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Articles

DIVERSIFICATION STRATEGY IN ELECTRIC UTILITIES: WHO WINS? WHO LOSES?

Karen A. Froelich, North Dakota State University
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ABSTRACT

Diversification is a prominent strategy for pursuing organizational growth, yet performance outcomes have been notoriously disappointing, especially for unrelated diversification via acquisition. While firms in most industries have thus constrained their diversification strategies, electric utility firms are increasingly pursuing diversification by purchasing businesses outside their fields of expertise to cope with bleak growth prospects and deregulation uncertainties. Considering that a utility company is generally a sole provider of essential service within a geographic territory, many stakeholders are justifiably concerned about increasing levels of electric utility diversification and potential performance outcomes.

This exploratory study examines diversification within the electric utility industry in four upper-Midwestern states. All ten investor-owned utilities (IOUs) and five of the largest rural electric cooperatives (RECs) in each of the four states are included in the study. Annual report data are analyzed to identify each company's diversification strategy and performance outcomes. Results indicate that IOUs are more diversified than RECs, and intended strategies are not always realized. Reasons for the varied strategies and outcomes are explored, and the differential impact on specific stakeholder groups is examined. The study concludes with recommendations for diversification strategy in the electric utility industry, and suggestions for improving future research through data refinements.

INTRODUCTION

Utilities, particularly electric utilities, are presently operating in an environment characterized by an awkward combination of tight regulation and impending but uncertain change. The highly regulated electric service operations provide profit but restricted growth, while looming deregulation spawns defensive forays into new business arenas. Following industry calamities including the 2000-2001 California brownouts, the 2003 power blackouts in the Eastern U.S. and parts of Canada, and corporate scandals such as that of Enron, there is heightened concern about business practices and their potential impact on energy reliability and cost. Various stakeholders – regulators, community leaders, investors and consumers – are uneasy about corporate strategies, mergers and acquisitions, accounting practices, and possible bankruptcies. So while many utility

companies appear to be supplying energy reliably and affordably, aggressive growth and increasing diversification is viewed warily by the diverse set of observers.

Considering the generally poor track record of diversification in other industries, particularly unrelated diversification via acquisition that is prominent as utilities buy instant entry into new lines of business, skepticism about the long-term value of many diversification moves is well placed. Further, considering the role of utility companies in providing affordable essential services, questions arise about whether growth and profit should be primary objectives of these firms anyway. Is diversification a viable strategy for electric utility companies? Is the strategy broadly beneficial for stakeholders? Such basic questions warrant study in the electric utility industry.

Accordingly, this exploratory study examines diversification in electric utilities. First we explain relevant features of the electric utility industry, and review diversification literature pertinent to this inquiry. Then we describe the study's methodology, including sample selection and data sources. Results of the study reveal that diversification is generally less extensive than expected, with publicly traded electric providers being more diversified than rural electric cooperatives. The varied performance outcomes are interpreted in light of current diversification theory and the utility industry context. The study concludes with recommendations for diversification strategy in the electric utility industry, and suggestions for advancing future research through data refinements.

THE ELECTRIC UTILITY INDUSTRY

Natural gas was used almost exclusively as a source of light during most of the 19th century. With the advent of the simple light bulb by Thomas Edison in1879, an new industry emerged in the United States and the rest of the world. Initially known as the illuminating industry, the new energy source and its economic extensions rapidly developed into the electric power industry. Services provided by early electric companies were inefficient and redundant. Frequently operating under nonexclusive franchises and in competition with one another, different companies provided for different needs such as street lighting, industrial power, residential lighting, and streetcar service. Companies used dissimilar equipment, voltages and frequencies, and their systems often were not compatible. Power companies had to acquire franchise rights from the local municipality; the franchise territories differed greatly in size (even as small as a city block) and were frequently granted through bribes and payoffs to city officials. This franchise process kept the young electric power industry fragmented and inefficient (Edison Electric Institute, 2004; NaturalGas.org, 2004). Electric utilities required an infrastructure that was, and still is, expensive. Due to the franchise process at the time and resulting low returns, power companies often found it difficult to maintain investor confidence and attract adequate capital. Around 1900 industry leaders began to push for regulation by state agencies rather than city councils to better control the franchising process, service standards and rates, and to increase both public and investor support. By 1916, 33 states had regulatory agencies. Early regulation of the industry proved beneficial to both the electric

companies and their customers. Today, in return for protected service territories, utility companies are expected to serve all existing and future customers equally and at reasonable cost. This natural monopoly is allowed based on the premise that a single company providing electric service is economically more efficient through elimination of duplicated infrastructure, service and equipment. The stable environment created also facilitates financing in this highly capital-intensive industry (Edison Electric Institute, 2004; NaturalGas.org, 2004).

Three principal agencies are involved in electric utility regulation. The Federal Energy Regulatory Commission (FERC), a division of the U.S. Department of Energy, oversees wholesale prices and generation and transmission of power nationwide, mergers among power companies, and issuance of certain types of stock and debt securities. The U.S. Securities and Exchange Commission (SEC) requires financial disclosure of publicly traded companies. In the utility industry, it also enforces the Public Utility Holding Act, which restricts non-utility activities (often referred to as "unregulated activities") of utility holding companies and requires that service territories of utility operating companies be contiguous. Retail sale of electric services to homeowners, businesses, and other users is primarily regulated by state public utility commissions; oversight centers on service territories, rates, reliability, access, and public safety. All three of these principal entities have signaled increasing deregulation of the electrical power industry. The deregulation process is long and complicated, with uneven impact on different segments of the industry, casting immense uncertainty over the competitive landscape of the future (deregulation details are beyond the scope of this paper; see McCann, 2004 for a useful discussion). For the near term, it appears that power generation and the wholesale market will become deregulated first, breaking down the traditional vertically integrated model where a firm generates, transmits and sells power in its service territory; deregulation of the retail market (enabling consumer choice of electricity provider) will vary by state; and merger and acquisition restrictions will be relaxed (U.S. Industry and Trade Outlook, 2000).

This combination of regulation and impending deregulation has several effects that influence electric company strategies. While deregulation evolves, the industry remains characterized by legally protected service territories that preclude competition but limit geographical expansion. Efforts to grow by encouraging increased electricity use have been curtailed by regulatory pressures to emphasize energy efficiency. Consequently, most electric utility companies can only experience the natural growth stemming from increased population or industrial activity in their territory, estimated at 1.3% nationwide through 2010 (U.S. Industry and Trade Outlook, 2000).

As exclusive providers of an essential service, electric companies do enjoy a continuous revenue stream, stable operations, and steady profits in their electric service businesses (operating margins commonly about 15% for investor-owned electric utilities) afforded by state-regulated rates that seek a balance between company and consumer interests (McCann, 2004). Dependable profits and associated borrowing power enable electric utilities to acquire new lines of business offering both higher growth prospects and defensive options in the face of deregulation uncertainties.

Deregulation promises new competition, but enhances operating flexibility. As a result, increasing diversification of electric utility firms has been a notable industry trend for the past ten years (U.S. Industry and Trade Outlook, 2000).

DIVERSIFICATION STRATEGY

Diversification strategy involves both the scope of the organization defined by industries and markets in which it competes, as well as the vehicles – acquisition, start-up, or joint venture/strategic alliance – used to enter these industries and markets (Bergh, 2001). Established definitions of diversification strategies center on organizational scope as defined by Rumelt (1974). An organization is said to have limited diversification if most or all of its revenues stem from a single business. More specifically, a *single business strategy* is defined as 95% or more of firm revenues from a single business; a *dominant business strategy* is defined as 70-95% of firm revenues from a single business. Diversification strategy is technically defined as when less than 70% of firm revenue comes from a single line of business; with *related diversification strategy* the firm's businesses share some common attributes or relationships; with *unrelated diversification strategy* the firm's business units lack common attributes and interrelationships.

Diversification is a widely prominent strategy for pursuing organizational growth. For decades managers have been enamored with prospects for market power, economies of scope, risk diversification, and mere size and visibility resulting from diversification initiatives (Hitt, Ireland, & Hoskisson, 2005; Porter, 1987). Efforts to understand these motives have produced a copious accumulation of research guided by numerous and complementary theoretical perspectives.

