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A STUDY ON VALUE CREATION IN SERIAL ACQUISITION OF TECHNOLOGY FIRMS

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ABSTRACT

The purpose of the study was to examine the causes of serial acquisition events and their consequences to the shareholders of the acquiring firms from strategic management and corporate finance perspectives. The research hypotheses investigated the impact of the strategic and financial determinants on shareholder value in serial acquisition of technology firms. In this mixed-methodology study, the research data were collected from company databases, internet sources, and publicly available records on acquisition transactions. The study results provide guidance to corporate managers on reducing investment risk in acquisition transactions. Increase in shareholder wealth as the result of informed acquisition decisions in the technology industry is a contribution of this study to positive social change.

INTRODUCTION

Few strategic activities surpass the complexity or the scope of mergers and acquisitions (M&A) in business organizations. The significance of this instrument of corporate strategy is evident from the transaction data published in the February 2007 edition of the Mergers and Acquisitions Journal. In the year 2006, the U.S.-based firms consummated more than 8,000 acquisition deals with a total dollar value of $1,371 billion. The deal value in year 2006 increased nearly by 30% compared to the deal value in year 2005.

Preceding the acquisition decision is a complex interplay of corporate strategy, capital allocation, organizational processes, and human resource redistribution. Even more challenging are the post-acquisition actions of structural, cultural, and behavioural integration. The scope of M&A is equally enormous in that the networked global economy creates an impact that extends far and beyond the corporate boundary, industry, and geography. It is indeed a simple supposition to predict high failure rates in M&A work, given the encompassing technological, market, cultural, legal, and sometimes even political uncertainties at every stage. The extant M&A literature readily confirms that one in every two acquisitions will fail (Zweig, 1995, as cited in DiGeorgio, 2002).

Technology firm acquisitions, and their strategic and financial determinants for value creation, are of specific interest for this research. Marked differences between the technology-intensive industries and non-technology based industries necessitate such industry-specific inquiry. Practitioners as well as researchers encounter special circumstances and specific challenges while dealing with acquisitions in the technology industry. Exemplifying this industry specificity, Paulson and Huber (2001) maintained that special consideration is essential while analyzing business acquisitions in the technology industry.

STATEMENT OF THE PROBLEM

This research study focused on firms in the technology industry that conducted multiple acquisitions each year displaying the strategic intent of achieving corporate growth and profitability through well-crafted acquisition strategies. Large technology firms such as Cisco, IBM, and Hewlett-Packard exemplified such serial acquisitive behaviour. In 2006, these three firms alone conducted 28 acquisitions with combined deal value exceeding $4.7 billion. Such serial acquisitive behaviour distinguishes the corporate strategy of large technology firms from that of the firms in many other industries that are less technology intensive. It is, therefore, of significant interest to examine the factors that cause success in the acquisition transactions of these serial acquirers (de Camara & Renjen, 2004; Dobbs, 2006; Macdonald, 2005; Palter & Srinivasan, 2006).

The problem with the extant M&A research focused on serial acquisition transactions is that this inquiry failed to conclude whether the strategy of serial acquisitions created value for the shareholders of the acquiring firms. The performance analysis for serial acquirers was further confounded by the impact of the past acquisitions on the current acquisition event. Two main themes emerged from the examination of research focused on serial acquisition transactions. The first theme propounds the experience hypothesis that previous experience influenced the pre-acquisition and the post-acquisition activity and was therefore critical to the acquisition performance (Duncan & Mtar, 2006; Hitt, Harrison, Ireland, & Best, 1998). The organizational capability and institutionalized M&A processes of serial acquirers created conditions for acquisition success (Rovit, Harding, & Lemire, 2004). Frequent acquirers also codified and documented their experiences that enabled effective monitoring of acquisition synergies such as the economies of scale or scope (Christofferson, McNish, & Sias, 2004).

NATURE OF THE STUDY

The current study focused primarily on serial acquirers such as Cisco, IBM, and Hewlett-Packard in the technology industry. The unit of analysis for the research was an acquisition event by the large technology firm. The selection of the final sample of acquirers was based on the number and the total value of the transactions, revenues, and market capitalization during the investigation period. This choice of acquiring firms was appropriate for two reasons. First, large firms accounted for a significant number of acquisition transactions in the technology sector. Therefore, these firms provided an excellent representation of the acquisition transaction characteristics of serial acquirers in the technology industry. Second, large firms have dedicated in-house M&A staff, established organizational routines, as well as the support of external consultants to execute the acquisition integration plan. The availability of such extensive resources minimized integration challenges that reduced value creation during the post-acquisition period.

CONCLUSIONS ON SERIAL ACQUISITION OF TECHNOLOGY FIRMS

The technology industry and the overall economy experienced the cycle of expansion-contraction-expansion in the period 1999-2006 covered by this research study. Interest in acquisition transactions, however, continued unabated through this cycle, except for a marginal reduction in the

years of economic decline. Over 234 acquisition deals conducted by the leading firms during the 8-year investigation period valued at approximately $100 billion dollars is a testament to the critical importance of this strategic instrument in the technology industry.

The first important result from the study was that the returns to the acquirers were marginally negative from the serial acquisition of technology firms. As these negative returns were not were not statistically significant at the 5% significance level, the study does not provide conclusive evidence that the serial acquisition strategy in the technology industry resulted in the loss of the shareholder value. Although the magnitude of the negative returns appeared to be insignificant in terms of the percentage values (i.e., approximately -0.5% in this study), researchers advocated caution in the interpretation of acquirers' returns on the basis of CAR values (Moeller, Schlingemann, & Stulz, 2005). The valuation losses in dollar terms could measure up to several hundred million dollars for the sample of acquiring firms that had the median market capitalization of approximately $131.8 billion in this study. It is also important to note that the valuation losses occurred regardless of the fact that the majority of the acquisition transactions involved small, privately-held target firms.

The study continued the investigation on whether the strategic and financial variables of the acquisition transaction impacted the acquirers' value. Examination of the ownership status of the target firm and its relative size to the acquirer allowed for certain important conclusions on investment risk in the serial acquisition transactions. The difference in the acquirer's returns from the private and public target firm acquisitions was positive, but insignificant. Thus, higher returns in private firm acquisitions indicated reduced risk exposure to the acquirers in these transactions. The negative correlation between the relative size of the target firms and the acquirer's returns further supported the rationale for the acquisition of private firms. However, such low investment risk did not necessarily translate into better valuation as reflected by the lack of significance in the difference of acquirers' returns from the acquisition of the private and the public firms. In conclusion, serial acquirers of technology firms managed to minimize their valuation losses by acquiring private target firms, but such acquisitions did not enhance the acquirers' value.

REFERENCES

Christofferson, S. A., McNish, R. S., & Sias, D. L. (2004). Where mergers go wrong. *McKinsey Quarterly*, 2, 92-99.

de Camara, D., & Renjen, P. (2004). The secrets of successful mergers: Dispatches from the frontlines. *Journal of Business Strategy, 25*(3), 10-14.

Dobbs, R. (2006). Creating value from mergers. *McKinsey Quarterly*, 4, 4-5.

Duncan, C., & Mtar, M. (2006). Determinants of international acquisitions success: Lessons from First Group in North America. *European Management Journal, 24*(6), 396-410

Hitt, M., Harrison, J., Ireland, R. D., & Best, A. (1998). Attributes of successful and unsuccessful acquisitions of U.S. firms. *British Journal* of *Management, 9*(2), 91-114.

MacDonald, R. (2005). A template for shareholder value creation on M&As. *Strategic Direction, 21*(5), 3-10.

Moeller, S. B., Schlingemann, F. P., & Stulz, R. M. (2004). Firm size and the gains from acquisitions. *Journal of Financial Economics, 73*(2), 201-228

Palter, R. N., & Srinivasan, D. (2006). Habits of the busiest acquirers. *McKinsey Quarterly*, 4, 18-27.

Paulson, E., & Huber, C. (2001). *The technology M&A guidebook*. New York: John Wiley & Sons, Inc.

Rovit, S., Harding, D., & Lemire, C. (2004). A simple M&A model for all seasons. *Strategy & Leadership, 32*(5), 18-24.

Zweig, P. L., & Perlman, J. (1995, October 30). The case against mergers. *Business Week*, *3448*, 122-130

THE FUTURE BELONGS TO CONGLOMERATES THAT DELIEVER SUPERIOR CUSTOMER VALUE: AN EMPIRICAL EXAMINATION IN 10 CARIBBEAN COUNTRIES

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ABSTRACT

This paper will analyze the subject area of superior customer value, and its importance in the business arena. Superior customer value has become increasingly critical as companies become more competitive and enter global markets. It is also intriguing to discover the underlying impact that this executed strategy could have on the organization's overall position within the marketplace. Our objective is to substantiate the correlations between superior customer value and market strength. This objective is met through empirical research in 10 Caribbean countries that reveals some of the corporate strategies employed, management styles/leadership abilities, supply chain management, global implications, and any resulting significant trends. However, based on general industry trends and the momentous success that most of these firms experience, this leads one to ponder: Is a company doomed without the delivery superior customer value?

INTRODUCTION

Superior customer value has become the buzz word within the business world, and it has certainly proved beneficial for many firms across the world. However, the delivery of superior customer value comes with its challenges; because it is a continual balancing act between: preserving corporate culture, understanding the corporate goals/objectives, superseding customer satisfaction, and remaining profitable.

The creation of superior customer value places the customer in the center of the company's goals and objectives. Further, it presumes that value and profit are interlinked and dependent upon each other. Therefore, as one element is changed, the other must also be amended to create synergy. This constant recognition and adjustment also plays an integral role in the creation of customer loyalty and long-term customer value. It also creates a competitive and sustainable advantage over other rivals in the industry.

Visionary Leadership That Commands Superior Customer Value (Sal)

The idea and practice of superior customer value must be executed by the executives of the firm. It is imperative for the leaders to trust and understand the advantages of delivering superior customer value, in order to transfer these ideologies to its employees effectively. Therefore, in order for a visionary leader to carry out this mandate, they must possess the following characteristics: creativity, receptive to feedback, resilient, able to make sound decisions, understand customer needs, unwavering dedication, and focused on productivity and quality (Keys and Wellins, 2008). Additionally, management must seek to procure employees who are dedicated, understand the corporate culture and objectives, and are fixated with the goal of increased customer satisfaction (Brown, Brown, and Gallagher, 2008).

Further, management must have customer insight. This provides a clear understanding of the target market, customer demand, customer experiences, and the level of customer service: how is the company measuring against its goals? Management's function of understanding customer needs is very important because in the aim to attain customer satisfaction and create value, the methods must be strategically aligned with the company goals and be within the scope of the organization.

Challenges in the Delivery of Superior Customer Value (Sal)

In an effort to succeed in today's global market, companies must be cognizant of the challenges one can encounter in the delivery of superior customer value. Every industry and company is different; however, there are some issues that are common to all organizations, namely: maintaining quality and consistency across regions, preserving corporate culture, understanding local markets and competition, understanding customer preferences, accounting for employee diversity, employee attitudes, management preparation, industrial legal and regulatory regimes (Karaszewski, 2004). These concerns warrant much research, calculated planning, and proper implementation, as to ensure that the corporate objectives are actualized, customers receive superior customer value, and the bottom line positively impacted. Nonetheless, it is vital for the company to understand its internal corporate objectives and incorporate them into the strategies and implementation process involved with delivering optimal levels of superior customer value (Cleveland, 2006).

According to Ma, Wal-Mart credits its delivery of superior customer service to its rich corporate culture that is entrenched with added value through great customer service. Further, 3M's corporate culture is highly innovative, and credits this to its successful penetration in the global market (Ma, 2004). Ma describes corporate culture as "a shared belief and value system embedded with norm and code that guide and regulate people's behavior within the organization." This norm provides a purpose that drives the employees to carry out the corporate objectives and goals. Careful indoctrination of the corporate culture fosters an environment that increases efficiency, productivity, and overall value that is passed down to the customers and creates superior customer value. This creation then leads to sustainable and competitive advantage for the firm (Ma, 2004). Therefore, it is critical that each employee 'take hold' of the corporate culture and become loyal and dedicated to the work they do by added value that is generated for customers. Overall, corporate culture provides employees a concrete sense of what is expected.

