition Cost for the OASDI Program*. Retrieved February 23, 2011, from http://www.ssa.gov/OACT/NOTES/ran1/an2008-1.pdf.

Social Security Administration. (2011). *Social Security Amendments of 1983*. Retrieved February 23, 2011, from http://www.socialsecurity.gov/history/1983amend2.html

Warren, N. (2010). *Personal interview October 26, 2010*. Ewen: MI.

WashingtonWatch.com. (2010). *H.R. 2145, The Windfall Elimination Provision Relief Act of 2009* [Blog]. Retrieved February 23, 2011, from http://www.washingtonwatch.com/bills/show/111_HR_2145.html#usercomments

West's Encyclopedia of American Law. (n.d.). *Social Security*. Retrieved February 23, 2011, from Answers.com website: http://www.answers.com/topic/social-security-united-states

A SYSTEMATIC APPROACH TO CREATING VALUE IN THE ENTREPRENEURIAL ENTERPRISE

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The engine that drives enterprise is not thrift, but profit.
--John Maynard Keynes

ABSTRACT

This paper examines the process of creating value in an entrepreneurial enterprise and develops a systematic approach applying enterprise risk management (ERM) principles. Adding value starts with an understanding of just how value is measured. Next, break down the valuation approach into its component drivers—generally, some measure of income which is capitalized using some factor that reflects risk and opportunity. The process of maximizing opportunity and minimizing risk is then developed further using the principles of ERM developed by the Committee of Sponsoring Organizations (COSO) of the Treadway Commission. The result is a systematic approach to maximizing enterprise value.

The entrepreneurial life cycle proceeds through the steps of (1) generating ideas through creativity and innovation, (2) recognizing and evaluating opportunities, and selecting the right opportunity, (3) establishing the enterprise, (4) growing the enterprise and creating value, and (5) harvesting the value through an exit strategy. Many entrepreneurship curricula focus more on the former three stages than on the latter two. This paper addresses the latter two.

VALUING THE ENTREPRENEURIAL ENTERPRISE

To do an intelligent job of creating and harvesting value requires first and understanding of just how value is measured. Just as a scoreboard helps us determine who is winning a football or baseball game, so an understanding of just how businesses are valued will help us determine how value is created. There are three basic approaches to valuing a business:

- Asset-based valuation
  Book value (which may be modified or adjusted) means simply assets minus liabilities, or paid in equity plus retained earnings, with appropriate modifications or adjustments to the value of assets and liabilities.

- Present value of future net cash flows (PVFNCF)
  This method considers the present value of future free cash flows, plus the residual terminal value of the firm, as follows (Bygrave & Zacharakis, 2010, p. 164):

$$PV = \sum_{t=1}^{N} \frac{(FCF_t)}{(1+K)^t} + \frac{RV_N}{(1+K)^N}$$

Where

K	=	Cost of capital
FCF_t	=	Free cash flow in year t
N	=	Number of years
RVN	=	Residual value in year N

Free cash flow is equal to operating income, plus depreciation and other noncash charges, less interest, taxes on operating income, increase in net working capital, capital expenditures (replacement and growth), and principal repayments. The application of this method depends upon assumptions regarding future growth and profitability (which impacts the value of FCF*t* for each year) and risk (which impacts the cost of capital, K).

- Market-comparable valuation
  This approach replaces the large number of small assumptions about growth and risk that are required to calculate PVFNCF, with a small number of large assumptions about the same variables (typically one judgmental factor). This can take several forms, as follows:

  - Earnings capitalization
    The basic formula for the earnings capitalization method is:

    Enterprise value = Net income ÷ Capitalization rate

    Under this method, the appropriate capitalization rate is essentially the target return on investment (ROI), considering risk and uncertainty. Higher risk means a higher the capitalization rate, and a lower resulting valuation.

  - Multiple of net income
    Mathematically this approach is similar to the earnings capitalization valuation except that income is capitalized by multiplying it by price to earnings (P/E) ratio instead of dividing by a capitalization rate. The standard financial ratio is:

    Stock price = Earnings per share (EPS) x P/E ratio

    This can be extrapolated to the enterprise in total:

    Enterprise value = Net income (NI) x P/E ratio

  - Multiple of EBITDA
    The basic formula used where cash flow is of great importance, such as is often the case with smaller companies, is:

    Enterprise value = EBITDA x Multiplier

EBITDA (earnings before interest, taxes, depreciation, and amortization) is usually a better indicator of cash flow than net income. This multiplier will normally be smaller than the P/E ratio, because risks are higher in smaller ventures, and EBITDA is usually larger than net income.

In each of these formulations, the divisor or multiplier is developed judgmentally based upon comparable values for the same or similar industries, adjusted up or down based upon evaluations of risk and future growth and profitability.

MAXIMIZING INTELLECTUAL CAPITAL

Note that the asset-based valuation process considers only physical capital (PC). The other approaches also assign a value to the enterprise's intellectual capital (IC). The relationship of the two can be shown formulaically as:

Enterprise Value = PC + IC

Since PC is generally least variable, it follows that increasing the IC component is the best way to increase enterprise value. The issue for the entrepreneur seeking to enhance enterprise value is how best to enhance the value of the IC included in the enterprise.

Selling a business for more than the value of its tangible assets generally requires the following characteristics (Stowe, 2008, pp. 177-178):

- Systems that enhance opportunities and minimize risks.
- Growth potential exceeding industry averages.
- Solid customer relationships not based not merely upon a personal tie between owner and customers but between customers and the "organization".
- The ability to replace those who leave and still progress forward.

An outline for wealth creation may be summarized as follows (Stowe, 2008, p. 11):

Wealth = IC + team building + systems

Consistent with this formulation, systems can be used effectively to apply and enhance IC. In reality, the entire business must represent a system. Regardless of individual personalities, the business must have conventions, traditions, culture, a set of procedures and attitudes that transcend individual personalities. The system must be designed to insure that with employees of reasonable intelligence and skills will achieve consistent, predictable results. The system really contains many "sub-systems".

MAXIMIZING THE IMPACT OF SYSTEMS

To identify areas where systems and sub-systems can be most helpful, let us return to the generic market-comparable valuation formula for suggestions of where systems can help most:

Value = Income stream x Multiplier

In this formulation, both the typical "mom and pop" small business owner/operator (SBO) and the classic entrepreneurial venturer (EV) will seek to increase the earnings stream. What separates the EV from the SBO is that the EV will also seek to increase the multiplier, which will normally not be a concern of the SBO. In fact, most SBO's will be loathe to spend money (reducing free cash flow) to develop things (e.g., a new computerized inventory management system) which might increase the multiplier, whereas the true EV will spend this money readily to add value to the enterprise as a whole.

Increasing the income stream simply boils down to applying what Duening and Sherrill call "the critical formula of business" (Duening and Sherrill, 2005):

R – C = P   or   Revenue minus cost equals profit

Obviously, the entrepreneur increases the earnings stream by increasing revenues or decreasing costs. The entrepreneur can increase revenues through volume strategies or pricing strategies, and various approaches to minimizing costs are well documented. The entrepreneur must simply pick an appropriate strategy and apply it correctly.

Multipliers (or growth and discount factors in the analogous DFNCF approach) are based primarily on upside potential, downside risk, and the level of motivation of the buyer. Since motivation of a buyer is largely subjective, the entrepreneur should seek to implement systems which enhance growth and eliminate or mitigate risks. Enhancing growth comes naturally to the entrepreneur, but minimizing risk may require something of a paradigm shift.

APPLYING COSO PRINCIPLES

The integrated framework developed by the Committee of Sponsoring Organizations of the Treadway Commission (COSO), as outlined in their publication, *Enterprise Risk Management*, is geared toward four objectives—strategic, operations, reporting, and compliance (COSO, 2004, p. 3). COSO standards are particularly applicable for the entrepreneur who anticipates an IPO or acquisition by a publicly-traded company as an exit strategy, since compliance with the Sarbanes-Oxley Act (SOX) will become a requirement upon going public, and most companies have relied upon a COSO framework (COSO, 1992) for their SOX compliance. The COSO objective areas can be related to the functional areas of the typical enterprise, as follows:

- Strategic - Strategy and planning
- Operations - Expenditure/purchasing/procurement, Payroll/personnel/human resources, Production/processing/conversion, Revenue/sales/marketing, Investing, and Financing
- Reporting - Information technology and Financial reporting

- Compliance - Monitoring/control

Within each of these functional areas, the enterprise risk management control objectives are achieved through the operating of eight separate components (COSO, 2004, pp. 3-4):

- Internal Environment
- Objective Setting
- Event Identification
- Risk Assessment
- Risk Response
- Control Activities
- Information and Communication
- Monitoring

PRIORITIZING SYSTEMS APPLICATIONS

A comprehensive risk management system would address each of the eight components for each of the four objectives and ten functional areas. This scope of addressing all areas is perhaps a bit daunting for the entrepreneur seeking to enhance the value of his enterprise. Indeed, there is probably no company of any size that truly succeeds in every area identified. The most appropriate approach is to prioritize, addressing first those systems with the most cost-effective potential. As a starting point, we would suggest that the entrepreneur prioritize the following:

- Strategic – Strategy and planning
    - A management system (informally called "corporate culture"), including a system of written procedures, strategies, training (both formal and informal), and quality control mechanisms to insure consistency and quality in all products or services.
    - Unless the proper "tone at the top" is clearly established, the achievement of the remaining objectives may be impossible.
- Operations – Revenue/sales/marketing
    - Documented procedures that can be used to train new sales representatives succeed in their job.
    - Fully developed and tested sales/marketing aids such as pamphlets, letters, etc.
    - A feedback system so that sales personnel obtain information on customer needs and wants so that the business can keep ahead of its competition.
    - A system of marketing data, collection and interpretation that forces the marketing decision makers to stay current in identifying new potential customers and that helps those decision makers know what the competition is doing.
    - An appraisal system so that not only sales personnel are rewarded by incentive plans but that they are rewarded for bringing valuable information to the company.
- Reporting – Financial reporting
    - An effective financial reporting system is more than accounting or bookkeeping.
    - An effective financial reporting system provides the right information on a timely basis so that managers have the ability to apply that information to decision-making.
    - Substantial attention must always be paid to cash flow.
- Compliance/monitoring

- Management reviews and independent verification are necessary to ensure that the entity's goals and objectives are being properly addressed by everyone involved.

CONCLUSION

This paper outlines a basic approach for utilizing systems effectively to create and grow wealth in an entrepreneurial enterprise. The enterprise which develops truly effective systems to achieve its risk management objectives, particularly in the primary areas, should be ahead of the game with respect to value creation and growth. The remaining areas can be addressed as is most appropriate for the particular entity and industry.

REFERENCES

Bygrave, William D., and Andrew Zacharakis (editors), 2010, *The Portable MBA in Entrepreneurship (Fourth Edition)*, Hoboken, NJ, USA: John Wiley & Sons, Inc.

Committee of Sponsoring Organizations of the Treadway Commission (COSO), 1992, *Internal Control – Integrated Framework*.

Committee of Sponsoring Organizations of the Treadway Commission (COSO), 2004, *Enterprise Risk Management – Integrated Framework*.

Duening, Thomas N., and William Sherrill, 2005, *Entrepreneurism: Exploring Entrepreneurship from a Business Process Perspective (1st edition)*, Mason, OH, USA: Atomic Dog Publishing.

Stowe, Charles R. B., 2008, *How to Start Your Business With No Investors and No Debt – Your Personal Entrepreneur's Plan*, The Woodlands, TX, USA: Edpubtech Inc.

STRATEGIES IN A MULTI-POLAR WORLD: OPPORTUNITY FOR APPLICATION OF PROJECT MANAGEMENT APPROACHES

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ABSTRACT

This paper is based purely on the review of literature and indications emerging from the review. The aim of this paper is to examine literature in the area of (a) multi-polar world (b) its impact on businesses and strategy (c) applicability of project management in strategic management in order to find how project management approaches can help strategists to function better in the multi-polar world.

INTRODUCTION

This paper explores what multi-polar world means and its implications. The next section discusses implications of this new world to strategists and what challenges it is posing to strategic management. This section is followed by a section where linkages between Project management and Strategic management are explored. However, this section remained focused only on what can be learned from project management to make strategies which can be best suited to the nature of multi-polar world. This paper is based purely on review of literature and concludes with discussing a way forward in this area for further exploration.

MULTI-POLAR WORLD: MEANING AND IMPLICATIONS

In literature across various disciplines, a number of studies like Howorth (2010), McMillan (2009) and Dimirovski *et al.*, (2006) indicated that multi-polarity in the world is growing. Mostly polarity in the world was discussed with reference to the power dynamics in the international politics (Etzioni, 1965; Best & Bracken, 1995; Hanqin, 2011). The transition in world geopolitics witnessed shifts from bi-polar world to uni-polar world and then from uni-polar world to a multi-polar world (Howorth, 2010). Researchers like Wasdell (2011, p11) gave credit of multi-polarity to changing geopolitics but indicated presence of other power groups like "*multi-national corporations, global industries and financial institutions*". He argues that besides nation states these power groups are also adding to the multi-polarity. Similarly, Zoellick (2010) highlighted that the end of "*third world*" and the growing participation of developing countries in the world economy has contributed to the emergence of multi-polarity. He indicated that shifting of economic powers from industrialized nations to developing nations as the main contributors to this phenomenon. Accenture (2010) conducted a series of studies starting from 2007 on this issue. Accenture (2010, p6) defined the term "multi-polar world" as follows:

"*........the diffusion of global economic power across a widening range of regions and countries, with that diffusion accelerated by information technology, greater economic openness, and the growing size and reach of multinational companies*."

This study further indicated five dimensions of multi-polar world as (a) talent, (b) capital, (c) resources, (d) consumers and trade and (e) innovations.

Researchers (Zoellick, 2010; McMillan 2009) indicated that such world demands taking responsibility, wider use of open multilateralism, managing local and global dynamics, acceptance of the contributions of new growth engines (developing countries) of world economy and understanding the importance of emerging power centres like Asia, Africa, EU, Latin America etc in the world economy. Dimirovski *et al*. (2006) opined that current environment requires interdependent approach and innovation in mindset and technology. Zoellick (2010) indicated that the adaptation of collaborative approach in multi-polar world will have challenges and risks like maintaining intention, consistency, speed, flexibility, innovativeness and accountability.

The literature suggests that multi-polar world is a certainty and with growing globalization and technological progression, most institutions including businesses, are required to either adapt their approaches or innovate new approaches to remain efficient and effective.

MULTI-POLAR WORLD AND ITS IMPLICATIONS FOR STRATEGIC MANAGEMENT

Emergence of various power centres, political or economic, globalization (McMillan, 2009) and advancement in technologies (Dimirovski et al., 2006) contributed to the emergence of a complex and dynamic business environment. While discussing changing world arena and its impacts, Ohmae (2005, p5) stated:

"*The interconnected, interactive, global economy is a reality. It is often confusing and disorientating: It challenges both the way we see business and the way we do business*."

Further highlighting the challenges faced by new generation strategists, Ohmae (2005) mentioned that in this environment it is difficult to clearly define competitors, company, customers and their relationships as they are dynamic. Similar thoughts were expressed by D'Aveni, Dagnino and Smith (2010) who pointed that due to fast pace of change and blurring of boundaries of industries, it is hard to characterize competition and buyer-supplier power. Pearce and Tavares (2000) indicated that this changing landscape of trade and economics impacted functioning of various companies operating in different countries.

D'Aveni, Dagnino and Smith (2010) highlighted that when the environment is turbulent, complex and is changing at high pace, sustaining any competitive advantage is difficult. They observed that the growing multi-polarity, fast pace technological advancements, globalization and privatization all are adding to the new era of "*temporary advantage*". They (p1375) indicated the need of freshness in the approaches of doing and managing businesses and while discussing its consequences they mentioned:

"*Consequently, there is a need for a new dynamic theory focusing on the action/reaction level of analysis that is more revealing to these dynamics*."

Zoellick (2010) indicated that such inter-connected multi-polar world requires organizations that are practical, accountable, flexible, quick in responding and which have collaborative and open attitude.

If we summarize the work of these researchers, it clearly indicates the need of strategic tools which can handle dynamism and complexity, manage temporary competitive advantages, produce time bound results, manage risks and can be used to network with various stakeholders and deliver to their diverse objectives.

PROJECT MANAGEMENT AND ITS ASSOCIATION WITH STRATEGIC MANAGEMENT

It is interesting to observe that reviewed literature on project management and on its relations with strategic management indicates possibilities of its applications in answering concerns of multi-polarity and temporary management discussed earlier.

Project are known for their clear-cut boundaries in terms of initiation and completion, their ability to achieve specific objectives (deliverables can be product or process or results) for which it is designed and their progressive nature (Project Management Institute, 2004). In an interesting definition projects were defined as transitory and dynamic organization (Shenhar, 2001). Explaining distinctive identities of projects, Association of Project Management (2006, p1) highlighted:

> "*........a project has a clear objective and deliverables, with a defined start and end, that must be completed on time, within budget (cost) and to the agreed quality and, of course, it must deliver the agreed benefits*."

Milosevic and Srivannaboon (2006) used strategic project leadership framework for exploring alignment between these two areas of management. They identified that besides supporting; project management has much bigger role to play as they have influence on business strategy. While reviewing the discipline of project management, Yiu (2008) observed that it was developed alongside with the systems theory and therefore indicates linkages with strategic management. In further analysis, Yiu (2008) stressed on the ability of project management in handling dynamism, temporary activities, and networks of multiple organisations.

Srivannaboon (2006) explained that research in the area of project management and strategic management covers three main streams where researchers cover: (a) issues related to how strategic management can affect project management (b) issues related to how project management influence strategic management and (c) the perspective of mutual influence. Grundy (1998) explored these areas through many tools and techniques from both disciplines and stressed about bright prospect of cross-fertilization of these two disciplines.

This paper intends to remain focused only on what can be learned from project management to make strategies which can best suited to the nature of multi-polar world.

While canvassing the wider applicability of project management in formulating strategies, Cicmil (1997) stressed that project management ensures optimal utilization of scares resources, competitive advantage and integration of interests of various stakeholders which are critical for any strategist. Yiu (2008) in his review of applicability of project management clearly highlighted that the popularity of project management in engineering or technology based sectors was because it was able to manage in a dynamic and complex environment where general management fell short.

Van Der Merwe (2002), argued that more emphasis on 'project' aspect than on 'management or behavioural' aspect by the practitioners of project management was a reason why association of project management with strategic management remained a less explored area. He also indicated possibilities of applicability of project management principals during strategy implementation. Similar were findings of Longman and Mullins (2004) and Dietrich and Lehtonen (2005). These researchers attempted to convince that discipline of strategic management can benefit a lot from project management approaches especially during execution of strategy. McElroy (1996) determines that projects are a good mean to implement strategic change in an organization.

While reviewing literature it was observed that in most research studies application of project management was explored at functional and operational level of strategies. However, the numbers were negligible when it came to application of project management (PM) at business and corporate level strategies. It is worth mentioning that business level strategy deals with issues related to positioning in market and competitive advantage while corporate level strategies looks at coherence in overall strategies of a multi-business firm (Gamble and Thompson, 2011). In order to address issues related to multi-polarity and 'temporary advantage' there is need for further exploration of application of project management approaches at all these levels. Without pre-emptying what is covered in the next section it is important to acknowledge the existence of a number of PM tools which are focused on issues of planning and control phases of any project and fundamental in corporate strategic management. The phases and their respective stages embodied in the project-life cycle have a potential to improve significantly the traditional approaches of dealing with strategic management in a multi-polar world.

A WAY FORWARD: POSSIBLE AREAS OF STRATEGIC MANAGEMENT FOR APPLICATION OF PROJECT MANAGEMENT APPROACHES

Gummesson (1974) looked at project management as a mean to handle change in order to remain effective and efficient in changing business environment. Years after, Mullaly and Thomas (2009), explored correlation between dynamic "fit" and construct of "value direction". They identified that intersection of these two constructs from two different disciplines gives organization an understanding of today (through fit) and route of tomorrow (through construct of value direction).

Gummesson (1974) and Mullaly and Thomas's (2009) work could be qualified by advancing an argument within the broader theme of this proposal that contemporary thinking in strategic management in a multi-polar world could be strongly influenced or enhanced by project management fundamentals. There are strong indications to suggest that strategy could be effectively implemented through projects.

According to Gray and Larson (2006) two major dimensions of strategic management are: (i) responding to change in the external environment and allocating scarce resources of the organisation to improve its competitive position. Constant scanning of the external environment for changes, they argue is a major requirement for survival in a dynamic competitive environment; (ii) internal responses to new action programmes aimed at enhancing the competitive position of the organisation. The nature of the response depends on the type of business, environment volatility, competition, and the organisational culture.

Furthermore, Gray and Larson (2006) argued that strategic management provides the theme and focus of the future direction of the organisation. It supports consistency of action at every level of the organisation. It encourages integration because effort and resources are committed to common goals and strategies.

Studies (Accenture, 2010; Zoellick, 2010) indicate that businesses in multi-polar world are invariably part of local, regional and global system and thus get influenced by dynamics in these systems.

In the light of the report by Accenture (2010) and Gray and Larson (2006), following are the main questions in-front of strategists in the multi-polar world:

a) How to remain aware with the changes in local, regional and global business environment and their impact on business?
b) How to keep strategies aligned with continuously changing local, regional and global business environment?
c) How to network with various stakeholders in local, regional and global system?
d) How to manage local, regional and global resources for the competitive advantage?
e) How to manage risks which arises because being a part of local, regional and global dynamics at the same time?
f) How to ensure that internal organization understands the dynamics of being part of multi-polar world?
g) How to align internal organization culture with the dynamics of multi-polar world?

On prima facie, it seems that project management can contribute to address (a) the complexity of functioning in multi-polar world (b) challenges of temporary advantage (c) dynamism. If management at local, regional and global levels can be taken as a separate project, principles of project portfolio can be handy in managing businesses at all these levels. Issues of temporary advantages can probably be addressed through project management approaches where one project based on one set of advantage can followed by another project based on another set of advantage. Each project has a limited life span (Association of Project Management, 2006). This characteristic gives an opportunity for introducing flexibility in the duration of their lifespan in order to manage issues of dynamism. Moreover, the components of strategic management in a multi-polar world should be closely interlinked, and all should direct toward the future success of the organisation. Strategic management in this complex world requires strong links among *mission, goals, objectives, strategy and implementation* (Gray and Larson 2006, Rwelamila 2007). The *mission* gives the general purpose of the organisation. *Goals* give global targets within the mission. Objectives give specific targets to goals. Objectives give rise to formulation of strategies to reach objectives. Finally, strategies require *actions* and *tasks* to be implemented. In most cases the actions to be taken represent projects, which could be grouped in programmes or portfolios.

This paper is based purely on review of literature, observations made in practice and indications emerging from them. There is a need for several field research studies to explore answers of all the above mentioned questions in the light of project management approaches as a tool in managing strategy.

REFERENCES

Accenture (2010). *From global connection to global orchestration: Future business models for high performance where technology and the multi-polar world meet.* Retrieved February 24, 2011, from https://microsite.accenture.com/NonSecureSiteCollectionDocuments/By_Subject/Management_Consulting/PDF/Accenture_Multipolar_World_Research_Report_2010.pdf.

Association of Project Management (2006). *APM Body of Knowledge* (5th ed.), Association of Project Management, UK.

Cicmil, Svetlna F.K. (1997). Critical factors of effective project management. *The TQM Magazine*, 9(6), 390-396.

Cooper, T., Purdy, M., & Foster, M. (2010). A portfolio strategy for locating operations in the new "multi-polar world". *Strategy and Leadership*, 38 (4), pp 42-49.

D'aveni, R. A., Daginino, G.B. & Smith,K.G. (2010). The age of temporary advantage. *Strategic Management Journal*, 31(13), 1371-1385.

Dietrich, P. & Lehtoen, P. (2005). Successful management of strategic intentions through multiple projects-reflections from empirical study. *International Journal of Project Management*, 23(5), 386-391.

Dimirovski, Georgi M., Dinibutun, A. Talha, Kile, F., Neck, R., Stahre, J., Vlacic & Ljubisa B. (2006). Control system approaches for sustainable development and instability management in the globalization age, *Annual Reviews in Control*, 30(1), 103–115.

Etzioni, E. (1965). Strategic Models for a De-Polarizing World Source. *Journal of Peace Research*, 2(2), 136-146.

Gamble, J.E. & Thompson, A.A. (2011). *Essentials of strategic management: The quest for competitive advantage (Second Edition)*, New York: McGraw-Hill/Irwin.

Gray, C. F. & Larson, E. W. (2006). *Project management: The managerial process*, (*Third Edition)*, Singapore: McGraw-Hill International Edition.

Grundy, T. (1998). Strategy implementation and project management. *International Journal of Project Management*, 16(1), 43-50.