Four theories dominate the literature and together facilitate broader appreciation of diversification issues. First, the traditional structure-conduct-performance paradigm of industrial organization (IO) economics helps explain the influential impact of industry structure on a firm's decision to diversify (Bergh, 2001). Essentially, this paradigm asserts that a firm's profit potential depends on structural conditions in the industry; firms situated in industries with unattractive structural attributes (such as low growth prospects, regulatory restrictions, strong competition, and/or threatening uncertainties, for example) will seek to conduct business in other industries where conditions are more favorable for high performance. Second, agency theory predicts that managers in unattractive industries will prefer to retain capital for diversification purposes rather than allowing outward movement of capital enabling investors to directly reinvest in more attractive industries (Anand & Singh, 1997; Jensen, 1986). Larger, more complex firms are associated with higher executive compensation (Cordeiro & Veliyath, 2003) and lower employment risk (Lane, Cannella, & Lubatkin, 1998), providing self-interested managers personal motives for pursuing diversification (Finkelstein & Hambrick, 1996). Third, the resource-based view of the firm (RBV) emphasizes the importance of well-developed competencies and resources for competitive success (Barney, 1991; Penrose, 1959; Wernerfelt, 1984). The RBV contends that skills and resources tend to lose value

when transferred across dissimilar markets (Montgomery & Wernerfelt, 1988; Wernerfelt & Montgomery, 1988), leading to the prediction that related diversification will be more successful than unrelated diversification. Finally, transaction cost economics helps explain the limits of diversification; management costs involved with collections of disparate businesses can become inefficient, suggesting need for organizational restructuring (Bergh, 2001; Teece, 1982; Williamson, 1975; 1985).

Insights from each of these theories help us understand the electric utility industry today. IO economics postulates that unattractive industry structure drives a firm toward increased diversification. The allure of diversification has been found to be especially compelling in contexts like that of the electric utility industry, where an organization's core business appears to offer limited growth opportunities, yet financial resources are available for acquisition purposes (Park, 2003). The agency theory prediction that capital will be retained is evident as electric utility firms have been reducing their dividend payouts to fund diversification initiatives (McCann, 2004). This combined set of circumstances – limited growth prospects within the industry, plus available capital within the firm – encourages a strategy of unrelated diversification via acquisition (Chatterjee & Wernerfelt, 1991).

The poor performance of diversification strategy, especially unrelated acquisition, is well documented (Mansi & Reeb, 2002; Markides & Williamson, 1996; Porter, 1987; Wright, Kroll, Lado & Van Ness, 2002). In fact, Porter (1987) bluntly concludes that the track record of diversification strategy is "dismal", while financial markets have consistently applied a "diversification discount" of about 20% to unrelated diversifiers (Campa & Kedia, 2002; Rajan, Servaes, & Zingales, 2001). However, as is commonly observed in nearly any topic of interest, diversification strategy research does not produce universally consistent results across studies. Performance benefits associated with related diversification have often been found (Hoskisson, 1987; Rumelt, 1974; Simmonds, 1990; Varadarajan & Ramanujam, 1987); results showing higher performance from unrelated diversification are not prevalent but have been reported (Dubofsky & Varadarajan, 1987). Other studies have identified no performance differences between diversification strategy and performance (Amit & Livant, 1988; Chang & Thomas, 1989; Montgomery, 1985). Two approaches to reconciling the disparate findings have been fruitful: 1) some diversification has been shown to have a positive impact on market performance as opposed to accounting returns (Keats & Hitt, 1988); 2) an inverted u-shaped curve might more accurately describe the relationship between diversification and performance, with moderate levels of diversification performing better than minimal or very extensive diversification (Grant & Jammine, 1988).

Research of diversification in the electric utility industry is scant but mirrors the generalized findings above. Using accounting returns, a study of 18 publicly held utility firms initiating significant diversification during the 1970s and 1980s finds only three firms with successful diversification strategies by 1995. The remaining 15 firms reported low return on equity (averaging

0.8 percent for 1986-1995) and only about 1% average contribution to company earnings from the diversification initiatives (Studness, 1996). Another study finds higher performance in diversified compared to undiversified electric utility firms, using Compustat data from 1980-1997 to calculate complex excess value measures to assess each firm's performance. The authors conclude that the undiversified utilities over-invest in their single business segment, while the diversified firms can potentially create value through new investment opportunities (Jandik & Makhija, 2005). A third study, using 1994 data (two accounting performance measures: return on assets and return on total capital) from 55 investor-owned utility companies, finds the inverted u-shaped relationship between diversification and performance which supports moderate levels of diversification as beneficial to the firm (Geiger & Hoffman, 1998).

Synthesizing insights across the complementary theories and evidence from the various empirical studies, it appears that electric utilities would have a higher likelihood of creating value by diversifying into related businesses where resources and skills from their core business could be fruitfully deployed. However, electric utilities have mainly favored acquisition into growth industries including health care and various types of manufacturing, as well as telecommunications and home security (U.S. Industry and Trade Outlook, 2000). Recent divestitures of non-core businesses and more constrained diversification (McCann, 2002) suggest that the limits of effective diversification have been exceeded in some electric utility firms.

In sum, many factors driving increased levels of diversification are present in the electric utility industry. While firms in other industries have already tried and abandoned high levels of diversification, electric utilities are still striving to diversify into new lines of business through (frequently unrelated) acquisitions. Considering the widespread poor performance of this strategy and the additional hazards of strategy failure in firms providing essential services, the growing prevalence and extent of diversification in the electric utility industry warrants attention.

SAMPLE AND DATA

Electric utility providers are of three ownership types: investor-owned utilities (IOUs), rural electric cooperatives (RECs), and publicly-owned utilities including municipal, state, and federal providers. There are about 240 IOUs in the U.S. which serve approximately 75% of all retail customers (U.S. Industry and Trade Outlook, 2000), comprising 75% of industry sales in terms of both volume and revenue (McCann, 2004). Most IOUs generate as well as distribute electric power, with wholesale and retail price structures, and provide about 50% of the electricity generated in the U.S. (Edison Electric Institute, 2004). Rural electric cooperatives, originally formed by residents to bring power to rural areas, are nonprofit organizations owned by their customers. While RECs continue to have a rural focus, population growth now involves many RECs in both urban and industrial markets. Most RECs distribute power purchased from either publicly-owned utilities or IOUs, although some have generation and transmission capabilities they wholesale to member

distribution cooperatives. Currently RECs number around 900 and provide 18% of the nation's power needs. Publicly-owned utilities are numerous, with over 2000 entities in the U.S. They are primarily small municipal systems that are self-regulating, funded through municipal bonds, and also provide about 18% of the nation's electricity. Federally-owned utilities are concentrated in the power generation, transmission, and wholesale end of the industry, providing the remaining 15% of our energy needs (Edison Electric Institute, 2004).

This study examines diversification in IOUs and RECs in four upper-Midwestern states where researcher contacts facilitated data acquisition. Government-owned systems are not subject to the same regulation or pressures for revenue diversification so are not included in the sample of organizations studied here. The IOUs, with their stock being traded daily and the overwhelming majority of retail electric customers depending upon them, are very important to investigate. Accordingly, all 10 IOUs doing business in the four states are included in the study. While RECs were initially created where IOUs were unwilling to extend power, urban sprawl beyond economic centers that IOUs once monopolized often puts RECs and IOUs in contention for serving these now densely populated areas. The study includes five of the largest RECs in each of the four states, or 20 RECs. The study explores the extent of diversification in this sample of 30 utility providers and the performance outcomes corresponding to each strategy type.

Financial data and qualitative information regarding strategy were obtained from each company's annual report. At the time the study began, many companies had yet to release 2003 reports, so all data is taken from 2002 annual reports. Following Rumelt's (1974) definitions, total revenue figures are used to determine extent of diversification in each company:

- single business strategy = >95% revenues from utility operations;
- dominant business strategy = 70-95% revenues from utility operations;
- related diversification = <70% revenues from utility operations, businesses are related;
- unrelated diversification = <70% revenues from utility operations, businesses are unrelated.

Performance outcomes are assessed using net profit measures for each company as a whole, and for utility versus non-utility business units. Qualitative information from the annual report and company newsletters is utilized as appropriate for explanatory and interpretive purposes, supplemented with interview data from company officials.