We use data from 10 Caribbean countries and 317 organizations in order to examine the importance that superior customer value may have on organizational profitability and survival. The Big Personality Inventory of McBride, Mendoza, and Carraher (1997) as modified by Carraher, Mendoza, Buckley, Schoenfeldt, Carraher (1998) was used to measure personality. It has previously been found to be related to a variety of types of performance (Carraher, Buckley, Scott, Parnell, & Carraher, 2002; Carraher, Carraher, & Mintu-Wimsatt, 2005; Carraher, Franklin, Parnell, & Sullivan, 2006, Carraher & Parnell, 2008; Carraher, Parnell, Carraher, Carraher, & Sullivan, 2006; Carraher & Sullivan, 2003; Chait, Carraher, & Buckley, 2000). Suggestions for future research on customer service, cognitive variables (Carraher & Buckley, 1996; Sturman & Carraher, 2007), strategic management, entrepreneurship (Carland, Hoy, Boulton, & Carland, 1984; Carraher, 2005), entrepreneurial marketing, and expatriate stress (Carraher, Sullivan, & Carraher, 2005; Crocitto, Carraher, & Sullivan, 2005) are provided. Corporate strategies employed, management styles/leadership abilities (Carraher, Buckley, & Carraher, 2002; Francis, Huang, & Carraher, 2004), supply chain management, global implications (Huang & Carraher, 2004) are also examined. We believe that there may be differences in terms of organizational life cycles (Lester, Parnell, & Carraher, 2003)

REFERENCES

Brown, L., Brown, C., & Gallagher, S. (2008). How CEO's can promote a strong market culture. *Strategy & Leadership.* Vol. 36, Iss. 5, p. 28.

Carland, J.W., Hoy, F., Boulton, W.R., & Carland, J.A.C. (1984). Differentiating entrepreneurs from small business owners: A conceptualization. *Academy of Management Review*, 9 (2), 354-359.

Carraher, S.M. (2005). An Examination of entrepreneurial orientation: A validation study in 68 countries in Africa, Asia, Europe, and North America. *International Journal of Family Business*, 2 (1), 95-100.

Carraher, S.M. & Buckley, M. R. (1996). Cognitive complexity and the perceived dimensionality of pay satisfaction. *Journal of Applied Psychology*, 81 (1), 102-109.

Carraher, S.M., Buckley, M., & Carraher, C. (2002). Cognitive complexity with employees from entrepreneurial financial information service organizations and educational institutions: An extension & replication looking at pay, benefits, and leadership. *Academy of Strategic Management Journal*, 1, 43-56.

Carraher, S.M., Buckley, M., Scott., C., Parnell, J., & Carraher, C. (2002). Customer service selection in a global entrepreneurial information services organization. *Journal of Applied Management and Entrepreneurship*, 7 (2), 45-55.

Carraher, S.M., Carraher, S.C., & Mintu-Wimsatt, A. (2005). Customer service management in Western and Central Europe: A concurrent validation strategy in entrepreneurial financial information services organizations. *Journal of Business Strategies*, 22 (1), 41-54.

Carraher, S.M., Franklin, G., Parnell, J., & Sullivan, S. (2006). Entrepreneurial service performance and technology management: A study of China and Japan. *Journal of Technology Management in China*, 1 (1), 107-117.

Carraher, S.M., Mendoza, J., Buckley, M., Schoenfeldt, L., Carraher, C. (1998). Validation of an instrument to measure service orientation. *Journal of Quality Management*, 3, 211-224.

Carraher, S.M.,& Parnell, J. (2008). Customer service during peak (in season) and non-peak (off season) times: A multi-country (Austria, Switzerland, United Kingdom and United States) examination of entrepreneurial tourist focused core personnel. *International Journal of Entrepreneurship*, 12, 39-56.

Carraher, S.M., Parnell, J., Carraher, S.C., Carraher, C., & Sullivan, S. (2006). Customer service, entrepreneurial orientation, and performance: A study in health care organizations in Hong Kong, Italy, New Zealand, the United Kingdom, and the USA. *Journal of Applied Management & Entrepreneurship*, 11 (4), 33-48.

Carraher, S.M. & Sullivan, S. (2003). Employees' contributions to quality: An examination of the Service Orientation Index within entrepreneurial organizations. *Global Business & Finance Review*, 8 (1) 103-110.

Carraher, S., Sullivan, S. & Carraher, S.C. (2005). An examination of the stress experience by entrepreneurial expatriate health care professionals working in Benin, Bolivia, Burkina Faso, Ethiopia, Ghana, Niger, Nigeria, Paraguay, South Africa, and Zambia. *International Journal of Entrepreneurship*, 9 , 45-66.

Carraher, S.M., Sullivan, S.E., & Crocitto, M. (2008). Mentoring across global boundaries: An empirical examination of home- and host-country mentors on expatriate career outcomes. *Journal of International Business Studies*, 39 (8), 1310-1326.

Chait, H., Carraher, S.M., & Buckley, M. (2000). Measuring service orientation with biodata. *Journal of Managerial Issues*, 12, 109-120.

Crocitto, M., Sullivan, S., & Carraher, S. (2005). Global mentoring as a means of career development and knowledge creation: A learning based framework and agenda for future research. *Career Development International*, 10 (6/7), 522-535.

Cleveland, J. (2006). Going Global: A Framework for Strategy Development. *Automotive Design & Production.* Vol. 118, Iss. 11, p. 16.

Francis, D., Huang, L., & Carraher, S. (2004). Top management teams and friendship: Results from the USA and Taiwan. *International Journal of Family Business*, 1 (1), 73-86.

Huang, L.Y. & Carraher, S. (2004). How effective are expatriate management and guanxi networks: Evidence from Chinese Industries. *International Journal of Family Business*, 1 (1), 1-23 .

Karaszewski, R. (2004). Quality Challenges In Global Companies. *Quality Progress.* Vol. 37, Iss. 10, p. 59.

Keys, D. & Wellins, R. (2008). DNA of a Global Leader. *T +D.* Vol. 62, Iss. 3, p. 37

Lester, D., Parnell, J., & Carraher, S. (2003). Organizational life cycle: A five-stage empirical scale. *International Journal of Organizational Analysis*, 11 (4), 339-354.

Ma, H. (2004). Toward global competitive advantage: Creation, competition, cooperation, and co-option. *Management Decision.* Vol. 42, Iss.7/8, p. 907.

McBride, A., Mendoza, J., & Carraher, S.M. (1997). Development of a biodata index to measure service-orientation. *Psychological Reports*, 81 (3 Pt 2), 1395-1407.

Sturman, M. & Carraher, S. (2007). Using a Random-effects model to test differing conceptualizations of multidimensional constructs. *Organizational Research Methods*, 10 (1), 108-135.

William, C. T. (2008). Preparing your staff for outstanding customer service. *Banking Strategies*. Vol. 84, Iss. 6, p. 26.

THE CONSERVATION OF ACCEFLOW: ELEVENTH LAW OF CONSERVATION

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ABSTRACT

This presentation is a report on the discovery of the eleventh new law of conservation - the Law of Conservation of AcceFlow (square rate, or the rate of the rate of mass change) that further develops the LT Bartini/Kuznetsov system of physical laws. The previous ten new laws of conservation, introduced and described in Aleinikov, 2006-2008, Aleinikov & Smarsh, 2007-2008, Aleinikov & McFarland 2008, opened opportunities for discovering new scientific laws. The 11th law is based on the 10^{th} Law of Conservation - the Law of Conservation of Flow, specifically described in Aleinikov & McFarland 2007, and twice successfully applied to the solution of the Great NASA Gravity Mystery in Aleinikov & McFarland, 2008. The new law - the Law of Conservation of AcceFlow fills the cell in the Bartini's Table (BT) that is located above the Law of Conservation of Flow - second cell up from the cell of Mass. The latter is considered to be the central cell because it includes the Law of Conservation of Mass (Newton, Lomonosov, Lavoisier). The mathematical formula of Conservation of AcceFlow is the following: $Afl = Flo/t = m/t^2 = const$ (where Afl is AcceFlow, Flo is Flow, m is mass, and t is Time). The range of measurement for Flow is L^3T^{-4}. A new unit for measuring the AcceFlow is called "Elim" (coined from the mother's name of one of the discoverers - Elizabeth McFarland). Time and place of discovery: February 2, 2009, Santa Cruz/Monterey, California, U.S.A.

LAW OF CONSERVATION OF MANEUVERABILITY

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ABSTRACT

This further develops the Law of Conservation of Maneuverability and expands the Bartini/Kuznetsov LT system of interpretation of laws of physics (Bartini, 1963, 1965, 2005; Kuznetsov, 2000) as described in Aleinikov & Smarsh, 2006-2008. This law, as all the other new laws can be applied to complex system like transportation, communication, construction, management and military operations. The concept of Mobility (Mob), introduced by Bartini is measured by L^6T^{-6}. Maneuverability is mobility over a distance. The new laws of conservation introduced the concepts of Extencia (extension, or linear displacement of power), Expancia (expansion, or area spread of power), and VoluPower (three-dimensions volumetric spread of Power). From this point of view, Maneuverability also can be defined by the rate of Expancia and the velocity or speed of Extencia. Maneuverability can be visualized in military applications. For example, tanks or armored vehicles can cover a certain area based on fuel and weapons. Knowing the characteristics of each, one can predict the potential flexibility of coverage. Therefore, at a certain moment of time and space, the amount of controlled firepower is constant, or conserved. The term offered for the phenomenon of "Maneuverability" is quite transparent. The range for measurement of Maneuverability is L^7T^{-6}. The Law of Conservation of Maneuverability states that under ideal/unchanging conditions the rate of expansion of power remains constant. The formula for Maneuverability is $Mnv = Mob \times L = Exp/t = Ext \times L/t = const$, where Mnv is Maneuverability, Mob is Mobility, Exp is Expancia, Ext is Extencia, L is Distance, t is Time. A new unit for measuring Maneuverability is called Grig. Mathematically, 1 Grig = 1watt $\times$ m^2/s. Time and place of discovery: August 21, 2007, Monterey, California. This law is applicable to all physical as well as complex economic systems and can be a foundation for numerous calculations in strategic management.

THE RELATIONSHIP BETWEEN THE SUBORDINATE'S PERCEPTION OF THE LEADERSHIP STYLE OF IT MANAGERS AND THE SUBORDINATE'S PERCEPTIONS OF MANAGER'S ABILITY TO INSPIRE EXTRA EFFORT, TO BE EFFECTIVE, AND TO ENHANCE SATISFACTION WITH MANAGEMENT

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ABSTRACT

The current study examined the Transformational, Transactional, and Passive/Avoidant Leadership styles as defined by Burns (1978) and Bass (1985) and how they are perceived by subordinates in predicting subordinate Extra Effort, manager Effectiveness, and satisfaction with management. One hundred fifty IT professionals from AITP, Association of Information Technology Professionals, were administered the Multifactor Leadership Questionnaire 5X-Short form (MLQ 5X-Short). The survey measured all nine full range leadership variables and results were analyzed using multiple regression.

Three hypotheses examined the relationship between the subordinate's perception of the leadership style of IT managers and one of three dependent measures: predicting subordinate Extra Effort, manager Effectiveness, and satisfaction with management. Partial support was found for all three hypotheses. In the first, Transformational Leadership and Passive/Avoidant Leadership, but not Transactional Leadership was able to predict Extra Effort. In the second, Transformational Leadership, Transactional Leadership (via a slightly modified "reversed" form as well as the two subscales individually), and Passive/Avoidant Leadership were able to predict management Effectiveness. In the last, Transformational Leadership, Transactional Leadership (reversed and subscales), were able to predict subordinates' Satisfaction with their leaders. Most findings were consistent with existing literature. In addition, this study also identified several items that needed further examination and research.

CONTROLLING INDUSTRY-UNIVERSITY RELATIONSHIPS FOR INITIAL AND CONTINUING SUCCESS

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ABSTRACT

Industry and academe can successfully work together to advance learning and new technologies. However these potentially powerful linkages are dynamic with uncertain outcomes, requiring governance methods other than traditional hierarchies and contracts. This exploratory study examines the key determinants for establishing and sustaining these relationships along with the subsequent learning and technology outcomes generated. Results using structural equation modeling reveal that several determinants are particularly important for advancing learning and technology outcomes in the initial and continuing stages of the relationship. These determinants include: trust, flexible university policies for intellectual property rights, effective communication and the presence of champions.