Gummesson, E. (1974). Organizing for strategic management: A conceptual model. *Long Range Planning*, 7(2), 13-19.

Hanqin, Xue (2011). Meaningful dialogue through a common discourse: law and values in a multi-polar World. *Asian Journal of International Law*, 1(1), 13–19.

Howorth. J (2010). The EU as a Global Actor: Grand, Strategy for a Global Grand Bargain? *Journal of Common Market studies*, 48(3), 455–474.

Longman, A. & Mullins, J. (2004). Project management: key tool for implementing strategy. *Journal of Business Strategy*, 25(5), 54-60.

McElroy, W. (1996). Implementing strategic change through projects. *International Journal of Project Management*, 14(6), 325-329.

McMillan, C. (2009). The great game: How globalization changes the managerial mindset. *Ivey Business Journal Online*, 1. Retrieved February 15, 2011, from ABI/INFORM Global. (Document ID: 1825234881).

Milosevic, D. Z. & Srivannaboon, S. (2006). A theoretical framework for aligning project management with business strategy. *Project Management Journal*, 37(3), 98-110.

Mullaly, M. & Thomas, J.L. (2009). Exploring the dynamic value and fit: Insights from project management. *Project Management Journal*, 40(1),124-135.

Ohmae, K. (2005). *The next global stage: Challenges and opportunities in our borderless world (First Edition)*. Singapore: Pearson Education, Inc., publishing as Wharton school publishing.

Pearce, R., & Tavares A. T. (2000). Emerging trading blocs and their impact on the strategic evolution of multinationals, *Managerial Finance*. 26(1), 26-31.

Project Management Institute (2004). *A Guide to The Project Management Body of Knowledge: PMBOK Guide* (3rd ed.). USA: Project Management Institute.

Rwelamila, P. M. D. (2007). Project Management Competence in Public Sector Infrastructure Organisations, *Construction Management and Economics Journal*, 25(1), 55 – 66.

Shenhar, A.J. (2001). Contingent management in temporary, dynamic organizations: The comparative analysis of projects. *Journal of High Technology Management Research,* 12(2), 239–271.

Srivannaboon, S. (2006). Linking project management with business strategy. *Project Management Journal*, 37(5), 88-96.

Van Der Merwe, A.P. (2002). Project Management and business development: integrating strategy, structure, processes and projects. *International Journal of Project Management*, 20(5), 401-411.

Wasdell, D. (2011). The dynamics of climate change: A case study in organizational learning. *The Learning Organization*, 18(1), 10-20.

Yiu, Chung Yim (2008). A theoretical framework for aligning project management with business strategy. *Facilities*, 26(13/14), 501-511.

Zoellick, Robert B. (2010). The end of the third world: the case for modernizing multilateralism. *The International Economy*, 24(2), 40-43.

Zoellick, Robert B. (2010). The end of the third world? Modernizing multilateralism for a multipolar world. Law and Business Review of the Americas, 16(3), 371-382.

THE ADAPTATION OF NON-PROFIT ORGANIZATIONS SERVING MEXICO AND CENTRAL AMERICA IN A HAZZARDOUS SERVICE ENVIRONMENT

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ABSTRACT

The cartel related violence in Mexico has made news headlines around the world in recent years and the violence is spreading into Central America. San Pedro Sula, Honduras is the second most deadly city in the Americas behind Ciudad Juarez. The negative impacts on foreign direct investment and tourism are self-evident; however, the popular press and academic literature have yet to examine the impact on non-profit organizations providing services in Mexico and Central America. There are estimated to be over 10,000 non-profit organizations serving the tens of millions of poor to extremely poor living between the Rio Grande and the Panama Canal. Many of the poorest and most needy individuals are finding that the food, healthcare, and education provided by foreign non-profit organizations are disappearing. These non-profits also employee people in the region.

The US side of the Rio Grande Valley is home to many charity organizations serving Mexico. These organizations face numerous obstacles and many are likely to cease operations. While the global economic situation cannot be discounted, in many cases a significant portion of the funding is tied to higher income individuals who engaged in philanthropic activities. For example, medical professional who travel to rural communities to provide free healthcare or wealthy retirees that go to build clinics or schools. These individuals often become continual donors and assist in obtaining donations from others. The rise in the violence, which has included the death of at least one missionary and a serious gunshot wound to the 9 year old daughter of another in 2010, has almost eliminated these activities. Even if an organization has funding, there are human resource issues. Even persons with decades of experience in the region are deciding not to travel south of the US border. We examine the dilemma these organizations face and the strategic repositioning some are undertaking to adapt to the environmental uncertainty.

THE US NATIONAL DEBT: ETHICAL ASPECTS OF TAX INCREASES VERSUS SPENDING CUTS

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ABSTRACT

In December 2007 the US entered a severe recession. The sub-prime mortgage problem led to falling values of mortgage-backed securities, threatening banks and other financial institutions which held these assets. The contagion quickly spread to the rest of the economy around the world by summer of 2008. Congress and the Federal Reserve responded with massive stimulus and liquidity, as did most other industrial nations.

Since June 2009 US economic growth has resumed, although unemployment remains high and the national debt has reached record levels. This paper will focus on the national debt and its projected trajectory over the next 20 years. It appears that under current economic policy the debt will become unsustainable, interest costs will displace other essential government spending, and the dollar as a world reserve currency will be in doubt. This projection calls for significant and early policy changes. This important issue goes beyond ordinary policy choices to a fundamental ethical dilemma that will affect future generations.

INTRODUCTION

As shown in Figure 1, federal tax revenue has remained relatively stable at 18% of GDP since 1971. Over the years tax rate decreases led to increased growth and revenues, while tax increases were eventually followed by slower growth of the tax base. One exception was in the late 1990s, when excessive economic growth associated with the internet expansion and advances in technology increased tax revenues enough to turn the federal budget to a surplus for four consecutive years. Otherwise the last year of federal budget surplus was 1969, when Vietnam War spending was eclipsed by a temporary 10% income tax surcharge. A notably different exception is the current cycle, when the recent recession and slow recovery reduced tax revenues to 14.9% in FY 2010. Table 1 shows trends in federal revenues and spending since 1971 as a percentage of GDP.

Also shown in Figure 1, federal spending (outlays) has been relatively stable at 21% of GDP since 1971. Federal spending tends to increase during recessions because of both automatic fiscal policy (progressive income tax rates, unemployment compensation), and due to discretionary fiscal policy. Around the recession of 1980-82 this effect increased outlays to nearly 24% of GDP. In the current business cycle, federal spending reached 23.8% of GDP for FY 2010, largely due to the stimulus spending intended to stabilize the economy and encourage investment and job creation. In addition the Troubled Asset Reduction Plan (TARP) was focused on buying troubled financial assets to shore us financial institutions.

Figure 1

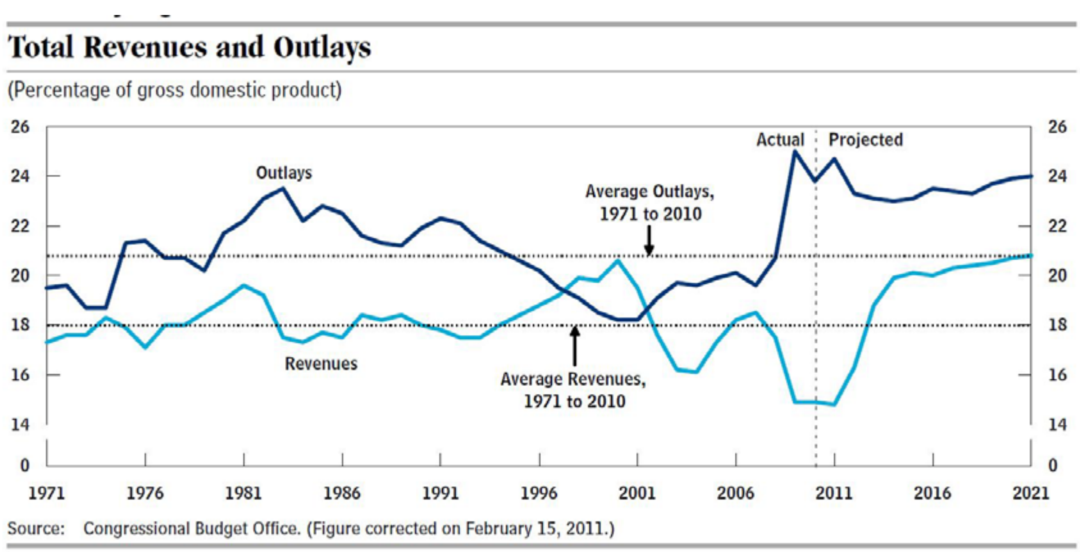
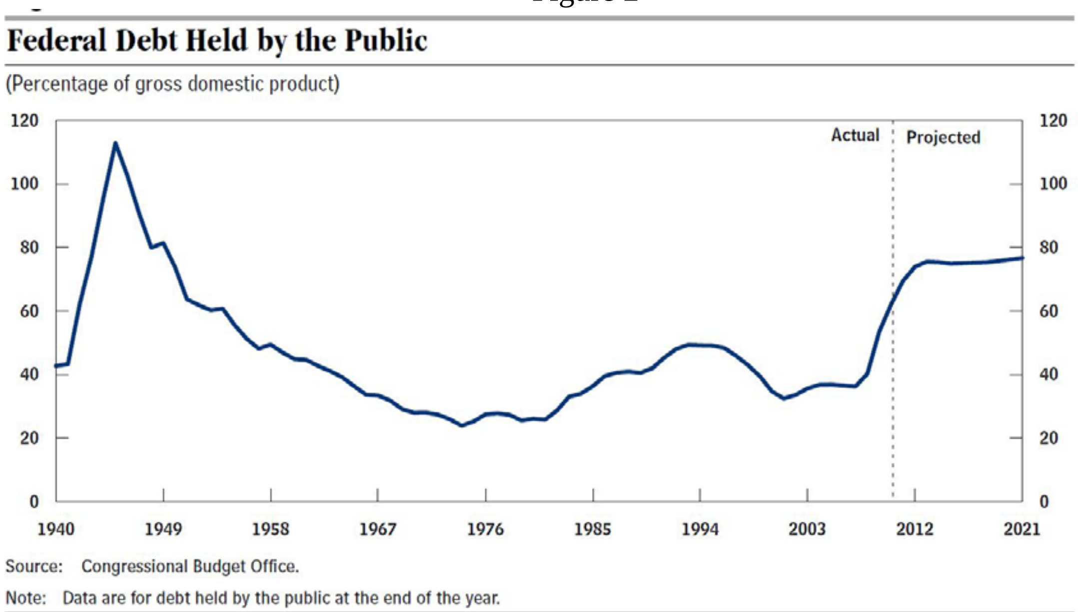


Figure 2



In almost every year since World War II, the US federal budget has been in deficit, so the national debt has been increasing. In FY 2010 the total federal deficit (off-budget and on-budget) reached $1.294 trillion, or 8.9% of GDP. In 1980 the Federal debt in the hands of the public was 26.1% of GDP. By the end of FY 2010 the debt had reached $9.018 trillion or 62.1% of GDP. Figure 2 shows this trend since 1940. This CBO projection is based on current policy. However many observers expect Congress will be forced to make certain policy changes, such as reversing the drastic reduction in payments to doctors under Medicare. With these changes, the projected debt to GDP ratio will approach 100% by 2021.

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Fiscal Year		2010	2011	2012	2013	2014	2015	2016	2012-21
Total Revenues	2162	2228	2555	3090	3442	3651	3832	39084	
Total Outlays		3456	3708	3655	3794	3975	4202	4491	46055
Surplus/deficit	-1294	-1480	-1100	-704	-533	-551	-659	-6971	
As a percentage of GDP									
Total Revenues	14.9	14.8	16.3	18.8	19.9	20.1	20.0	19.9	
Total Outlays		23.8	24.7	23.3	23.1	23.0	23.1	23.5	23.5
Surplus/deficit	-8.9	-9.8	-7.0	-4.3	-3.1	-3.0	-3.4	-3.6	
Debt held by Public		62.1	69.4	73.9	75.5	75.3	74.9	75.0	n/a

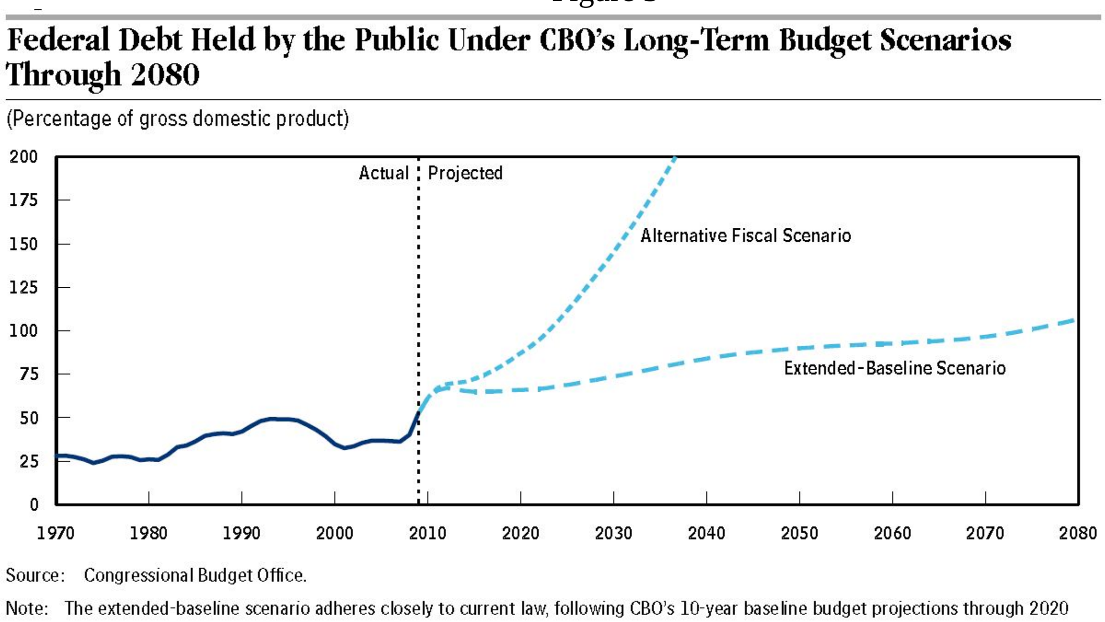
Table 1

CBO Baseline Budget Outlook (Billions of dollars)

Debt peaked at 116% of GDP during World War II, and then it steadily decreased until 2007, when it reached 30% of GDP. Since 2007 debt as a percentage of GDP has more than doubled to 62.1% of GDP, and under current fiscal policy it is projected to continue rising. Figure 2 shows two projections from the Congressional Budget Office. First, their Baseline scenario assumes continuation of current fiscal policy. However "current policy" includes sharp decreases in Medicare payments for doctors, increases in income taxes in 2013, and a growing burden due to the Alternative Minimum Tax. Most political observers expect these "current policy" items to be fixed. Second, CBO has adjusted their projections assuming these fixes are made ("Continuation of certain policies"), and that analysis shows federal debt rising to 98% of GDP by 2021.

The CBO also provides a long term projection of debt under various policy options. Figure 3 shows the Baseline scenario (current policy) extended until 2080, when debt-to-GDP would approach 80%. Assuming certain fixes to current policy ("Alternative fiscal scenario"), the debt-to-GDP ratio would reach 200% in 2040. Reinhart and Rogoff show based of the study of financial crises since 1800 that debt-to-GDP ratios of 90% become unsustainable and limit economic growth. (See Reinhart and Rogoff, 2009).

Figure 3



RISKS OF CREDIT CRISES AND DEFAULT

The run-up to the US financial crisis of 2008 was characterized by a growing current account deficit and a 100% increase in nominal house prices and mortgage debt compared to the average of 1890-1990. (See Shiller, 2005). Some have argued that the Federal Reserve should have noted and stopped this bubble in house prices.

Reinhart and Rogoff have studied sovereign debt and banking crises in sixty-seven countries over almost eight centuries. They demonstrate that such crises generally lead to a sudden decline in a nation's currency exchange rate and a less access to international capital markets. Only a bailout and significant policy changes can restore normalcy. The US, though, is in a unique situation, as the dollar is considered a world reserve currency. Many commodities around the world are priced in dollars. So far the US has been spared the fate of other large debtor nations in crisis, but there is no guarantee this dispensation will last. In recent years some world leaders have called for the use of Special Drawing Rights or euros as another world reserve currency. As the world's largest debtor, the US already is dependent on China and other foreign investors to buy its debt. If they were to sharply reduce their purchases of US debt, US interest rates could rise sharply, and calls for alternatives to the dollar would mount. The result would be a sharp increase in US federal interest expense, making the budget deficit larger and forcing serious policy choices. (See Reinhart and Rogoff, 2009).

PROJECTIONS OF FEDERAL REVENUES AND SPENDING

Figure 4 shows the CBO projections of federal outlays by category through 2021. Note that interest expense, still relatively small, is projected to almost double by 2021. This projection assumes continued low interest rates and a growing debt. It could be argued that the interest rate assumptions are extremely optimistic with dire consequences. If the status of the dollar as a reserve currency is threatened, we would see a "perfect storm" of rising rates and rising debt, which would bring net interest up to a much larger percentage of GDP. This outcome would force either cuts in other spending or additional tax revenue.

Figure 4

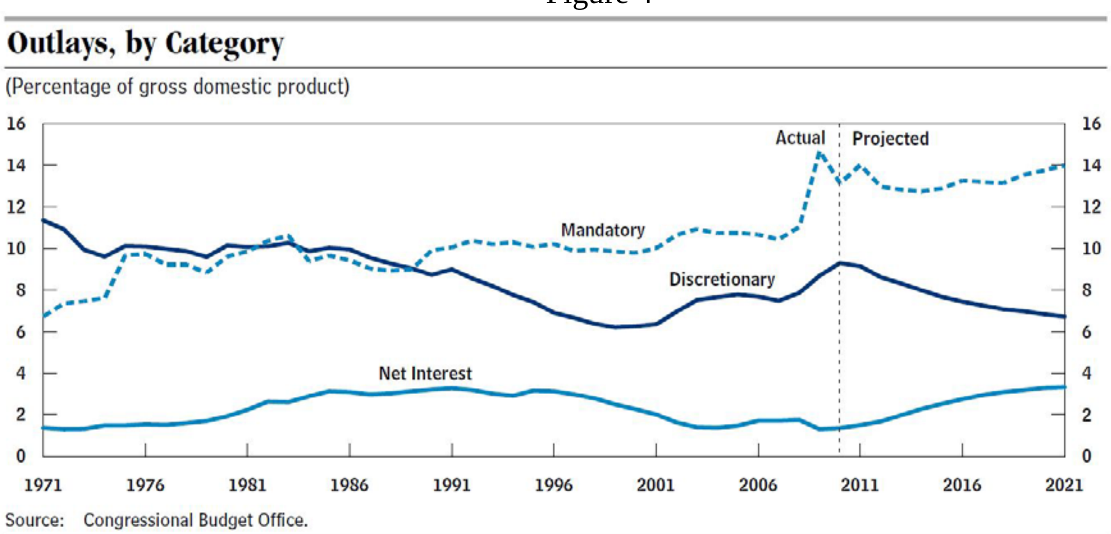


Figure 5 shows projected federal revenues by source through 2021. Individual income tax revenue is projected to rise as the tax cuts of 2001 and 2003 are slated to expire in 2013.

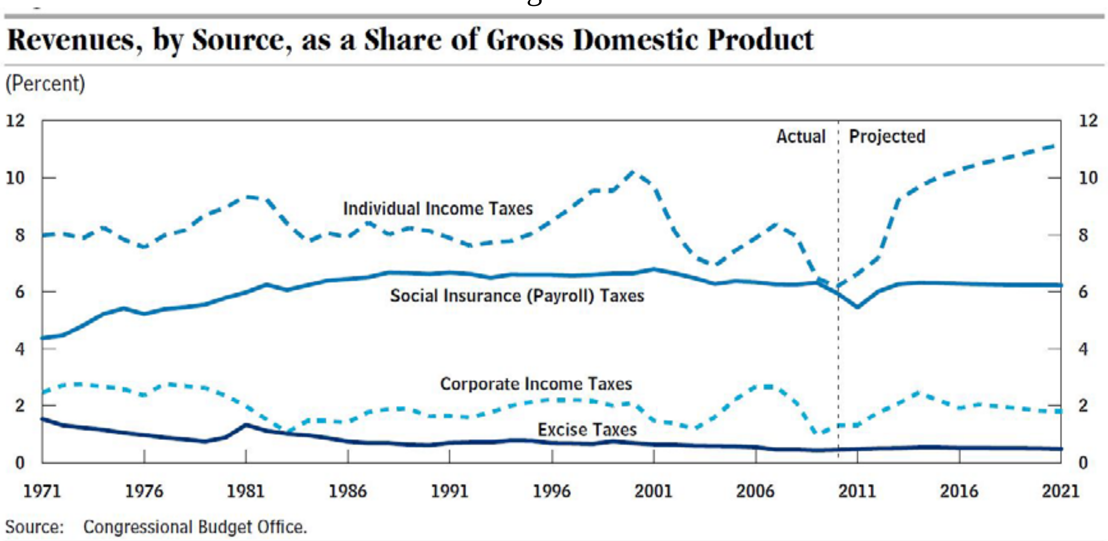
SOLUTION OF THE PROBLEM

The solution can only be increased tax revenues, reduced spending, or some combination of these two measures. Increased tax revenues offer limited benefit because at some point they reduce final demand and temper or retard economic growth. The highest marginal income tax rate is set to increase to 39.6% in 2013. The corporate income tax rate is 35%, one of the highest in the industrial world. Some have called for a value-added tax (VAT), as is used in some European nations, but there seems to be strong opposition.

Spending decreases must be a large part of the solution. Some have argued that 85% of the deficit gap should be closed by spending cuts. Since 2009 federal discretionary spending increased by 4% of GDP. Rolling back that recent increase would contribute to a solution without disturbing long held benefits or services. However more initiatives will be needed to bring the deficits and debt into a sustainable range in the near term. Senator Rand Paul of Tennessee has introduced a bill to cut $500 billion of government spending in one year by rolling back many departmental budgets to 2008 levels. (Paul,2011).

In addition there are other fiscal issues that will limit future policy options. Medicaid, Medicare, and Social Security are facing huge deficits soon after 2020, and those deficits do not show up in the data through 2020 presented here. Those deficits will require another set of decisions on benefit cuts, tax revenue increases, or some combination.

Figure 5



Many states also are facing current budget problems. Some are constrained by their constitutions to balance their annual budgets, and others have limits on the debt they can issue. Most states will be under severe pressure, and any effort of the federal government to assist them would exacerbate federal fiscal woes.

The appropriate mix of tax increases and spending cuts is an important issue. Some observers tend to favor an equal mix of the two adjustments. However a study of past financial crises shows that excessive tax increases limit growth and prevent solving the problem. Nations that have relied mostly on spending cuts to resolve a financial crisis have fared much better, with quicker resolution and better outcomes in terms of incomes, output, and employment. For example, analysts at the American Enterprise Institute have studied the fiscal consolidations required in 21 OECD nations over the past 37 years. They found that the typical unsuccessful consolidation consisted of 53% tax increases and 47% spending cuts. The typical successful consolidation averaged 85% spending cuts and 15% tax increases. Notable successful efforts were in Finland in 1996-98 and the United Kingdom in 1997. (See Biggs, 2010).

ETHICAL ISSUES

The ethics of spending are important as the nation decides how government policy should assist various groups. Recent policy changes in health insurance reform are directed at reducing the number or residents without health insurance. Of course the disabled, children, and other special populations require public support.

The ethics of tax increases affect the distribution of income and the potential growth rate of income. The US income tax system is highly progressive, while payroll taxes (Social Security and Medicaid) and sales taxes are regressive. Increased effective tax rates discourage work and risk-taking, and these effects can eventually reduce tax revenue and increase debt. The globalization of the world economy has caused some US firms to operate off-shore or to arrange their investment and employment to avoid high US taxes. This means that tax increases may not be a viable option beyond some point, and policy makers should realize the limits of this solution.

A very important ethical issue with the growing national debt is that future generations will bear the burden of interest and repayment. Excessive levels of debt could limit their ability to enjoy economic growth and maintain a competitive economy. In addition, if a true credit crisis were to face the US and the value of the dollar as a world reserve currency were threatened, the adverse consequences would be more severe than any American alive today has seen.

POLICY PRESCRIPTIONS

Federal spending should be limited to 22% of GDP, which is slightly above the average since 1971. Federal tax revenues should be limited to 18% of GDP, the average since 1971.