ANALYSIS AND RESULTS

Financial data obtained or calculated from each electric utility's annual report is displayed in Appendix 1. As publicly-traded companies with more exacting disclosure requirements, the

IOUs' annual reports contain more complete information than the customer-owned RECs' reports. It was therefore necessary to estimate some cells for RECs as indicated in Appendix 1. Data limitations center in the non-utility or "unregulated" businesses. For example, pre-tax non-utility revenue was not always published for the RECs. To provide non-utility revenue for RECs that is comparable to that of the IOUs, these entries were estimated assuming a 35% corporate tax rate. It should be noted that as nonprofit organizations, RECs' revenue from utility operations is not taxable, but revenue from non-utility operations falls outside the scope of the nonprofit charter and thus is subject to taxation. Also, some RECs are very guarded about non-utility operations and publish almost no detail about them in their annual report. In such cases, estimates were made based on confidential interviews with company officials including general managers and financial officers. The only major complication with IOU data is that in some firms, utility revenue includes natural gas in addition to electricity. Since many IOUs built their core business on electricity and gas distribution, both basic energy sources and regulated as such, no attempt was made to split out the gas operations for purposes of this study.

Table 1 reports proportion of total revenue from each company's utility business and the associated level of diversification according to Rumelt's strategy definitions. It is evident that IOUs are considerably more diversified than RECs. The proportion of revenue from utilities ranges from 100% down to only 16% in the IOUs, while only one REC (with 62% of revenue from its utility business) fits the definition of a diversified firm. Most RECs in the sample (12 of the 20, or 60%) exhibit a dominant business strategy, while seven (35%) have a single business strategy. Only one of the ten IOUs has a single business strategy, and three have a dominant strategy. Even within the dominant business category, IOUs report a lower proportion of revenue from utilities (83%, 76%, and 72%) than the RECs, all of which derive 84-94% of revenue from their utility business. Six of the ten IOUs are diversified, all with revenue from regulated utility operations below 45%. According to description provided in the annual reports, two of these firms would be considered related diversifiers with their unregulated businesses all tightly related to the energy industry, such as utility construction or energy exploration, transportation and storage. Four IOUs are involved in unrelated businesses, encompassing a broad scope of industries including telecommunications, information systems, automotive, healthcare, manufacturing, home appliances, and recreation.

Data from Table 1 enable comparison of percentage net profit derived from utilities with percentage revenue derived from utilities for each company. It is striking that in all three IOUs with a dominant business strategy, 100% of net profit comes from utilities, while only 72-83% of revenue (77% on average) is from the utility business. Also, two-thirds of the diversified IOUs receive a substantially higher proportion of profit from utilities compared to the proportion revenue earned from utilities. This includes one firm that reports 39% of its revenue from utilities, but 100% of its total profit from utilities. Only 20% of the IOUs demonstrate comparative profit proportions favoring non-utility businesses. Looking at the RECs in the sample, we see generally higher correspondence between utility profit and utility revenue, with half of the organizations indicating

a higher proportion profit than revenue from utilities, and only one-quarter of the RECs showing greater proportionate profit than revenue from non-utility businesses.

Turning to the overall net profit margins reported in Table 1, two of the ten IOUs show startling net losses, both attributable to non-utility businesses. Moreover, 70% of the IOUs saw their net profit margins negatively impacted by non-utility businesses. Forty-four percent of IOUs report negative profit margins in their non-utility businesses; another 33% report non-utility margins substantially lower than utility margins. Contrary to expectations, such undesirable profitability consequences do not appear generally more severe with unrelated diversification. An interesting observation is that negative margins in non-utility businesses are most prominent in IOUs with dominant business strategies. This is also true for RECs with only a small proportion (<13%) of non-utility revenue. However, in over half the RECs with a single business strategy, the small portion of profit from non-utility businesses has a notably high net margin. This result does not extend to the dominant business RECs, where non-utility net profit margins are lower than utility net profit margins in 12 of 20 organizations.

Table 1: Revenue Proportions and Net Profit Margins

Firm	Strategy	Revenue - Utility (%)	Profit - Utility (%)	Overall Net Margin (%)	Utility Net Margin (%)	Non-Utility Net Margin (%)
IOU-5	single	100	100	8	8	N/A
IOU-2	dominant	83	100	4	8	-14
IOU-8	dominant	76	100	4	10	-15
IOU-10	dominant	72	100	-23	8	-103
IOU-7	unrelated	43	69	6	10	4
IOU-9	related	40	73	4	8	2
IOU-6	unrelated	39	100	-38	7	-67
IOU-3	unrelated	38	46	15	18	13
IOU-1	unrelated	34	27	9	7	10
IOU-4	related	16	13	7	6	8
REC-12	single	100	98	5	5	45
REC-13	single	100	100	7	8	-75
REC-5	single	99	99	9	9	17
REC-14	single	98	79	6	5	52
REC-11	single	96	81	6	5	30
REC-7	single	95	100	8	13	-83
REC-20	single	95	96	8	8	6
REC-10	dominant	94	94	7	7	6

Table 1: Revenue Proportions and Net Profit Margins						
Firm	Strategy	Revenue - Utility (%)	Profit - Utility (%)	Overall Net Margin (%)	Utility Net Margin (%)	Non-Utility Net Margin (%)
REC-16	dominant	93	100	8	9	0
REC-17	dominant	92	91	12	11	12
REC-4	dominant	91	98	26	28	6
REC-6	dominant	89	97	26	29	6
REC-9	dominant	88	100	3	4	-1
REC-18	dominant	88	95	15	16	6
REC-2	dominant	86	88	7	7	6
REC-15	dominant	86	74	3	3	6
REC-3	dominant	85	89	8	8	6
REC-19	dominant	85	85	6	6	6
REC-1	dominant	84	88	8	8	6
REC-8	unrelated	62	62	6	6	6

Summary data displayed in Table 2 more pointedly expose profitability pitfalls associated with diversification in this sample of electric utility firms. In all strategy categories but one, the average proportion of total profit contributed by the utility business equals or exceeds the average proportion of revenue from the utility business. In fact, for IOUs, where greater prevalence of diversification and stricter financial reporting requirements enable a clearer picture to emerge, profit contribution of the utility business exceeds utility revenue contribution by over 50% in both related diversification and unrelated diversification categories.

DISCUSSION

The analysis finds less diversification than expected in this sample of electric utility providers, a result directly attributable to low levels of diversification in the RECs where fully 95% of the sample organizations demonstrate single- or dominant-business strategies. One logical explanation stems from the RECs' structural form as a nonprofit customer-owned entity created expressly to serve the rural need for electricity. As such, the investor-related pressure for growth and profits that IOUs experience is not an operative factor influencing strategy of RECs. A more subtle contributing explanation for lower levels of diversification in RECs turns on the distinction between "intended strategies" and "realized strategies" (Mintzberg, 1987). Basically, while official commentary in many of the annual reports touts both the need for and specific efforts extended toward greater diversification (intended strategy), only when these efforts generate revenue (realized

strategy) do we recognize the diversification. This inherent measurement limitation is compounded by the scant financial detail RECs typically disclose for unregulated operations. RECs often aggregate unregulated businesses together and provide a consolidated financial statement of their activity. Profits and losses become blended, as some ventures' losses are offset by other ventures' gains, and miscellaneous income might be included as an additional buffer. The result is a blurred and potentially distorted view of both diversification strategy and financial performance outcomes for the RECs.

Table 2: Strategy and Utility Revenue and Profit Proportions

Firm Type	Strategy (% of sample)	Average % Revenue from Utility Business	Average % Profit from Utility Business
IOUs	single business (10)	100	100
	dominant business (30)	77	100
	related diversification (20)	28	43
	unrelated diversification (40)	39	61
RECs	single business (35)	98	93
	dominant business (60)	88	92
	related diversification (0)	N/A	N/A
	unrelated diversification (1)	62	62

Nevertheless, the examination of profit and revenue contributions still shows utility businesses adding disproportionately to profit in half the RECs, while non-utility businesses do so in only one-quarter of the RECs. Several instances of very high non-utility margins are evident where non-utility profit contribution exceeds its revenue contribution. Considering financial reporting liberties that might be taken, understated corporate overhead or unassigned operating expenses in these non-utility ventures are possibilities that would lead to apparent high profit margins.