INTRODUCTION

The current competitive environment for most firms has been radically transformed by rapid technological change, shorter product life-cycles, and more intense global competition (Ali, 1994; Bettis & Hitt, 1995). It is increasingly more difficult for firms to rely solely on intra-organizational methods due to limited expertise and resources (D'Este & Patel, 2007; Hamel & Prahalad, 1994). Thus, an extensive literature continues to grow on the advantages of inter-organizational collaboration for both learning and advancing new technologies (Hail, Link & Scott, 2003; Adams, Chan, & Starkey, 2001; Jarillo, 1982; Parkhe, 1990; Pisano, 1993; Shan, Walker & Kogut, 1994). While much of this literature focuses on the determinants and outcomes between two or more industrial firms, this study concentrates on the growing trend inter-organizational collaboration between industrial firms and universities (Harryson, Kliknaite & Dudkowski, 2007, 2008; SRI, 1997).

There are a number of reasons why industry and universities seek to establish close ties with one another. Industrial firms gain access to highly trained students, professors, facilities, and new technologies. Industrial firms also can enhance their image and reputation (Fombrun, 1996). Universities primarily interact with industry in order to raise funds (NSB, 1996; NSF, 1982). Funding from industry involves less bureaucratic red tape than from the federal or state governments. Universities also want to expose students and faculty members to practical problems, create employment opportunities for university graduates, and gain access to applied technological areas (Lam, 2007; NSB, 1996). Thus, to help propel these potentially powerful linkages, a better

understanding is needed regarding what's important to industry in establishing and sustaining technologically-oriented relationships with universities.

RESEARCH METHOD

Secondary and interview data were initially collected and analyzed in order to structure our overall study. This initial set of data included recent program evaluations and survey protocols from National Science Foundation (NSF) supported Engineering Research Centers (ERCs) and Industry-University Cooperative Research Centers (IUCRCs). In addition to the program evaluations and survey protocols, semi-structured interviews were also conducted. After a comprehensive analysis of the initial data and the appropriate literature, a survey questionnaire was then developed which was used to obtain additional data on the key determinants and the specific outcomes generated from these relationships.

Twenty-one university technology research centers agreed to participate in this study by working with the authors and by providing access to their industrial firm partners. These centers represented a diverse cross-section of disciplines which would extend our findings beyond the idiosyncratic nature of one particular center or one or two industry environments. The survey questionnaire was then mailed to each industrial firm representative working with the participating university technology research centers. To complete the data collection, a series of in-depth, structured interviews were conducted with both university technology center directors and industrial firm representatives to validate the survey questionnaire data and to gain further insight on the firm's key determinants and outcomes.

The university technology research centers participating in this study work with an average of twenty-one industrial firms. A total of 558 industrial firm survey questionnaires were mailed to individuals representing 421 industrial firms. 202 responses were useable for a response rate of 36%. Where there were multiple respondents from one industrial firm, the responses were reduced to an aggregated sample of 189 that was then used in all our analyses.

The measures used in this study were primarily adapted from the existing literature along with input obtained from our in-depth interviews. We captured data for each of these measures at two points in time; the initial stage and the continuing stage of the relationship. This was necessary since our initial interviews indicated that the dynamics at work in establishing I/U relationships may differ from those in sustaining I/U relationships.

The independent variables were trust, flexible policies for intellectual property rights (IPR), patents, and licenses was measured, communications, and the presence of I/U champions . The dependent variables were learning and technology outcomes.

Learning outcomes was measured by three questions asking the respondents to approximate the number of research papers published as a direct result of their relationship with the university center, the number of research papers presented at conferences as a direct result of their relationship with the university center, and the number of master's theses and doctoral dissertations generated as a direct result of their relationship with the university center.

Technology outcomes were measured by asking respondents to approximate the number of patents, patent applications, licenses, and non-patented/licensed products and processes directly resulting from their relationship with the university center.

Structural Equation Analysis In an exploratory study such as this one, this structural equation modeling can be used to reveal dynamics between the variables thought to be related (Maruyama, 1998). We estimated the full structural equation models for both initial and continuing relationship success using LISREL 8.11 (Joreskog & Sorbom, 1993) structural equations modeling program. Learning outcomes and trust were both multiple indicator latent variables with 3 indicators. The other variables were single indicator latent variables and as such their error variances were set to zero (Bollen, 1989). The factor loadings for all of the indicators for all variables in both models were highly significant ($p < 0.001$). The confirmatory factor analysis indicated a very good fit for the measurement models for these variables for both initial and continuing relationship success. The fit statistics were identical to those found for the structural model which can be found in Table 2 and are discussed in the next section.

RESULTS

Table 1
Structural Model Fit Statistics

Statistic	Initial Success	Continuing Success
chi-square with 24 degrees of freedom	33.46	38.38
significance of chi-square	0.095	0.032
root mean square error of approx. (RMSEA)	0.046	0.056
goodness of fit index (GFI)	0.97	0.96
comparative fit index (CFI)	0.99	0.98
incremental fit index (IFI)	0.99	0.98

Measures for the overall fit of the model are reported in Table 1. The fit statistics reported include the chi-square statistic, root mean square error of approximation (RMSEA) (Browne & Cudeck, 1993), and three fit indexes: goodness of fit index (GFI) (Joreskog & Sorbom, 1993), comparative fit index (CFI) (Bollen, 1989) and incremental fit index (IFI) (Bollen, 1989). The significance of the chi-square for the initial relationship success model was .095 and for the continuing success model was .036; therefore it is advisable to use measures of fit other than the chi-squared statistic (Bollen, 1989; Joreskog & Sorbom, 1994). The RMSEA, GFI, IFI and CFI strongly suggest a good fit for both models. Descriptive statistics (means, standard deviations, and correlations among variables) are available on request.

Parameter Estimates Because this is an exploratory study with no strong a priori hypotheses, all paths between predictor and outcome variables were estimated. The path coefficients and their significance are presented in Tables 2 and 3. An analysis of the paths reveals patterns of significance both within each model and between the models. In both the initial relationship success model and the continuing relationship success model, the paths between trust and learning outcomes and champions and technology outcomes are significant. Of the paths between trust and technology outcomes and champions and learning outcomes, only the champions to learning outcomes path in the initial success model approaches significance. Within the initial

success model, the paths between intellectual property rights and both outcomes were significant, while the paths between communication and either outcome were not significant. This pattern is reversed in the continuing relationship success model, with the paths between communication and both outcomes highly significant.

Table 2
Initial I/U Relationship Structural Model Path Coefficients

	Trust	IPR Policies	Communication	Champions	R2
Learning Outcomes	0.200 *	0.250 ***	0.014	0.110	0.11
Technology Outcomes	0.006	0.290 ***	0.013	0.120	0.11
N = 189, * p < .05, ** p < .01, *** p < .001					

Table 3
Continuing I/U Relationship Structural Model Path Coefficients

	Trust	IPR Policies	Communication	Champions	R2
Learning Outcomes	0.250 **	0.062	0.430 ***	0.034	0.37
Technology Outcomes	0.150	0.064	0.560 ***	0.150 *	0.28
N = 189, * p < .05, ** p < .01, *** p < .001					

DISCUSSION

The results of this study suggest that industry-university relationships can be beneficial collaborative endeavors. Moreover we found that universities can influence industry-university collaboration success. The results also indicate that there are both similarities and differences in the sets of determinants which are associated with the initial success of such relationships and their continued success. Our in-depth interviews with industrial firm managers and university technology center directors highlighted several explanations for how these patterns of determinants influence the success of the relationship.

Intra-group Findings Two links were found to be significant in both the initial relationship success model and the continuing relationship success model. The first one was between trust and learning outcomes and the second between champions and technology outcomes.

Trust The finding that trust was linked to learning outcomes but not to technology outcomes can be explained by considering what the role of trust is in a relationship. Trust assumes the role of reducing uncertainty about the outcomes due to the actions of the other parties in the relationship.

It is an informal mechanism and, if betrayed, the injured party has little recourse. In the case of learning outcomes, a betrayal of trust could be not producing learning outcomes, inappropriately sharing outcomes and not sharing outcomes.

If a relationship does not produce learning outcomes, it may or may not be due to a betrayal of trust. Predicting the level of outcomes is often difficult to estimate. With respect to the inappropriate sharing of outcomes, it is important for partners to trust the judgment of their partners to disseminate learning outcomes.

Trust that another party shares information is related to the notion that there is wider participation in developing learning outcomes than in developing specific technologies and that the benefits of learning outcomes are more general and widespread. The wider participation in developing learning outcomes makes sharing of ideas a necessity, and tracking of such sharing difficult. Such trust is, in turn, built as the parties interact throughout the process. Formal mechanisms may not be able to capture the idiosyncratic participation needs for specific projects.

Champions The finding that champions was linked to technology outcomes but not to learning outcomes can be explained by considering the notion that champions serve as a substitute for trust. The use of champions, like trust, assumes the role of reducing uncertainty about the outcomes due to the actions of the other parties in the relationship. The more focused nature of the development of specific technologies allows for greater control of the process and therefore enables the use of champions. The greater accountability of the champion in essence reduces the risk to the parties involved by placing it on the champions themselves.

Technological outcomes are more likely to involve proprietary information than learning outcomes. The tangible benefits of specific technological outcomes and the proprietary information create greater risks for the parties. The greater control of the process and accountability of the champion is more suitable for managing these risks.

Inter-group Findings Two links were found to be significant in just the initial relationship success model and two others in only the continuing relationship success model. Relationships between flexible intellectual property right policies and both learning and technology outcomes was found in the initial relationship success model. Similar relationships between communication and both learning and technology outcomes were found in the continuing relationship success model.

Intellectual Property Rights The finding that flexible intellectual property right policies were linked to outcomes in initial but not in continuing relationship success can be explained by considering the notion that once intellectual property rights are established; they are no longer an issue. In the initial stages of a relationship, the concern over intellectual property are not completely established and flexible policies enable the relationship to move forward since industrial firms feel that their needs are now being met. Once the I/U relationship has been established, other issues come to the forefront.

With respect to learning and technology outcomes, flexible policies for IPR are important. However, for learning outcomes publishing rights such as copyrights and authorship are a major concern, whereas for technology outputs, patents and licensing are the major issue.

Communications The finding that communications were not linked outcomes in initial relationship success but were in continuing relationship success. In the initial stages of these relationships, the effectiveness of the communications between partners is just beginning to

crystallize. It is only after the relationship continues and communications intensify that evaluation is possible.

LIMITATIONS AND SUGGESTIONS FOR FURTHER RESEARCH

While this study did deepen and broaden our current knowledge, our investigation has limitations which can be addressed with further research. A key limitation has to do with perspective. Since our primary focus was on the industrial firm, we did not concentrate on the key factors important to university technology research centers. For example, the existence or lack of effective leadership in the university technology center as well as personality conflicts between the center director and the industrial firm participants. An examination of these factors requires a different focus and research design than was employed in this study.

Second, the industry-university technology relationships examined in our study were largely based in NSF supported technology research centers affiliated with US universities. Although this provided us with a diverse array of firms, relationships, and outcomes, this largely confined our study to US borders. A similar investigation examining I/U technology relationships in university technology research centers located in a variety of different countries will serve to extend and enhance these findings.

(references available on request)

LAYOFF AND FIRM LONG-TERM PERFORMANCE

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ABSTRACT

This paper investigates the company characteristics that explain the short-term market reaction, as well as long-term stock price performance of firms that announce layoffs. Results suggest that factors that explain the short-term market reaction differ from those that explain long-term stock performance. Evidence in this study also suggests that, on average, negative returns are associated with layoff announcements.

THE IMPACT OF CAPITAL INTENSITY AND DEMAND INSTABILITY ON STRATEGY SELECTION IN TRADITION BOUND ORGANIZATIONS

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ABSTRACT

This study explores the impact of capital intensity and demand instability on strategy selection in a tradition bound industry. The application of these important structural dimensions are developed and applied to the use of entrepreneurial strategies in a non profit context. Specifically we test the influence of these two characteristics on the strategy selection utilizing a unique sample of 250 religious organizations. There are two components offered. First, these two components of managerial discretion contribute positively to entrepreneurial behavior. Second, entrepreneurial behavior is positively associated with performance in a religious context. The propositions are discussed and tested. The impact of discretion on strategy selection was mixed. Implications of these results and suggestions for future study are offered.

INTRODUCTION

The need to be entrepreneurial is becoming almost axiomatic in today's business context, however, there remain significant industries and organizations where strategies of change are far less appealing, certain, or successful. This study begins to addresses that niche by exploring the factors that drive the utilization of an entrepreneurial orientation (EO) in traditional religious organizations. The entrepreneurial orientation has emerged as a well-accepted conceptualization of important behaviors which drive performance and facilitate entrepreneurial success. An entrepreneurial orientation (EO) is comprised of those strategic actions that promote innovation, encourage entrance into new markets, and tolerate increased levels of risk (Miller, 1983).