Debt held by the public should be held down to 40% of GDP, the average since 1971. A precedent for these moves is the Gramm-Latta Act of 1985, which achieved success for several years in reconciling federal spending and revenues. Periodically Congress has adopted “pay as you go” rules to achieve the same purpose, but policy has recently deviated widely from that standard.

Failure to make significant progress on these goals will increase the risk of a major financial crisis, encourage replacement of the dollar as a world reserve currency, and make it even more difficult for government to assist the weakest members of society.

REFERENCES

Akerlof, George and Robert Shiller, 2009, *Animal Spirits*, Princeton University Press, Princeton, New Jersey.

Becker, Gary A and Richard A. Posner, 2009. *Uncommon Sense*, University of Chicago Press, Chicago.

Biggs, Andrew G, Kevin Hassett, and Matt Jensen, “The Right Way to Balance the Budget”, Wall Street Journal, Opinion, December 29, 2010.

Brooks, David, “To Make Budget Cuts palatable, Everyone Must Suffer”, Houston Chronicle, February 23, 2011

Bullard, James, 2010, “The European Debt Crisis: Lessons for the US”, The Regional Economist, Federal Reserve Bank of St. Louis, October 2010.

Congressional Budget Office, 2011, *The Budget and Economic Outlook: Fiscal Years 2011 to 2021*, Congress of the United States, January 2011.

Congressional Budget Office (2010), “The Long-Term Budget Outlook”, Washington, August 2010. www.cbo.gov/doc.cfm?index=11579&zzz=40884

Financial Crisis Inquiry Commission, *Final Report of the National Commission on the Causes of the Financial and Economic Crisis in the United States*, Washington, DC, January 2011.

Paul, Rand, 2011, “A Modest $500 Billion Proposal”, The Wall Street Journal, February 7, 2011.

Posner, Richard A., 2010, *The Crisis of Capitalist Democracy*, Harvard University Press, Cambridge, Mass.

Reinhart, Carmen M. and Kenneth S. Rogoff, 2009, *This Time is Different*, Princeton University Press, Princeton.

Shiller, Robert, 2005, Irrational Exuberance, 2d edition, Princeton University Press, Princeton.

Shiller, Robert J., 2008. *The Subprime Solution*, Princeton University Press, Princeton, NJ.

Taylor, John B. and John C. Williams, 2009a. “A Black Swan in the Money Market”, American Economic Journal: Macroeconomics, 1, no. 1: 58-83.

Taylor, John B., 2009b. *Getting Off Track*, Hoover Institution Press, Stanford, California.

QUESTIONS CONCERNING THE ETHICAL PRACTICES IN MANAGING A HOMEOWNERS' ASSOCIATION: A CASE STUDY

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ABSTRACT

Developers of subdivisions are using homeowners' associations to achieve their own objectives at the expense of the buyers of homes in the subdivisions. The homeowners' associations are sold to the potential buyers as a means to protect and improve the quality of the subdivision in the future. The objective of this paper is explore how one homeowners' association has been used by the developer, a management firm and related parties to advance their own interests to the detriment of the homeowners. The case study of this association shows how an organization designed to help the homeowners has been manipulated by the developer and his friends in an unethical manner.

Subdivision developers have found it profitable to set up owners' associations to take care of all maintenance, repair and improvements for the common property of a specific subdivision. Management companies have contracted with the developers to meet the interests of the subdivision developers. While the developer is selling houses and lots within the subdivision, buyers are being assured that the new owners will control an association that will insure the future maintenance and quality of the neighborhood. Unfortunately, this is often not the case. The management firm, working with the developer, controls and uses the association for their common interests, which is being paid for by the fees charged to the new owners. The developer passes some his costs off to the new owners without having to raise the selling price of the property and keeps control of the whole subdivision until all properties within the subdivision have been sold. The management firm is paid a substantial fee annually for a minimum amount of effort, which could continue for many years. The cozy arrangement between the developer and the management company is done at the expense of and to the detriment of the property owners in the subdivision.

The purpose of this paper is to explore in detail how the arrangements between the developer and a management company are working to the detriment of owners in one subdivision in south Texas. The paper raises questions about the ethics of the practices of the management firm running the homeowners' association. Property owners were sold their homes with the assurance that a homeowners association controlled by the property owners would work in their best interest to maintain and improve the quality of the neighborhood. These assurances were made by a wide variety of real estate salesmen who cannot be held accountable. The homeowners' association set up by the developer was to be controlled by the developer until a set percentage of the lots were sold and then turned over to the property holders. Each lot in the subdivision is assessed a yearly fee to run the association. The developer used the association to cover some of his costs for development and maintenance in the first years of the subdivision, which appears to be common practice. In this case, the association was run by a real estate agent working for the developer. No records appear to be available for these years and all questions are avoided. After several years, the homeowners' complaints reached a level where the developer had to change to a professional management firm. The firm did their job in assuring the homeowners that their association was now in good hands and would work in their interest. The past was forgotten and the developer was not held accountable. Thus, the arrangement was made which takes care of the developer's and the management firm's interests first and uses the owners. This paper will show how this arrangement is scamming the homeowners long after the developer should be out of the picture.

The developer contracted with a management firm in San Antonio, Texas, which we will refer to as XComm, to manage the subdivision in McAllen, Texas. XComm manages a number of associations and opened an office in McAllen in the same complex where the developer is located. The management contract awarded to XComm gives them the "responsibility for enforcing the Association's governing documents and/or its rules and regulations." All the documents, rules and regulations were written or approved by the developer. The owners get hooked when they sign a statement at the closing of the home they have purchased that they agree to belong to the association. They also agree to the deed restrictions on their property at the time of purchase. The package is sold to them as "restrictions exist to maximize the property value and beauty of your neighborhood." These rules, regulations and restrictions require the owners of the property to be permanent members of the association and liable for the annual dues. Failure to comply with the rules, regulations and restrictions or to pay amounts due permits the association to take action against the property holder, which can lead to foreclosure on the property. Thus the buyers have given up significant power to the association, which is controlled by the developer and run by his handpicked management firm. The owners did not draft the rules and most know very little about them. They merely pay the association dues when asked and pay no attention. The situation gives the developer and the management company the ability to do as they please.

There is a natural reaction to dismiss the statement that foreclosure on the property based on nonpayment of association dues could take place because we think it will never happen. In fact, XComm is actively feeding information to law firms foreclosing on many properties in associations they manage. The association has entered into a contract with a law firm agreeing to pay the firm $250 for the demand letter stage, $250 for the lien stage, $1,000 for the lawsuit stage, $500 for the judgment stage and $750 for the foreclosure stage. In September 2010 XComm reported that 20% of the members were delinquent and the law firm had taken at least some action against 83% of this group. In addition, the association already owned two homes in the subdivision due to foreclosures. These numbers raise questions about the differences between the stated objectives of the association and the actions taken in the name of the association by other parties. As a member of the association, my question was why this association would go to all the effort and expense to foreclose on a house in the subdivision that owed dues to the association when the owners of this home were under water. For example it was disclosed that the current market value of a property in the subdivision was about $250,000 and the mortgage on the home was over $275,000. The owners had become delinquent on many of their payments including association dues. The association reacted by charging the owners penalties and interest, increasing their debt. Then XComm, acting for the association, gave the law firm in San Antonio information to start the collection process, which substantially raises the amount the owners owe. The management firm does very little while the association is paying a legal firm in San Antonio to collect money they will never get. In this example the association planned to continue paying the legal costs until they had legal title to the property, which would still have a $275,000+ mortgage on it. Then the association would either have to pay the mortgage or sell the home, giving all the funds received from the sale to the mortgagee. Every step of the process costs the association additional funds, and the benefits go to the attorney and the mortgagee. Letters from the attorneys dated June 2, 2010, indicate that the attorneys had bought two properties in the subdivision for the association. The mortgage balance on the first property purchased was $295,264.00 as of December 28, 2007. The mortgage balance on the second property was $165,000.00 as of June 8, 2007. Add to these balances the interest due, late fees, penalties, attorney fees and collection fees, and the balance is more than the current market value of the property. As the attorney's letter states, "the question now becomes what the Association will do with the property." Why would an association managed by a professional firm knowingly plan to get into this situation? The question of independence between XComm and the attorney and/or the mortgagee must be asked. There are ethical, if not legal, considerations. What benefit did the association and its members obtain from forcing a neighbor out of their home? Is the association being used to benefit individuals or firms that are not part of the association?

The example discussed is not an isolated issue. The number of homes that have quietly exchanged ownership in the subdivision is surprising. Verifying the actual reason for the sale is difficult, but a part of the reason is pressure from the association. One home that was having problems was taken off the market and months later ended up in the hands of an attorney who is very friendly with XComm and the developer. The attorney immediately became a director of the association and strongly supports the status quo. What appears to be happening is a strong network of "you scratch my back and I'll scratch yours." While the owners think of the association as a means to take care of the lawns, gardens and walls shared by all subdivision owners, this association is much more. Behind the scenes it appears the association is being used for the benefit of the developer, lending institutions, selected individuals and the management firm.

On the surface, the management firm portrays their efforts as improvements to the neighborhood. These efforts include driving through the subdivision once a week looking for violations, sending form letters to homeowners concerning violations, collecting dues, hiring a lawn service, turning information over to attorneys, keeping the books, answering the phone at their office and calling an annual meeting. The management firm does not get involved in the solution of problems facing the homeowners other than offering some general advice. Problems such a drug house, extreme noise keeping people awake all night and strong sewage smells are quickly passed on to someone else. XComm employees do not make calls at a home or on the phone to help the owners with problems or see what can be done to improve the subdivision. The practice is to send a legal notice and turn it over to an attorney.

As long as the grass gets mowed and the neighborhood does not fall apart, the management firm can continue to do very little. Owners do not pay much attention to the few people with problems who are forced to leave. The management firm has an answer for owners' concerns. The problems common to everyone in the subdivision are being handled by someone else. The noise problem was being taken care of by the attorney/director who was collecting money to cover the costs. If you knew of a drug problem, you should call the police. If the street lights do not work or you smell sewage, call the city. When the park which was a selling point for the subdivision remained a vacant lot for several years, the association could not do anything about it. Requests by homeowners to have the association write a letter asking for action were dismissed. A problem did arise, however, when the association started running out of funds. By the time the management firm paid all their own fees and other management costs, there was no money to mow the common areas. XComm's solution was to ask owners to volunteer to do the work. Many people tried to help and a few took on the major burden of doing the mowing. Instead of praising these efforts by individual owners, the management firm tried to ignore it. How could an association that collects dues mainly to take care of the common grounds not have money to pay for mowing?

The financial records of the association are kept at the San Antonio offices of XComm. The owners as members of the association have no access to the financial records except through the directors of the association. The three directors have access only by making specific requests through the subdivision's XComm manager, who in turn makes the request to her boss in San Antonio. The response to requests for information takes anywhere from weeks to months to get and may have nothing to do with what was requested. The normal financial disclosure to the members of the association is a one-page report showing budgeted numbers versus actual costs for only part of the past year. Since dues are the major source of revenue for the association and are collected once a year, these financial disclosures indicate shortfalls in revenue. But the amount of total expenditures for the year is difficult to estimate from the information provided. The financial disclosures indicated how XComm planned to spend the revenues of the association as indicated in Table I.

Table I
Association's Budgeted Expenditures by Year

Year	2007	2008	2009	2010	2011
	100%	100%	100%	100%	100%
Management Fee (A)	41.28%	44.38%	34.88%	30.75%	32.05%
Total Administrative Expenses	60.60%	51.81%	47.18%	44.89%	39.51%
Total Community Expenses	0%	0%	0%	0%	0%
Total Common Area Expenses	42.31%	51.08%	51.42%	41.92%	48.04%
Reserve	(2.91%)	(2.89%)	1.40%	13.19%	12.45%

(A) The management fee paid to XComm is included in Total Administrative Expenses
(B) The 2007 year disclosed statement included a footnote that there was to be a "Loan to be paid to Developer in 2008." The reasons for making payments to the developer are unclear.

The table shows that management fees alone account for 30% to 44% of the annual budgeted expenditures for the association, while total administrative expenses range from 40% to 60% of the yearly budget. Review of the administrative expenses which are not direct XComm management fees indicates a substantial portion of these funds go to XComm or related parties. For example the association paid $275 for tax preparation for the association's tax return in 2009. The tax return for the year 2009 consisted of a one-page form 1120H with five numbers on it. It was signed by a Susan Wallace as the paid preparer, giving a phone number. The phone number was the number for XComm in San Antonio. It seems Susan was an office worker in XComm's San Antonio office who has left and cannot be reached. When XComm employees were questioned about the payment to Susan, they had no response. Is it reasonable to expect the management firm which is being paid substantial fees to pay their own employees with no expertise in accounting or taxation $275 to fill out a one-page form? Is this ethical behavior?

The copy of the association's 2009 tax return was obtained only after demanding a copy several times. This tax return indicates that actual revenues were over 5% less than budgeted and actual expenses were 20% greater than budgeted. When revenue is less than budgeted and expenditures 20% greater, it is easy to understand why the association has been short on cash. After paying all the administrative costs, there was nothing left to have the lawn mowed. Even when there were funds to pay for mowing, the amounts paid appeared excessive. The management firm's answer to repeated questions about these excessive payments was to put the lawn contract out for bids. The bidders, all firms that work for XComm associations, proved that the current contract was reasonable.

An independent audit of the association's accounting records has not been done. Full disclosure of operations, revenues and expenditures of the association is not available. The standard procedure of the management firm is to avoid any detailed questions about the business affairs of the association by saying that an answer will have to come from San Antonio. An individual owner that wants an answer to any question must be forceful, persistent and have time to burn. The individual owner will have to overcome the local XComm employee, unpleasant directors and a fight with the San Antonio office. The individual should also expect a smear campaign as a reward for their efforts. The management firm has a lock on the operations of the association and will not let anyone see what is happening without a struggle. As the budgeted numbers indicate, the management firm takes more than a reasonable amount of the association's total revenue to run a neighborhood association. In addition, it is difficult to determine what percentages of the total expenditures are being used in ways that benefit individuals other than the homeowners. The property owners are not getting much benefit from the fees they are required to pay and certainly are not getting what they were promised.

Given the past performance of the management firm, it would be reasonable to expect that the firm would be replaced. The three directors of the association could refuse to renew the management firm's contract when it ends. Termination of the contract by the association before it ends includes a penalty clause for the management firm so substantial that in effect it stops it from happening. The first directors were hand-picked by the developer that contracted with the management firm. The association rules state that the three directors will be elected yearly at the annual meeting. The time and place of the annual meetings is set by the management firm and approved by the directors. The annual meetings for the association have taken on a pattern over the last five years. The first meeting took place in such a vacuum that it was not until the next year that most people knew there had been a first meeting. The second meeting was called for on a weeknight early in the evening at a hotel in a neighboring town. Only a handful of owners found the meeting. The management firm was not concerned and indicated they would arrange for another meeting. The next meeting was not called until the following year, and only a few owners that wanted to get things done attended. Since a quorum was not present, the management firm said no action could be taken and suggested if we wanted to do anything we should get a quorum of owners at the meeting. Once again the management firm passed the work to someone else. For the next annual meeting some homeowners went door-to-door to get a quorum to attend the meeting. Obtaining a quorum on any given school night in a middle-class neighborhood is difficult. People have a lot of things going on. In addition, the importance of the association meeting is difficult to communicate in a neighborhood where there are real language barriers. However, teams of individuals going door-to-door did get owners to turn out. The well-attended meeting started with presentations controlled by the management firm, which continued until owners started to leave. After numerous suggestions that the meeting get down to business, the XComm manager opened the floor to a general discussion where every individual was encouraged to vent their concerns on any issue. Later, as people got up to leave, the XComm manager asked for volunteers to be directors and she quickly selected the board.

At the next annual meeting more owners were upset. They were tried of mowing and doing the work they were paying the association to have done. The XComm manager was unable to stop the election of two new directors. The manager took care of that problem by not calling a meeting of the directors until one of the new directors insisted on it. Director meetings take place in the XComm office and are run by the XComm manager. The agenda for the meeting was set by the manger with the objective of accomplishing nothing. Questions about the operations of the association, the accounting records, financial statements and the contracts entered into by the association were answered with “I will have to get you that information.” Several months later another directors’ meeting was called and the directors were informed that the XComm contract had automatically been renewed for another year. The current board of directors could not change the management contract until there was another annual meeting.

At the last annual meeting owners wanting change and XComm supporters appeared. Once again the XComm manager attempted to control the meeting and the agenda. The owners were not going to let this happen again and demanded to be heard. The discussion quickly turned to the performance and fees of the management firm. From the discussion it appeared that XComm was in trouble. However, the attorney/director supporting XComm had run a smear campaign to get absentee votes, which evened things up. At this point the developer rose, nominated himself as a director and indicated all the votes he controls under his set of rules. Of course, XComm is still running the association and doing exactly as they please. Some owners have sold their homes and moved. Others have given up any hope of changing the association. It appears the association will continue to be a means to take fees from the owners for the benefit of others outside the subdivision.

AN EVALUATION OF MOTIVATION IN THE BANKING INDUSTRY IN GUATEMALA UTILIZING THE HACKMAN AND OLDHAM JOB CHARACTERISTICS MODEL

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ABSTRACT

The Hackman and Oldham's (1975) Model was tested in a bank in Guatemala City, Guatemala and evaluated several of the dimensions of the model. This study compared the characteristics of high work motivation obtained from the bank in Guatemala to those obtained from manufacturing, retail, service and sales sector industries to determine if there are any significant differences among these industries. The research evaluated the relationships across industries in skill variety and task identity, task significance and autonomy as well as the relationship between feedback and autonomy. This study evaluated the model across four industries and in Guatemala City, Guatemala. The study also evaluated possible cultural issues associated with the model.

INTRODUCTION

In order to survive in today's global economy; many U.S. companies are downsizing or reorganizing. Unfortunately this strategy does not consider the effects of this decision on the motivation of the individual.

This strategy has proven to be flawed. When a workforce has been downsized or reorganized, the results are employees could be assigned to new positions that they perceive as not challenging. Performance could then decline, and have a significant negative influence on productivity.

The Hackman & Oldham Model was developed to specify how job characteristics and individual differences interact to affect the satisfaction, motivation, and productivity of individuals at work. The model is helpful in planning and carrying out changes in the design of jobs.

In developing their model, Hackman & Oldham (1976) built upon the foundation of Herzberg's two-factor theory (Herzberg, Mausner & Synderman, 1959) with some theoretical underpinnings directly from the expectancy theory (Evans, Kiggundu & House, 1979).

REVIEW OF THE LITERATURE

What motivates an individual to perform at his or her best? This question has intrigued management and inspired much research and interest. This research has focused on job design and its interaction with the motivation of the individual.

The theory of work redesign is based upon the motivation literature specifically on Hackman & Oldham's Job Characteristics Theory (Hackman & Oldham, 1980).

The Hackman & Oldham model was developed to specify how job characteristics and individual differences interact to affect the satisfaction, motivation, and the productivity of individuals at work. The model is specifically for use in planning and carrying out changes in the design of work. Several studies have supported the theory of motivation through job redesign (Ford, 1969; Lawler, 1973; Maher, 1971; Meyers, 1970; Special Task Force, HEW, 1973; Vroom, 1964). Studies of job redesign have found this technique can (1) significantly reduce turnover and absenteeism, (2) improve job satisfaction, (3) improve quality of products, and (4) improve productivity and outputs rates (Steers and Porter, 1987).

Several researchers started the job redesign movement (Walker & Guest, 1952; Herzberg, 1966; Davis, 1957; Herzberg, Mausner & Snyderman, 1959). Job redesign has become a useful tool in developing ergonomic programs, resulting in increased motivation and fewer injuries (Mier, 1992). Using job redesign to introduce technology into the workplace will be very important in the future for there will be a shift from a tightly controlled management structure with narrowly defined jobs to a style that gives employees satisfaction, thus increasing motivation (Iadipaolo, 1992).

Work redesign is a unique approach to motivation and company reorganization for four reasons: (1) Work redesign alters the basic relationship between a person and what he or she does in the job; (2) Work redesign directly changes behavior, which tends to stay changed; (3) Work redesign offers and sometimes forces into one's hands numerous opportunities for initiating other organizational changes; and (4) Work redesign, in the long term, can result in organizations that rehumanize rather than dehumanize the people who work in them (Hackman, 1977). The entire concept of job redesign is based upon the theories of motivation and the motivation literature.

Motivation may be defined as psychological forces that determine the direction of a person's level of effort, and a person's level of persistence in the face of obstacles (Kanfer, 1990). Or motivation is simply, why people behave as they do on the job. Motivation stimulates people to do things with the use of inducements and incentives. People are motivated to reach an objective only if they feel it is in their best interest to do so (Bernard, 1938).

Organizations hire people to obtain important inputs. An input is anything a person contributes to his or her organization, such as time, effort, education, experience, skills, knowledge, and actual work behaviors (Jones, George & Hill, 1998).

Recent trends in motivation seem to be in the area of job redesign to determine why people work and what really motivates an employee or manager (Kovach, 1987). The theories of motivation are still being utilized to better understand and motivate people. They have been tested and utilized in a variety of cultures (Geert, 1980). Job performance and its relationship to motivation has continued to be an important issue of study (Katerberg & Vkaym, 1987).

Basically, motivation theory has evolved into two distinct categories, content theories and process theories. Content theories focus on the importance of the work itself and the challenges, growth opportunities, and responsibilities work provides for employees. Thus, these theories deal with the content of motivation, that is, with the specific needs that motivate and direct human behavior. Process theories do not focus directly on the work but rather deal with the cognitive processes we use in making decisions and choices about our work (Schultz & Schultz, 1998).

METHODOLOGY

The sample for the first study was derived from a manufacturing plant in northwest Arkansas and the second study from a large retail company in Arkansas. A total of 192 employees out of a plant population of 1,000 completed the questionnaire at this location. The second survey was of 89 stores selected out of a sample of 1,953 stores and 534 employees were surveyed. The response rate for the second study was 62 percent or 330 responses. A random number generator was utilized to determine participants in the study. Also in the hospital study 300 were sampled with 89 surveys completed or a 30 percent response rate. In the bank survey in Nicaragua, 600 were surveyed with 233 returned or a 39 percent response rate. In the bank in Guatemala 400 were surveyed with 152 completing the survey for a 38 percent response rate.

This data was then utilized to statistically determine if the researcher would reject or fail to reject the hypotheses. A two-tailed **t**-test was used to determine if a significant relationship exists for each hypothesis. the level of significance was placed at <.05.

JDS has been utilized with many organizations as well as subjected to several empirical tests (Cathcart, Goddard, Youngblood, 1978, Duhham, 1976, Aldag & Brief, 1977; Ohdham, Hackman and Stepina, 1979; Pierce & Dunham, 1978; Stone, Ganster, Woodman & Fuslier, in press; Stone & Porter, 1977; Barr & Aldag, 1978).

Internal consistency reliabilities range from a high f .88 (growth need strength, in the “would like” format) to a low of .56 (social satisfaction) to .28 (growth satisfaction). In general, the results suggest that both the validity of the items are satisfactory. While it is to the credit of the instrument that it discriminates well between the job (and families of jobs), it takes many research studies relating a concept to other variables to firmly establish the meaning of the concept. The substantive validity of the instrument has been established (Hackman & Oldham, 1974) as well as the intercorrelation of the bob dimensions themselves (Hackman & Lawler, 1971), (Hackman & Oldham, 1974), and (Taber & Taylor, 1990).

INSTRUMENTATION

The Job Diagnostic Survey (JDS) is an instrument designed to measure the key elements of the job characteristics theory. The survey measures several job characteristics, employee's experienced psychological states, employees' satisfaction with their jobs and work context, and the growth need strength of respondents. The instrument has a variety of scales depending on the section. Sections 1 through 5 will utilize a 7 point scale. Section six will utilize a 10 point scale, and sections 7 and 8 will utilize a 5 point scale.

The JDS is designed to be completed by the incumbents of the job or jobs in question-not by individuals outside the job. An instrument designed for the latter purpose is entitled the Job Rating Form (JRF) and will be completed only by management personnel. The Job Rating Form uses a 7 point scale for all three sections.

The JDS is not copyrighted and, therefore, may be used without the author's permission.

RELIABILTIY OF THE INSTURMENTS

The Job Diagnostic Survey is intended for use in (a) diagnostic activities to determine whether (and how) existing jobs can be improved to increase employee motivation, performance, and satisfaction; and (b) evaluation studies of the effects of work design.

Since the JDS was originally published (Hackman & Oldham, 1974 & 1975), the instrument has been used in many organizations and subjected to several empirical tests (Cathcart, Goddard, and Youngblood, 1978; Dunham, 1976; Dunham, Aldag & Brief, 1977; Oldham, Hackman & Stepina, 1979; Pierce & Dunham, 1978; Stone, Ganster, Woodman & Fuslier, in press; Stone & Porter, 1977; Barr & Aldag, 1978).