Alternatively, certain types of new ventures might be associated with attractive non-utility margins for RECs. According to annual reports, these ventures can be identified as utility-related construction services, sales of electric appliances such as hot water heaters and fireplaces, and additional new "basic" services for rural customers including cable television, internet, and cell phone service. Non-utility involvement of RECs reporting more modest returns is also centered in these areas. Major losses are found in home security system, electric wiring service, and residential billing service (targeting refuse collection businesses) ventures; losses are also reported in manufacturing, and some utility construction and telecommunication service businesses. The key to differentiating success from failure in the utility construction businesses appears linked to how effectively excess functional capacity is organized and deployed for generating additional revenue

without incurring substantial additional costs. Successful ventures in both the telecommunication areas and appliance sales seem to hinge on unserved customer needs, implying a lack of competition. For example, many rural areas have inadequate cable television, internet, and cell phone coverage. Related products and services provided at the request of customers with few other options provide diversification opportunity for RECs; adding the same products or services in the face of strong competition from other providers with greater expertise or other advantages appears less likely to lead to successful new ventures.

The strategy and performance picture is clearer for the IOUs, thanks to financial disclosure required of publicly traded companies. The IOUs are found to be substantially more diversified than the RECs, with only four of ten IOUs in the sample exhibiting a single- or dominant-business strategy, and two of those nearing the non-utility revenue threshold of diversification. Whereas most RECs with non-utility revenue report some non-utility profit, the IOUs with dominant-business strategy all show 100% of their profit from the utility business. There are no generous non-utility profit margins to be found in the dominant-business IOUs, only negative margins. This result suggests that more stringent financial disclosure may dampen reported non-utility profits, or that IOUs are less likely than RECs to find success with relatively small non-utility ventures. The finding is consistent with prior research showing performance benefits of diversification at moderate levels, rather than low (or high) levels.

Ventures within IOUs associated with losses include recycling, economic development, real estate development, housing, telecommunications, and a variety of business services. Reliance on debt financing is also associated with losses; a notable example is a –23% overall net profit margin for one IOU, even though the problematic venture involved was energy-related. Considering together the reported profit experience of IOUs and RECs with relatively small non-utility revenue streams, we note the widely varied profit outcomes, intimating the uncertainty and risk associated with the start-up phase of new ventures. It is evident that as higher proportions of revenue are generated from non-utility ventures, earnings become less volatile across the sample. The implication is that greater experience with diversification and/or more mature ventures help stabilize non-utility performance outcomes.

We have noted a high incidence of diversification among the sample IOUs, consistent with the holding company mentality now prevalent in publicly-traded utility firms, where utility operations become just a small portion (45% or less in this sample) of a mixed portfolio of business enterprises. Performance outcomes are devastating in only one of the cases, a firm with a 50-year history of profitability that embarked on a strategy of generally unrelated acquisition, using generous executive incentives to reward aggressive growth. Expansion was financed with borrowed funds and included businesses in heating, ventilation, and air conditioning services; retail propane; and networked communications and data services. Company officials acknowledged taking too long to respond to key indicators of problems in these businesses, leading to a downward spiral accelerated

by debt financing. The company ultimately filed for bankruptcy in 2003 (Hildebrandt & Kirchenmann, 2003).

In two other firms in our sample, net profit margin from non-utility businesses is very low (2% and 4%), and utility profits dominate the total profit picture even though utility revenue comprises only about 40% of the total in each instance. The firm with 2% non-utility margin has a highly related diversification strategy, with essentially all operations in various facets of the energy industry. The second IOU with a low non-utility margin is an unrelated diversifier, with a broad portfolio including diverse manufacturing, trucking, construction, health and information services businesses. While this firm is often lauded for its careful approach to acquisitions – targeting small companies with strong management and performance that are well-positioned in growth industries, and prudently financing acquisitions largely through retained earnings – the overall profitability of unrelated ventures in this firm is not impressive.

Three diversified IOUs exhibit attractive net profit margins in their non-utility businesses. The highest margin (13%) is derived from a portfolio consisting mainly of wholesale energy operations; non-utility net profit margin is depressed here, however, due to losses in the broadband service business also contained in the portfolio. The IOU earning a non-utility net profit margin of 10% seems to be successful with both the unrelated and the related portions of its portfolio, which includes a large wholesale vehicle auction network as well as various energy-related businesses. The IOU with only 16% of revenue from its regulated utility business demonstrates successful related diversification into many unregulated areas of the utility and utility construction industry; it is noteworthy that this firm has avoided the telecommunication industry.

Overall, the diversification track record of IOUs in the sample is mixed. Generally, businesses with strong relationships with core utility operations show greater promise than unrelated ventures, although attractive margins were not always attained even in some highly related energy businesses. Telecommunications ventures seem appealing to many utility firms but profitable thus far for only a few, although others project positive future returns from their recent substantial infrastructure investments. A clear signal from the study results is that ventures financed with high levels of debt are prone to disaster, whether or not they are related to the core utility business. Firms that try to grow too broadly, too fast, and with too much leverage seem to suffer.

IMPLICATIONS AND CONCLUSIONS

Our sample of 30 electric utilities provides evidence that electric utility firms are indeed involved in a wide range of diversification initiatives. While it appears that RECs are mainly dabbling in diversification while retaining their single- or dominant-business strategy, a clear picture of strategy and performance is difficult to uncover given the limited financial disclosure required in the unregulated (non-utility) activities of these nonprofit organizations. Absent stockholder-related pressures, RECs still exhibit tendencies toward diversification. One motive for

diversification rather unique to RECs comes from customer requests for additional products or services. Diversification based on this motive led to better outcomes in our sample organizations that provided upgraded electric appliances, or new communication services to an otherwise under-served rural market. RECs also found opportunity in business activities that prudently utilize their existing skills and resources for commercial purposes during slack periods. Diversification initiatives that pit the REC against strong rivals in a competitive market did not exhibit favorable outcomes. Overall, while still warranting concern, negative consequences of diversification in RECs are smaller in scale and scope than in IOUs.

Diversification was found to be both prevalent and extensive in the IOUs in our sample. Similar to other studies using accounting performance measures, we found that while some diversification initiatives provided additional profits to the firm, in many cases growth came at the expense of overall firm profitability. In several instances, diversification led to truly disastrous results. Consistent with tenets of diversification theory and documented experience of firms in other industries, better outcomes were found with related ventures such as utility construction and other energy businesses, while strongly negative results involved rapid growth through debt-financed unrelated acquisition. Recalling that IOUs serve three-quarters of electricity customers and generate half of the electricity produced in the U.S., we see the highest stakes coinciding with the group of firms exhibiting the highest level of diversification in the industry.

Realizing diversification to be "an unpredictable, high stakes game" (Markides, pg. 93), potential impacts on various stakeholder groups should be considered. Of major concern is the (characteristically captive) customer. Should diversification contribute additional profits that allow for improved infrastructure resulting in more reliable power, better service, and/or reduced energy rates, customers clearly benefit. In reality, these benefits are unlikely to reach the energy consumer. The regulatory structure of the electric utility industry essentially eliminates incentives to lower rates; at best, customers might benefit from improvements that reduce the need for rate increases. However, growth initiatives tend to require rather than produce capital, leading to the more likely scenario that funds are diverted from rather than to utility operations, especially when losses occur. At least regulators have thus far protected consumers from major rate increases due to failed diversification strategies. Even in the new business areas requested by REC customers, often a small portion benefit while the cost and risk is borne by all customers who are the members of the cooperative. Thus, the argument for electric utility diversification based on customer benefit is not a strong one.