In a traditional religious organization a high value is placed on consistency and stability. Therefore, two important questions face research in this novel context. First do these organizations choose an entrepreneurial strategy based on their own discretion or only when forced? Second, is an entrepreneurial strategy selection an effective choice in terms of organizational performance? In this study we move entrepreneurial research forward by investigating the role of capital intensity and demand instability have on promoting entrepreneurial behavior in a religious institution. This exploration of these structural components expands our knowledge of the mechanisms impacting the success of entrepreneurial strategies.

Due to the unique nature of nonprofit organizations in general more study is needed into the mechanics and rationality of strategy selection in this unique context. These organizations thrive on stability, predictability, and tradition. Therefore, it is an open question whether innovative behavior is valued at all in this context. Religious organizations provide an ideal setting for expanding our knowledge of the contingencies involved in entrepreneurial strategy selection.

In religious organizations innovation and change may be viewed as a threat rather than as a benefit. Therefore, an important research question is: can innovation be equally effective in these traditional non-profit contexts where the dominant products represent stability and tradition? The positive impact of an EO in this context has been recently explored (Fritz & Davis, 2006; Pearce, Fritz, and Davis, 2009). In their large scale study Pearce et al. (2009) found innovativeness and autonomy seeking linked to superior performance in religious organizations. This study moves beyond a simple test of EO and performance to investigate the antecedents of EO strategy selection and their direct and indirect impact on organizational performance.

THEORY AND HYPOTHESES

This study relies on the Resource Based View of the firm (Wernerfelt,1984,1995), Agency Theory (Jensen & Meckling, 1976), and Institutional Theory (Hannan & Freeman, 1984) to develop and test the impact of capital intensity and demand instability on strategy selection and performance in a religious context. The resource based view of the firm has become a stalwart model for assessing competitive advantage. In this framework the competitive advantage of a firm is found in the existence of valuable, rare, inimitable, resources (Barney, 1991). It is the purpose of this study to explore the role that managerial discretion and entrepreneurial behavior play in creating this unique resource. The institutional theory of the firm can be cited as supporting an alternative view of the value of EO, and managerial discretion, in the context of a religious organization. Under the institutional theory of the firm organizations will seek legitimacy rather than change. Legitimacy and adherence to institutional norms, rather than innovation, is the dominant strategy under institutional theory. Therefore, IT theory can be cited as calling into question the value of utilizing an EO in a religious context even when the level of discretion is quite high. Due to the demands of legitimacy higher discretion would be utilized to promote stability and associate with the dominant industry practices. This alternate theory has clear appeal in the religious and nonprofit arenas.

Managerial Discretion

Managerial discretion is defined as those structural characteristics that increase the organization's latitude for action (Hambrick & Finkelstien, 1987). Capital intensity and demand instability to are two characteristics that have been established as increasing the level of managerial discretion available to a firm. The impact of varying levels of managerial discretion on strategy selection is unknown in the context of religious organizations. Arguably a high degree of managerial discretion would encourage increased entrepreneurial action due to the increased flexibility associated with slack resources and limited capital restraints. However, in a tradition bound organization the increased flexibility and limited capital investments may in fact discourage rather than encourage innovation. The support for reducing entrepreneurial action even when unconstrained is also a empirically supported choice (Gill, 1995). Given the mixed support for the role of innovation an investigation of managerial discretion's role in encouraging entrepreneurial behavior and supporting performance is of great interest.

Performance

Performance in a religious organization can be a controversial topic. Leaders and adherents in these organizations claim a wide variety of potential measures of performance. In several structured discussions with local leaders of religious institutions the definition of performance included increased faith, salvation, attendance, and survival. The intangible outcomes that mentioned by these leaders are clearly important outcomes for religious organizations however these intangibles are not the primary focus of this study. Performance for this study is defined as changes in giving by members ot the organization and changes in weekly attendance. We take the stance that these tangible outcomes are the best indicators of performance. In most previous research on religious organizations the predominant performance measure has been attendance (e.g. Odom and Boxx, 1988). It is our contention that these tangible measures of growth are important indicators and can be accepted as proxies for delivery of the intangible products (faith, spirituality, peace). If the organization is growing as measured by attendance and giving we argue that the other products are also being delivered at a sufficient level.

In any given religious organization the growth in attendance and growth in giving to the organization may not be perfectly correlated. Admittedly, an organization could increase dramatically in attendance yet not grow in giving, while another organization could increase its overall giving while attendance declines. Although these circumstances are indeed possible, explorations of performance in religious organizations indicates that the two measures of performance are highly correlated. Therefore, it is our contention that these two indicators provide a more stable and robust measure of performance. Using both measures in a combined manner is consistent with the call in entrepreneurial research that performance measures of entrepreneurial firms contain multiple dimensions (Murphy, Trailer, and Hill, 1996).

Strategic Choice

The idea of strategic choice (Child, 1972) argues that organizations and their leaders have options when making decisions. Further it is the executive's exercise of reason, deliberation, and strategic choices that subsequently impacts the organization's performance. Therefore, creating discretion and taking the appropriate strategic action is what makes leaders and organizations successful. Admittedly, strategic choice opens the option of both good and bad utilization of the discretion available to the decision makers. Therefore an exploration of the choices and subsequent performance of organizations during situations of high and low discretion is quite relevant and needed.

The resource based view (Wernerfelt, 1984; Barney, 1990) offers clear support for the argument for increased managerial discretion improving organizational performance. Under the resource based view of the firm the key to strategic advantage lies in the creation and maintenance of valuable, rare, inimitable, organizational advantages. Therefore an organization in the religious context which exhibits high discretion becomes an extremely rare, valuable, inimitable resource. This argument is further strengthened if the existence of high discretion is viewed as a unique organizational arrangement. The uniqueness of discretion is supported under the argument that

widespread awareness of agency costs has created restrictive governance structures in the majority of organizations.

Entrepreneurial Orientation

An entrepreneurial orientation is described as comprising specific behaviors that support the development of new products, procedures, or novel combinations of existing products or processes. There exists broad agreement on the importance of proactiveness, innovativeness, and risk seeking in contributing to entrepreneurial behavior (Dess & Lumpkin, 2005; Miller & Friesen, 1982; Miller & Friesen, 1978; Wiklund & Shepherd, 2005). Dess and Lumpkin (1996) have proposed expanding the definition of an entrepreneurial orientation to include autonomy seeking, and competitive aggressiveness. All of the entrepreneurial behaviors can be expected to be highly correlated with one another; however, there is theoretical and empirical support for modeling each of them as distinct dimensions (Jambulingam, et al. 2005, Knight, 1997, Lumpkin & Dess, 1996).

Managerial Discretion

Managerial discretion is defined as "latitude of managerial action" (Hambrick & Finkelstein, 1987). Although, managerial discretion exists and can be measured at the firm, industry, and individual level, this study focuses on firm level discretion. Prior research has developed a model that specifies several structural features that serve as proxies for increased managerial discretion (Hambrick & Finkelstein, 1987; Finkelstein & Boyd, 1998). Simply stated as the ratio of capital assets per employee decreases, managerial discretion increases. Similarly, as the demand for an organization's products becomes increasingly instable (higher competition, change in market share, etc.) the amount of discretion is increased. Finally, as the levels of financial slack increase the firm receives more discretion. The following paragraphs describe the two dimensions of managerial discretion deemed most salient in a religious context.

Capital intensity. Organizations in the religious industry can be impacted by the degree of capital intensity. Capital intensity is the level of investment in buildings, plants and other physical structures relative to the number of employees. Theory argues that those organizations that are heavily invested in plant and equipment relative to their employee base will find themselves more constrained than the low capital intensity firms (Hambrick and Finkelstein, 1987). Capital intensity limits the ability to shift methods of delivering services, changing physical location, or even offering new products. High capital intensity has been found to reduce the number of strategic options available to the CEO, while lower capital intensity promoted increased flexibility in the markets served, and more flexibility in the mix of products offered (Ghemawhat, 1991).

Demand instability. Firms facing demand instability such as increased competition and dynamic change will experience an increase in their domain of their managerial discretion. This increase in discretion is created from the increased market volatility and its subsequent creation of increased opportunities for action (Hambrick & Finkelstein, 1987; Wright & Kroll, 2002). When consumers are actively searching firms are less constrained by the current market mix, and the existing customer base. In contrast, when firms face a lower level of demand instability their discretion decreases as they are confronted with less external volatility and reduced competition.

The existing customer base, rather than the external market is said to be more salient and becomes a constraint. Since we argue that an entrepreneurial orientation is a strategic choice that leads to higher performance we expect that an increase in these structural dimensions that are associated with managerial discretion will increase the likelihood of an entrepreneurial stance being taken.

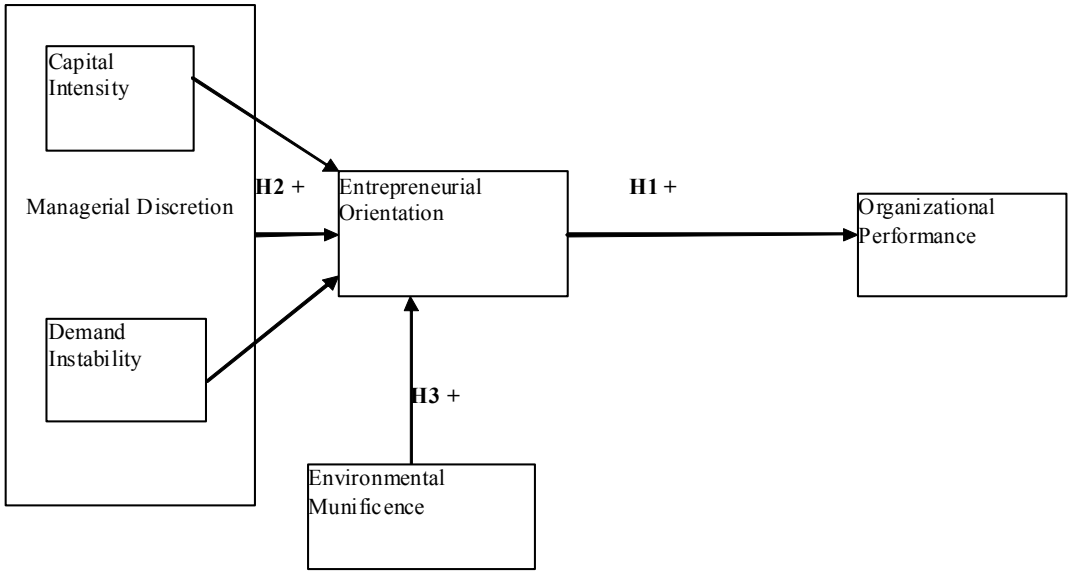
The combination of demand instability and reduced capital intensity creates the latent construct we have previously defined as managerial discretion. As discussed in the previous paragraphs an increase in this discretion will be conducive to the adoption of an entrepreneurial orientation, Therefore,

Environmental Munificence

Environmental munificence is the sufficient supply of the resources that are required to support and grow an organization (Castrogiovanni, 1991; Dess & Beard, 1984; Pfeffer & Salancik, 1978). When resources are abundant, firms are faced with a wider variety of strategic choices and markets. Environmental munificence can arguably be viewed as an extension of the managerial discretion construct under the rubric of organizational slack. When resources become scarce there is increased competition for the scarce resources (Dess & Beard, 1984). This increased competition for resources can lead to reduced organizational slack and result in revised behavior by the organization and its members (Child, 1972). In short, religious organizations will benefit from munificence in a performance sense. In this study we argue that it leads to an increased ability and willingness to adopt an entrepreneurial strategy. Anecdotal evidence strongly supports munificence as a prime determinate of performance in religious organizations. The existence of large churches in rapidly growing suburbs and near heavily traveled shopping areas can be contrasted to the smaller or abandoned churches in the areas of the declining areas of many cities. In discussions with local church leaders it was revealed that the dominant (albeit untested) belief is that munificence is that environmental munificence is the primary cause of performance variation. Therefore,

In this context the entrepreneurial behavior is largely generated from the members and therefore any increased affluence, education, or social interaction that may be present in a munificent environment can be utilized to enhance the effectiveness of an EO and increase its adoption as a strategic choice. In contrast, when the environment of the organization is hostile the quality of the members' decision making resources becomes constrained and the innovation and proactiveness becomes less effective.