Experience with the JDS, and studies of its properties, have highlighted a number of limitations and suggest several cautions in using the JDS survey instrument. The Job Characteristics, as measured by the JDS, are not independent of one another. When a job is high on one characteristic (such as skill variety) it also tends to be high on one or more others (such as autonomy and/or feedback). The positive intercorrelations among the job characteristics may reflect problems in how they are measured in the JDS. Or, it may be that most "good" jobs really are good in many ways, and jobs that are poorly designed tend to be low on most or all of the job characteristics. The authors of the JDS are not sure if they have an instrument problem or an ecological phenomenon to over interpret JDS scores for any single job characteristic considered The authors of the instrument suggest it is just as good empirically-and usually-better to simply add up the scores of the five motivating job characteristics to get an overall estimate of formula for the motivating potential score (MPS) as it is to compute them individually. The advantage of the MPS score is that it derives directly from the motivational theory on which the JDS was based. The disadvantage is that computation of the score involves multiplying the job characteristics, which is generally a dubious proposition with measures that are less than perfectly reliable, and especially so when those measures tend to be intercorrelated.

RESULTS/CONCLUSIONS

In review, the researchers found the Hackman & Oldham model to work for the variables that were used. The results of this study could be utilized in the redesign of current jobs and to evaluate and increase motivation in the manufacturing sector.

OBJECTIVES AND HYPOTHESES

The objectives of this study were to test the Hackman and Oldham’s (1975) Model in a bank in Guatemala City, Guatemala and evaluated several of the dimensions of the model. This study compared the characteristic of skill variety, task identity, task significance, autonomy and feedback high internal work motivation obtained from the bank in Guatemala to those obtained from manufacturing, retail, service and sales sector industries to determine if there are any significant differences among these industries. The study also looked at a study of a bank in Nicaragua and evaluated those results in comparison to the other surveys. The results of the study found there is a marginal significance between the industries and the study in Guatemala. The results also found there were a substantial difference in the scores of the banks in Guatemala and Nicaragua and the companies here in the United States.

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Ho1 (Null) There is no difference among the mean for the manufacturing, sales, service industry and the bank in Guatemala.
Ho2 (Alt) There is a difference among the mean for the manufacturing, sales, service industry and the bank in Guatemala.

DATA COLLECTION

The bank in Nicaragua has a population of 600 with 233 sampled. This represented a 39 percent response rate. The bank in Guatemala had a population sample of 400 with 152 responding or a 38 percent response rate. Comparison studies were done in a major retail company, manufacturing company and a service company. From the survey sample of 534 employees of the retail company, 330 responses were returned, indicating a 62 percent response rate. Another survey of a major manufacturer of electric motors was collected. The sample was taken from one plant with all three shifts sampled. The plant has a population of 1,000 with 200 sampled. In another service industry a survey was conducted. From the survey sample of 300, 89 responded or 30 percent. All of these studies utilized the Job Diagnostic Survey. Employees completed the JDS survey and returned it in to a collection box in the bank. The survey instrument was scored and the results related to the Hackman and Oldham model of work redesign and motivation.

Also in the hospital study 300 were sampled with 89 surveys completed or a 30 percent response rate. In the bank survey in Nicaragua, 600 were surveyed with 233 returned or a 39 percent response rate. In the bank in Guatemala 400 were surveyed with 152 completing the survey for a 38 percent response rate.

The researcher obtained the permission of the company to conduct the survey. The instrument is not under a copyright and may be reproduced and utilized.

The initial step in the research design was to gain corporate permission to administer the instrument. A meeting was held on site between the researcher and the manager of human resources and the director of operations and compliance. A memo to all department managers was given to the manager of human resources outlining information about the project and to ask for their voluntary participation. A follow-up meeting was conducted between the researcher, manager of human resources, and all department managers to answer any questions pertaining to the study. The research study had complete instructions for the managers to use in explaining to all participants the survey instrument. Before the data collection started, all participants were told about the nature and purpose of the research and given an opportunity to not participate if they so wished. It was relayed to all participants that all information given would be held in confidence and that no one would have access to the individual responses except the researcher.

The survey was distributed to the employees with the completed survey being returned to collection boxes and picked up by the researcher. They were told that they will find in the questionnaire different kinds of questions about their job. Specific instructions were given at the start of each section. They were told to please read all instructions and questions carefully. They were also informed it would not take more than 25 minutes to complete the entire questionnaire. They were asked to read through it quickly. The participants were also told the questions were designed to obtain their perception of their job and their reaction to it. They were informed there

were no trick questions and their individual answers would be kept completely confidential. The participants were asked to answer each question as honestly and frankly as possible.
The JDS has been used for most jobs in many kinds of organizations. Blue-collar, white-collar, professional, and lower level management personnel, as well as those in business, service and public organizations have taken the JDS. It is less appropriate for middle-and upper-level managers whose jobs are much more strongly defined by role relationships than by concrete tasks to perform. Since the primary language of the employees was Spanish, the research instrument was translated into Spanish.

Table 1
Means for the Bank in Guatemala and Nicaragua

Dimension	Bank in Nicaragua	Bank in Guatemala	Variance
Skill Variety	3.77	3.71	.06
Task Identity	3.01	3.35	-.34
Task Significance	2.5	3.10	-.6
Autonomy	2.86	2.72	.14
Feedback	3.5	3.48	.02
Motivating Potential Score	31.79	32.05	-.26

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Table 2
Means For the Studies in the Service, Manufacturing, Retail and Manufacturing industry

Dimension	Hospital (Service)	Retail	Manufacturing	Mean for Sales Industry	Mean for Manufacturing Industry	Bank in Nicaragua (Service)	Bank in Guatemala
Skill Variety	4.05	4.46	4.89	4.80	4.2	3.77	3.71
Task Identity	3.89	5.25	3.94	4.4	4.3	3.01	3.35
Task Significance	4.48	5.59	5.31	5.5	5.3	2.5	3.10
Autonomy	3.56	5.3	4.67	4.80	4.5	2.86	2.72
Feedback	3.36	4.05	4.07	4.44	4.7	3.50	3.48
Motivating Potential Score	49.52	109.47	89.59	104.52	97.29	31.79	32.05

CONCLUSIONS

In the study of four industries**,** the researchers found there was a marginal relationship with respect to skill variety, task identity, task significance autonomy and feedback when evaluating the service, manufacturing, retail and a bank in Guatemala. The survey also found a significance variance in the scores of the companies surveyed in the United States and the two banks in Nicaragua and Guatemala. It appeared there may be a cultural issue.

RECOMMENDATION FOR FUTURE RESEARCH

The researches recommend additional research be done to determine if there culture is playing a part in the variations of the scores, and the instrument be tested in other industries and countries.

REFERENCES

Bernard, Chester (1938). *The Functions of the Executative*, Harvard University Press.

Davis, L.E. (1957). Toward a theory of job redesign. *Journal of Industrial Engineering*, 8, 19-23.

Ford, R.N. (1969). *Motivation Through Work Itself*, New York: American Management Association.

Geert, Hofestede, (1980). Motivation, leadership and organizations. Do American theories apply abroad? *Organizational Dynamics*, Summer, 1989, 55.

Hackman, J.R., & Oldham Greg R. (1976). Motivation through the design of work: Test of a theory. *Organizational Behavior and Human Performance*, 16, 250-276.

Hackman, J.R., & Oldham, Greg R. (1980). *Work Redesign*, Addison-Wesley.

Hackman, J.R. & Lawler, E.E. (1971). Employee reactions to job characteristics. *Journal of Applied Psychology Monograph*, 55 (191), 259-286.

Hackman, J.R. & Oldham, Greg R. (1975). Development of the job diagnostic survey. *Journal of Applied Psychology*, 60, 159-170.

Hackman, J.R., & Oldham, Greg R. (1974). The job diagnostic survey: an instrument for the diagnosis of jobs in the evaluation of job redesign projects. *JSAC Catalog of Selected Documents in Psychology*, 4 (148), (MS No. 810).

Hackman, J.R., & Suttle, J.L. (1977). Improving Life at Work, Scott Foresman and Company, 1977.

Herzberg F. and Mausner, B.& Snyderman, B. (1959). *The Motivation to Work*, New York: Wiley.

Herzberg F. (1966). *Work and the Nature of Man*, Cleveland: World Publishing Co.

Horton, G.R., Eidgaby, Saied Y. (1990). Retirement should be obsolete. *HR Magazine*, 35 (12), 61-62.

Iadipaolo, Donna M. (1992). Job Redesign-and justice for all. *Insurance and Technology*, 17 (4), 50-51.

Jones, Garth R., George, Jennifer M., & Hill, W.L. (1998). *Contemporary Management*, Irwin McGraw -Hill, Boston, Mass.

Kanfer,R. (1990). Motivational theory and Industrial Organizational Psychology. *Handbook of Industrial and Organizational Psychology*, 2nd, ed., 1, 75-170.

Kovach, Kenneth (1987). What motivates employees? Workers and supervisors give different answers. Business Horizons, Sept-Oct. 58-65.

Katerberg, Ralph & Vkaym Gart J. (1987). An examination of level and director of effort and job performance. *Academy of Management*, June, 249-257.

Lawler, E.E., III. *Motivation in Work Organizations*, (1973). Monterey, Calif: Brooks/Cole.

Maher, J.B. (1971). (Ed.) *New Perspectives in Job Enrichments*, New York: Van Nostrad Reinhold.

Martin, Thomas N. (1992). Predictors of turnover for inbound and outbound employees. *Telemarketing Magazine*, 10, (10) 60-64.

Mier, Franklin E. (1992). Labor and industry should cooperate to reduce the ergonomic injury rate. *Occupational Health & Safety* (OHS), 61 (10) 34, 94-95.

Myers, M.S. (1970). *Every Employee a Manager*, New York: McGraw-Hill.

Schultz, Duane & Schultz, Sydney Ellen. (1998). *Psychology and Work Today*, Prentice Hall, Upper Saddle River, New Jersey.

Special Task Force to the Secretary of Health, Education, and Welfare (1973). *Work in America* Cambridge, Mass: M.I.T.

Steers, Richard M., & Porter, Lyman W. (1987) Motivation and Work Behavior.

Taber, Tom & Taylor, Elizabeth, (1990). a review and evaluation of the psychometric properties of job diagnostic survey. *Personnel Psychology*, 43 (3), 467-500.

Tiegs, Robert B., Tetrick, Lois E. & Fried Yitzhak (1992). Growth need strength and context satisfactions as moderators of the relations of the job characteristics model. *Journal of Management*, 18 (3) 575-593.

Vromm, V. (1964). *Work and Motivation*, New York. Wiley.

Walker, Charles & Guest, Robert (1952). *The Man on the Assembly Line*, Cambridge, Mass: Harvard School of Business Administration.

DIVERSITY EDUCATION AND IMPROVED TEAM INTERACTIONS

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ABSTRACT

Educators seek to improve student understanding of how diversity characteristics can influence interactions with others. The core research question addressed in this paper is whether diversity awareness education early in the business curriculum can improve student awareness of diversity issues and thereby lead to better team dynamics in subsequent courses. 481 students who had studied diversity issues in a Business Cornerstone course were surveyed during their senior year. The results indicated that diversity consciousness had been raised and that the respondents had used their knowledge of diversity in working with people from diverse backgrounds on team projects. A survey of faculty members supported student perceptions that they were aware of diversity issues. Further analysis into differences in perceptions of improvement in diversity awareness based on demographic characteristics revealed interesting results. Positive perceptions in awareness of diversity consciousness varied by ethnicity and race but not by age and gender. These findings raise questions for further research into the reasons for these differences by ethnicity and race.

INTRODUCTION

Diversity awareness is an integral component of any diversity training or education program. Generally, people consider three dimensions (characteristics) of diversity—race, gender, and ethnicity—when discussing diversity. However, the dimensions of diversity include all the ways in which people are different. Bucher (2000, p. 15) describes diversity as including whatever we think distinguishes us. Awareness of one's own diversity is the first step in the process of becoming aware of the diversity of others. Increasing one's diversity awareness can impact one's ability to interact with others. According to the US Bureau of Labor Statistics (2001) report "Working in the 21st Century," the labor force is getting older, more women are working today than in the past, and minorities are the fastest growing part of the labor force. As our countries, communities, schools, and workplaces become increasingly diverse, a person's ability to be aware of one's own diversity as well as the diversity of others is exceedingly important.

Improving Diversity Awareness through Teaching/Training

The dimensions of diversity include all the ways in which people are different. A few of those dimensions include race, gender, physical makeup (appearance), ethnicity, physical and mental limitations, age, sexual preference, income level, geographical location or region, occupation, religion, and education (Ingram, 2001), p. 5). While this list is by no means exhaustive, it represents some of the more commonly recognized dimensions of diversity. Much of the existing research focuses on four of the above listed dimensions: race, ethnicity, gender, and age. The population for ethnic and racial minorities in the United States is estimated at approximately 35 percent (CIA World Factbook, 2010). According to the US Bureau of Labor Statistics (2010), African Americans made up 11.5 percent of the total labor force in 2008 and were projected to increase to 12.1 percent by 2018; Hispanics made up 14.3 percent and were projected to increase to 17.6 percent; and Asians made up 4.7 percent and were projected to increase to 5.6 percent. As the ethnic and racial minority workforce increases, American universities, colleges, and workforce training programs are tasked with preparing graduates to live and work effectively in a diverse society.

Educators search for meaningful ways of demonstrating to students how ethnicity, culture, gender, age, socioeconomic status, and other diversity characteristics can impact their interactions with fellow students, coworkers, and others in their day-to-day activities. Social perception biases, such as stereotyping, often inhibit the effectiveness of those interactions. Peoples' values can have an impact on how they view others, particularly others who are different from them. Age, gender, race, and religiosity were studied to see how an individual's values influence attitudes toward others. Sawyer, Strauss, and Yan (2005, p. 510) found that age, gender, and race have a significant impact on the relationship between individual value structure and attitudes toward diversity, while religiosity had no significant impact. Spelman (2010) discusses the impact that emotion has when students discuss diversity in classroom situations. His commentary suggests that teachers should help students develop the capacity to interact in emotional situations about challenging intercultural issues with people from other identity groups by getting students to look at themselves, particularly their cultural identities, and how those identities can be threatened during diversity discussions (882). Awareness of one's own diversity is also important to overall diversity awareness. Diversity-awareness training aims at raising the awareness of social perception biases, thus increasing the sensitivity toward the beliefs and feelings of others who have differing diversity characteristics. Knowledge of the biases influencing social perception is an intermediate goal, which is expected to "induce a positive change in trainees' behavior related to the treatment of culturally different individuals" (Sanchez and Medkik, 2004, p. 518). Teaching students to be flexible and to consider how other people's backgrounds affect their behaviors, as well as how their own backgrounds affect their behaviors, is an important part of any diversity awareness curriculum. Diversity education includes raising diversity awareness by focusing on diversity skills such as flexible thinking, communication, teamwork, and leadership as well as developing the ability to overcome personal and social barriers (Bucher, 2000, p. 21). But can diversity awareness really be improved through teaching?

A study by Easter (2002) examined the "effectiveness of diversity training in eliminating racial stereotypes in the workplace and modifying employees' negative attitudes toward diversity" (p. 1). The quasi-experimental study found no significant difference in the attitudes and behaviors of the students who received diversity training from those who did not receive the training. While the outcome appears to indicate that diversity awareness was not improved through training, several factors could have skewed the results. First, the students scored high on the diversity pre-test, so there was little room for improvement. Second, the instrument used to measure diversity awareness may have been more appropriate for a longitudinal study with intervention that required counseling rather than a brief academic intervention. Finally, the assessment instrument was a self-report survey, and students may have answered the questions the way they thought they were "supposed" to answer them (p. 8). In contrast, a study by Royster (1993, p. 59) showed significant improvement in participants' pre-test and post-test scores related to their attitudes, perceptions, assumptions, prejudices, stereotypes, and myths about diversity after participating in a cultural diversity program administered by an Arkansas diversity organization.

Additional studies indicate more positive results from diversity education and training. Evaluation of the Diversity Sensitivity Training Program developed by Tranakos-Howe (2001) which attempted to increase sensitivity to issues of diversity self awareness, cultural education, and skill building demonstrated a positive impact in the level of cultural sensitivity—including awareness, knowledge, and behavioral skills—between pre- and post-test administration. Kulik and Roberson (2008) reviewed diversity education research from 1970-2008 and came to several conclusions about diversity education. The review suggests that diversity knowledge can be improved with "semester-long interventions delivered in academic settings, full- or half-day workshops delivered in organizational settings, or even laboratory interventions lasting only an hour or two" (p. 312). The impact on diversity attitudes has mixed results, with overall attitudes toward diversity being improved but with far less consistency in the impact on attitudes toward specific demographic groups (p. 313). Diversity skill learning received less attention, but the research suggests that "adult learners usually perceive themselves as having higher skills after diversity education" (p. 314). Learning can be achieved via knowledge and/or skills training. Questions persist as to which method is better equipped to achieve the goal of a more effective workforce in diverse settings. Roberson, Kulik, and Pepper (2009) suggest that while "skill . . . training is more likely to lead to behavioral change . . . awareness training will be profitable to the extent it increases the perceived applicability of skills to the job" (pp. 84-85).

Hypothesis 1: Diversity awareness can be improved through teaching.

Many studies conducted in the past show conflicting results on the relationship between dimensions of diversity and diversity awareness education/training. Attitudes and reactions toward diversity education/training are important factors to consider when evaluating the effectiveness of the training. The Roberson, Kulik, and Pepper (2009) study suggested that trainee race/ethnicity was a significant predictor of the ability to transfer the learning to the workplace: "Non-White trainees were significantly more likely to attempt to use their training back on the job than were White trainees" (p. 81). Sanchez and Medkik (2004) compared average reaction to diversity awareness training between Non-White participants and White participants. Non-White participants reacted slightly more positively to the training than White participants (p. 527). Other studies found no significant relationship between specific dimensions of diversity and training. Schmidt (2009, p. 308) found that age, gender, and race/ethnicity had no relationship with job training satisfaction. A great number of studies regarding diversity education/training have separated gender from race/ethnicity as variables. Additionally, studies specific to diversity training for Hispanics are rare. Hood, Muller, and Seitz (2004) examined changes in attitudes of Hispanic and Anglo men and women before and after a diversity competency intervention. Results revealed that Anglo women's attitudes moved in a positive direction more so than other groups'. Hispanic women seemed to be the most tolerant of others, while Anglo men appeared to be the least tolerant of others.

Hypothesis 2: Response to diversity training will vary by gender and race or ethnicity.

Improving Team Interactions through Diversity Awareness

Businesses and organizations today demand that their employees are proficient in teamwork skills. "One of the most common situations in which different cultures may collide in today's global workplace is in work groups or teams (Humes and Reilly, 2008, p. 119). Thus, team building is the focus of many training and educational programs. Much of the curricula devoted to enhancing team effectiveness are focused on criteria such as team diversity, team size, team processes, team longevity, and team skills. Increasingly, however, trainers and educators believe that diversity awareness is an essential part of the team building curriculum. Bucher (2000, p. 168) states "As our awareness and understanding of diversity grows, we become better able to deal with team members, who in all likelihood will have a wide variety of values, personalities, behaviors, and talents." The body of data on how a team's diversity can impact—either positively or negatively—its productivity and effectiveness is well documented (Kearney, Gebert, and Voelpel, 2009; Shaw, 2004; Stahl, Makela, Zander, and Maznevski, 2010; Staples & Zhao, 2006). Less documented is whether team members' diversity awareness has any impact on the effectiveness of team interactions.

The ability to work effectively in diverse teams often depends on the team members' diversity skills. Bucher (2000, p. 32) states, "Diversity skills are those competencies that allow people to interact with others in a way that respects and values differences." Skills such as communication, teamwork, self-evaluation and behaviors/attitudes such as self-esteem, self-awareness, empathy, flexible thinking, and adaptability are components of diversity awareness. These skills can have an impact on how team members interact with each other and how team members perceive their teams' effectiveness. Shaw's study (2004) involving diversity and team-based class projects found that diversity skill level impacted several outcome and experience variables. In particular, "low- and medium-diversity skill students reported their groups had higher levels of anxiety and apprehension, cognitive effort, group conflict, role ambiguity, and role conflict than did high-skill students" (162). Other differences included lesser abilities to set performance goals and use group resources effectively and higher levels of stereotyping.

Dimensions of diversity such as gender, race, ethnicity, culture, age, etc., of the team members can impact members' perceptions of team interactions and team effectiveness. Morales and Rahe (2009) suggest that the role of cultural differences is paramount in the way people perceive their work performance (59). The effectiveness of those interactions is influenced by the team members' diversity skills. For example, the way different cultures perceive effectiveness and conflict management can impact perceptions of work performance. Much has been written about the impact of gender diversity on team performance. Shaw (2004) suggests that when students find themselves in a group where they are overwhelmed by the presence of a majority of the opposite gender, their diversity skills fail to work or may achieve unpredictable results (163). In contrast, Morales and Rahe (2009) studied the impact that gender has on the perception of performance and found that "gender as an independent variable does not have any influence on the perceived performance" (61).

Communication is an important diversity skill because it is integral to conducting daily activities in the workplace, classrooms, neighborhoods, or anywhere else that people of diverse backgrounds interact. According to Milliken & Martins (1996), diversity in the workplace focuses on observable attributes such as race/ethnicity, nationality, age, and gender, as well as underlying attributes such as values, skills, knowledge, and cohort membership. "These attributes form our identity and influence our relationships in the workplace [and] our identity and our relationships form and are formed by our communication with one another" (Thomas, 1996, p. 371). Successful communication is achieved when the receiver of a message interprets the message the way the sender intends. Lehman and DuFrene (2008) stated "Differences between the sender and the receiver in areas such as culture, age, gender, and education require a sensitivity on the part of both parties so that the intended message is the one that is received" (22).

Barriers to successful communication span the dimensions of diversity and include differences in culture, race, ethnicity, gender, age, education, experience, and socio-economic status, among others. Communication includes both verbal and nonverbal messages. Verbal messages include written and spoken words, whereas nonverbal messages include metacommuncation (inferences that accompany spoken words) and kinesics (body language). According to Lehman and DuFrene (2008), barriers to intercultural communication include ethnocentrism, stereotyping, interpretation of time, personal space requirements, body language, translation limitations, and lack of language training. Problems associated with communicating verbally in a diverse environment include a lack of language training and translation limitations. Issues with nonverbal communication in a diverse society include interpretation of time, personal space requirements, metacommunication, and body language.

Successful teamwork experiences rely upon effective communication. The same barriers that impact every day communication activities also impact team communication. Multicultural teams are particularly vulnerable to interaction problems, and members have different perceptions of the environment, motives and intentions of behaviors, communication norms, stereotyping, ethnocentrism, and prejudices (Matveev & Nelson, 2004, p. 255). These problems can impact team performance negatively. Numerous studies have focused on the positive and negative aspects of diverse teams, but as Bucher (2000) states, "Diversity is only an asset when team members develop skills to manage the assets and challenges of diversity . . . and becoming more conscious of diversity . . . will improve those skills that are essential for true teamwork; these include communication, conflict management, empathy, self-evaluation, and leadership" (169). While cultural diversity in teams "enables an increase in creativity due to a wider range of perspectives, more and better ideas, and less group thinking . . . [and] it has the potential to increase performance . . . heterogeneous teams experience higher process losses compared with homogenous teams because they face additional communication barriers" (Erdem & Polat, 2010, p. 406).

Improving one's awareness of diversity impacts the effectiveness of the communication among team members. Rentz, Flatley & Lentz (2011) state "Learning about the ways cultures differ is an important foundation for communicating globally" (pp. 497-498). Diversity awareness can improve diversity skills, such as communication. A study by Matveev & Nelson (2004) provided "empirical support for the communication competence-team performance hypothesis" (266). "Managers experienced in working on multicultural teams reported a relationship between the level of cross cultural communication competence and multicultural team performance" (266). The relationship among diversity awareness, diversity skills, and team performance invites the question: Can increased diversity awareness improve team interactions?

Hypothesis 3: Increased diversity awareness improves team interactions.

RESEARCH METHODS

The survey method was chosen as the best way to measure student perceptions of the use and benefit of instruction they had received in diversity consciousness and awareness. The questionnaire contained three statements concerning the impact of the diversity education delivered in Business Cornerstone. Students were asked to indicate the strength of their agreement/disagreement on each statement. In addition, six background/demographic questions were asked. These included gender, age, race, major, year that Business Cornerstone was completed, and semester credit hours completed since completing the Business Cornerstone. In addition to the survey completed by students, another survey was completed by faculty teaching in the College of Business. The faculty survey included two questions regarding awareness of diversity consciousness among students in their upper level classes.