Another important constituent for the IOU is the stockholder. While utility diversification is often attributed to investor criteria for growth and profit, evidence here indicates that overall firm profitability is often compromised by diversification. A related issue of concern is the established role of utility stock in investment portfolios. Stock in electric utilities carries a long-standing reputation of stable value plus high dividend return, so is prevalent in low-risk, income-oriented retirement portfolios. In fact, the stock is still being promoted as such, as shown in this quote from

a Midwestern utility association newsletter: "When you invested in utility company stock you knew you were buying a piece of a solid company that would provide income and security for your retirement years. The factors that guided your purchasing decision are as solid today as they were when you made your initial investment" (Shareholder News, 2004, pg. 7). Failed strategies leading to bankruptcy, precarious financial position, declining profitability, or merely dividend reductions can all have serious repercussions as the number of investors approaching retirement age increases. In general, increasing diversification brings increasing risk and frequently reduced dividends for stockholders, many of whom may be unaware of this new strategy trend in electric utility firms.

More broadly, communities should also be considered as important stakeholders. Both IOUs and RECs have traditionally been pillars of their communities, providing a stable source of good jobs and active community involvement. This community connection contributes to the number of citizens putting their faith and retirement savings in the local electric company stock. While diversification brings new business initiatives that add jobs at least in the short run, eroded profits may limit the utility's ability to support community initiatives. Job losses are often very difficult to replace in the local area. And if diversification strategy results in a serious company collapse, as shown in at least one of the ten IOUs in our sample, reliable and reputable electrical service enabling industrial development and thus community growth may be hampered.

Clearly, impacts of increasing diversification in the electric utility industry extend beyond mere growth and profitability of the firm. Many stockholders, electric customers, employees and communities are vulnerable to effects of poorly performing diversification strategies. While some stockholders benefit when firms successfully implement a diversification strategy, and others may profit in the future if firms are more favorably positioned for alternative revenue streams as deregulation and competitive changes unfold, major winners in this study seem to be executives with generous growth-related bonuses.

Reflecting on our overall analysis, we find at least some support for three of the four major theories concerning diversification. Industrial organization (IO) economics and agency theory are involved in the motivation for diversification, while the resource-based view of the firm helps explain the observed performance outcomes of diversification in electric utility firms.

The finding that IOUs are substantially more diversified than RECs in our sample strongly supports the IO economics viewpoint; IOUs adjust their strategies in order to appease investors seeking growth and profits, resulting in shifts towards businesses outside the unattractive and increasingly uncertain low-growth electricity generation and distribution arenas. The RECs are not as driven by financial performance pressures and thus are not as strongly motivated to venture beyond their regulated electricity business, evidenced by the limited diversification documented here. The agency theory explanation implying managers' self-interest in retaining capital does not receive widespread support as a motive for diversification in our study; however, in the one firm where managers were explicitly and handsomely compensated for consummating diversification initiatives, diversification ultimately became extensive.

Diversification outcomes exhibited in this study clearly support the resource-based view of the firm; strongly related ventures (primarily in various segments of the energy industry) where the firms already have excess capacity and/or valuable skills were more likely to show favorable outcomes as opposed to forays into supposed attractive industries (telecommunications, health or information services, for example) where knowledge and competence were insufficient to effectively compete against other capable players. Thus, while the IO economics perspective encourages migration to more attractive industry contexts, firms were more successful when constraining choice of new ventures to arenas where they possess relevant and developed skills.

Diversification outcomes examined here do not lend consistent support to the transaction cost economics tenet that greater breadth of operations depresses performance. While one broadly diversified firm with numerous businesses experienced net losses in both utility and non-utility businesses, another had low but at least positive profitability, while a third delivered quite attractive net returns in both utility and non-utility businesses. Likely our small sample combined with the even smaller subset of firms operating more than just three or four different businesses is insufficient to enable even an exploratory examination of potential support for this theory.

Drawing from these complementary diversification theories, results of this exploratory study suggest that electric utility firms should beware of growth for its own sake, and carefully evaluate competition, requisite skills, and profitability when seeking new opportunities. Initiatives requiring expertise unrelated to the core utility business, major infrastructure investment, and/or head-to-head competition present substantially increased risk. Business endeavors should be critically assessed periodically for profitability, and competence and resource fit with the firm; continual management attention is important to avoid declining or even negative profits. Further, results imply that electric utilities should evaluate and possibly strengthen internal governance controls to prevent executives from enriching themselves while plunging the firm into debt and future instability under the guise of expanded growth opportunities. Basically, diversification lessons learned in other industries need translation to the burgeoning diversification attempts in our essential electric utility industry to help mitigate potential negative consequences for numerous stakeholder groups.

Our relatively small sample of organizations, concentrated in four upper-Midwestern states, may reduce the generalizability of these findings. Some states outside this region have moved faster with deregulation, and are more urban with fewer RECs, creating industry contexts somewhat different than that of organizations studied here. Future studies involving larger samples would also enable useful statistical analysis.

The main limitations within this study flow from financial data constraints, particularly involving the RECs. With financial data from unregulated businesses displayed in a consolidated net format in the typical REC annual report, detailed analysis of operating results and individual venture performance is not possible. Thus, this study utilized net profit measures to provide an initial look at performance outcomes associated with various diversification strategies. More refined investigation using operating data from each individual venture would increase both understanding

of and confidence in any results obtained. Future studies involving a broader range of more precise performance variables could begin with the IOUs, given their financial disclosure requirements leading to greater availability, consistency, and credence of the data. Recognizing the dominant role of IOUs in the electric utility industry, this is an appropriate as well as feasible avenue for more refined research.

Another constructive avenue for study might employ systematic measures of relatedness to provide more actionable prescription to diversifying firms. Broadening the inquiry to examine how ventures were started, organized, and managed over time would also enhance prescriptive value. Realizing that few industries are as involved with unrelated diversification today as this one, potentially useful insights for implementing high levels of diversification might be discovered. Clearly, substantial work remains to help us adequately understand diversification and its important consequences in the electric utility industry today.

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Appendix I: Financial Date						
Utility	Total Revenue	Utility Revenue	Non-Utility Revenue	Net Profit Total	Net Profit: Utility	Net Profit: Non-Utility
REC-1	36,573,745	30,894,656	5,679,089*	2,778,903	2,446,676	332,227*
REC-2	21,057,127	18,199,505	2,857,622*	1,388,928	1,221,757	167,171*
REC-3	9,439,690	8,046,166	1,393,522*	758,630	677,109	81,521*
REC-4	13,626,275	12,400,075	1,226,200*	3,491,460	3,419,727	71,733*
REC-5	37,762,394	37,508,032	254,362	3,429,094	3,385,473	43,621
REC-6	11,869,704	10,509,904	1,359,800*	3,142,890	3,063,342	79,548*
REC-7	142,571,421	135,192,846	7,378,575	11,289,172	17,419,069	(6,129,897)
REC-8	49,480,399	30,744,643	18,735,756*	2,881,159	1,785,117	1,096,042*
REC-9	137,980,000	120,782,000	17,198,000	4,171,000	4,373,000	(202,000)
REC-10	13,391,487	12,560,220	831,267*	879,996	831,367	48,629*
REC-11	43,939,080	42,207,852	1,731,228	2,772,059	2,249,068	522,991
REC-12	24,198,522	24,126,796	71,726	1,309,838	1,277,380	32,458
REC-13	34,435,007	34,325,838	109,169	2,532,489	2,614,599	(82,110)
REC-14	18,584,036	18,132,340	451,696	1,112,037	878,421	233,616
REC-15	18,153,993	15,530,126	2,623,867*	589,763	436,267	153,496*
REC-16	13,166,086	12,231,294	934,792	1,064,262	1,066,766	(2,504)
REC-17	33,202,519	30,399,056	2,803,463	3,821,497	3,491,237	330,260
REC-18	16,517,416	14,544,427	1,972,989*	2,400,697	2,285,277	115,420*
REC-19	20,851,129	17,746,340	3,104,789*	1,210,939	1,029,309	181,630*
REC-20	14,658,927	13,940,994	717,933*	1,132,634	1,090,635	41,999*
IOU-1	1,506,900,000	505,600,000	1,001,300,000	137,200,000	36,462,000	100,738,000
IOU-2	2,608,812,000	2,178,206,000	430,594,000	106,900,000	167,522,000	(60,622,000)
IOU-3	423,919,000	162,186,000	261,733,000	63,193,000	29,078,900	34,114,100
IOU-4	2,031,500,000	329,769,000	1,701,731,000	147,700,000	19,400,000	128,300,000
IOU-5	347,096,000	347,096,000	0	29,193,000	20,193,000	0
IOU-6	1,991,509,000	775,369,000	1,216,140,000	(763,754,000)	56,366,000	(820,120,000)
IOU-7	710,116,000	307,403,000	402,713,000	46,128,000	31,696,894	14,431,106
IOU-8	3,736,200,000	2,852,100,000	884,100,000	167,000,000	295,200,000	(128,200,000)
IOU-9	2,674,900,000	1,057,849,000	1,617,051,000	109,400,000	79,400,000	30,000,000
IOU-10	9,524,372,000	6,833,177,000	2,691,195,000	(2,217,991,000)	544,052,560	(2,762,043,560)
*cell estimated						