Figure 1
Model of Proposed Effects



BOARD POWER, CEO APPOINTMENTS, AND CEO DUALITY

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ABSTRACT

Decades of research on corporate boards of directors resulting in diverse and often inconsistent findings have not dampened scholarly interest in the topic. Instead, researchers are attempting to more effectively model the board-firm relationship. One such modeling approach considers the power of the board in relation to top management. Drawing on upper echelons thinking (Hambrick & Mason, 1984) and the concept of managerial power (Finkelstein, 1992), this conceptual study develops the notion of board power in relation to CEO duality. Based on a framework composed of structural, ownership, expertise, and prestige power of the board, the study develops several propositions predicting the impact of board characteristics on a key aspect of managerial power - the appointment of the CEO to the position of board chair. This work contributes to scholarly understanding of the role of agency theory in explaining corporate governance phenomena by extending upper echelons thinking to the study of boards.

INTRODUCTION

Corporate boards of directors have been the focus of several decades of research prompting calls by organizational researchers for development of constructs that more effectively model this relationship. Among constructs recently capturing the attention of governance researchers is that of the power of the board of directors. A board's ability, or capacity, to monitor top management is dependent on its power to effect and enforce its will. Hence, examination of the nature of board power and its antecedents and outcomes is essential to our understanding of the governance function of boards (Finkelstein and Hambrick, 1996; Hillman and Dalziel, 2003).

This study examines the impact of board power on the likelihood that a newly appointed CEO is also eventually appointed chair. Specifically, the study conceptualizes board characteristics in terms of board power. Using a framework of managerial power (Finkelstein, 1992) and extending upper echelons thinking to the study of boards of directors, board power is framed within the context of board characteristics to predict dual leadership by a newly appointed CEO.

CEO DUALITY AND BOARD POWER

Consequences of CEO duality have been the focus of considerable empirical investigation (See Daily and Dalton (1997) for a narrative analysis of empirical examination of the relationship between CEO duality and firm financial performance.) Most such empirical studies have been grounded in the assumption, based largely in agency theory, that the roles should be split in order to preserve the independence and monitoring capabilities of the board. Results of some of these studies suggest that the concerns of corporate governance activists and theorists urging separation

of the two roles are well founded. However, other organizational researchers suggest a different tack proposing instead that one form of corporate leadership may not be the best in all circumstances and demonstrating, for example, that there are costs and benefits associated with both forms of leadership structure (Brickley, Coles, & Jarrell, 1997; Faleye, 2007). The power of the board of directors may be a key factor in determining the most suitable arrangement.

In an organizational context, power is the capacity to control the premises and choices of decisions as well their consequences (Roy, 1997) and the board possesses a certain degree of organizational power. Because the CEO role derives authority from its relationship with the board, the board does possess a certain degree of structural power. Thus, structural power of the board stems not strictly from the separation of the chair and CEO roles but from the board's legitimate authority to separate or combine the two positions.

In addition to structural power, boards possess a certain amount of ownership power (Finkelstein, 1992) stemming from several sources. First, the board is legally empowered to act on behalf of the owners. Second, directors often have some ownership interest in the focal firm. Third, directors' personal links to the firm's founders may provide some base of ownership power.

In addition to structural and ownership power, board power stems from directors' expertise as directors and as managers. In addition to general management or governance experience, expertise power may also be based on the relevance of a director's expertise with respect to a particular strategic choice (Finkelstein, 1992). Hillman & Dalziel (2003) noted that boards with experience in a particular situation facing the firm showed effective monitoring.

Finally, board prestige power may lie in directors' reputations. Prestige power, while a general source of power for most strategic leaders, may have unique application within the context of boards of directors. Indeed, a central tenet in the resource dependence perspective (Pfeffer, 1972, 1973, Pfeffer & Salancik, 1978) is that prestigious individuals are recruited as directors to enhance the legitimacy of the focal firm. Such formal and informal connections with and authority within organizations in the focal firm's institutional environment may be sources of external information that leads to a reduction of uncertainty for the focal firm. In sum, boards operate from a basis of organizational power that, while similar to managerial power, differs in its sources and in the ways that power might be used to influence firm outcomes. Following are propositions that articulate the relationship between board power and the likelihood of CEO duality at the time of CEO succession.

The division of the work of the board into committees represents a certain amount of task allocation, reporting structure, and formal patterns of interaction within the board, and the work of the board increasingly relies on committees (Lorsch & MacIver, 1989) as a means to facilitate board decision-making processes (Conyon & Peck, 1998; Singh & Harianto, 1989). Although researchers have increasingly acknowledged the importance of board committees, in comparison to the volume of research on the board at large, board structure in the form of board committees has received relatively little empirical scrutiny.

Some boards have many committees in addition to those mandated legally or by the firm's listing stock exchange (i.e., nominating, compensation, and audit). Such boards should have relatively decentralized information systems reducing the power of the entire board. All things being equal, allocation of board work into fewer committees may effectively focus directors' efforts on specific issues and allow more efficient interaction among committee chairs and individual

committee members. Increased efficiency and effectiveness of the board through efficient committee structure may enhance the capacity of the board to monitor.

P1: The larger the number of standing committees of the board, the more likely that CEO succession will include also succession to the chair position.

Eisenhardt (1989) suggests that the number of meetings enhances the information processing of the board increasing the amount of director interaction, enhancing the quality and quantity of the board's information, and reducing their reliance on insiders for information and increasing their independence. The increased power and independence from enhanced information makes the board less likely to turn over the reins of both the firm and board to a new CEO.

P2: The greater the number of meetings, the less likely that CEO succession will be accompanied by succession to the chair position.

A key element of board structure addressed by organizational researchers is board size (Finkelstein & Hambrick, 1996), although empirical effects are somewhat mixed (Dalton, Daily, Ellstrand, & Johnson, 1998; Hermalin & Weisbach, 2001). A larger board may be too unwieldy to adequately control and serve the focal firm's management leading to the possibility of lower performance outcomes. Alternatively, a larger board may have a broader, richer pool of experience from which to draw. The larger the board, the greater its capacity for a larger number of committees, whereas a small sized board's capacity for division into committees is quickly exhausted. Therefore, the larger the board, the less pronounced are the effects of the number of committees and of committee meetings.

P1a: The relationship between the number of committees and the likelihood of CEO duality at the time of CEO succession will be less positive as board size increases.

P2a: The relationship between the number of meetings and the likelihood of CEO duality at the time of CEO succession will be less negative as board size increases.

Ownership power of the board stems from directors' equity stakes in the firm and their personal links to the firm's founders (Finkelstein, 1992). Following an agency perspective, this is thought to align directors' interests with those of the stockholders thereby enhancing the board's level of fiduciary care. Recent research on the impact of managerial equity in the focal firm demonstrated that this may be effective only up to a certain level of ownership (Wright, Kroll, Lado, & VanNess, 2002) eventually inflecting downward at a point when ownership is disproportionately concentrated in the focal firm leading managers to reduce the risk associated with their personal wealth portfolios through risk-reducing corporate strategies.

Increased ownership stakes tend to align board decisions with those of shareholders. At relatively low levels of equity, directors will have the incentive to enhance governance through separation of the CEO and chair positions. However, as their equity stakes increase, their interests begin to diverge from those of shareholders, leading to risk averse decisions favoring entrenchment.

P3: The greater the ownership power of the board, the less likely that CEO succession will be accompanied by succession to the chair position.

P3a: As ownership power continues to increase, CEO duality upon appointment becomes more likely.

Ownership power may also be manifest through the presence on the board of the firm's founder(s) or of members of the founder's family. Founders likely retain a position on the board and most likely the position of chair in the event they relinquish the CEO position making it unlikely that

a new CEO would assume the chair role. Furthermore, with succeeding generations, it is likely that at least one family member will sit on the board. This suggests the ownership power of the board is greater with the presence on the board of the founder or members of the founder's family. Stated more formally,

P4: The presence on the board of the firm's founder or family will reduce the likelihood of CEO duality upon appointment of a new CEO.

The number of other directorships represented on the board may enhance the board's expertise. Although theory and corporate governance critics suggest that multiple directorships represented on boards lead to complacent, entrenched boards, resulting in reduced board capacity to monitor, Ferris and colleagues (Ferris, Jagannathan, & Pritchard, 2003) found that boards with directors serving on multiple boards were not "too busy to mind their own business" (Ferris et al., 2003). Rather than multiple directorships reducing board effectiveness and monitoring capacity, they may actually enhance board expertise. Hence, the number of multiple directorships held by focal firm directors will be associated with a higher probability of separation of the chair and CEO roles.

P5: Multiple directorships represented on the board will reduce the likelihood of CEO duality at the focal firm.

The prestige power of the board is also enhanced through multiple directorships. Multiple directorships are often considered a manifestation of an individual's social embeddedness in the business elite (Mizruchi & Stearns, 1988; Useem, 1979; Granovetter, 1985) resulting in less reliance on the CEO. Greater embeddedness leads to less reliance on the focal firm's CEO and may also result in a lower incidence of CEO duality immediately upon appointment as new CEO.

P6: The greater the prestige of the board the lower the likelihood of CEO duality at the focal firm.

Prior research has demonstrated that focal firm performance impacts the incidence of CEO duality. When firm performance is low, powerful boards may be less likely to favor duality while vigilant boards may prefer the arrangement when performance is high (Finkestein & D'Aveni, 1994). This finding suggests the following:

P7: When focal firm performance is high, the relationship between board power and the likelihood of CEO duality will be less negative.

DISCUSSION AND CONCLUSION

Understanding of the role of the board in corporate governance requires a clear understanding of board power (Finkelstein & Hambrick, 1996). One reflection of board power is separation of the chair and CEO roles. The perspective presented in this study proposes that separation stems from the intrinsic authority of the board to appoint the board chair. This conceptual framework rests on the notion that boards function as an upper echelons decision group. At the same time, upper echelons perspectives, developed largely to help explain top management team (TMT) phenomena, may not be wholly appropriate for studying boards which differ substantively from top management teams in how they operate and in the domains of their activities. Due to these differences, theoretical perspectives developed to illumine scholarly understanding of top management teams may have limited application outside the domain of top management.

A key result is that the domains of governance and management may not be equally subject to perspectives such as upper echelons thinking that illumine one or the other. Therefore, while agency considerations should take into account the balance of power between management and the board as well as other governance mechanisms, notions of managerial power (Finkelstein, 1992) may not explain the types of power considerations necessary for the proper application of agency theory.

Underlying the logic of this conceptual study is the fact that while boards may indeed appoint a CEO as also board chair, the board still retains the authority to reverse that decision. This study seeks to distinguish between the actual division of labor between CEO and chair and the legal and intrinsic authority of the board to allocate those tasks. However, the practical implications of the division of labor between the two leadership roles suggest that CEO duality may be a component of board power rather than an outcome of board characteristics. The upper echelons perspective views the firm as a reflection of its top managers (Hambrick & Mason, 1984), and the board of directors may be equally a reflection of the organization's leaders.

REFERENCES

Brickley, J. A., J. L. Coles & G. Jarrell (1997). Leadership structure: Separating the CEO and Chairman of the Board. *Journal of Corporate Finance, 3*(3), 189-220.

Conyon, M. J., & S. I. Peck (1998). Board control, remuneration committees, and top management compensation. *Academy of Management Journal, 41*(2), 146-157.

Daily, C. M., & D. R. Dalton (1997) CEO and board chair roles held jointly or separately: Much ado about nothing? *Academy of Management Executive,* 11(3): 11- 20.

Dalton, D. R., Daily, C. M., Ellstrand, A. E., & Johnson, J. L., 1998. Meta-analytic reviews of board composition, leadership structure, and financial performance. *Strategic Management Journal, 19*(3): 269-290.

Eisenhardt, K. (1989). Agency theory: An assessment and review. *Academy of Management Journal, 14* (1), 57-74.

Faleye, O. (2007). Does one hat fit all? The case of corporate leadership structure. *Journal of Management & Governance, 11*(3), 239-259.

Ferris, S., M. Jagannathan, & A. C. Pritchard (2003). Too busy to mind the business? Monitoring by directors with multiple board appointments. *The Journal of Finance, 58*(3), 1087-1111.

Finkelstein, S. (1992). Power in top management teams: Dimensions, measurement, and validation. *Academy of Management Journal, 35*(3), 505-538.

Finkelstein, S. & D. Hambrick (1996). *Strategic Leadership: Top Executives and Their Effects on Organizations.* Minneapolis/St. Paul: West Publishing.