The student sample included all students enrolled in Business Strategy, the capstone class for the College of Business. This course was chosen since only seniors nearing graduation are permitted to enroll. Administering the survey to this group ensured that students would have had the maximum opportunity to use and/or benefit from the instruction given in the Business Cornerstone class on critical thinking, team building, and business research. According to Holter and Kopka (2001), a period of time must elapse and additional courses must be completed before students recognize the value of the course. The questionnaire was administered during the Spring, Summer, and Fall semesters of 2007. Of the 863 students enrolled in the Business Strategy course, 481 students completed the questionnaire for a return rate of 55.7%. Of those participating in the survey, 54% were women, 68% were 23-30 years old and 33% were Hispanic. Other age and racial groups completing the questionnaire were represented in proportions consistent with the age/racial mix of the university. All possible majors within the college were represented with percentages comparable to the size of the program. For example, accounting and finance are the college's largest programs and represented the largest percentage in the sample. As expected, most (71%) of the students had taken the Business Cornerstone course in 2004 or 2005. This would be consistent with continuous full- or part-time enrollment from the beginning of their junior year when the Business Cornerstone course is taken to the end of their senior year when the Business Strategy course is taken. Finally, 91% of the respondents had completed 20 or more semester credit hours since taking the Business Cornerstone course.

The faculty sample included all full time and part time instructors in the College of Business. A total of 40% of the faculty completed the survey. All of the faculty respondents were tenured or on tenure-track. No adjunct or part-time instructors completed the survey. All the academic disciplines within the College were represented.

The data from both surveys was summarized using frequencies and means. The mean scores were tested against the neutral position of neither agreeing nor disagreeing using a t-test. ANOVAs were run to test differences in means by gender, race, major, and hours completed. In addition a correlation matrix was created to evaluate the relationship between team experiences and diversity consciousness.

FINDINGS

The first hypothesis that diversity consciousness can be improved through teaching was tested using data from both students and faculty. The mean score on the student responses on each question was statistically different from the neutral position that reflected neither agreement nor disagreement with the statement. In addition, the mean score on all three statements was lower than the neutral position of 3 indicating a positive perception that the diversity education in the Business Cornerstone class improved their diversity consciousness. The mean response and standard deviation on each statement is shown Table 1.

Table 1

Statement	**Mean**	**Std Dev**	**2-tailed T test (Significance)**
My diversity consciousness was raised as a result of what I learned in the Business Cornerstone class.	2.34	1.025	Y
In my upper level classes, I have used some of the principles relating to workplace diversity covered in the Business Cornerstone class.	2.32	.972	Y
Examining the perspective of diversity as an advantage in workplace, school, and social situations has improved my interaction with people from diverse backgrounds.	2.29	.970	Y

Hypothesis #2 proposed that the response to diversity training will differ by gender and race and/or ethnicity. To test this hypothesis, ANOVAs were run for gender and ethnic/racial groups. The frequencies by ethnic/racial groups are shown in Table 2.

Table 2				
	My diversity consciousness was raised as a result of what I learned in the Business Cornerstone class. (α = .03)			
	Agree or Strongly Agree	Neither Agree nor Disagree	Disagree or Strongly Disagree	All Responses
White	56% (72)	26% (33)	18% (23)	100% (128)
Hispanic/Latino	67% (104)	24% (38)	9% (14)	100% (156)
African American/Black	64% (53)	21% (17)	15% (12)	100% (82)
Other	63% (65)	20% (21)	17% (17)	100% (103)
	In my upper level classes, I have used some of the principles relating to workplace diversity covered in the Business Cornerstone class. (α = .01)			
	Agree or Strongly Agree	Neither Agree nor Disagree	Disagree or Strongly Disagree	All Responses
White	58% (75)	26% (34))	16% (20)	100% (129)
Hispanic/Latino	70% (110)	22% (34)	8% (13)	100% (157)
African American/Black	69% (57)	20% (16)	11% (9)	100% (82)
Other	62% (64)	25% (26)	13% (13)	100% (103)
	Examining the perspective of diversity as an advantage in workplace, school, and social situations has improved my interaction with people from diverse backgrounds. (α = .07)			
	Agree or Strongly Agree	Neither Agree nor Disagree	Disagree or Strongly Disagree	All Responses
White	63% (80)	23% (30)	14% (18)	100% (128)
Hispanic/Latino	69% (108)	23% (36)	8% (13)	100% (157)
African American/Black	68% (56)	21% (17)	11% (9)	100% (82)
Other	60% (63)	31% (32)	9% (9)	100% (104)

There were no statistically significant differences by gender; however, on all three statements, there were statistically significant differences among the ethnic/racial groups. The Hispanic/Latino group had the highest percentage of agreement or strong agreement on all three questions. The African-American/Black group had the second highest percentage with White having the lowest percentage of agreement.

Finally, we examined the response of faculty respondents to the question: How many students in your upper level classes demonstrated an awareness of diversity issues? A total of 70% stated that the majority of students demonstrated awareness of diversity issues with 8% indicating that all had demonstrated an awareness of diversity issues. Therefore, there is support for the first hypotheses from both the student and faculty surveys.

The third hypothesis was increased diversity awareness improves team interactions. Using the student respondent data set we calculated the correlations among student perceptions of their effectiveness in working in teams with their perceptions of their own improvement in diversity consciousness. Table 3 is the correlation matrix for all student respondents. The highest correlations were between the three statements pertaining to diversity. These ranged from .66 to .76. However, the correlations between the statements pertaining to working in teams and the statements pertaining to diversity consciousness ranged from .52 to .57. As expected the correlations between working in teams and diversity consciousness were not as strong as within the measures of diversity consciousness. Nevertheless, the moderate correlations lend support to the hypothesis.

Table 3				
	More Effective Team Member	Knowledge of Pitfalls Improved Team Decision-making	Consciousness Raised	Used Diversity Principles
Knowledge of Pitfalls	.67			
Consciousness Raised	.55	.52		
Used Diversity Principles	.57	.55	.76	
Improved Interaction with diverse backgrounds	.52	.57	.66	.70

Since there were statistically significant differences among ethnic/racial groups in the perceptions of learning diversity consciousness, we investigated the correlations between perceptions of team effectiveness and diversity consciousness by ethnic/racial groups. The correlation matrix by ethnic/racial group is shown in Table 4. When broken down in this way, the correlations between the perceptions of improvement in diversity consciousness with the perceptions of working in teams effectively range from .60 to .66 among two groups: Hispanic/Latino and African American/Black. This is re-enforces that improvement in diversity consciousness as a result of diversity education was strongest among these two ethnic/racial groups.

Table 4				
	More Effective Team Member	**Knowledge of Pitfalls**	**Consciousness Raised**	**Used Diversity Principles**
Knowledge of Pitfalls				
White	.66			
Hispanic/Latino	.67			
African American/Black	.67			
Other	.68			
Consciousness Raised				
White	.48	.47		
Hispanic/Latino	.61	.55		
African American/Black	.61	.58		
Other	.53	.49		
Used Diversity Principles				
White	.51	.47	.77	
Hispanic/Latino	.61	.60	.77	
African American/Black	.61	.59	.74	
Other	.58	.54	.74	
Improved Interaction with diverse backgrounds				
White	.34	.48	.64	.57
Hispanic/Latino	.66	.61	.67	.71
African American/Black	.60	.61	.66	.71
Other	.50	.56	.68	.85

The data from the faculty survey also indicates that team interactions may have benefitted from the diversity education. When asked how many students experience communication problems related to cultural or diversity issues while working in teams, 50% of the faculty respondents selected less than half or none. There is support for the third hypothesis with respect to the student data set, particularly when the data is analyzed by ethnic/racial groups. The support from the faculty data set is inconclusive since only half of the respondents observed fewer than half of the students with communication problems related to cultural or other diversity issues.

DISCUSSION

Approximately one-sixth of the semester was dedicated to diversity awareness education in the Business Cornerstone course. Nevertheless student self-perception of his/her own diversity consciousness was raised. This elevation in diversity consciousness could be valuable in self-monitoring of one's own diversity or in the ability to relate to others. It is common practice in the College of Business for students to work in teams on assignments. Therefore, students have the opportunity to adjust individual behaviors and observe whether the diversity consciousness has personal value for them. The survey results confirm that the students did use the diversity training they received and considered it valuable in their interactions with people from diverse backgrounds. Specifically, they recognized diversity training as an advantage in a variety of settings from school to workplace to social situations. Although there were no attitudinal measures of stereotypes in this study, the results are encouraging. Increasing diversity awareness of self or others is the first step toward changing attitudes. Our results support previous research that diversity education can improve diversity consciousness and lead to behavioral change.

Our findings with respect to hypothesis #2 raise questions that warrant further investigation. Our results are consistent with previous research that found that non-whites react more positively to diversity education than do whites. Both African Americans and Hispanics/Latinos were more likely to agree or strongly agree that the diversity education in the Business Cornerstone course had raised their consciousness of diversity and improved their interactions with people from diverse backgrounds. An important question to be answered in future research is why race and ethnicity matters. There are several possible explanations. White students may be more aware of diversity issues since greater emphasis has been placed in our society on breaking down stereotypes of non-whites. Another explanation is that non-whites come into the classroom with less awareness of diversity issues. A pre-post test of diversity awareness could provide insight into whether there are differences among race/ethnicity in their beginning levels of diversity consciousness. It is also possible that non-whites are more willing to accept that diversity matters. How people communicate, perceive, behave, listen or respond is influenced by their gender, age, race or ethnicity. If non-whites begin with a greater expectation that diversity matters, then they may be less resistant to diversity education and therefore, more willing to learn. Further research on student attitudes about diversity could help in identifying why non-whites are more likely to use and benefit from diversity education.

Hypothesis #3 sought to explore the relationship between student perceptions of diversity consciousness and the use of diversity principles with working in teams in subsequent courses. The survey contained two statements regarding teamwork:

(1) "I was a more effective team member in my upper level classes as a result of what I learned in the Business Cornerstone class."

(2) "Instruction regarding the pitfalls of team decision making helped teams in my upper level business classes make better decisions."

Students in the Business Cornerstone class also receive instruction on how to work in teams. Students are exposed to the process of team building and different methods for decision-making in teams. Is there any synergy between diversity education and training on how to work in teams? It should be noted that these two areas are not explicitly connected in the Business Cornerstone class. Each topic is covered separately; therefore, if there is a correlation, the students would have to make it independently. Not surprisingly, the correlations between pairs of the diversity statements are higher than the correlation of the diversity statements to the teamwork statements. The correlations among the pairs of diversity statements ranged from .66 to .76. Similarly the correlation between the two teamwork statements had a correlation of .67. Nevertheless, the pairwise correlations between each teamwork statement and each diversity statement were all greater than .5. Therefore, it did appear that students drew some connection between effective teamwork and diversity consciousness. It should be noted that when the data is analyzed by race/ethnicity, that the pairwise correlations were .6 or higher. Our results are consistent with previous research on the relationship between improved diversity skills (as a subset of diversity awareness) and team performance. An interesting instructional question is whether the connection between diversity education and better teamwork can be improved by more explicit instruction on how to use diversity consciousness to improve team interactions with students of diverse backgrounds.

The results from this study support continuing formal diversity education in the college curriculum. Students perceive value from the education both in subsequent courses and in the workplace. Teaching diversity education in the context of team building and team decision-making may further enhance the benefit of diversity education to the student. The results reported in this study suggest that students can make the connection from diversity education to teamwork but that it could be improved if class activities required students to reflect on how diversity influenced team interactions.

REFERENCES

Bucher, R. D. (2000). *Diversity consciousness: Opening our minds to people, cultures, and opportunities*. Upper Saddle River, NJ: Prentice-Hall, Inc.

Bureau of Labor Statistics, U.S. Department of Labor (2010). *Occupational Outlook Handbook, 2010-11 Edition*. Retrieved from http://www.bls.gov/oco/oco2003.htm#population.

Easter, M. (2002, April 1-5). *The rise and fall of diversity training.* Paper presented at the Annual Meeting of the American Educational Research Association, New Orleans, LA. Retrieved from ERIC. (ERIC No. ED465874).

Erdem, O. & Polat, S. (2010). Team analysis. *E-Journal of new World Sciences Academy, 5(1)*, 398-415. Retrieved from http://www.newwsa.com.

Hood, J. N., Muller, H. J. & Seitz, P. (2001). Attitudes of Hispanics and Anglos surrounding a workforce diversity intervention. *Hispanic Journal of Behavioral Sciences 23(4)*, 444-458. doi: 10.1177/0739986301234006.

Humes, M. & Reilly, A. H. (2008, February). Managing intercultural teams: the Eorganization exercise. *Journal of Management Education, 32(1)*, 118-137.
doi: 10.1177/1052562906294988.

Ingram, P. D. (2001). An overview of diversity awareness. *PennState College of Agricultural Sciences Publications.* Retrieved from http://pubs.cas.psu.edu/freepubs/pdfs/ui362.pdf.

Kearney, E., Gebert, D. & Voelpel, S. C. (2009). When and how diversity benefits teams: the importance of team members' need for cognition. *Academy of Management Journal, 52(3)*, 581-598.

Kulik, C. T. & Roberson, L. (2008). Common goals and golden opportunities: evaluations of diversity education in academic and organizational settings. *Academy of Management Learning & Education, 7(3)*, 309-331. Retrieved from Business Source Complete. (Accession No. 34251670).

Lehman, C. M. & DuFrene, D. D. (2008). *Business Communication, 15th Ed*. Mason, OH: Thomson South-Western.

Matveev A. V. & Nelson, P. E. (2004). Cross cultural communication competence and multicultural team performance: perceptions of American and Russian managers. *International Journal of Cross Cultural Management, 4(2)*, 253-270.
doi: 10:1177/1470595804044752.

Morales, C. E. & Rahe, M. (2009). Further evidence on the role of gender diversity in team performance. *Research and Practice in Human Resource Management, 17(2)*, 55-67.

Rentz, K., Flately, M. & Lentz, P. (2011). *Lesikar's Business Communication: Connecting in a Digital World, 12th Ed*. NY: McGraw-Hill/Irwin.

Roberson, L., Kulik, C. T. & Pepper, M. B. (2009). Individual and environmental factors influencing the use of transfer strategies after diversity training. *Group & Organization Management, 34(1)*, 67-89. doi: 10.1177/1059601108329732.

Royster, N. H. (1993). An assessment of the impact of cultural diversity training on the attitudes of Arkansas business, industry, and community leaders. (Doctoral Dissertation). Retrieved from ProQuest Dissertation and Theses Database. (Order No. 93334098).

Sanchez, J. I. & Medkik, N. (2004, August). The effects of diversity awareness training on differential treatment. *Group & Organization Management, 29(4)*, 517-536. doi: 10.1177/1059601103257426.

Sawyerr, O. O., Strauss, J. & Yan, J. (2005). Individual value structure and diversity attitudes. *Journal of Managerial Psychology, 20(6)*, 498-521. doi: 10.1108/02683940510615442.

Schmidt, S. W. (2009, July). Employee demographics and job training satisfaction: the relationship between dimensions of diversity and satisfaction with job training. *Human Resource Development International, 12(3)*, 297-312. doi: 10.1080/13678860902982082.

Shaw, J. B. (2004, April). A fair go for all? The impact of intragroup diversity and diversity-management skills on student experiences and outcomes in team-based class projects. *Journal of Management Education, 28(2)*, 139-169. doi: 10.1177/1052562903252514.

Spelman, D. (2010, October). Recognizing the centrality of emotion in diversity courses: commentary on "gender in the management education classroom." *Journal of Management Education, 34(6)*, 882-890. doi: 10.1177/1052562910378984.

Staples, S. D. & Zhao, L. (2006). The effects of cultural diversity in virtual teams versus face-to-face teams. *Group Decision and Negotiation, 15*, 389-406. doi: 10.1007/s10726-006-9042-x.

Thomas, G. F. (1996). Business communication and diversity in the workplace: a guest editorial. *Journal of Business Communication, 33(4)*, 371-374. doi: 10.1177/002194369603300401.

Tranakos-Howe, S. K. (2001). An investigation of the diversity sensitivity training program: What is the impact of participation? (Doctoral Dissertation). Retrieved from ProQuest Dissertation and Theses Database. (UMI No. 9994102).

U.S. Central Intelligence Agency. (2010). *The world factbook, 2010*. Retrieved from https://www.cia.gov/library/publications/the-world-factbook/geos/us.html.

THE IMPACT OF NON-WORK RELATED ACTIVITIES ON CAREER SUCCESS

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ABSTRACT

This research project concerns gender-related issues in the aviation industry, as there is a significantly smaller number of female pilots than male. Research indicates that there are no significant differences in skill level between male and female pilots, yet the extreme disparity continues to exist.. In an attempt to investigate reasons for the low number of female commercial pilots and captains, interviews were conducted with five women who are members of the International Society for Women Airline Pilots (ISWAP). They disclosed their accomplishments, experiences, hardships, sacrifices and tribulations faced upon earning a leadership position in the commercial aviation industry.

INTRODUCTION

As of 2009, only 4,000 of the 92,000 U.S. aircraft pilots and flight engineers were women (Department of Labor, Bureau of Labor Statistics, 2009).

This research project concerns women in leadership positions in the aviation industry. Women are in the minority in aviation, except as flight attendants and ground-based support personnel (ChecklistComplete, 2008). The significantly smaller number of female pilots and captains in commercial aviation led the researchers to investigate the personal stories of women who broke the barrier to become leaders in their industry. Learning about the hardships, sacrifices, and tribulations these women encountered when pursuing advancement and how these barriers were overcome was the focus of this study.

LITERATURE REVIEW

There have been very few empirical studies about gender issues in aviation, especially in the United States. Most of these articles concerning this topic were published in the 1990's and early 2000's. Articles about this topic point to definite gender-related issues in the aviation industry. However, it is still an extremely under-developed category of research.

An early study focused on male and female pilots in the U.S. Air Force (Kantor, Noble, Leisey, & McFarlane, 1979, p. 5). This study found that "few significant differences were found between men and women entering pilot training. Comparable performance on most pre-training measures, combined with equivalent graduation rates, factors associated with flight training performance, and student impressions of the flight training experience, all lend strong support to the conclusion that men and women perform similarly in flight training." Interestingly enough, this article was written in 1979, and military aviation was almost totally male dominated until the mid-1970's.

A study conducted in Europe some twenty years later was designed to examine the difficulties faced by female pilots (Davey & Davidson, 2000). Interviews were conducted to determine the experience of the first female pilots who joined a commercial airline company and the experiences of women who joined later. Interviews with the first women to join determined that they were not automatically accepted by the male flight crew. The interviews also revealed that these women were made aware of being visibly different from male pilots. They also experienced sexual harassment in their workplaces. It was discovered that men found it difficult to adapt to female pilots and showed aggressive behavior towards female pilots. The women who joined the aviation industry later still reported many difficulties but seemed to have an easier time entering the industry than the women who entered in earlier years. These women also claimed they felt forced to laugh at sexist jokes, pranks, and teasing. They felt socializing and drinking with men was very important in order to be "well liked" by the flight crew. Even though they felt more accepted than female pilots in the past, women currently in the aviation industry still represented a very small percentage and were still considered "different." Women who entered the aviation industry later were considered inferior and were reluctant to admit problems. This study gave more insight into the problems women pilots faced upon working in the aviation industry.

A study was conducted in South Africa using the Aviation Gender Attitude Questionnaire. This questionnaire was designed to determine aviators' perceptions about gender-related pilot behavior (Vermeulen and Mitchell, 2007, p. 197). The study focused on four factors that related to perceptions about gender-related pilot behavior: flying proficiency, safety orientation, flight confidence and flight standards (Vermeulen and Mitchell, 2007, p. 197). The primary purpose of this study was to develop a valid and reliable instrument to assess female and male aviators' perceptions regarding gender-related pilot behavior. This survey was used in later studies concerning gender-related pilot behavior.

A study conducted in Australia attempted to determine why the number of female pilots was significantly smaller than the number of male pilots. In order to determine their perception of female pilots, 1,114 Australian pilots were surveyed. The survey included questions from the Aviation Gender Attitude Questionnaire previously described. The results showed that females scored higher in flying proficiency and safety orientation than males did. The survey also revealed that the opportunity to fly with female pilots improved male perceptions of them in the category of safety orientation. The results revealed that "many aviation industry pilots had negative perceptions towards female pilots including some female pilots themselves" (Mitchell, Kristovics and Vermeulen, 2006, p. 48). These negative perceptions may lead to gender bias, prejudice, harassment and discrimination ((Mitchell, Kristovics and Vermeulen, 2006, p. 48).

The Aviation Gender Attitude Questionnaire was also used in another study to investigate flight instructors' perceptions in reference to gender-related pilot behavior (Vermeulen, 2009, p. 1). The study focused on flight instructors' and commercial pilots' feelings in regards to female pilots' flying proficiency and safety orientation. The results revealed that the two groups differed significantly in their perceptions of female pilots' flying proficiency, but did not differ in perceptions of female pilots' safety orientation (Vermeulen, 2009, p. 1). This shows that instructors have a more positive perception than commercial pilots of female pilots' performance (Vermeulen, 2009, p. 6).

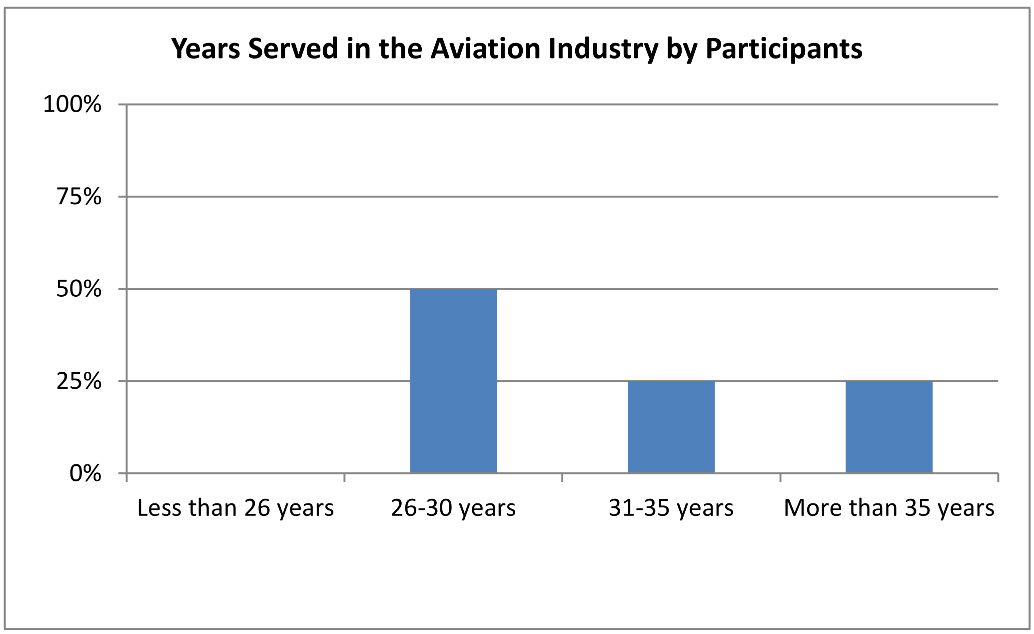
RESEARCH METHODS

Online interviews were conducted with five women who are members of the International Society for Women Airline Pilots (ISWAP), formerly called the ISA+21. ISWAP is a non-profit organization of "career women airline pilots whose purpose is to: celebrate camaraderie; support informational exchange and social interaction among its members in a healthy environment; provide aviation scholarship opportunities for career-seeking women; and inspire future generations of women aviators via educational outreach" (ISWAP, 2010). The participants volunteered for the research project during an ISWAP conference in 2010.

Each participant of the study has reached a career milestone in aviation, such as being the first woman to pilot a B-747. All participants have served at least 26 years in the aviation industry (see Figure 1). All participants are in a leadership position (pilot, co-pilot, or captain), and fly for commercial airline companies such as FedEx and Continental Airlines.

Interview questions were administered online because of the impracticality of face-to-face interviews. Several of the women who volunteered to participate in the study fly overseas routes every week. The interview protocol consisted of forced choice as well as open-ended formats.

Figure 1.



RESULTS

The majority of participants felt that it was difficult to break the barrier and become a female leader. Specifically, 75 percent of respondents found it "difficult." None of the participants felt this process was "easy."

Workplace's Influence and Attitude toward Female Leaders

A related question focused on the extent to which participants' workplace promoted a particular attitude toward female leaders. Overall, 80 percent of respondents felt that the aviation industry encourages female leaders and has a positive effect on their leadership skills. One participant wrote that "as a Captain, these skills are taught, reinforced, and expected. If they aren't, you fail or lose respect of your peers." Another respondent said, "It is in the aviation industry's best interest to train female captains to develop the skills of women in leadership positions." However, 20 percent felt that their workplace does not influence their leadership skills and does not strive to develop female leaders. Some participants also explained that their employers sometimes incur problems when women with poor leadership skills are promoted.