CORPORATE GOVERNANCE CHARACTERISTICS OF GROWTH COMPANIES: AN EMPIRICAL STUDY

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ABSTRACT

High growth companies face many challenges, encompassing the numerous demands of new product innovation, market shares and customer satisfaction. This paper studied the hypothesis that, due to time and resource constraints, high growth companies will find it exigent to formulate and disseminate an elaborate, structured policy of corporate governance. To test this hypothesis, a corporate governance scoring system was developed and computed for 500 firms, based on the guidelines of accountability, responsibility, internal controls, and audit procedures. A life cycle analysis was also performed to identify differences in corporate governance characteristics of "initial growth" and "revival" firms, since both groups face the same challenges of dealing with increasing sales, customers, products and innovation.

The results indicate that initial growth firms had lower corporate governance scores when compared to other firms. Revival firms showed higher scores, indicating that a well developed system of corporate governance added a much needed synergy for growth. Finally, a regression analysis indicated that certain fundamental characteristics such as Board development and Audit Committee role were equally well -detailed for growth and revival firms, but other corporate governance features such as ethics policy, shareholder value, reporting transparency and corporate citizenship were much better elaborated for revival firms.

INTRODUCTION

Within the intricate complexities of the business world, corporate governance is defined as a mechanism to maximize firm value. Empirical research over the past decade has shown a causal relationship between governance and market value. This evidence comes from both single-country studies (Black, 2001 on Russia; Black, Jang and Kim, 2006 on Korea; Gompers, Ishii and Metrick, 2003 on the U.S.) and multi-country studies (Durnev and Kim, 2005; Klapper and Love, 2004).

The advantages of corporate governance have been well documented. Good governance systems lead to better access to capital, improved performance, and reduction of risk. However,

implementing effective governance systems also comes at a cost. Technology constraints, lack of financial and business understanding of the system, and the cost of implementing and communicating corporate governance policies throughout the organization are crucial barriers which many firms, especially small ones face.

In today's high risk, high growth economy, companies need to set a strong strategic course and have the capability to survive in the fiercely competitive environment. Rapid growth firms have many challenges to face, starting from cash flows, human resources, product quality, imminent deadlines and customer satisfaction. Once a successful working environment is established, a well-oiled system of corporate governance will be highly rewarding. However, in the growth phase of a company's life cycle, the tendency of management will be to focus resources on revenue increase, and the value chain that links vendors and customers through their organizations. This paper studies the relationship between firm growth, life cycle stages and corporate governance characteristics. The rest of the paper is organized as follows: an explanation of the concepts of growth and corporate governance, and their interrelationships, development of the hypothesis, description of the methodology for measuring growth, life cycle stage and corporate governance scores, the statistical tests used, and the results.

GROWTH COMPANIES AND THEIR STRATEGIES

The organization life cycle model suggests that a company moves through a predictable sequence of developmental stages over its life time. These stages are sequential in nature, and are not easily reversible. Each stage can be clearly demarcated and involve a broad range of organizational activities and structures. There are a number of models describing the life cycle of a company, but most models divide the life of a company into the following five stages:

Start – up:	*This is the initial stage where a business organization is formed, funds are raised, and a business plan is written.*
The Growth phase:	*The product/service is now being marketed, revenues increase, employment and asset growth are common.*
Maturity:	*The organization has fully developed its market and its products, revenue growth has flattened, there are declining profit margins, and debt loads.*
The Renewal phase:	*With the injection of new management, new ideas, products and funds, the organization enters into its second growth phase, once again leading to higher revenues and products.*

Decline: *Due to changes in the economy, society or market conditions, sales and profits can decline. Negative cash flows and shrinking markets can lead the company to exit the field.*

Different stages in company's life cycle necessitate appropriate changes to the firm's objectives, strategies, planning, organizing, controlling, technology and even the very culture of the company. Growth phases are usually the most frantically demanding areas, where the company is identifying new products, new markets, new sources of finance and therefore constantly changing strategies. It is usually identified with substantial turmoil as the company tries to cope with the changing landscape of business. The focus of the organization is on creating customer value, marketing strategies, product/service innovation and cost control. In this stage, corporate governance is a regulatory requirement, not a competitive tool.

CORPORATE GOVERNANCE

The concept of corporate governance is not new – it has been around for a long time. However, with the recent demise of companies such as Enron, WorldCom, HealthSouth, and Arthur Anderson, the business community, under increasing scrutiny, has brought a renewed focus on the importance of corporate governance. A study of these failed firms indicated that there was a lack of consistent policies, control procedures, guidelines and mechanisms to ensure accountability and fiduciary duty. A corporate governance structure specifies the distribution of rights and responsibilities amount different participants in the corporation, and spells out the rules and procedures for making decisions on corporate affairs.

The OECD defines corporate governance as follows "….the system by which business corporations are directed and controlled. The corporate governance structure specifies the distribution of rights and responsibilities among different participants in the corporation, such as the board, managers, shareholders and other stakeholders, and spells out the rules and procedures for making decisions on corporate affairs. By doing this, it also provides the structure through which company objectives are set, and the means of attaining those objectives and monitoring performance."

The World Bank has a slightly different view: "Corporate governance is about promoting corporate fairness, transparency and accountability." The core values of an efficient system of corporate governance are as follows:

Fairness: *Protecting shareholder rights and ensure the equitable treatment of all shareholders including minority and foreign shareholders.*

Responsibility:	*Recognizing the rights of all stakeholders as established by law, and encouraging active co-operation between the corporation and stakeholders in creating wealth, jobs and sustainable enterprises.*
Transparency:	*Ensuring adequate and timely disclosures of all material matters regarding the company, including its financial situation, performance, ownership and governance structure.*
Accountability:	*Providing for the strategic guidance of the company, effective monitoring of management and its accountability to the stakeholders.*

Five years after the establishment of the PCAOB, corporate governance has not lost its importance in the business field. A recent study by Institutional Shareholder Services (ISS) found that corporate governance is not just a compliance objective – it has now become a major business imperative. Companies are discovering that a good system of corporate governance enhances returns, provides for better risk management, improves investor satisfaction and reputation, and provides better access to capital markets. According to the ISS study, respondents predicted increasing importance for corporate governance.

Yet there are serious costs involved in setting up a feasible and practicable system of corporate governance. Some of the costs involved are as follows:

Hiring dedicated staff such as corporate secretaries, experienced and independent directors, internal auditors, and other governance specialists

Payment of fees to external counsel, auditors, and consultants

Costs of additional disclosure

Increased managerial and supervisory time

Further, corporate governance is not a single event, but a continuous process. Management needs to:

Be fully informed on existing and changing stakeholder and regulatory expectations and determine the implications for company strategy.

Assess the resources and expertise the company has to implement changes and determine whether it is necessary to outsource to external professionals

Create/amend existing policies to create a framework that meets the company's specific needs

Communicate the changes to stakeholders, shareholders and regulators.

This is a cyclical process that needs continual management involvement for a company to fully realize the advantages of a corporate governance framework.

In a growth environment of rapid changes, high risk and uncertainty, managerial focus is on developing effective strategies for competitive advantage, innovation and market position. A company may not have the time, resources or the leadership to formulate and institute a company wide policy of effective corporate governance, with all its attendant details. This paper examines the corporate governance policies of high growth firms in comparison with a control group to test the hypothesis that there are distinct differences in corporate governance characteristics between the groups. A life cycle analysis shows that firms experience rapid growth twice: once during their initial growth stage, and later during the renewal stage. Firms are therefore separated according to their life cycle stage, and corporate governance characteristics are compared for firms in different stages of the life cycle.