Granovetter, M. (1985). Economic action and social structure: A theory of embeddedness. *American Journal of Sociology, 91*(3), 481-510.

Hambrick, D. C. & P. A. Mason (1984). Upper echelons: The organization as a reflection of its top managers. *Academy of Management Review, 9*(2), 193-206.

Hermalin, B. E. & M. S. Weisbach (1988). The determinants of board composition. *RAND Journal of Economics, 19*(4), 589-606.

Hillman, A. J. & T. Dalziel (2003). Boards of directors and firm performance: Integrating agency and resource dependence perspectives. *Academy of Management Review, 28*(3), 383-396.

Lorsch, J. W., & E. MacIver (1989). *Pawns or potentates.* Boston: Harvard Business School Press.

Mizruchi, M. S., & L. B. Stearns (1988). A longitudinal study of the formation of interlocking directorates. *Administrative Science Quarterly, 33*(2), 194-210.

Pfeffer, J. (1972). Size and composition of corporate boards of directors: The organization and its environment. *Administrative Science Quarterly, 17*(2), 218-228.

Pfeffer, J. (1973). Size, composition, and function of hospital boards of directors: A study of organization-environment linkage. *Administrative Science Quarterly, 18*(3): 349-364.

Pfeffer, J. & G. R. Salancik (1978). *The external control of organizations: A resource dependence perspective.* New York: Harper & Row.

Roy, W. G. (1997). *Socializing capital: The rise of the large industrial corporation in America.* Princeton, NJ: Princeton University Press.

Singh, H. & F. Harianto (1989). Top management tenure, corporate ownership structure and the magnitude of golden parachutes. *Strategic Management Journal, 10*(2): 143-156.

Useem, M. (1979). The social organization of the American business elite and participation of corporation directors in the governance of American institutions. *American Sociological Review, 44*(4), 553-572.

Wright, P., M. Kroll, A. Lado, & B. Van Ness (2002). The structure of ownership and corporate acquisition strategies. *Strategic Management Journal, 23*(1): 41-53.

A MODEL FOR MEASURING A FIRM'S DEGREE OF PROCESS ORIENTATION

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ABSTRACT

Several organizations choose to be process-oriented. Process orientation means focusing on business processes rather than emphasizing functional structure or hierarchy. In this paper a model for measuring a firm's degree of process orientation is discussed. The a priori model consists of ten dimensions, each operationalized by several indicators. The paper applies a factor analysis to the a priori model by using data from 133 Austrian corporations in order to investigate the underlying data structure. The result of the paper is a revised model with newly developed unidimensional factors, each measuring a certain dimension of process orientation.

INTRODUCTION

Instead of placing emphasis on functional structures, process-oriented organizations focus on their business processes ranging from customer to customer (Reijers, 2006). Business process management (BPM) does not only incorporate the discovery, design, deployment and execution of business processes, but also interaction, control, analysis and optimization of processes (Smith & Fingar, 2002). The purpose of this work, carried out as a part of on-going research, is to refine a model for measuring a firm's degree of process orientation (PO). The model to be refined (from now on called *a priori model*) was originally introduced in (Kohlbacher, 2008). The paper applies a principal component analysis to the a priori model by using data from 133 Austrian corporations in order to investigate the underlying data structure. The result of the paper is a revised model with newly developed unidimensional factors, each measuring a certain dimension of PO. The paper starts with a brief introduction of the a priori model and a description of the data collection process. Second, a factor analysis and a reliability analysis are applied to the a priori model, resulting in a revised model. Finally, the paper gives a conclusion and describes further course of research.

THE A PRIORI MODEL

The overall objective of this paper is to create a summated scale for the concept of process orientation. The starting point for creating such a summated scale is its conceptual definition (Hair et al., 2006). This section is supposed to give a very short overview of the a priori model representing the conceptual definition. The model was originally introduced in (Kohlbacher, 2008) and consists of ten dimensions, each measured by several items:

- Process Design and Documentation (dimDESDOC): Existence of enterprise process model (MACROM); Documentation of processes (DOC); Use and update of process documentation (DOCUSE); Definition of inputs and outputs for processes (INPOUTP); Definition of

suppliers and customers for processes (CUSTSUPP); Existence of process cascades (CASCADE); Segmentation of business processes (SEGMENT).

- Management Commitment (dimMGMT): Do senior executives perceive process management as a way of managing the business? (MGMT_AW); Existence of a senior executive who has taken leadership of the process program (CPO); Active engagement of the senior executives in the process program (MGMT_BEH).
- Process Owner (dimPOWNER): Existence of process owners (PO_EX); Are process owners experienced managers (PO_MNGR); Power of the process owner (PO_ID); Are process owners responsible for continuous improvement of their processes (PO_ACT); Process owner's responsibility for budget (PO_BUD); Process owner's influence over personnel assignments (PO_STAFF).
- Process Performance Measurement (dimPPM): Existence of process performance indicators for processes (PPM_DEF); Derivation of process performance indicators from enterprise goals (PPM_DRV); Continuous collection of process performance data (PPM_COLL); Are measures actually initiated by performance indicators? (PPM_ACT); Presentation of metrics to workers (PPM_PRES); Use of process benchmarking (BENCHM); Use of activity based costing (ABCOST).
- Corporate Culture (dimCULTURE): Existence of inter-departmental teamwork (TEAMW); Customer-focused attitude of employees (CUST_FOC); Employees' accountability for enterprise results (CHARGE); Employees' attitude towards change (ATT_CHNG); Use of process language (LANGUAGE); Existence of open and collaborative leadership style (MGMT_ST).
- Information technology (dimIT): Existence of integrated information systems (IS); Use of a business process management system (BPMS).
- Organizational Structure (dimSTRUC): Is the organizational structure congruent with the enterprise process model? (STRUCT1); Is the organizational structure derived from processes? (STRUCT2).
- People and Expertise (dimPEOPLE): Do workers have detailed knowledge of how their process is executed? (KNOWL); Do process workers have skills in process improvement and problem solving techniques? (SKILLS); Existence of a process redesign, project management and change management experts cadre (EXPERTS); Use of process improvement methodologies (METHODLG).
- HR Systems (dimHRSYST): Are role definitions and job descriptions driven by processes? (JOB_SPEC); Existence of incentive systems which emphasize the process' needs (INC_SYS).
- Coordination and Integration of Process Projects (dimBPMOFFICE): Existence of an instance coordinating and integrating process projects, which is often referred to as business process management office (PROJ_INT).

DATA COLLECTION

A questionnaire for collecting process orientation data was designed based on the model introduced in the previous section. For all indicators – each measuring one aspect of PO – a

statement was formulated. Each statement had to be rated by the respondents using a six point Likert scale ranging from full disagreement to full agreement. The questionnaire was tested and improved by conducting cognitive interviews and a pilot study. The population of this study is defined as Austrian corporations operating in metal and machinery industry with at least 50 employees. Firms were selected randomly and telephone interviews were used for data collection. All telephone interviews were personally conducted by the researcher. For every firm one executive (CEO, CIO or quality manager) was interviewed. In total, data from 133 firms was collected.

ASSESSING UNDIDIMENSIONALITY, RELIABILITY AND VALIDITY

A fundamental requirement for creating a summated scale is that its items are unidimensional, i.e. that they represent and measure the same concept. Factor analysis plays a pivotal role in assessing unidimensionality. Unidimensionality means that each summated scale should consist of items loading highly on a single factor. If a summated scale consists of multiple dimensions, each dimension should be reflected by a separate factor. Unidimensionality is assessed either by confirmatory factor analysis (CFA) or exploratory factor analysis (Hattie, 1985; Hair et al., 2006). This paper uses exploratory factor analysis to assess unidimensionality. As noted in (Hair et al., 2006) a precondition for a factor analysis is that the minimum sample size should be at least five times higher than the variables to be analyzed. In the case of this work this would require 200 firms (40 items times 5 = 200). Although the sample size is too small the factor analysis is performed and caution must be made when interpreting the findings. In order to determine the appropriateness of a factor analysis application, a Bartlett test of sphericity is performed, as recommended by (Hair et al., 2006). The entire correlation matrix is tested for the presence of correlation among the variables. The Bartlett's test finds that the correlation matrix has significant correlations at a significance level of 0.000. Therefore, the application of a factor analysis is justified. The subsequent principal component analysis yielded eight factors with eigenvalues greater than the traditional cut-off of 1.0. The eight factors retain 69.09 percent of the total variance in the data. Given that the unrotated factor matrix does not have a completely clean set of factor loadings (there are several cross loadings), a rotation technique is applied in order to try to improve the interpretation. In this case, VARIMAX rotation is used. The *revised model* consists of eight dimensions, each measuring a certain aspect of process orientation by several items (see also Table 1):

- Component 1: Process Performance Measurement (dimPPM), including PPM_PRES, PPM_COLL, PPM_ACT, PPM_DRV, PPM_DEF, BENCHM, ABCOST and INC_SYS.
- Component 2: Process Owner (dimPOWNER), including PO_ID, PO_STAFF, PO_MNGR, PO_ACT, PO_BUD, PO_EX.
- Component 3: Design and Documentation of business processes (dimDESDOC), including DOC, INPOUTP, CUSTSUPP, DOCUSE, MACROM, SEGMENT.
- Component 4: Management Commitment (dimMGMT), including MGMT_BEH, CPO, MGMT_AW, PROJ_INT.
- Component 5: Process-Oriented Culture (dimCULTURE), including CUST_FOC, CHARGE, TEAMW, KNOWL, LANGUAGE, MGMT_ST.

- Component 6: Process-Oriented Organizational Structure (dimSTRUC), including ATT_CHNG and STRUCT2 (a flexible organizational structure requires employees who have a positive attitude towards change).
- Component 7: Methodologies (dimMETHODS), including METHODLG and EXPERTS (continuous improvement methodologies can be deployed only if certain knowledge about redesign, project management and change management is present).
- Component 8: IT supporting the process idea (dimIT), including BPMS and IS.

Table 1
Rotated component matrix. Note: Factor loadings less than 0.40 have not been printed and variables have been sorted by loadings on each factor.

	Component							
	1	2	3	4	5	6	7	8
PPM_PRES	0.839							
PPM_COLL	0.819							
PPM_ACT	0.776							
PPM_DRV	0.759							
PPM_DEF	0.757							
BENCHM	0.738							
ABCOST	0.601							
INC_SYS	0.581							
PO_ID		0.857						
PO_STAFF		0.803						
PO_MNGR		0.799						
PO_ACT		0.736						
PO_BUD		0.728						
PO_EX		0.689						
JOB_SPEC		0.472		0.447				
DOC			0.754					
INPOUTP			0.727					
CUSTSUPP			0.705					
DOCUSE			0.695					

Table 1
Rotated component matrix. Note: Factor loadings less than 0.40 have not been printed and variables have been sorted by loadings on each factor.

	Component							
	1	2	3	4	5	6	7	8
MACROM			0.615				0.411	
SEGMENT			0.529					
CASCADE								
MGMT_BEH				0.774				
CPO				0.772				
MGMT_AW				0.693				
PROJ_INT				0.676				
STRUCT1				0.541				
CUST_FOC					0.797			
CHARGE					0.686			
TEAMW					0.667			
KNOWL					0.632			
LANGUAGE					0.531			
MGMT_ST					0.421			
SKILLS					0.416			
ATT_CHNG						0.749		
STRUCT2						0.594		
METHODLG							0.717	
EXPERTS				0.476			0.502	
BPMS								0.592
IS								-0.532

The variable CASCADE does not strongly load on any factor and is therefore dropped from the analysis. The variables STRUCT1 and SKILLS are difficult to interpret within their respective factor and are therefore also dropped from the analysis. The cross-loadings of the variables JOB_SPEC, MACROM and EXPERTS also require attention. Since both factor loadings of JOB_SPEC are below 0.5 (as noted in (Hair et al., 2006) factor loadings +/- 0.5 or greater are

considered practically significant), the variable is subsequently deleted from the analysis. MACROM has a strong theoretical foundation within the dimDESDOC dimension. Furthermore, its loading on dimDESDOC is well over 0.5 and its loading on the other component is well below 0.5. Thus, the cross-loading is ignored and MACROM is considered as a part of dimDESDOC. The cross loading of the item EXPERTS is a little bit more problematic. Nevertheless, its loading on dimMETHODS is over 0.5 as opposed to its loading on dimMGMT, which is below 0.5. Therefore, the cross-loading of EXPERTS is also ignored, and the item is assigned to dimMETHODS.