Personal Influences

In light of the apparent disparity between a perceived encouraging environment and great difficulty in reaching advancement, the participants were asked about the chief resources they had used to achieve success. All of the participants reported several people that personally mentored them. Influential people in the respondents' lives included authors, coworkers, teachers, public figures, parents, and military leaders. The participants' activities as leaders in non-aviation areas seemed to have transferred to the workplace. Of the respondents, 80 percent have held leadership positions in other organizations such as on a church board, conflict resolutions committee, and as a member of the US armed services. The participants said they believe these positions influenced their career path and aided their acquisition of leadership abilities.

Hardships Endured

The respondents agreed that breaking into leadership positions in the aviation industry was met with male resistance. One respondent stated that the hardships were faced early on in her career when it was "unheard of" to have women in aviation. Participants explained that they were forced to deal with men who did not want them in "their" profession and were sometimes required to perform tasks that men were not required to do. Other hardships they faced included ridicule, harassment, alienation, malicious comments from co-workers and passengers, having to "prove that they were capable of doing the job," having to change airlines up to seven times in order to reach career goals, balancing personal and career decisions, and "breaking the glass ceiling."

Ideal Characteristics of a Female Leader

When asked what the important traits are for a successful leader in aviation, they reported the following key traits: excellent communication skills, integrity, compassion, competence and patience.

Career Satisfaction and Fulfillment

The participants in this study felt that they had achieved their career goals. Eighty percent felt that they had reached their full potential and could happily retire. One participant said, "I went further than I ever dreamed possible." Some of the most rewarding parts of their careers include being able to give back to their employers by mentoring and training other pilots and helping people who were afraid to fly.

CONCLUSIONS AND IMPLICATIONS

The results of this study indicate that female pilots and captains in the aviation industry faced real roadblocks to their career paths, as had their predecessors over the past forty years. They achieved success and became leaders for reasons other than their workplace environments, whether welcoming or threatening. Instead, they said they owed their success to experiences, people, and events outside of the aviation industry. These outside influences helped them to acquire the skills and confidence that they needed for leadership positions in aviation.

The implications of these findings are that we should encourage our students and entry-level business professionals to seek developmental opportunities in their communities that will help them prepare for leadership in their careers.

REFERENCES

ChecklistComplete. (2008). Retrieved July 30, 2010, from http://www.checklistcomplete.com/women.htm

Davey, C. and Davidson, M. (2000). The right of passage? The experiences of female pilots in commercial aviation. *Feminism & Psychology*, *10*(2), 195-225.

Department of Labor, Bureau of Labor Statistics. (2009). Retrieved July 30, 2010, from http://www.bls.gov/cps/wlftable18.htm

Kantor, J., Noble, B., Leisey, S. and McFarlane, T. (1979). Air Force female pilots program: Initial performance and attitudes. *Air Force Human Resources Laboratory*.

International Society of Women Airline Pilots. (2010). Retrieved July 27, 2010, from www.iswap.org/content.aspx?page_id=275&club_id=658242&item_id=1506&ad=yes

Mitchell, J., Kristovics, K. and Vermeulen, L. (2006). Gender issues in aviation: Pilot perceptions and employment relations. *International Journal of Employment Studies*, *14,* 35-59.

Vermeulen, L. (2009). Flight instructors' perceptions of pilot behaviour related to gender. *SA Journal of Industrial Psychology*, *35*(1), Art. #819, 8 pages.

Vermeulen, L. and Mitchell, J. (2007). Development and validation of a measure to assess perceptions regarding gender-related pilot behavior. *International Journal of Aviation Psychology*, *17*(2), 197-218.

Women's Learning Partnership. (2010). Retrieved July 27, 2010 from http://www.learningpartnership.org/resources/facts/leadership

WORKPLACE RELIGIOUS ACCOMMODATION ISSUES FOR ADHERENTS OF ISLAM

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ABSTRACT

America has long been a haven for religious freedom. This diversity of religious practices has resulted in tensions in the workplace. Many of today's workplace conflicts related to religion are a result of the growing presence of workers of the Muslim faith of Islam. This paper focuses on Title VII of the Civil Rights Act of 1964 and its required regulatory compliance related to religious discrimination and accommodation.

INTRODUCTION

For hundreds of years, people from around the world have looked to America as a beacon of religious freedom. But, as the United States has become more pluralistic with a diversity of religious practices, the workplace interactions between followers of different religions has become more complicated. A major driver of the increasing religious diversity is the growing presence of followers of the Muslim faith. Islam is the second largest religion in the world (Lewis and Churchill, 2008) and the fastest growing religion in the United States (Geaves, 2010). Though growth in the Muslim community is prodigious, they still represent only a small proportion of the general population, accounting for approximately 0.8 percent of the total population in the United States in 2009 (Pew, 2009).

Although religious freedom is prized highly in American culture and law, there has been significant religious disagreement between employers and Muslim employees. The United States Equal Employment Opportunity Commission (EEOC) reports that the number of employment-related complaints received from Muslim employees has jumped from 697 in 2004 to 1,490 in 2009 (Greenhouse, 2010). Muslim Americans accounted for nearly one-quarter of all religious discrimination charges filed with the Equal Employment Opportunity Commission (EEOC) in 2010 (Greenhouse, 2010). This is over 30 times higher than their proportional representation in the population at large.

What is driving these charges is of importance to all employers. This paper reviews employment law related to religious practices in the American workplace, especially concerning regulatory compliance obligations imposed under Title VII of the Civil Rights Act of 1964 and related court decisions on religious discrimination regarding Muslims. After summarizing the pertinent sections of Title VII (sections 701 and 703), we focus on the critical applications of "religious accommodation" and "religious harassment" as the likely major sources of potential EEO complaints to arise from Muslim employees and applicants. Finally, guidance is provided for employers having to deal with these issues.

TITLE VII AND RELIGIOUS DISCRIMINATION

Title VII of the Civil Rights Act of 1964 makes it unlawful for a covered employer to discriminate against any individual employee or applicant in compensation, terms, and conditions of employment because of "such individual's race, color, *religion*, sex, or national origin" (42 U.S.C. § 2000e-2(a)). This portion of the Act is referred to as section 703, and it essentially makes it illegal for a covered employer to make any employment decision in which the employee's or applicant's religious beliefs are taken into consideration and the individual is subjected to different treatment in the workplace (EEOC, 2011, § 12-1). Hence, if an employer harbors an animosity against a member of the Roman Catholic faith and refuses to hire anyone he or she believes to be a Roman Catholic, that employer has violated section 703. This form of discrimination is technically known as "disparate treatment" (Krieger and Fiske, 2006). Because the employer knowingly (intentionally) discriminated against an individual because of his or her affiliation with a particular class (in this example a religion), it is also known as "intentional discrimination" (Robinson, Franklin, and Wayland, 2010).

Treating someone "differently" in his or her terms and conditions of employment due to a particular religious belief violates Title VII (that is, constitutes unlawful discrimination). However, the protected class of religion, unlike the other Title VII protected classes (race, color, sex, and national origin), imposes another obligation on employers. Under section 701 of the Act, employers are required to "accommodate" an employee's religious observance or practice unless the employer shows that he or she is unable to reasonably accommodate that practice without suffering an undue hardship on the conduct of the employer's business (42 U.S.C. § 2000e).

This means that an employer is required to reasonably accommodate an employee's religious beliefs or practices. Once the request for accommodation is made, the only defense available to an employer is that it would cause more than a minimal burden on the operations of the employer's business. Generally, this means an employer may be required to make reasonable adjustments to the work environment that will allow an employee to practice his or her religion (Brierton, 2002).

Typical religious accommodations include voluntary exchanges with other employees to allow the observance of religious worship (*EEOC v. Robert Bosch Corp*., 2006). One example in this context would be to allow flexible scheduling and/or to authorize scheduling changes to accommodate late arrivals or early departures, permitting employees to make up the lost time in religious observance through such arrangements (Puckett, 2008). The individual may also be laterally transferred to another job in the organization which has a work schedule which does not conflict with the religious observance, provided that it does not result in less pay (*Shelton v. University of Medicine & Dentistry of New Jersey*, 2000).

Unreasonable Accommodation

The law is vague on when a requested accommodation is unreasonable. It merely states that an accommodation is unreasonable when it imposes an undue hardship on the employer (42 U.S.C § 2000e(j)). But what constitutes an undue burden? This lack of specificity in the law means that every request for accommodation must be handled on a case-by-case basis and evaluated on its own unique circumstances (*Smith v. Pyro Mining Co*., 1987; *Tooley v. Martin Marietta Corp.*, 1981).

Cost is one factor in considering whether an accommodation may cause undue hardship. In *Trans World Airlines, Inc. v. Hardison* (1977), the Supreme Court defined accommodation hardship as anything more than "*de minimus*" cost. It may also be an undue burden if "it compromises workplace safety, decreases workplace efficiency, infringes on the rights of other employees, or requires other employees to do more than their share of potentially hazardous or burdensome work" (EEOC, 2011). Additionally, accommodation may create an undue hardship depending on the number of employees who are affected by the accommodation and its impact on business operations. In one instance, 40 Muslim factory workers requested permission to take a break from the production line for their sunset prayers. The employer refused the accommodation on the grounds that to allow all employees to leave the assembly area would effectively shut the line down. Shutting the line for prayers would result in an undue hardship because of their absence (*Farah v. Whirlpool Corp*., 2004).

Must Accommodate All Religions

Implementing an accommodation for a specific religious group in the workplace may be a double-edged sword. By allowing individuals of one religious faith to practice their religion at work while simultaneously denying similar accommodation to members of other faiths is a recipe for litigation. This is what happened in the case of *Delelegne v. Kinney Systems* (2004) in which a parking garage attendant who was an Ethiopian Christian was not allowed to bring his Bible to work, pray, or display any religious objects or pictures in his booth. Meanwhile, his employer permitted several Somali Muslim employees to take prayer breaks. The employer even allowed his Muslim employees to display religious materials in their booths. The effect was that the Somali Muslim employees were allowed to practice their religion at work, while the employer was simultaneously precluding the Ethiopian Christian from practicing his. From a strictly legal perspective, two different work rules were in operation, one for Muslims and the other for Christians (or more accurately, non-Muslims), and thus this is a representative example of a violation of Title VII's intent to prohibit different treatment of individuals based on their religion.

RELIGIOUS ACCOMMODATION AND EMPLOYER DRESS CODES

Dress codes and appearance policies may be required to be modified, in some instances, to permit exemptions for some religiously-required apparel (*EEOC v. United Parcel* Service, 1996). Consequently, if an employer has a policy regulating the appearance of those employees who come into contact with its customers, that policy may be challenged on religious grounds. However, when the dress code is specifically part of the "trade dress" of the employer, or part of the branding to distinguish the company in the marketplace, the accommodation question is more complicated (Adcock, 2002; Cline, 2005).

The required accommodation of employee's religious beliefs for dress or grooming practices is parallel to a request for schedule changes or leave for religious observances. Should a dress code or appearance standard conflict with an employee’s religious practices, the employer is expected to make modifications to the dress code *unless* doing so would result in undue hardship. But, dress code conflict may prove to be more likely with Muslim employees than employees who practice more prevalent religions. Islam requires certain dress of its adherents, such as women and men wearing particular head coverings or other garments. There also may be religious sanctions that prohibit members from wearing certain clothing; for example, Muslim women are prohibited from pants or miniskirts.

The accommodation that the employer offers does not have to match the employee’s desired accommodation; it only has to satisfy the religious practice or observance (EEOC, 2010). To illustrate, a cashier (implying she had direct contact with the employer’s customers) claimed that her facial piercings were part of her religious observance as a member of the Church of Body Modification. The employee’s requested accommodation was that she be exempted from the employer’s appearance policy. The employer’s accommodation was that she either cover her facial piercings with flesh colored Band-Aids while at her work station or that she transfer to a stocking job in which she would have minimal contact with customers. A federal court ruled that the employer’s accommodation was reasonable and that the employee’s requested accommodation of allowing her to display her piercings would have posed an undue hardship on the employer (*Cloutier v. Costco Wholesale Corp*., 2004).

Still, the larger the company, in terms of financial resources and number of employees, the greater the expectation is for that company to make an accommodation, and the higher the bar for establishing undue hardship. Consider the out-of-court settlement between the EEOC and Electrolux, whereby the employer agreed to a religious accommodation request of 165 Somali Muslim employees at its Electrolux Home Products plant in St. Cloud, Minnesota. The employees were allowed time to conduct at least five daily prayers, two of which had to be observed within a restricted time period of between one and two hours (EEOC, 2003). Electrolux further agreed for all managers (top, middle, and first-level) to attend mandatory diversity training and that it would also make a monetary donation to a local Islamic Center.

RELIGIOUS HARASSMENT

Religious harassment is often initiated by offensive remarks about an individual’s religious beliefs or practices. The remarks must go beyond simple teasing, offhand comments, or isolated incidents that are not very serious. Religious harassment is only actionable under Title VII if it becomes so pervasive (frequent) or severe that it creates an abusive or intimidating work environment, or when it culminates in an adverse employment actions (i.e., the victim is terminated, transferred, or demoted). The legal standard is not that the religiously-motivated comment or conduct is subjectively perceived by the victim to be abusive, but that it is “severe or pervasive enough to create an objectively hostile or abusive work environment -- an environment that a reasonable person would find hostile or abusive” (*Harris v. Forklift Systems., Inc.*, 1993). A reasonable person’s determination of the level of abuse in the work environment “turns on common sense and context, looking at the totality of the circumstances” (*Faragher v. City of Boca Raton*, 1998). Some of the considerations include the frequency of the conduct, was it isolated, or did it recur on a frequent basis (*Williams v. Gen. Motors Corp*., 1999)? Or, was the behavior in question offensive, derogatory, or disparaging toward the victim (*Bains LLC v. Arco Products Co*., 2005)? Courts and enforcement agencies will also consider whether the conduct was humiliating or physically threatening (*Jones v. United Space Alliance*, 2006).

According to the EEOC, religious harassment that is actionable under Title VII occurs when employees are: (1) required or coerced to abandon, alter, or adopt a religious practice as a condition of employment (this is often referred to as *quid pro quo* religious harassment because it involves the loss of tangible job benefits), or (2) subjected to unwelcome statements or conduct that is based on religion and is so severe or pervasive that the individual being harassed reasonably finds the work environment to be hostile or abusive, and there is a basis for holding the employer liable (this is hostile environment religious harassment) (EEOC, 2011).

Because *quid pro quo* harassment involves tangible job benefits, only supervisory and management personnel can actively be involved this type of harassment (meaning that there is a smaller pool of potential harassers that an employer has to monitor). However, federal courts have held that since the employer has granted the *quid pro quo* harasser the ability to control the employee's job benefits (hence abetting the harassment), the employer is held to the higher standard of vicarious liability (*Faragher v. City of Boca Rato*n, 1998). Once tangible job benefits are involved, the employer becomes automatically liable for the supervisor's harassment.

Hostile environment religious harassment involves a far broader range of potential harassers. Coworkers are by far the most common source, but religious harassment can include supervisory personnel (provided that there is no evidence of job benefits being involved), customers, vendors, and other non-employees. Here the standard is generally one of direct liability. As an example, in *Sheikh v. Independent School District* (2001), a Muslim teacher was ostracized by colleagues when he refused to shake hands with female colleagues because of his religious prohibition against touching members of the opposite sex who are not relations. The employee claimed that his coworkers created a hostile work environment and sued his employer. Under the theory of direct liability, a federal district court ruled that employer was not liable because it took prompt steps to stop alleged harassment of the Muslim employee by his coworkers (*Sheikh v. Independent School District*, 2001).

Even if supervisors are not the source of hostile environment religious harassment, it is the employer's responsibility to maintain a harassment-free work environment, regardless of who is doing the harassing (29 C.F.R. § 1604.11(f)). In a Texas case, coworkers of an American convert to Islam created a working environment which a district court described as "malicious and vitriolic" (*Khan v. United Recovery Systems, Inc.*, 2005). Several coworkers taunted the Muslim employee with remarks that "all Muslims should be bombed because they are [expletive deleted] terrorists" and that "all these Muslims were wiped off the face of the earth" and inquired whether the employee was "connected with terrorists" (*Khan v. United Recovery Systems, Inc.*, 2005, p. 53). On one occasion, a coworker expressed the sentiment that the employee might get shot for wearing an Islamic pendant. It was also alleged by the Muslim employee that her immediate supervisor was of the habit of putting newspaper articles on her desk about mosques in Afghanistan that taught terrorism (*Khan v. United Recovery Systems, Inc*., 2005).

CONCLUSION

Employers are required to maintain a work environment free of religious harassment and, where reasonable, accommodate religious beliefs, practices, and dress. The increasing numbers of followers of Islam in the workplace and the significant increase in EEOC claims signals that employers must take further care in avoiding possible religious discrimination claims. In particular, the development of company policies, training, and documentation prohibiting religious harassment is essential. Proactively facilitating the voluntary exchange of schedules to accommodate Islamic prayers, special ceremonies, and holidays may also be in the "enlightened self-interest" of many employers. However, given that dress codes are often part of the "branding" of companies in their appeal to customers, appearance differences based on religious practices will continue to be a significant area of conflict and discrimination cases for employees for the foreseeable future.

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REFERENCES

Adcock, T. (2002). Casualties of casual dress code. *New York Law Journal*. Retrieved February 4, 2011, from http://www.law.com/jsp/nylj/PubArticleNY.jsp?id=900005376013&slreturn=1&hbxlogin=1.

Bains LLC v. Arco Prods. Co., 405 F.3d 764 (9th Cir. 2005).

Brierton, T. (2002). Reasonable accommodation under Title VII: Is it reasonable to the religious employee? 42 Catholic Law 165.

Civil Rights Act of 1964 (Title VII). 42 U.S.C. 2000e et seq.

Cline, S. (2005, March 11). Office attire swinging back to professional from casual. *Colorado Springs Business Journal*. Retrieved February 4, 2011, from http://csbj.com/2005/03/11/office-attire-swinging-back-to-professional-from-casual/.

Cloutier v. Costco Wholesale Corp., 390 F.3d 126 (1st Cir. 2004).

Delelegne v. Kinney Sys., Inc., 2004 U.S. Dist. LEXIS 10565 (D. Mass. June 10, 2004).

EEOC v. Robert Bosch Corp., 169 Fed. Appx. 942 (6th Cir. 2006).

EEOC v. United Parcel Service, 94 F.3d 314 (7th Cir. 1996).

Faragher v. City of Boca Raton, 524 U.S. 775 (1998).

Farah v. Whirlpool Corp., No. 3:02-0424 (M.D. Tenn. Oct. 16, 2004).

Geaves, R. (2010). *Islam today: An introduction*. New York: The Continuum International Publishing Group.

Greenhouse, S. (2010, September 23). Muslims report rising discrimination at work. *The New York Times*, B1.

Harris v. Forklift Systems, Inc., 510 U.S. 17, 21-22 (1993).

Jones v. United Space Alliance, 170 Fed. Appx. 52 (11th Cir. 2006).

Khan v. United Recovery Systems, Inc., 2005 U.S. Dist. LEXIS 4980 (S.D. Tex. 2005).

Krieger, L.H. and S.T. Fiske (2006). Behavioral realism in employment discrimination law: Implicit bias and disparate treatment. *California Law Review*, 94(4): 997-1062.

Lewis, B.E. and B.E. Churchill (2008). *Islam: The religion and the people*. Upper Saddle River, NJ: Pearson Prentice Hall.

Pew Research Center's Forum on Religion & Public Life (2009, October). *Mapping the global Muslim population: A report on the size and distribution of the world's Muslim population*. Washington, DC: Pew Research Center.

Puckett, T.G. (2008, October 24). EEOC offers employers guidance on avoiding religious discrimination. *Oklahoma Employment Law Letter*. Retrieved March 2, 2011, from http://hrhero.com/hl/articles/2008/10/24/eeoc-offers-employers-guidance-on-avoiding-religious-discrimination/.

Robinson, R.K., G.M. Franklin, and R.F. Wayland (2010). *Employment regulation in the workplace: Basic compliance for managers*. Armonk NY: M.E. Sharpe, Inc.

Shelton v. University of Medicine & Dentistry of New Jersey, 223 F.3d 220 (3rd Cir. 2000).

Sheikh v. Independent School District 535, 2001 U.S. Dist. LEXIS 17452 (D. Minn. Oct. 18, 2001).

Smith v. Pyro Mining Co., 827 F.2d 1081 (6th Cir. 1987).

Tooley v. Martin Marietta Corp., 648 F.2d 1239, (9th Cir. 1981).

Trans World Airlines, Inc. v. Hardison, 432 U.S. 63 (1977).

U.S. Equal Employment Opportunity Commission (*2011*, *February 8*). Section 12: Religious discrimination. *Compliance Manual*. Washington DC: Government Printing Office.

U.S. Equal Employment Opportunity Commission (2010). *Guidelines on discrimination because of national origin*, 29 C.F.R. part 1606.

U.S. Equal Employment Opportunity Commission (2003, September 24). Press Release: EEOC and electrolux reach voluntary resolution in class religious accommodation case. Retrieved February 22, 2011, from http://www.eeoc.gov/eeoc/newsroom/release/9-24-03.cfm.

Williams v. General Motors Corp., 187 F.3d 553, 564 (6th Cir. 1999).

THE CLEARY DEFINITION OF TEST BIAS WITH SUPERVISORY RATINGS

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ABSTRACT

Investigators have found that racial bias exists in supervisory ratings of job performance. Black supervisors rating black employees tend to rate them a third to a half a standard deviation higher than white supervisors rating those same black employees. These new findings suggest that, for black employees, employment tests, such as intelligence tests, predicting lower job performance for blacks might not be correct when based on ratings provided by black supervisors. This study used data from the U.S. Employment Service (USES, U.S. Department of Labor) and re-examined the differential prediction and validity of those black workers who were rated by both a black and white supervisor and found no significant difference. The results indicate that the most highly endorsed and, therefore, most widely used strategy for detecting test bias, regressing job performance on the test in question, is no longer valid. Industrial psychology and human resource management must abandon this approach and find other ways to evaluate their employment tests for test bias.

INTRODUCTION

The question of bias in mental ability (intelligence) tests is an important one and is of great interest to employers, educators, and the public in general. Ability tests have contributed to a more fair selection of job applicants, however, they may or may not have expanded workers opportunities. After all, ability test exclude as well as include. There are some historical analysts who believe that "tests were used intentionally to restrict opportunity for groups that were powerless or out of favor." (Wigdor & Garner, 1986, p.82)

Standardized testing first began in the federal government. Many imagined the test would insure an educated government. However, Congress worried that the creation of such an elite bureaucracy required that the test be sensible in character. They were to be set up to where an applicant with an 8th grade education could compete with an applicant with a degree when it came to experience.

With the need for good workers in the early 1900's, firms began using systems such as character analysis, standardized interviews, and application forms. "Mental testing emerged in the 1880s from the experimental psychology of Wilhelm Wundt in Leipzig and the anthropometric observation of Francis Galton in London." (Wigdor & Garner, 1986, p. 84) By 1910 their were psychologist pushing the use of mental test in the selection of an applicant.

The U.S. Army testing program led to the widespread use of employment testing. The results of the Army tests were presented to the public in a National Academy of Sciences study (Yerkes, 1921). There were conclusions drawn by the study regarding test scores among differing ethnicities. Native whites earned the highest scores. Black people earned the lowest scores. “Test scores on the Army Alpha also correlated very closely with the length of time of residence in the United States and with years of schooling” (Wigdor & Garner, 1986, p. 88)

Some testers such as Lewis Terman and his colleagues believed that one’s social background had effects on one’s test scores. They expected to find that the children of the more cultured and successful parents were better prepared and gifted than the children who had been raised in poverty. The diverse scores earned among the different ethnicities seem to be a result of the oppression that evolved throughout history.

Most testing in the past has been used to identify specific skills or capabilities. However, since World War II there is an increasing use of tests to measure managerial talent too.

The success of psychological testing in America occurred when the federal government, in response to important civil rights statues, began to make certain that differing groups were given equal benefits and opportunity to participate to the same extent at all levels of society. Now significant restrictions on the use of tests have been applied by governmental policy. In the spring of 1965, the House and the Senate had hearings on the use and abuse of psychological tests. Apparently, some felt the test items could give one’s beliefs about the applicant's sexual preference and religion. Title VII of the Civil Rights Act denies employers to make decisions about applicants using their religion, national origin, color, sex or race. These five characteristics should be irrelevant to productivity and opposing merit selection. The judicial standards for applying Title VII to employment tests were brought about in 1971 in Griggs v. Duke Power Co. (401 U.S. 424). Like the Civil Rights Act, the Supreme Court opinion in *Griggs* officially rejects any legal requirement for preferential treatment: “Congress has not commanded that the less qualified be preferred over the better qualified simply because of minority origins,” Griggs v. Duke Power Co. (401 U.S. 424). One fundamental assumption in the Griggs case was that, in an entirely neutral marketplace, people will be chosen for employment in roughly the same proportion as they embody in the population.