HYPOTHESIS DEVELOPMENT

Corporate governance is the set of processes, policies, laws and institutions affecting the way a corporation is directed, administered or controlled. This complicated structure of rules and regulations is there to encourage the efficient use of resources and to require accountability of those resources. Elaborate systems and processes to deal with matters such as delegation of authority, performance measures, assurance mechanisms and reporting needs require the expenditure of time, effort and resources. Growing companies usually do not have a plethora of those three things to work on corporate governance.

The growth of a company is usually associated with its ability to innovate, which implies constant changes to products, processes, and organizational and managerial practices. This requires continuous adaptation to the changing business environment, and developing sustainable relationships with other firms, vendors, and financial institutions. Evans (1987) found that young firms, smaller firms had faster growth, and also found a significant (and positive) coefficient of the interaction between size and age. Such young, fast developing firms are referred to as "gazelles."

To succeed, these companies need to set targets, determine responsibilities and monitor profitability, customers, innovation and financing. Experts suggest that, for a young company to

grow, the management hierarchy remain flat rather than layered. Executives of such companies, therefore, are still trying to find a internal organizational structure that works well, and therefore will not have the time or the opportunity to set up a well defined corporate governance system. This suggests the first hypothesis for the study:

H_1 : The corporate governance scores for companies characterized as high growth will be lower than the scores for other companies.

Growth occurs in two stages of a company's life cycle. The revival stage also sees a period of great activity where product innovation, sales growth and profitability once again become crucial factors in the company's strategy to grow and survive. But these companies have already been through their maturity phase, with settled markets and customers, and have had the time to set up a workable, detailed corporate governance framework. Since corporate governance is now a regulatory requirement, the political cost hypothesis would suggest that these companies would have stellar systems. Added to this, is the fact that mature/revival companies would not have "flat" management systems, but well-developed hierarchical structures that require a good system of governance for fairness and transparency. So the second hypothesis of this study is set up as follows:

H_2 : The corporate governance scores for companies characterized as "revival" firms will be higher than the scores for other companies.

A truly effective system of corporate governance has many features that involve Board structure and effectiveness, strategic planning and monitoring, risk management, audit committees, internal control, corporate ethics, and transparency in disclosure. A new growth company may not have the resources to develop every facet of a corporate governance policy. So the third hypothesis is an exploratory study of the various elements of the corporate governance policy and its development in relation to the growth and other life cycle stages of the firm.

H_3: The corporate governance scores for companies characterized as "initial growth" will show an unequal development of the elements of corporate governance as compared to the scores for "revival" companies.

METHODOLOGY

An initial sample of 500 firms were randomly selected from S&P 500 and S&P 600 to get a wide range of capitalization and firm age. S&P 600 firms, in general, tended to be newer and

smaller than the S&P 500 firms. These firms were then measured for growth, life cycle stage and corporate governance scores.

Measuring Growth Firms

A growth company is usually defined as a company that has performed better than the industry average over a period of years and is expected to continue to do so in the future. According to Delmar (2003), a firm's growth can be measured in terms of inputs (investment funds, employees), in terms of the value of the firm (assets, market capitalization, economic value added) or outputs (sales revenues, profits). The synergistic effects of the three facets of a firm's strategy indicate its growth position within the industry. As commonly measured,

$$G = (E/B)^{1/n} - 1$$

G = growth of a firm
E = ending balance of the variable such as firm size or revenues
B = beginning balance of the variable
n = period over which growth is measured

The actual growth path of a company can be traced by using the various measures of input, output and value. Table 1 describes the growth measures.

Table 1: Growth Indicators

Growth Indicators	Description
Value	Total Assets (TA)
Value	Market Capitalization (MC)
Inputs	Number of Employees (EMP)
Inputs	Investment Cash Inflows (ICI)
Outputs	Sales (SA)
Outputs	Net Income (NI)

The Growth Indicators were combined as follows to compute the growth measure for a specific firm.

$$G_{f,t} = [(TA_t/TA_{t-1})^{1/n} * (MC_t/MC_{t-1})^{1/n} * (EMP_t/EMP_{t-1})^{1/n} * (ICI_t/ICI_{t-1})^{1/n} * (SA_t/SA_{t-1})^{1/n} * (NI_t/NI_{t-1})^{1/n}] - 1$$

g = Growth
f = specific firm
t = year used to test the hypothesis
n = period over which growth is measured

This growth measure was computed for all the firms in the sample (g_f) , as well as for the firms in the industry in which the firm was located. Firms with negative growth were discarded, as these firms had a low chance of survival. The industry average for the growth rate was then computed as the simple mean of the growth measure of the all the firms within the industry, defined by the three digit SIC code (G_I). For each firm within the sample, the following variable was computed:

$$G_F = g_f - G_I$$

where G_F is the incremental growth rate for the specific firm in the sample. The sample firms were then ranked according to the incremental growth rate. Fast growth firms and a comparative sample were identified as follows:

Table 2: Identifying fast growth firms

Value of G_F	Variable Identified
Top 25% (125 firms)	Fast growth firms
Next 10% (50 firms)	Buffer zone to separate fast growth and median growth firms
Next 25% (125 firms)	Median growth firms
Next 15% (75 firms)	Buffer zone
Last 25% (125 firms)	Slow growth firms

Measuring firm life cycle stage

Anthony and Ramesh (1992) use four classification variables to indicate a firm's position in its life cycle. These variables are: dividends, sales growth, capital expenditure and years of life. Dickinson (2005) uses cash flows from operations, investing and financing to identify life cycle stages. Yan (2006) suggests that these variables should be adjusted for industry level to adjust for industry specific characteristics. This study uses the following variables to test for the life cycle stage of the firm:

Table 3:Life Cycle Variables

Variable	Description	Measurement	Score
Years of life (SCYL)	The initial growth phase occurs early in the life cycle. Revival occurs later	5 – 10 years 11 – 15 years > 15 years	1 2 3

Table 3:Life Cycle Variables			
Variable	Description	Measurement	Score
Sales growth (SCSG)	Growth firms will have increasing sales growth, mature firms stagnant, and declining firms will have declining sales growth	3 year firm sales growth – average industry sales growth	3 if in top 33% 2 if in middle 33% 1 if in bottom 34%
Dividends (SCDV)	A growth firm will pay very little dividends. Mature, revival firms will continue to pay higher dividends to avoid signaling news of possible decline	Firm dividends – minus industry average of dividends	3 if in the top 33% 2 if in middle 33 % 1 if in bottom 34%
Capital investment (SCCI)	Revival firms will have the resources to invest heavily. Next will be growth firms.	Cash investment from statement of cashflows	3 if in top 33% 2 if in bottom 34% 1 if in middle 33%
Cash Flows (SCCF)	Growth firms have positive operating, negative investing and financing. Revival firms should have high positive operating cash flows	Operating cash flows – (investing plus financing cash flows)	3 if in top 33% 2 if in bottom 34% 1 if in middle 33%

Based on the above variables, a life cycle score is developed for each firm within the high growth sample, the slow growth sample, and the median growth sample, thus:

$$LCSC = SCYL + SCSG + SCDV + SCCI + SCCF,$$

where LCSC is the Life Cycle Score.

The firms are ranked according to their life cycle scores within each growth sample. The top 33% are in the revival stage, the bottom 33% are in the growth stage. Firms which have a life span of less than 5 years, and firms which have a declining sales growth are rejected from this sample because they would be in the start up stage or declining stage. Corporate governance scores are then computed for each firm in the growth samples.

Based on the above computations, six groups of firms out of a sample of 361 firms are identified as follows in Table 4.

Out of the initial 500 firms, 139 firms were rejected because they were less than five years old or in the initial life cycle stage, or because they were considered to be in the decline stage of the life cycle. Both these stages were not studied in this paper.