As the revised model can now be considered as unidimensional, reliability has to be assessed, i.e. the degree of consistency between multiple measurements of a variable has to be checked (Hair et al., 2006). Adequate construct reliability is checked by using Cronbach alpha. The Cronbach alpha coefficients for dimPPM, dimPOWNER, dimDESDOC, dimMGMT, dimCULTURE, and dimMETHODS are all above the minimum acceptance level of 0.6 suggested by (Hair et al., 2006). The coefficient for dimSTRUC is 0.533, which indicates, according to (Nunnally, 1967), adequate construct reliability in early stages of research (the process-oriented organizational structure definitely is subject of early stage research). The coefficient for dimIT is 0.183 and is far away from internal construct validity. As a consequence, dimIT cannot act as a summated scale for process-oriented information technology. Therefore, the dimIT dimension is decomposed into two separate dimensions, each represented by a single item. The newly dimensions are given the names from their items, i.e. IS and BPMS. Having assessed the revised model for dimensionality and reliability, validity has to be checked as a next step (Hair et al., 2006). Construct validity is supported by the fact that none of the items loads greater than 0.5 on more than one factor.

CONCLUSION

This work, carried out as a part of an ongoing research, created a summated scale for the process orientation construct. The outcome of this paper is a model which can be used for measuring a firm's degree of process orientation. The model exhibits satisfactory unidimensionality, reliability, and validity. In a further course of action, the model will be used as a tool for measuring process orientation with the superordinate research objective of investigating the effects of process orientation on organizational performance.

REFERENCES

Hair, J.F., W.C. Black, B.J. Babin, R.E. Anderson & R.L.Tatham (2006). *Multivariate data analysis (Sixth Edition)*. Upper Saddle River, NJ: Pearson.

Hattie, J. (1985). Methodology review: assessing unidimensionality of tests and items. *Applied Psychological Measurement*, 9(2), 139–164.

Kohlbacher, M. (October 2008). Process orientation of manufacturing companies. *Proceedings of the GBDI Tenth International Conference*, Las Vegas, 142-149.

Nunnally, J.C. (1967). *Psychometric theory*. New York: McGraw-Hill.

Reijers, H.A. (2006). Implementing BPM systems: the role of process orientation. *Business Process Management Journal*, 12(4), 389–409.

Smith, H. & P. Fingar (2003). *Business process management: The third wave*. Tampa, FL: Meghan-Kiffer Press.

EXECUTIVES' STRATEGY FOR POSSIBLE TERRORIST ATTACKS

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ABSTRACT

Recent warnings by authorities stated that a major terrorist attack is likely for the U.S. in the near future. Experience during 9/11 showed that companies prepared for terrorist attacks fared better than those who had not. Executives should be knowledgeable about terrorist attacks and what to do about them. Although there are various types of terrorists, those of most concern now are Foreign Terrorist Organizations (FTO's), such as al Qaeda, which seek to influence civilians for societal and political purposes. Future terrorist attacks are likely against civilian targets with weapons such as dirty bombs and cyber-warfare techniques. Terrorists often target public gatherings or buildings, but companies not directly targeted can be adversely affected because of proximity. Results of terrorist attacks include initial injuries and destruction and also later (physical and mental) health problems and reduced ability of organizations to function. Executives can prevent some of the negative effects of terrorist attacks with crisis management plans, security procedures, warning systems, emergency responder teams, dispersion and protection of facilities and people, purchasing terrorism insurance, and conducting emergency training. Corporate response to a terrorist attack includes actually implementing the crisis management plan, treating injuries, repairing equipment, conducting effective communication with authorities and employees, and continuity of production and/or service.

INTRODUCTION

Although national surveys show that the U.S. populace is increasingly less concerned about a terrorist attack and the new Obama Administration desires to remove Bush's "War on Terrorism" terminology, ex-Vice President Cheney and a U.S. government panel have recently warned that a major terrorist attack, similar to 9/11, was likely for the U.S. in the near future. Considering their prognostications and prior experience showing that companies prepared for terrorist attacks fared far better than those companies who had not prepared. For instance, before the 9/11 attacks on the World Trade Center in New York, Oppenheimer Funds and Aon Corporation had their computers backed up every day at remote locations. Neither firm had any data losses from having their facilities destroyed in their World Trade Center locations (Alexander, 2004). On the other hand, the financial services firm Keefe, Bruyette & Woods lost a third of its employees, its co-chairman, and all of its paperwork and computer files in New York. Although it survived, a year later its revenues were still down (Timmons, 2002). The purpose of this paper is to help executives better understand such terrorist attacks and how to prevent and respond to the negative effects of them. Before discussing prevention and response actions, discussion of terrorism, terrorists and their goals, weapons, targets, and attack effects would be helpful.

TERRORISM

The U.S. government considers terrorism to be "premeditated, politically motivated violence perpetuated against non-combatant targets by sub-national groups or clandestine agents, usually intended to influence an audience" (U.S. Department of State, 2004b). Considering different definitions of "terrorism," the main aspects of "terrorism" seem to include 1) a non-military group of people united in a common cause, 2) who operate in a clandestine manner, 3) to commit or threaten to commit acts of significant violence, 4) against non-combatant civilians. 5) Terrorists do not abide by laws, 6) seek to produce fear, and 7) seek to influence others towards a particular political, religious, or sociological course of action. This view of terrorism will be applied in this paper. However, we must remember that one country's terrorist may be another country's freedom fighter.

Although there are various types of terrorists (domestic terrorists, eco-terrorists, etc.), those of most concern now to the U.S. government are Foreign Terrorist Organizations (FTO's) as listed by the U.S. State Department. Of the 40 FTO's presently listed by the U.S. State Department, the FTO of most concern continues to be al Qaeda and those who follow its ideals and philosophy (U.S. State Department (2009. As with most FTO's, al Qaeda seeks to strike fear in the populace to influence societal and political actions rather than win military battles or seek geographical territory.

According to World Market Research Center, the United States ranks fourth in an index assessing the risk of terrorist attacks to 186 countries (Labott, 2003). The terrorist attacks are most likely to be soft, unguarded civilian targets such as 1) important symbols, 2) important economic targets and 3) high concentrations of people in public gatherings or buildings (FBI, 2003). Executives should understand that companies not directly targeted can still be adversely affected because of proximity to a terrorist's target. Employers could also be impacted by a ripple effect of damage to some other targets.

The weapons that terrorists are likely to employ can be represented by the acronym GENCRIB. The first two are the ones that have been most prevalent in past and present terrorist attacks—Guns and Explosives. These conventional weapons include assault rifles, bombs, and improvised explosive devices as used by insurgents/terrorists in Iraq (Barnes, 2005). Nuclear, Radiological, Biological and Chemical weapons (as well as large explosive devices) could be referred to as Weapons of Mass Destruction (WMD). *Chemical* agents are poisonous vapors, liquids, and solids that have fatal effects as quickly as a couple of seconds. *Biological* agents are bacteria, viruses, and toxins that can kill or incapacitate people. A *nuclear* explosion has intense heat, a damaging pressure wave, and widespread radioactive material that can contaminate a wide area for years. *Radiological Devices* deploy radioactive materials by a conventional explosive device. *Informational* weapons, or cyber-terrorism, is attack on computer systems/networks (e.g. to seek control of computer-controlled operations such as stock exchanges and dams.

PROBABLILITY AND RESULTS OF A TERRORIST ATTACK

The probability of suffering harmful effects of a terrorist attack (directly or indirectly) are low to moderate, but the possible seriousness of such an encounter is significant. Some "innocent" employers in 9/11 were literally decimated. Also realize that the probability of a terrorist attack

occurring is often underestimated because of the powerful media focus on completed terrorist attacks and the authorities' tendency to hide such information from the public for fear of panicking the public and to avoid giving terrorists information about authorities' surveillance. Negative results of terrorist attacks include not just the initial death and destruction but also include later (physical and mental) health problems, reduced ability of organizations to function, and immobilizing fear of future attacks. It could affect outsiders such as government authorities responding to the attack, suppliers, and present and future customers.

PREVENTING NEGATIVE RESULTS OF TERRORIST ATTACKS

Corporate executives generally cannot prevent terrorist attacks. That is the responsibility of government organizations like the military and the FBI. Executives can, however, act to prevent some of the negative effects of such terrorist attacks. The first goal of executives is to minimize damage. Organizations want to eliminate or minimize deaths, injuries, and illnesses of their employees and others such as their customers. They want to minimize psychological damage that is insidious and possibly quite long-term. Organizations and their leaders want to minimize damage to their facilities, equipment, inventories of finished products, and supplies to make the products. Keeping the organization functioning is of prime importance.

Companies must consider the probable target areas, weapons and their effects on the companies. A crisis management plan (CMP) is highly recommended as an appropriate preventative action. Other actions include security procedures, warning systems, emergency responder teams, dispersion and protection of people and facilities, backup lists for essential people and equipment (e.g. computer systems), utility continuity, terrorism insurance, and emergency training/evacuation drills (Homeland Security Staff, 2005). Businesses can join InfraGard and coordinate their efforts to report suspicious activity to the FBI to determine patterns, assess the severity of the threat, and ultimately stop terrorist attempts in their planning stages. More information on InfraGard is available at http://www.infragard.net/chapters/index.htm.There are a few essential and numerous helpful sources to consult for assistance in establishing preventative actions (e. g. www.ready.gov and www.bens.org and websites for FEMA, DHS, Ready Business, and CERT). Once executives have done as much as they can to prevent the negative effects of terrorist attacks, the only option is to buy insurance for those losses that the organization was not able to prevent or respond to (Wade Financial Group, 2005). What executives do *before* a terrorist attack can determine what the terrorist attack will do to them *after* such an attack.

Countering terrorist attacks costs resources (e. g. money, time), slows down an organization's production processes, and may antagonize employees who believe their privacy rights are being violated (e. g. by monitoring their phone calls). A Conference Board survey of CEO's in 96 mid-sized companies found 1) about 40% said security expenses should be minimized and 2) about 45% said they spent no more now on security than before 9/11 (Magnussun et al, 2004). The executive has to assess the probability of different forms of terrorist attacks occurring and the seriousness of the impacts of those attacks when considering what to spend resources on.

RESPONDING TO TERRORIST ATTACKS

The response to a terrorist attack from the corporate standpoint is also paramount in deciding the future fate of the organization. The CMP that was previously developed must be carried out for it to be effective. In general, the executives of the organization want to prevent further harm to facilities and especially to people, treat/repair people and equipment that have been damaged, conduct effective communication with authorities and employees, and keep the organization performing. Continuity of production and/or services requires following employee backup and succession plans, communication and reassurances with customers and suppliers, and making appropriate decisions.

The first thing to do is detect a terrorist attack. Attacks by guns and explosives are immediately apparent, but chemical, biological, radioactive, and information attacks may not be immediately evident. When an attack has been ascertained, the company should carry out its CMP. Pre-trained Emergency Response Teams should offer immediate assistance to those in need and also contact outside authorities for appropriate assistance. It is essential to save as many lives as possible and minimize health problems. Information must be provided to employees, emergency authorities and others. Damage to facilities and equipment must be repaired quickly by employees or pre-planned/pre-screened outside contractors. Suppliers and shippers must continue to function or quickly be replaced per the pre-planned CMP. Counseling can be employed for employee problems such as anxiety, low morale, and depression. In some cases of radiological, biological, and chemical contamination, employees may need to be quarantined. The organization should assess the physical and mental needs of its employees. Pre-selected employee(s) should represent the organization and communicate to the public, the media, the emergency services (e. g. police, fire, medical, government authorities), and family members/relatives of deceased and injured employees.

SUMMARY & CONCLUSIONS

In order for a business to withstand a terrorist attack, it must be prepared to deal with the ramifications of such an event. Terrorist activity can come in many forms and can have varying effects on businesses. Executives must promote awareness within their company; this will create well-informed employees who are prepared to respond to an attack. Proper planning, including a CMP, is important; plans will ensure that businesses respond to terror in an effective way and minimize damage to people, facilities, equipment and the operation of the business. Corporations must protect their investments through insurance and proper security procedures. In the end, executives' preventative and response actions will ultimately determine whether the company will stay in business and prosper or collapse and disappear from the economy.

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REFERENCES

Alexander, Dean C. (2004). *Business Confronts Terrorism*. Madison, WI: University of Wisconsin Press.