In employment selection, in order to determine if bias exists in ability tests, researchers examine how well these tests predict job performance. Finding a suitable measure of job performance to use as the criterion in these studies is important. In the vast majority of cases, supervisory ratings are used. An influential government study conducted under the auspices of the National Academy of Sciences by their National Research Council (Hartigan & Wigdor, 1989) raised the possibility that supervisory ratings themselves might be biased. While the NRC concluded that the ability tests they examined appeared to be unbiased, they did express a concern that some researchers were finding evidence of bias in supervisory ratings and that this bias might mask bias in the tests. If this were the case, then their study and countless others like it concluding that ability tests are not biased might instead be found to be inconclusive.

Recent research has demonstrated that there is indeed bias in supervisory ratings of job performance (Stauffer & Buckley, 2005). This research shows that, when observing the same, identical performance by black workers, black and white supervisors disagree substantially in their ratings of that performance. This study is a reanalysis of the NRC study by separating out those employees who had both a black and white supervisor rating them simultaneously and testing for differences in the predictive validity of the ability tests according to the race of the employee and the supervisor doing the rating.

The NRC Study

With productivity as a concern many companies decided to use the scores of the General Aptitude Test Battery (GATB) to pick a candidate for a particular job. The basic question posed to the NRC by the U. S. Congress was whether the GATB used and distributed by the U. S. Department of Labor was biased against blacks.

The GATB is “a test of cognitive, perceptual, and motor skills used in state Job Service offices since 1947” (Hartigan & Wigdor, 1989, p. 18) It was developed and chiefly used by the United States Employment Service (USES) to better the nation’s economic health. Many feel that high-scoring candidates enhance workforce efficiency and firms' overall productivity. Even though mental measurement specialists have pointed out that cognitive ability tests cannot measure all the attributes that are necessary for successful job performance, the tests are still considered to be the most informative job performance predictor for most jobs (Schmidt, Hunter, McKenzie, & Muldrow, 1979).

Beginning in the 1970s, industrial psychologists began to challenge the theory that situational factors accounted for much of the variability in individual job performance, as opposed to individual ability (e.g., Schmidt et al., 1979). They said that the “differences in a given test’s validity from one setting to another were not real, but rather were artificial differences introduced by sampling error, unreliability in the criterion measures, and other weaknesses of the individual validity studies” (Hartigan & Wigdor, 1989, p. 19).

In the early 1980s, industrial psychologist John Hunter conducted a series of technical studies for the Department of Labor that provided support for this view (e.g., Department of Labor, 1983). Hunter reported that individual differences in ability accounted for most of the variation in productivity and that economic gains would be made by using the tests scores to select a new employee out of the candidates. Many firms viewed his findings as a very beneficial reason to adopt the test. Furthermore, these firms saw the GATB as a way to pass the expense of testing applicants to the State, and it could keep them from being vulnerable to law suits regarding unfair employment acts.

USES officials were encouraged by John Hunter's findings and implemented a new job referral system based almost exclusively on the GATB (Hartigan & Wigdor, 1989). Test score percentile ranks were observed with the population categories of whites and minorities. There were significant findings that showed that black percentile scores on the GATB were well below the percentile of scores of whites, a disparity that is well established in the psychological testing literature, the reasons for which are hotly debated (see, e.g., Jencks & Phillips, 1998).

There were conflicting views between the two agencies on whether or not it was ethical to convert the scores. The score conversion was created to bring minorities into the workforce by equalizing test scores, but in doing so, it was considered by many to discriminate against Asians and whites. The agencies decided to discontinue the conversion of the test scores until the validity of it was confirmed. The nature of cognitive test and the wisdom of allowing any one procedure to dominate federal and state efforts to promote the economic well being of the nation is questionable (Hartigan & Wigdor, 1989). Not only the GATB test but the Army Alpha Test and other IQ test revealed differences in scores by race or ethnicity.

The Civil Rights Act of 1991 made it illegal to use racial preferences unless necessary (as a last resort) to eliminate persistent discrimination by an individual employer. The Justice Department also found the score conversions illegal, citing section 703(j) of Title VII, which denies any requirement for preferential treatment. Programs to enhance hiring of minorities could be viewed as discriminatory to the majority because they fail to provide equality under the law and devalue individualism and merit. One of the most compelling arguments against preferential treatment for blacks is that it creates injustice for whites and other ethnic groups who have also suffered discrimination. “There is no requirement that preferential treatment be accorded to minorities or other protected groups; rather, qualifications are to be the controlling factor in employee selection.” (Hartigan & Wigdor, 1989, p. 41)

The NRC did note that the supervisory ratings were supplied mainly by white raters and cited evidence that raters tended to rate members of their own race more favorably than members of other races (Kraiger & Ford, 1985). Based on this information, the NRC reported that, despite their findings, they could not rule out the possibility of bias in the GATB.

Follow-on Studies

In response to the NRC's concern, industrial psychology claimed to find evidence that the NRC's concerns were unfounded—there was no evidence of either racial or gender bias in supervisory rating of job performance (Landy, Shankster, & Kohler, 1994; Latham & Wexley, 1994; Sackett & DuBois, 1991). The most significant investigation of bias in supervisory ratings in response to the NRC report was conducted by Sackett and DuBois (1991). The study incorporated data from the two largest programs of study in existence at that time. Information was observed from the U.S. Army’s Project A (Campbell, 1990) and the USES personnel testing database. Using these large-scale data sets, Sackett and DuBois concluded that there was no bias in the supervisory ratings. Other studies based on these same data reached similar conclusions (e.g., Pulakos, White, Oppler, & Borman, 1989), and reviews of this literature were quick to cite the Sackett and Dubois analysis as evidence that the NRC's concerns about bias in supervisory ratings were unfounded (Landy, Shankster, & Kohler, 1994; Latham & Wexley, 1994). Stauffer and Buckley (2005), however, noticed that the Sackett and DuBois analysis focused on one particular type of bias and that the supervisory ratings might well suffer from another type of bias. Stauffer and Buckley looked at the same two databases and extracted a subset of workers who had been evaluated by both a black and a white supervisor. The advantage of using these data was that black and white supervisors were observing the same, identical performance, so the true performance differences between what the black and white supervisors were observing were zero. Sackett and DuBois (1991), however, relied on observations made on different workers, some black and some white, and, therefore, did not control for true performance differences. Stauffer and Buckley's findings are summarized in Figures 1 and 2. For both the USES and Army datasets, black and white supervisors agreed on white worker performance, but they disagreed substantially on black worker performance.

Figure 1

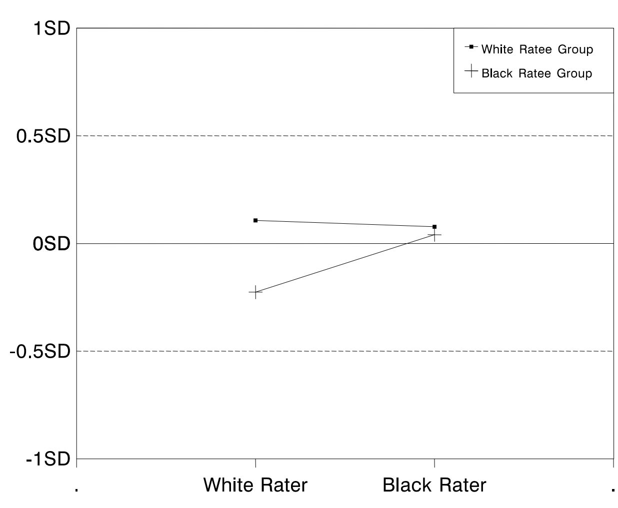
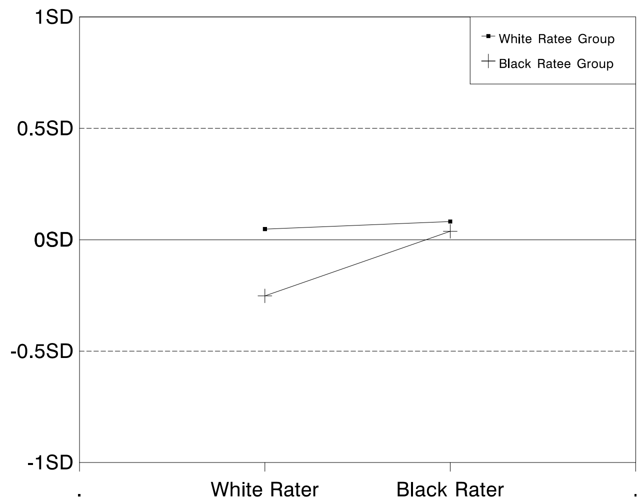


Figure 2



The same pattern can be found in both data sets. Figures 1 and 2 show that, when observing the same white employee performance, black and white supervisors essentially agree on the level of performance. When observing the same black employee performance, they disagree substantially. Depending on how these values are corrected for unreliability, this disagreement on black performance ranges from a third to half a standard deviation. Given that the true performance differences are known to be zero, these data provide clear evidence of bias. While it is not clear why black and white supervisors disagree on the level of black employee performance, the fact that this bias exists means that the NRC's concerns remain valid.

Validity, Prediction, and Bias

At the heart of the NRC study was an analysis of the test's *differential validity* and *differential prediction*. In educational and employment selection, a test's validity refers to the strength of its correlation with the criterion, in this case supervisory ratings of job performance. Differential validity refers to differences in these correlations for one group of test takers versus another. Those who assert that ability tests are biased against blacks posit that the correlations with black job performance would be lower than that for white job performance.

Differential prediction looks for differences in the regression line when predicting job performance from ability test scores. This analysis provides better information than that for differential validity, since it is possible for two data sets to have different regression lines even though they have the same correlation. In fact, differential prediction is currently the most widely used and most highly endorsed definition of test bias in educational and psychological measurement (e.g., Joint Committee on Testing Practices, 1988; Society for Industrial and

Organizational Psychology, 2003). It is more commonly known as the Cleary (1968) definition of test bias.

Under the Cleary (1968) definition, even if black and white employees perform equally well on the job, and black employees perform lower on the selection test, no matter where a cut score is drawn, more white applicants will receive job offers than blacks. This will result in a scatter plot that shows equal validity but unequal predictor means. This, according to Cleary, is an unfair, biased test.

For a test to be considered unbiased in terms of no differential prediction or validity, under the Cleary (1968) definition, mean group performance differences on the test are supposed to translate into mean group differences in job performance. Some test critics claim that tests appear to be unbiased only because artifactual differences in mean group test performance are offset by artifactual mean group job performance differences.

This was a concern the NRC raised when it issued its report on its investigation of test bias in the GATB. In general, the NRC found the GATB to be unbiased. Applying the Cleary (1968) definition of test bias, the NRC found that a single regression equation relating GATB scores to supervisory ratings of job performance would not be biased against blacks. That is, applicants, black or white, with the same test score would have the same probability of succeeding on the job. Using the same decision rule, in the form of a single regression equation, would be expected to result in the same proportion of false negatives (people who would have done well on the job but did not pass the test) for blacks as it would for whites.

> Although there are several definitions of selection fairness, they all have differing sensible and ethical suggestions that can conflict. Many of the definitions of selection fairness, for example, cause adverse impact on minorities. Furthermore, the Cleary definition fails to consider the validity or the utility of the criterion, in this case, performance appraisals. A performance appraisal obviously cannot accurately measure job performance. The performance appraisal scores are different depending on whether they are given by a black or white supervisor. (Reilly and Chao 1982 p. 55) concluded that "there is no reason to expect alternate predictors to behave differently because, test fairness research has, with few exceptions, supported the predictability of minority groups even though adverse impact exists," but once again, the validity of the criterion that these tests predict *was not* taken into consideration.

The NRC data (from the USES database) was reanalyzed to look for differential validity and differential prediction.

METHODOLOGY

The NRC found no significant differential validity or differential prediction in the USES GATB database, indicating an absence of bias in the GATB. Those subjects were identified who were rated simultaneously by both a white and a black supervisor. There were 349 black workers and 244 white workers who were rated by both a black and a white supervisor. Validity and differential prediction analyses were conducted on this group of subjects using first their white supervisor ratings and then their black supervisor ratings.

Because the NRC's analysis was dominated by white supervisor ratings, it was expected that the analysis based on the white supervisor ratings of this group would produce results similar to the NRC's and that a significant differential validity or prediction would exist. Based on the finding that black supervisors rate black worker performance nearly as high as white worker performance, it was expected that the validities and regression lines computed using black supervisor ratings would not be equal.

The following four hypotheses were tested:

H1, Differential validity, black supervisor scores: The correlation between black test scores and black supervisor ratings will be significantly less than that for white test scores and black supervisor ratings.

H2, differential prediction, black supervisor scores: The slope of the regression of black supervisor ratings on black test scores will be significantly less than that of black supervisor ratings on white test scores.

H3, Differential validity, white supervisor scores: The correlation between black test scores and white supervisor ratings will be not be significantly different from that of white test scores and white supervisor ratings.

H4, differential prediction, white supervisor scores: The slope of the regression of white supervisor ratings on black test scores will not be significantly different from that of white supervisor ratings on white test scores.

H1 and H3 were tested using a procedure outlined in Hays (1988, pp. 590-591). The computed correlations were transformed to Z scores (i.e., standard normal variants) using a Fisher *r*-to-*Z* transformation. The standard error of this transformed *Z* is 1/(N-3), where N is the sample size. The test statistic is then the difference between the *Z* for black employees and the *Z* for white employees divided by the square root of the sum of the standard errors:

$$\frac{Zwhite - Zblack}{\sqrt{1/(Nwhite-3)+1/(Nblack-3)}}.$$

Multiple regression interaction test were used for H2 and H4 to test the differences between two regression slopes (Pedhazur, 1982, pp. 440-442). This procedure introduces a new variable (X1), coding black workers with a value of 1 and white workers with a value of -1. A second variable (X2) indicates the worker's score on the GATB. A third variable (X3) is created by multiplying X1 and X2. A multiple regression is run. If the regression weight for X3 is significant, then there are significant differences in the slopes for the two worker groups.

RESULTS

There were 244 white workers and 349 black workers who where rated by both a black and white supervisor. Table 1 displayed below shows sample sizes, means, and standard deviations for the data. The average score given to white workers by white supervisors (22.1926) minus the average score given to white workers by black supervisors (22.0738) is equal to 0.1188, which is not a significant difference. The average difference between scores given to black workers is 1.6375. The average score given to black workers by black supervisors (21.6418) minus the average score given to black workers by white supervisors (20.4756) is equal to 1.662, which is a significant difference. A Levene test (of the homogeneity of variances) showed that the standard deviations were not significantly different from each other.

Table 1

Ethnic Group		White Supervisor Score	Black Supervisor Score	Total GATB Score
White	**Mean**	22.1926	22.0738	903.2090
	N	244	244	244
	Std. Deviation	3.93880	3.95690	132.23713
Black	**Mean**	20.4756	21.6418	795.7221
	N	349	349	349
	Std. Deviation	4.40645	4.20462	108.77497
Total	**Mean**	21.1821	21.8196	839.9494
	N	593	593	593
	Std. Deviation	4.30083	4.10662	130.13695

Table 2

	Unstandardized Coefficients		Standardized Coefficients		
	B	**Std. Error**	**Beta**	**t**	**Sig.**
Intercept	18.082	1.737	--	10.413	.000
Slope	.004	.002	.148	2.323	.021

Table 3

	Unstandardized Coefficients		Standardized Coefficients		
	B	**Std. Error**	**Beta**	**t**	**Sig.**
Intercept	19.022	1.660	--	11.456	.000
Slope	.003	.002	.0855	1.593	.112

Table 4

	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta	t	Sig.
Intercept	17.203	1.717	--	10.017	.000
Slope	.006	.002	.185	2.936	.004

Table 5

	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta	t	Sig.
Intercept	17.403	1.739	--	10.010	.000
Slope	.004	.002	.095	1.783	.075

As you can see in the tables above, the regression slope for black supervisors rating white workers is .004 whereas white supervisors rating white workers is .006. Ratings given to black workers by white supervisors have a regression slope of .004, and ratings given to black workers by black supervisors had a regression slope of .003.

Table 6

	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta	t	Sig.
Intercept	17.303	1.244		13.910	.000
Total GATB Score	.005	.001	.142	3.240	.001
Interaction	-.001	.001	-.163	-.574	.566

Dependent Variable: White Supervisory Rating Score

Table 7

	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
Intercept	18.552	1.213		15.293	.000
Slope	.004	.001	.122	2.730	.007
Interaction	-.001	.001	-.116	-.399	.690

Dependent Variable: Black Supervisory Rating Score

Tables 6 and 7 show the results of the interaction test for the equality of two regression coefficients (slopes). A significant interaction suggests that the two regression coefficients are different. In this case, the difference between the slopes of the regression of supervisory ratings on GATB scores for black versus white workers were tested. Table 6 shows the results using white supervisor ratings. Table 7 shows the results using black supervisor ratings. Neither is significant (p = .566 for white supervisor ratings, p = .566 for black supervisor ratings), suggesting that, like the validity coefficients, black and white worker regression slopes are not different after all.

DISCUSSION

Although the hypotheses were not supported, These findings can make an important contribution to personnel selection. The failure to find differences in the validities and regression slopes between white and black workers presents a problem for employment testing. These results suggest that there is no differential validity or prediction in the GATB. That means that the GATB would be expected to show no signs of bias regardless of who did the rating, white or black supervisors.

There are two problems with that expectation. First, one of the fundamental assumptions in the Cleary definition of test bias is that there is no bias in the criterion. That is clearly not the case here. As can be seen in Table 8 below, there *is* bias in the criterion measure. White raters view a significant difference in the average performance of black and white workers in this sample, whereas black supervisors see no significant difference in the mean performances of the same group. Because of this bias, the Cleary definition loses its anchor and is thus incompetent to make any reliable determination of test bias. The apparent lack of differential prediction in such a situation is inconclusive.

Table 8

		Sum of Squares	df	Mean Square	F	Sig.
White Supv. Score	**Between Groups**[a]	423.341	1	423.341	23.767	.000
	Within Groups	10526.990	591	17.812		
	Total	10950.331	592			
Black Supv. Score	**Between Groups**	26.792	1	26.792	1.590	.208
	Within Groups	9956.901	591	16.848		
	Total	9983.693	592			
Total GATB Score	**Between Groups**	1659098.10	1	1659098.102	117.193	.000
	Within Groups	8366792.38	591	14157.009		
	Total	10025890.4	592			

These results illustrate the errors that can be made in employment test validation when not taking into account the bias that may exist in the criterion measure. In fact, relying on examinations of differential validity and differential prediction may mask the presence of criterion bias and falsely indicate that no bias exists in either the test or the criterion. Table 8 shows that a difference in mean GATB test scores will translate into a difference in mean job performance *only* if we use mainly white supervisory ratings as the criterion. In the eyes of black supervisors, there is no mean performance difference between black and white workers, so the performance gap predicted by the GATB is an illusion, regardless of whether or not we fail to find differences in the regressions and correlations between the two.

The bottom line is that differential prediction and differential validity may not be of much use without a good, unbiased criterion, as demonstrated in this study. This is especially true for differential prediction (the Cleary definition). Unfortunately, the Cleary definition is by far the most widely used method for determining test bias, and supervisory ratings are the most commonly used measure of job performance. We know that bias exists in these supervisory ratings. What we are not so sure about is if our earlier findings of no test bias in the GATB are correct. This study demonstrates that our methods for detecting bias in the GATB may not have been able to do that. It is at least open to debate and warrants further investigation. In any event, it is fairly clear that employment testing researchers need to consider abandoning the unsound practice applying the Cleary definition when the criterion is supervisory ratings of job performance.

REFERENCES

Campbell, J.P. (1990). An overview of the Army Selection and Classification Project (Project A). Personnel Psychology, 43 (2), 231-239.

Cleary, T. A. (1968). Test bias: Prediction of grades of Negro and White students in integrated colleges. *Journal of Educational Measurement*, *5*, 115-124.

Hartigan, J.A., & Wigdor, A.K. (1989). *Fairness in employment testing: Validity generalization, minority issues, and the General Aptitude Test Battery.* Washington, D.C.: National Academy Press.

Hunter, J. E, & Schmidt, F. L. (1990). *Methods of meta-analysis: Correcting error and bias in research findings*. Newbury Park, CA: Sage.

Jencks, C., & Phillips, M. (1998). *The black-white test score gap*. Washington, D. C.: Brookings Institution Press.

Joint Committee on Testing Practices (1988). *Code of fair testing practices in education*. National Council on Measurement in Education.

Kraiger, K., & Ford, J. K. (1985). A meta-analysis of ratee race effects in performance ratings. *Journal of Applied Psychology*, *70*, 56-65.

Landy, F. J., Shankster, L. J., & Kohler, S. S. (1994). Personnel selection and placement. *Annual Review of Psychology, 45*, 261-96.

Latham, G. P. & Wexley, K. N. (1994). *Increasing productivity through performance appraisal*. Reading, MA: Addison Wesley.

Pedhazur, Elazar J. (1982). Multiple Regression In Behavioral Research. *Explanation and Prediction. 2nd ed.*

Pulakos, E. D., White, L. A., Oppler, S. H., & Borman, W. C. (1989). Examination of race and sex effects on performance ratings. *Journal of Applied Psychology*, *74*, 770-880.

Reilly, R. R., and Chao, G. T. (1982). Validity and fairness of some alternative employee selection procedures. *Personnel Psychology*, *35*, 1-62.

Sackett, P. R., & Dubois, C. L. Z. (1991). Rater-ratee race effects on performance evaluation: Challenging meta-analytic conclusions. *Journal of Applied Psychology*, *76*, 873-877.

Schmidt, F. L. (1988). The problem of group differences in ability test scores in employment selection. *Journal of Vocational Behavior*, *33*, 272-292.

Schmidt, F. L., Hunter, J. E., McKenzie, R. C., & Muldrow, T. W. (1979). The impact of valid selection procedures on workforce productivity. *Journal of Applied Psychology*, *64*, 609-626.

Society for Industrial and Organizational Psychology (2003). *Principles for the validation and use of personnel selection procedures*. Bowling Green, OH.

Stauffer, J. & Buckley, M. (2005). A note on the existence and nature of racial bias in supervisory ratings of job performance. *Journal of Applied Psychology*. Forthcoming.

Wigdor, A. K., & Garner, W. R. (1982). Ability testing: Uses, Consequences, and controversies. Part 1: Report of the committee. Washington, D.C.: National Academy Press.

Yerkes, R. (1921). Psychological examining in the United States Army. Washington, D.C.: U.S. Government Printing Office.

THE MARGIN TAX – A TEXAS TAX IN NEED OF CHANGE

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ABSTRACT

In 2005, the Texas Supreme Court held that the Texas school funding system violated the Texas Constitution. In the tax overhaul which followed, the property tax rate which local school districts used to fund operations was reduced. To offset this decrease in revenue, the Legislature altered the franchise tax and increased cigarette taxes. The altered franchise tax became known as the margin tax. The intent was to significantly increase revenue, and to do so, the number of taxpayers covered by the tax was significantly increased, the tax basis was changed and new tax rates were adopted.

Since its effective inception in 2008, the margin tax has been the subject of much controversy and debate. Many observers oppose the tax, or elements of it. There is even some doubt as to whether some provisions of the new law are constitutional. The revenue generated by the tax, to date, has fallen short of expectations. Different types of businesses are treated differently under the tax, and even businesses in the same industry can face different tax treatment. This paper studies the results of the implementation of the tax, its defects, and suggests an alternative.

INTRODUCTION

In a 2005 decision, the Texas Supreme Court (the court) held that the Texas system of funding schools violated the Texas constitution's prohibition of a state wide property tax (Neeley v. West Orange-Cove I.S.D., 2005). The court gave the state a deadline of June 1, 2006 to legislate a remedy. In response, Governor Perry appointed the Texas Tax Reform Commission (the Commission), chaired by John Sharp, a former Texas Comptroller of Public Accounts, and charged the Commission with recommending reforms to the tax structure which would satisfy the objections contained in the court's decision.

The resulting plan contained more than $6 billion in property tax relief and resulted in a 33% reduction in school operations taxes for homeowners and employers. This was the biggest property tax cut in Texas history. The result was that the state would pay a greater share of education costs. The state would now pay approximately 50% of the cost of education rather than the approximate 36% it paid prior to the reform. The reduction in property tax monies and the resulting increase in state funding for education were to be compensated for by a restructured franchise tax system and an increase of $1 per pack in cigarette taxes. The new legislation, contained in H.B. No. 3, was passed in a special session of the legislature and signed into law by the Governor on May 18, 2006, two weeks before the court imposed deadline.