Federal Bureau of Investigation. (2003). Testimony of Robert S. Mueller, III, Director, FBI: Before the Select Committee on Intelligence of the United States Senate: February 11, 2003. Retrieved February 20, 2007 from www.fbi.gov///congress/congress03/mueller021103.htm.

Kondrasuk, J. N., Bailey, D., & Sheeks, M. (2005). Global terrorism: Past, present & future. *The Business Review, Cambridge*, 3(2) Summer, 35-41.

Labott, E. (2003). Terrorism now key business risk. On CNN.Com, Retrieved October 2, 2003 from: *cnn.worldnews.printthis.clickability.com/pt/cpt?action=cpt&Expire=- 1&urlID=7430.*

Magnusson, P., Thornton, E., Brady, D., and Ante, S. (August 16, 2004). The war on terror: What companies need to do. *BusinessWeek*., 32-35.

Terrorism Research Center Staff (2009). Homepage. Terrorism Research Center website. Retrieved August 5, 2006 from: www.terrorism.com.

Timmons, Heather (September 16, 2002). Keefe Bruyette: Up from Ground Zero. *Business Week*, 36-37.

U.S. State Department (2009). Office of the Coordinator for Counterterrorism. U.S. Department of State website. Retrieved February 26, 2009 from http://www.state.gov/s/ct/.

U. S. Department of State (2004). Patterns of Global Terrorism – 2003. Retrieved December 23, 2004 from: www.state.gov/s/ct/rls/pgtrpt/2003/31880.htm.

Wade Financial Group Staff (2005). Terrorism insurance and risk management. Wade Financial Group website, Retrieved May 6, 2005 from: http://www.terrorism-insurance-risk-management.com/index.html.

Wikipedia (2006). Definition of terrorism. *Wikipedia, the free encyclopedia*, Retrieved August 5, 2006 from http://en.wikipedia.org/wiki/Definition_of_terrorism.

INFLUENCES ON INTERNATIONAL ENVIRONMENTAL STRATEGY FOR FOREIGN DIRECT INVESTMENTS OF MULTINATIONAL ENTERPRISES

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ABSTRACT

Proponents of the pollution haven hypothesis argue that where countries have strict environmental regulations and other countries have lax regulations, the country with the least restrictive regulations will have a comparative advantage over the other countries. An alternative view is that those countries which have strict and high environmental standards are a source of competitive advantages for multinational enterprises which have developed or adopted the environmental technologies due to home country standards (Gladwin, 1993; Shrivastava, 1995). High environmental standards become a potential barrier to entry to firms seeking to enter the market, and new environmental improvements to product and process have led to increased efficiencies and lower costs. There is disagreement regarding the impact of host country environmental legislation on multinational enterprises' environmental behavior. Will strict and appropriate host country environmental legislation lead to industrial flight (through foreign direct investment) to pollution havens or lead to innovation of new environmental technologies? Image Theory (Mitchell and Beach, 1985) provides a bridge between the traditional FDI theories and the work regarding how multinationals conceive and value the environment. According to an empirical study, three major stakeholders are exerting pressure to become increasingly environmental. (Winsemius and Guntram 1992). These are the government, competitors, and customers. The employees and capital markets are other important sources of pressure.

When government sets strict standards without specifying technology, it encourages competition among firms to develop innovative technologies (Porter and van der Lind, 1995). Once developed these technologies represent a competitive advantage to the firm. Customers can be a very powerful force. The multinational's continued existence depends on satisfying its customers. According to one study, nearly eighty percent of the American public believe that "protecting the environment is so important that requirements and standards cannot be set too high. . ." (Thomas 1992). As more people realize the intrinsic value of nature, society broadens it scope of rights to include aspects of the environment. (Nash, 1998). If the multinational is making appropriate environmental investments, the capital market will make additional capital available easily and cheaply. (Alexander & Bucholtz, 1978). With regard to employees, firms with poor environmental records are finding it difficult to recruit and retain the top employees. (Winsemius and Guntram, 1992). It has also been shown that socially responsible firms have improved employee goodwill and fewer labor problems. (Soloman & Hansen, 1985). This paper has attempted to provide an overview of existing literature on the subject.

STRATEGIC VERSUS GRATUITOUS MENTORING: A PRELIMINARY INVESTIGATION

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ABSTRACT

Mentoring as a human resource management tool has been an important element in business and industry. The needs of individuals in modern organizations are so diverse that the one-on-one relationship offered through mentoring has been found useful in filling some of the staffing gaps in large and small organizations. Although mentoring has some drawbacks, it has been found beneficial to mentors, protégés, and sponsoring organizations in a number of settings. In order to make mentoring a more useful staffing tool for managers, The Mentoring Maze was developed. The maze differentiated mentoring by ***initiation****,* ***operation****, and* ***outcome****. Upon further analysis, these three phases of mentoring (****initiation****,* ***operation****, and* ***outcome)*** *were found to overlap at key junctures to produce eight distinct mentoring relationships: (a)* ***formal continuous strategic*** *mentoring (b)* ***formal continuous gratuitous*** *mentoring (c)* ***formal intermittent strategic*** *mentoring (d)* ***formal intermittent gratuitous*** *mentoring (e)* ***informa****l* ***continuous strategic*** *mentoring (f)* ***informa****l* ***continuous gratuitous*** *mentoring (g)* ***informa****l* ***intermittent strategic*** *mentoring (h)* ***informa****l* ***intermittent gratuitous*** *mentoring. The degree of success of a mentoring relationship could be enhanced by a better understanding of its underlying characteristics, associated assumptions, and expectations of mentors, protégés, and sponsoring organizations.*

INTRODUCTION

Mentoring as a human resource management tool has been an important element in business and industry. The needs of individuals in modern organizations are so diverse that the one-on-one relationship offered through mentoring has been found useful in filling some of the staffing gaps in large and small organizations. Although some studies have sought to cast doubts on the benefits of mentoring (Ncube & Wasburn, 2006; Hurley, 1988) most of the available data tend to suggest that mentoring offers direct and indirect benefits to protégés, mentors, and participating organizations (Carlton, 2007; Ball, 1989).

MENTORING AS A VALUE PROPOSITION

Mentors derive personal satisfaction similar to those of parents watching their children (protégés) progress from infancy to adulthood. There is the sense of contributing something positive towards the making of a person and his career. The reward of mentoring, especially those designed to assist disadvantaged adolescents, tends to appear in the form of intangible satisfaction (Brightman, 2006; Jacoby, 1989). Those with access to mentoring have been consistently shown to benefit from their involvement in these relationships; they report higher salaries, increased

promotion rates, greater career satisfaction, higher organizational commitment and less intention to leave the organization as well as lower levels of turnover (Blake-Beard, & Thomas, 2006).

Critics have charged that mentoring has been oversold, especially by those who have had a positive experience from the process (Ulloa & Herrera, 2006; Hurley, 1988). They maintain that mentoring can only work when an individual is well-prepared for the relationship, and is able to take advantage of opportunities that may arise during the relationship. To buttress their argument, critics have reminded the readers that an unsuccessful mentoring process tends to ruin other relationships between a mentor and his protégé (Alsbury & Hackmann, 2006; Stanley, 1991). Unlike success, failure tends to bring the worst out of people. A mentor and protégé in an unsuccessful mentoring process may wind up becoming very hostile to each other.

CRITICAL ATTRIBUTES OF THE MENTORING PROCESS

Mentoring can be distinguished by **initiation**, **operation**, and **outcome**. Initiation refers to the circumstance that brought about the mentoring relationship. Research focused on the **initiation** phase of mentoring seeks to determine the method by which the mentor and protégé were brought together. Unlike **initiation**, a study focused on the "operation" aspect of mentoring attempts to characterize and evaluate the nature of the mentoring relationship. It is aimed at determining the intensity of the mentor-protégé relationship. Finally, research focused on **outcome** of the mentoring process attempts to discover the motive behind the arrangement. Since mentoring is not supposed to be a life-long commitment, participants must have a way of knowing when graduation is to occur. This provision of the mentoring relationship requires that an **outcome** be defined so as to know when the process is completed. We shall examine each of the three phases of the mentoring process in greater detail.

There are two major **initiation** approaches to the mentoring process, **formal** and in**formal**. Under **formal** mentoring, the relationship is not initiated by the expressed desire of the mentor or protégé, but is the result of a third party intervention. **Informal** mentoring is initiated without any direct third party intervention between a mentor and his protégé. It is the result of a personal interest that one individual has on another individual.

The mentoring process can also be distinguished or analyzed by the intensity of the relationship, which could be **continuous** or **intermittent**. Mentoring is said to be **continuous** when there is frequent contact between mentor and protégé. The contact could be the result of a structured activity or at random. **Intermittent** mentoring occurs when the protégé and mentor do not meet frequently. Meetings are arranged in such a way that they interfere to a minimum with the primary occupation of the parties.

In exploring the major **outcome**s of the mentoring process, one is interested in discerning the situation that the participants wanted to see created at the end of the relationship. The **outcome** of mentoring could be **strategic** or **gratuitous**. In **strategic** mentoring, the mentoring process is seen as a calculated staffing process by the participating organization. Mentoring, in this case, is said to be **strategic** to the extent that an organization uses it as a way to survive and thrive, both now and in the long run. Unlike the **strategic** mentoring process, **gratuitous** mentoring is aimed at achieving socioeconomic justice. Mentoring is the result of the decision of individuals or groups to

alter a condition in a firm or society which they consider dysfunctional. The focus of a **gratuitous** mentor is the protégé, rather than any specific organization, industry, employer, or career.

THE MENTORING MAZE

In order to make mentoring a more useful staffing tool for managers, The Mentoring Maze (see Figure I) was developed. The maze differentiated mentoring by **initiation**, **operation**, and **outcome**. Upon further analysis, these three phases of mentoring (**initiation**, **operation**, and **outcome)** were found to overlap at key junctures to produce eight distinct mentoring relationships: (a) **formal continuous strategic** mentoring (b) **formal continuous gratuitous** mentoring (c) **formal intermittent strategic** mentoring (d) **formal intermittent gratuitous** mentoring (e) **informa**l **continuous strategic** mentoring (f) **informa**l **continuous gratuitous** mentoring (g) **informa**l **intermittent strategic** mentoring (h) **informa**l **intermittent gratuitous** mentoring.

OBSERVATIONS AND CONCLUSION

The mentoring model presented here could potentially strengthen the mentoring process by highlighting potential areas of complication and/or reward which participants must pay close attention to if mentoring is to yield anticipated results. The degree of success of a mentoring relationship could be enhanced by a better understanding of its underlying characteristics, associated assumptions, and expectations of mentors, protégés, and sponsoring organizations. The next phase of this investigation is to determine through empirical processes if, in fact, the preliminary mentoring dimensions identified in Figure I are valid and reflective of real world practices.

REFERENCES

Alsbury, T. L., & Hackmann, D. L. (2006). The changing face of the profession: Findings of the Iowa Mentoring/Induction Program for novice principals and superintendents. *Planning and Changing, 37* (3/4). pp. 169-189.

Ball, A. L. Mentors and protégés: Portraits of success. *Working Woman*, October 1989, pp. 134-142.

Blake-Beard, S., Murrell, A., & Thomas, D. (June 2006). Unfinished business: The impact of race on understanding mentoring relationships. *Harvard Business School Working Paper, No. 06-060*, p.10.

Brightman, H. J. (2006). "Mentoring Faculty to Improve Teaching and Student Learning". *Issues In Accounting Education, Vol. 21, No 2*. pp. 127-146.

Carlton, A. (Jan 2007). "Who Mentored You?" *Journal of Family & Consumer Sciences: Vol. 99,* Iss.1; p. 73.

Higgins, M.C. & Kram, K.E. (2001). Re-conceptualizing mentoring and work: A developmental network perspective. *Academy of Management Review, 26*. pp. 264-288.

Jacoby, D. (Dec 1989). Rewards make the mentor. *Personnel, Vol. 66*. pp. 10-14.

Ncube, L., & Washburn, M.H. (2006). Strategic collaboration for ethical leadership: A mentoring framework for business and organizational decision making. *Journal of Leadership and Organizational Studies, 13*. pp. 77-92.

Stanley, L. (April 1991). Mentoring: What works, what doesn't. *Across the Board, Vol. 28.* pp. 55-56.

Ulloa, E.C., & Herrera, M. (June 2006). Experiences: Mentoring of ethnic minority undergrad by ethnic minority grad students. *Career Development Quarterly, 54* (4). pp. 361-366.

FIGURE I
THE MENTORING MAZE