The revised Texas franchise tax, now more commonly referred to as the margin tax, took effect for reports originally due on or after January 1, 2008. The new tax was much broader in its reach, applying to more entities than the corporations and limited liability companies which were taxed under the old law. The margin tax added as taxable entities partnerships (other than general partnerships comprised solely of partners who are natural persons), professional associations, joint ventures, business trusts, and certain other legal entities. Sole proprietorships and general partnerships directly and solely owned by natural persons remain exempt from the tax.

The entire method of taxing businesses in Texas changed under the new law. Not only did the rate change, but the basis on which it was calculated changed also. The old tax rate was either 0.25% per year of net taxable capital or 4.5% of net taxable earned surplus. The new tax system was based on a taxpayer's taxable margin, although this margin could be calculated in different ways. Also, there were three different tax rates, depending upon a taxable entity's situation.

While the Margin Tax was now applied to a broader range of taxpayers, there was an attempt to protect small business. There is an exception if a taxpayer's tax liability is less than $1,000 in any year and an additional exemption based on total revenue. Up until the end of 2009, if total revenue was $300,000 or less, there was no tax. This amount increased to $1 million for reports due by the end of 2011, after which it will decrease to $600,000. Thereafter, this amount will be indexed for inflation every other year.

The normal tax rate is 1% of an entities taxable margin. However, for entities primarily engaged in retail or wholesale, the rate is cut in half to 0.5% of taxable margin. There is also an E-Z computation and special rate for smaller businesses, not including those businesses that are totally exempt. This applies to any taxable entity with total revenues not more than $10 million, which are taxed at the rate of 0.575%. Taxpayers who use this method may not take any of the credits, deductions, or other adjustments which are available to other entities paying this tax. The only exception to this is the discount for small businesses which is available to all taxpayers with total revenues between $300,000 and $900,000. Such taxpayers, after calculating their tax due on their taxable margin, are entitled to a discount of the tax depending upon their total revenue. Taxpayers get an 80% discount on the tax due if their total revenue is in the $300,000's, 60% if it is in the $400,00's, 40% if it is between $500,000 and $699,999.99 and 20% if it is between $700,000 and $899,999.99. Effective at the start of 2012, these discounts will be more restrictive. The 20% discount and relevant revenue range will remain, but the only other discount will be 40% for entities with revenues in the $600,000's.

Taxpayers who do not qualify for the E-Z computation have three choices in calculating their taxable margin. All calculations begin with the taxpayer's total revenue. The taxable margin is the lower of 1) 70% of the total revenue or 2a) total revenue less cost of goods sold or 2b) total revenue less compensation.

Cost of goods sold is defined as including "all direct costs of acquiring or producing the goods" (Hamilton, 2010). Generally the cost of goods sold deduction is to be determined using the same methods used on a taxpayer's federal tax return. However, the calculation is different and the Comptroller's office itself has stated that it is very unlikely that the cost of goods sold claimed for federal tax purposes will equal the figure claimed under the margin tax. The compensation deduction, for reports due in 2010 and 2011, is limited to W2 wages and cash compensation up to $320,000 per person plus the amount of benefits provided to all personnel to the extent they are deductible on the taxpayer's federal income tax return. The compensation and benefits can be paid to any owner, director, partner, officer, or employee of the taxpayer.

Even before the new law was enacted, there were protests and criticisms of the changes. Many felt that it would hit small businesses too heavily. This is the reason why concessions were included for small businesses. There were doubts expressed as to the constitutionality of the new law in three respects. Some felt that it was an income tax and this is prohibited by the Texas Constitution unless it was approved in a statewide referendum, in which a majority of registered voters approved the tax. Others argued that it was the fact that some partners, individually, would be taxed which made the new margin tax unconstitutional. Others wondered if it was legal to have a standard rate of 1% but then reduce it to 0.5% for retailers and wholesalers and/or reduce the 1% to 0.575% for those allowed to use the E-Z computation. These issues have not yet been litigated.

The biggest criticism of the new law is that it breaks one of the key principles of any sound tax policy – that all taxpayers be treated the same under the law. The normal measure of how well a business performs is its net income. The Margin Tax does not base its computation on net income, but rather on an artificial figure somewhere between sales revenue and net income. The logic of the cost of goods sold deduction is that it bases the tax on what could roughly (due to adjustments allowed in the law) be described as the gross margin of the business. However, there are many more costs a business incurs to operate. The cost of goods sold as a percentage of sales could vary considerably for different types of businesses. For companies using this as a deduction, even from the same revenue figures, could have very different taxable margins. The tax calculation would not consider the other costs of doing business as they are not included in the deduction. For example, a company with a lower cost of sales would pay more tax than another with a larger cost of sales, even if the former had considerably higher operating expenses. The result is a tax treatment which is not equitable. This higher tax result would still be the case if the former company actually made a net loss. This tax could treat a profitable company more leniently than an unprofitable one or treat both of them the same because the tax is not based on the bottom line.

For a business which does not have a cost of goods sold, the compensation deduction is available. Whereas a company with inventory for sale may have cost of goods sold as its biggest cost of doing business, a service company’s biggest expense is likely to be the compensation for staff. Allowing such a business to deduct compensation expense allows them to pay the tax on only the revenue which remains after paying labor costs. There is no guarantee, however, that the deduction each business from different industries makes would result in similar tax treatment under the margin tax. In some service businesses, the cost of labor may be reasonably small, whereas in others it could represent the bulk of the business’s cost structure. These two deduction possibilities are alternatives to the basic standard deduction of 30% of revenue from the revenue figure. This standard deduction can be viewed as a blanket attempt to calculate a margin, with the two alternatives providing the opportunity to deduct more if the business actually incurs a greater cost of goods sold or a greater labor expense.

Criticism can also be made of the fact that there are significant protections for small business. If all businesses were taxed, a small business would have a small tax burden, but one which is proportional to its size. Of course, many would argue that it is not possible to include a tax on sole proprietorships due to the restrictions in the Texas constitution. Others could argue that this tax is not an income tax and is therefore permitted. It can be argued however, that the role of government is not to pick winners and losers by way of different tax policies, but that all should be treated equally and that success of that business should be determined by the marketplace

The margin tax has not been as successful as expected. The original estimate was that it would bring in $6 billion per year, more than twice as much as the franchise tax that it replaced. In the first year of implementation, 2008, margin tax payments were well short of this estimate, at $4.45 billion. In each of the next two years, this amount decreased, falling to just below $4 billion last year. While some of this shortfall may be traced to the recession, the first tax payments were based on 2007 revenues when the Texas economy was strong.

There seems to be some confusion, or miscalculations, relating to several aspects of the new tax, which are partially responsible for the lower tax receipts. The number of taxpayers using the cost of goods sold deduction was much higher than expected. The term as used by taxpayers is much broader than what the state thought was included. The protection from taxation for small businesses, which were progressively added, also contributed to lower tax receipts. A total of 18,011 taxpayers, who paid more than $100 million combined in tax under the old law, paid nothing under the new margin tax (Hamilton, 2010). Over 1,000 taxpayers may have taken the 0.5% tax rate which is only available to retailers, wholesalers, and restaurants instead of paying at the higher rate of 1%. A total of 22,816 taxpayers in service industries may have taken the cost of goods sold deduction when they were not eligible to take it. Also, 12,794 taxpayers took deductions when they used the E-Z computation. The E-Z computation method does not permit deductions. All of these mistakes can be corrected with education, and an improvement in filing will occur over time as taxpayers become more familiar with the margin tax system. This would have the effect of increasing tax receipts, although it is unlikely that it would meet the original estimates.

The new margin tax did have the effect of spreading the corporate tax burden out more broadly over different sectors of the Texas economy. One criticism of the prior tax structure was that the taxes paid did not reflect the diversity of the Texas economy. The new margin tax more fully achieves this goal, with the taxes paid by 8 of the 10 major industrial sectors more closely approximating their share of the Texas economy.

SUMMARY

Despite the fact that the tax is spread out more over the Texas corporate economy, and that the large number of initial filing errors can be corrected over time with education, the basic flaw in the margin tax remains. Taxpayers are being taxed on an artificially created margin which does not treat them all the same. Two taxpayers with the same net income could pay significantly different margin taxes and taxpayers with very different financial results could pay the same tax. A taxpayer sustaining losses can be taxed while a profitable business can escape the tax burden completely. It is therefore recommended, that the current margin tax system be changed. Texas should return to a form of the old franchise tax. The tax should be based on each taxpayer's "earned surplus" – the net income plus any payments to officers and directors. If the broader class of taxpayers created under the margin tax system is retained, the former franchise tax rate could be reduced from the previous figure of 4.5%. In this way, all sectors of the economy would be treated and taxed in the same way. Taxes would only be paid on profits. The argument that the tax rate was lowered from 4.5% to 1% under the new margin tax system is a false argument. The old rate of 4.5% applied to a much smaller figure and there was no tax if there was no profit. The other alternative under the old franchise tax system of taxing net taxable capital at the rate of 0.25% should not be reintroduced because it also does not base the tax on profit.

REFERENCES

Hamilton, B. (2010, September 6). The tax that fell to earth: Lessons from the Texas margin tax's launch. *State Tax Notes*, *57*(10), 671-675. Retrieved March 10, 2011, from http://www.taxanalysts.com/www/website.nsf/Web/StateTaxNews/$file/stnsample.pdf

Neeley v. West Orange-Cove I.S.D. (2005, November 22). Retrieved March 10, 2011, from http://www.supreme.courts.state.tx.us/historical/2005/nov/041144.pdf

Ryan, G. B., & Stein, E. L. (2010). *2011 Guidebook to Texas Taxes.* Toronto, ON: CCH.

Strasburger (2006, October 20). *Texas margin tax on business entities*. Retrieved January 20, 2011, from www.strasburger.com/calendar/articles/tax/Texas_Margin_Tax_on_Business_Entities_20061020.ppt

Texans for Taxpayer Relief. (n.d.). *The Texas tax reform commission plan: Relief – reform – fairness.* Retrieved January 20, 2011, from www.taxpayerrelief.com/factSheet.html

Texas Comptroller of Public Accounts. (n.d.). *Texas franchise tax revisions – What changed?* Retrieved March 10, 2011, from www.window.state.tx.us/taxinfo/franchise/changes.html

Williams, J. & Atkins, C. (2006, May 11). *Reforming property taxes in the lone star state*. Retrieved February 17, 2011, from www.taxfoundation.org/commentary/show/1493.html

INTERPRETING THE STATEMENT OF CASH FLOWS

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ABSTRACT

The statement of cash flows is one of the primary financial statements required by Generally Accepted Accounting Principles (GAAP). It is arguably the most important statement for the entrepreneur or small business owner, and for the commercial lending officer at a small to medium-sized bank which loans money to those entrepreneurs and small businesses. Unfortunately, how to prepare the statement is not widely understood. Even more unfortunately, how to interpret the results is even less well understood. This paper explores some general rules for interpreting the statement of cash flows, and provides some guidelines for applying those rules in specific situations.

INTRODUCTION

A proper understanding of cash flow is essential for accurate analysis of the financial condition and viability of any enterprise. Among the standard financial statements required by Generally Accepted Accounting Practices (GAAP)—balance sheet (BS), income statement (IS), and statement of cash flows (SCF)—the SCF may be the most important of all, particularly for entrepreneurs or small business owners, or for the bank lending officers or analysts attempting to determine the creditworthiness of such entrepreneurs and small businesses. Unfortunately, the SCF is the most difficult of the basic financial statements to prepare. Many students graduate with a degree in accounting without being fully conversant in the preparation of the SCF, and non-accountants have little or no understanding of how to prepare one.

Perhaps even more unfortunately, there is little understanding about how to interpret the results of the SCF, and very little in the literature to assist. This paper explores some general rules for interpreting the statement of cash flows, and provides some guidelines for applying those rules in specific situations.

AUTHORITATIVE GUIDANCE

The SCF was established by the Financial Accounting Standards Board (FASB) in Statement of Financial Accounting Standards No. 95: Statement of Cash Flows (FAS-95) in 1987. The SCF replaced the Statement of Changes in Financial Position (SCFP) previously required by Accounting Principles Board (APB) Opinion No. 19, Reporting Changes in Financial Position (FAS-95, p. 3). FAS-95 is codified in FASB Accounting Standards Codification (ASC) 230.

The SCF differs from the prior SCFP in several respects:

1. The SCFP reported changes in working capital (current assets minus current liabilities), whereas the SCF reports changes in cash (and cash equivalents).
2. The SCFP included two component statements, sources and uses of working capital and changes in components of working capital, whereas the SCF essentially incorporates both into a single report.
3. The statement of sources and uses of working capital classified components into two segments, all sources of working capital aggregated in one segment and all uses in the other, whereas the SCF classifies components into three segments, based upon whether cash flows arise from operating, investing, or financing activities.

FASB defines the purpose of the SCF as, "to provide relevant information about the cash receipts and cash payments of an enterprise during a period" (ASC 230-10-10-1). FASB further states that the statement of cash flow, when considered along with the other financial statements and the related disclosures, should help investors, creditors, and others to assess:

1. The enterprise's ability to generate positive future net cash flows;
2. The enterprise's ability to meet its obligations, its ability to pay dividends, and its needs for external financing;
3. The reasons for differences between net income and associated cash receipts and payments; and
4. The impact on the enterprise's financial position of both its cash and non-cash investing and financing transactions during the period (ASC 230-10-10-2).

COMPOSITION AND PREPARATION OF THE SCF

Although it has been around over 20 years, the SCF is not well understood. Neither how to prepare it nor how to interpret it has received the attention that such an important element of the financial reporting structure should deserve. This paper attempts to address some of those issues.

As prescribed by ASC 230, the general layout of the SCF is as indicated by the following:

	Cash inflows (outflows) from operating activities
+/-	Cash inflows (outflows) from financing activities
+/-	Cash inflows (outflows) from investing activities
=	Net cash flow
+	Beginning cash and cash equivalents
=	Ending cash and cash equivalents

While this general layout appears straightforward, there are numerous intricacies to preparing, and therefore understanding, the SCF. One issue with the preparation and understanding of the SCF is that companies are allowed to choose one of two methods for calculating cash inflows (outflows) from operating activities: the direct and indirect methods.

The direct method provides direct and straightforward information about operating inflows and outflows. At a minimum, the following major classes of operating cash receipts and payments are required to be shown when using this method:

- Cash collected from customers, including lessees, licensees, and the like
- Interest and dividends received
- Other operating cash receipts, if any
- Cash paid to employees and other suppliers of goods, including suppliers of insurance, advertising, and the like
- Interest paid
- Income taxes paid
- Other operating cash payments (ASC 230-10-45-25)

The indirect method follows most closely the methodology used to prepare the predecessor SCFP. This method involves reconciling net income back to cash flow from operations by accounting for changes (increases and decreases) in working capital accounts and adding back noncash expenses, such as depreciation and amortization.

The concept behind the indirect method begins with the basis of net income representing the results of operations. Next, with GAAP based on the notion of recognizing revenue when earned and expenses when incurred, working capital accounts that arise due to accrual accounting (such as accounts receivable and accounts payable) must be considered to adjust net income to a cash flow measure from operations. The same is true of working capital accounts that arise due to deferrals of their recognition of in net income until consumed (such as prepaid expense) or earned (such as unearned revenue) in operations. Therefore, the indirect method essentially involves adjusting GAAP-based net income to cash flow-based net income.

To appreciate this reconciliation process, consider that accounts receivable exist because sales have been but not collected as of yet. When accounts receivable has increased during a period, it means that less cash has been collected than the amount of current period sales on the income statement. Therefore, an increase in accounts receivable would be subtracted from sales for the period to determine cash collected from customers (a class that would be shown if using the direct method).

Conversely, if accounts receivable has decreased during the period, it means that more cash has been collected than the amount of current period sales on the income statement. The additional amount is for receivables that existed at the beginning of the period from prior period sales. The explanations given for how to handle an increase or decrease in accounts receivable are the same as for a decrease or increase in accounts payable.

For example, expenses are cash outflows, but if accounts payable has increased during a period, then not all current period expenses have been paid. Therefore, the increase is subtracted to adjust expenses to a cash flow measure. If accounts payable has decreased, then expenses from prior periods have been paid for in addition to current period expenses. Therefore, the decrease is added to current period expenses to better measure current period cash flows. This reasoning and logic is used to determine whether to add or subtract the change in each working capital account based on its nature as an accrual or deferral, as well as whether it is an asset or liability.

While the direct method is, for lack of a better word, more “direct” with showing inflows and outflows from operations, it is rarely used because it requires more work to calculate direct cash flow classes than the calculations under the direct method. Also, because companies using the direct method must also report a reconciliation of net income to cash flow from operations (essentially, the indirect method), companies opt for the indirect method because the direct method involves more work.

In preparing the SCF using the indirect method (or in reconciling net income to cash flow if the direct method is used), students often find that adding/subtracting changes in working capital accounts to reconcile net income to net cash flow is somewhat counterintuitive. A rule which may help them understand this is the following (Matthews, 2011):

Credits (to accounts other than cash) are sources of cash; debits are uses of cash.

Considering this rule when reading back over the previous example discussions that explain how increases/decreases in accounts receivable and accounts payable effect cash flows shows the usefulness of this rule. Applying this rule to specific accounts facilitates preparation of the following table of general rules (recognizing that there are always exceptions to each and every general rule):

BALANCE SHEET CLASSIFICATION	INCREASE IN ACCOUNT BALANCE IS	DECREASE IN ACCOUNT BALANCE IS
Current assets	Operating outflow	Operating inflow
Noncurrent assets	Investing outflow	Investing inflow
Current liabilities	Operating inflow	Operating outflow
Long-term liabilities	Financing inflow	Financing outflow
Retained earnings	Net Income (Loss)—Operating inflow (outflow)	Dividends/Distributions—Financing outflow
Other equity accounts	Financing inflow	Financing outflow

USING THE SCF

The SCF should be used in conjunction with the balance sheet and income statement, and the related disclosures, to complete a full and complete analysis of the company. This is especially so when the indirect method for calculating cash flows from operations is used since it involves the reconciliation of net income to a cash flow measure based on changes in working capital accounts shown on the balance sheet. The SCF is very useful in evaluating the liquidity, viability, and financial adaptability. General impressions that may be drawn from the cash flow statement may be summarized as follows:

Operating	Financing	Investing	Where this pattern would be expected
Inflow	Inflow	Outflow	Healthy, growing company
Inflow	Inflow	Inflow	Potential “cash cow” that is still in growth stage
Inflow	Outflow	Outflow	Mature “cash cow” in harvesting stage
Inflow	Outflow	Inflow	Company is successful but may be downsizing.
Outflow	Inflow	Outflow	Start-up company that is amassing capital but has not yet reached the stage of operating successfully.
Outflow	Inflow	Inflow	Company is attracting both debt and equity capital despite losing money; more must be known about actual situation to characterize properly
Outflow	Outflow	Outflow	Company is experiencing a cash drain and may not be able to continue to operate without making significant changes
Outflow	Outflow	Inflow	Company is in trouble and selling off assets to pay off debts.

These inferences should be substantiated by review of data from several periods to determine whether what is being observed is a "one-off" occurrence or a trend over time. Note that a positive net income may or may not be accompanied by sound positive cash flow from operations. Situations where positive net income is accompanied by net cash outflows to operations will almost always require further analysis. It is certainly appropriate to question the quality of earnings under such situations.

Of course, the analyst must take reasonable steps to assure himself/herself that the conclusions reached from the statement analysis accurately reflect economic and financial reality. Recommended analytical steps, and questions to ask, as suggested by Bob Vause, include (Vause, 2009, pp. 109-110):

Determine whether the company is showing a continued positive cash flow from operations.
- Is there stability over time?
- Has the increase in cash flow over the previous year matched the rate of inflation?

The cash flow statement shows whether a company is generating or consuming cash.
- Has it proved capable of producing sufficient cash from business operations?
- Has it used up all available liquid assets and had to raise additional funds?

A change in the relationship between net income and operating cash flow can raise a flag.
- If cash flow begins to lag behind income, why?
- Are sales being massaged or managed? Perhaps customers are being given excessively generous credit terms in order to inflate sales. Net income increases, but cash flow does not increase. Such a strategy puts a strain on cash flows if outflows to suppliers are not adjusted for in the same manner as that for inflows from customers.

At any point in the statement, a company is free to draw a subtotal and to highlight the figure.
- Is such a figure truly indicative of performance or position?
- Is your attention being directed away from more important information in the statement?

If a business is experiencing large cash outflows, the SCF should reveal this.

- If this is the case, a forecast must be prepared of how long the company can support the continuing outflow.

The quality of a company's cash flow depends partly on management and partly on the nature of the business and its areas of operation.

- Even exceptional management may achieve only low profitability and poor cash flows in a declining economy or a declining business segment.
- The more cash coming from continuing operations, the better the quality of the company's cash flow.
- How do a company's cash flow activities compare to competitors?

Study changes in cash balances and in each element of working capital in the light of what is known about the company.

- If both inventories and customer credit terms are increasing, the company may be in trouble.
- Liberalized credit terms may not be leading to increased sales, and the company may be in danger of overtrading.

Determine where the cash is coming from.

- In large companies with various operating segments, individual companies and business sectors may have different cash flow patterns.
- There should be at least one business that is capable of generating positive cash flows to help the others with negative cash flow to survive and develop.
- Segment reporting of cash flows helps the analyst understand these situations.

Other useful indicators of company performance are

- Whether more or less cash is held at the end of the year than in the beginning, or
- Whether the company's borrowings have increased or decreased during the year.

The cash flow statement can show whether a company has the necessary liquidity to pay a cash dividend, and whether it is likely to generate sufficient cash flows to meet its obligations, including debt service.

Current year cash flow can be used as a basis for projecting future cash flows.

- Depreciation is simple to calculate and forecast for future years. Rates are known and assumptions about future investment in additional assets can be made accurately enough to provide a fairly accurate estimate of future depreciation.
- For most businesses, the contribution of profit to cash flow is the least certain element of a cash flow forecast. An estimate can be made based on prior year trends. The more consistent those trends, the more reliable the forecast.

IMPACT OF CHANGE TO IFRS

Generally accepted accounting principles in the United States (US GAAP) are expected to change in coming years with the adoption of International Financial Reporting Standards (IFRS). In conjunction with that change, although not technically a part of IFRS as they are now constituted, the structure of US GAAP financial statements is expected to change significantly. Both the balance sheet and the statement of income are expected to adopt a classification scheme pursuant to which all components will be classified following the Operating, Financing, and

Investing scheme currently used for the SCF. This change may make the SCF easier to prepare, and should make it easier to interpret SCF data in conjunction with the balance sheet and statement of income. The issues addressed in this paper will need to be readdressed in that context, as the precise nature and elements of the revisions to financial accounting are defined in more detail.

CONCLUSION

The Statement of Cash Flows (SCF) is critical to evaluating an enterprise's financial performance. Unfortunately, knowing how to prepare the cash flow statement and understanding how to interpret it are not taught as commonly--or as well--as they arguably should be. The guidelines contained in this paper should help any user gain a better understanding of how to interpret the SCF. Armed with such understanding, the analyst or other user is much better prepared to understand the whole set of financial statements of any enterprise.

REFERENCES

Beasley, Mark S., and Joseph V. Carcello (2008), *GAAS Guide 2009*, Chicago, IL, USA: Commerce Clearing House.

Bossung, Sharon E., and Barbara J. Howard (October 1993), "Comprehensive Gross Cash Flow Preparation: A Spreadsheet Application, *CPA Journal*, vol. 63, no. 10.

Financial Accounting Standards Board (1987), Statement of Financial Accounting Standards No. 95: Statement of Cash Flows, Norwalk, CT, USA.

Financial Accounting Standards Board (2011), Accounting Standards Codification, http://asc.fasb.org

Gibson, Charles H. (2007), Financial Reporting and Analysis: Using Financial Accounting Information (10th Edition), Mason, OH, USA: South-Western Cengage Learning.

Hagen, K. M. (21 June 2005), "How to Prepare a Cash Flow Statement," GoogoBits.com, accessed 31 January 2010 at www.googobits.com/articles/p0-932-how-to-prepare-a-cash-flow-statement.html.

Madray, J. Russell (2008), *Compilations & Reviews 2008-2009*, Chicago, IL, USA: Commerce Clearing House.

Matthews, Robert B., and Joe James (2011), “Preparing the Statement of Cash Flows Using the Balance Sheet ‘Squeeze’ Method,” unpublished manuscript.

Vause, Bob (2009), *Analysing Companies*, New York, NY, USA: Bloomberg Press.