Table 4: Test Groups			
Growth/Life Cycle	High Growth	Median Growth	Low Growth
Initial Growth	36	54	27
Maturity	11	33	42
Revival	61	73	24

Corporate Governance Scores

A well-developed system of corporate governance provides a framework for decision making within the organization, setting and achieving objectives, and monitoring performance. It is a many faceted structure that encompasses the following concepts:

- *Board Structure and Composition (BC)*
- *Board Operation and Effectiveness (BE)*
- *Audit Committee conduct (AC)*
- *Strategy, Planning and Monitoring (SP)*
- *Risk Management and Compliance (RM)*
- *Corporate Ethics – a well developed and adequately disseminated policy (CE)*
- *Internal Control system (IC)*
- *Creating shareholder value with clarity of business objectives, anti takeover measures, dividend policies, pre-emptive rights and clear lines of communication (SV)*
- *Transparency and Fairness in disclosure (TF)*
- *Corporate Citizenship that takes into account responsibilities towards consumers, employees, the environment, and other stakeholders in a corporation (CC)*

The Corporate Governance Score in this study assigns 10 points to each of the above categories for a total of 100 points. Each firm in the sample is assigned a score based on the study of its corporate governance policies available on its website, proxy forms and 10 – K's as follows:

$$CGS = BC + BE + AC + SP + RM + CE + IC + SV + TF + CC$$

The average score for each group in the study is then computed (Table 5). To investigate the differential impact of growth on the various components of corporate governance, the following regression analysis was performed:

$$GR * LC = \alpha + \beta_1 BC + \beta_2 BE + \beta_3 AC + \beta_4 SP + \beta_5 RM + \beta_6 CE + \beta_7 IC + \beta_8 SV + \beta_9 TF + \beta_{10} CC + e$$

where: GR is the Growth score for each firm, LC is the switch indicating whether the firm is in the initial growth stage or the revival stage of the life cycle, and e is the error in the OLS regression.

Table 5: Average Scores

Growth/Life Cycle	High Growth	Median Growth	Low Growth
Initial Growth	63.82	72.15	57.33
Maturity	73.65	69.84	58.36
Revival	77.32	67.35	59.39

RESULTS AND CONCLUSIONS

The purpose of this paper was to explore the corporate governance characteristics of growth firms, to examine the effects of a firm's life cycle on corporate governance, and to specifically test for differences in the various components of corporate governance. Firms were classified according to their growth levels and life cycle position, and a Multiple Analysis of Variance (MANOVA) was performed on the nine groups, with growth as the independent variable. Wilk's Lambda was used to test the significance of all the groups, while Tukey's univariate tests were used to test for two groups at a time.

The MANOVA was adjusted for uneven sample sizes. Wilk's Lambda indicated a significant difference in governance scores between the groups. Univariate testing showed the following:

The governance scores for the high growth/initial growth firms was significantly lower than the median growth/initial growth firms.

The difference between the high growth/mature firms and the median growth/mature firms was not statistically significant.

The high growth/revival firms had the highest scores among all groups, statistically different from all the groups.

The low growth firms in all three life cycle had the lowest governance scores.

An OLS regression analysis had an overall R^2 of 13%. The Life Cycle variable was significant, as were Corporate Ethics, Creating Shareholder Value, Transparency and Fairness, and Corporate Citizenship. The variables related to the Board and Audit Committees showed no significant relationship to the growth of companies.

The past few years have seen many upheavals in the corporate world. The rapid growth of the stock market has been accompanied by financial scandals that have bankrupted some of the biggest companies in the country. Corporate governance, which is the structure by which companies plan, operate and monitor their activities, is essential for increasing shareholder value and trust. But governance systems take time and effort to devise and implement.

This paper studied the corporate governance characteristics of growth companies in two stages of their life cycle – initial growth and revival. Analysis of variance showed that initial growth companies had lower corporate governance scores as compared to slower growth companies, while revival companies had highest scores as compared to mature companies, and slower growth companies in the revival stage. This indicates that fast growing revival companies fully utilize the advantages of a well-developed corporate governance system to augment their growth strategies.

A further analysis of the specific characteristics of the corporate governance systems showed that certain basic features of governance, such as Board structure, composition and operation as well as Audit committees were utilized by most companies – many of these features are mandatory requirements of the Sarbanes Oxley or stock exchange regulations. Other features such as Corporate Citizenship, Ethics policy, Disclosure of information and Shareholder relationship showed significant differences between growth and non-growth firms.

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SEARCHING FOR STRATEGIC OPPORTUNITIES

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ABSTRACT

Early in 2005 the School of Business initiated a strategic planning process with the goal of formulating a new strategy that drives curricula development. The impetus for the initiative was the realization that the needs of traditional changed and the number of non-traditional students was increasing and becoming a more important user of the school's services. The study followed a traditional model for creating a strategic planning process with the goal of developing a strategic plan. This study focused on developing a process for collecting useful information about other schools. The objective was to learn how other schools chose to respond to market trends to assist us in preparing our own strategic plan. Twenty schools were examined, private and public, large and small, in-state and out-of-state schools. A series of hypotheses were developed. What the study revealed was that all schools varied in the extent to which different types of academic programs were offered. However, the larger the school the more varied the range of offerings, schedule variety, delivery options and location of services. Small schools were more selective in their approach, as predicted. The findings gave impetus to the strategic planning process in helping us to selectively target the type of actions required to meet the needs of students. Furthermore, we learned that schools of our size serve as a useful benchmark in helping us to assess our own actions in responding to the competitive challenges of the higher education marketplace.

INTRODUCTION

In early 2005 the School of Business initiated a strategic planning process with the goal of formulating a new strategy to drive curricula development and curricula delivery methods (Maister, 1993). The impetus for the initiative was the realization that the needs of traditional students changed and the departments within the school needed to respond to these changes (Lawler, 2001). Furthermore, the number of non-traditional students increased. The non-traditional student had become an important customer. As such, the School of Business and the various departments within the School needed to determine how best to meet the academic needs of both groups of students and determine the best delivery methods to ensure that the educational programs fulfill the mission of the school. This study describes one part of the strategic planning process, the information gathering stage (Ross and Covino, 2005).

INFORMATION GATHERING MODEL DEVELOPMENT

The study followed a traditional strategic planning process model (Porter, 1980) with the goal of developing a strategic plan. Information gathering is a critical component of the strategic planning process because planners and decision-makers need to understand the opportunities, threats, and the organization's capabilities in the form of core competencies, and organizational limitations which illustrate what is feasible. There are three central issues that to address during information gathering. These issues pertain to the types of information required. We start with broad groupings of information and follow a deductive approach of narrowing the scope of information gathering to collect only relevant and time sensitive information.

There are three broad categories of types of information (Porter, 1979). Two categories, environmental and competitive, offer information that is external to an organization and impact either directly or indirectly on the organization's ability to achieve its goals. Within each of these broad categories are sub-categories of information that describe particular types of information needed. Within the environmental category the common descriptors for the sub-categories include: technology issues, socio-cultural issues, political-legal issues, international issues and economic issues. Within the competitive category the important information sub-categories include: customer analysis, supplier analysis, substitute products or services, barriers to entry and an industry analysis. This study is not meant to describe each category in detail. Other sources (Porter, 1985) describe the details of the major information categories and each sub-category.

The third category of information focuses on the organization. The analysis of the organization is often referred to as an internal analysis. A comprehensive review of the theory supporting the types of information gathering associated with a competitive analysis is beyond the scope of this study. Other sources serve this purpose. What is important in conducting a strategic information gathering exercise is to be focused. A focused search enables the planner and decision-maker (Pfeffer, 2005) to look beyond the myriad kinds of information by zeroing in on the key drivers that can either help or hurt the organization. We are designing our own roadmap that illustrates both the type of information to collect and describe and how to use the information in formulating strategic goals and a strategy. For example, we might want to know about a market and learn if the number of people in this segment is increasing or declining (and the rate of change).

Key drivers refer to factors that have a profound impact on the ability of the organization to successfully fulfill its mission and achieve the strategic goals. Several examples of key drivers illustrate their significance when information gathering. Employers that change their educational requirements for managers by requiring managers to have an MBA will lead to a sudden and dramatic increase in applications to MBA programs. Parents with children who also work full time and find that employers stipulate that only employees with a bachelor's degree can be promoted will have a direct impact on enrollment at bachelor degree granting schools and on the way schools deliver their educational programs.

Customer analysis is almost always critical because the preponderance of organizations are demand-driven. That is, the needs of the customer and satisfying those needs are the most critical driver of a firm's sales efforts. Market research, a substitute for psychological analysis, represents an attempt to get "under the skin" of the customer to better understand important needs and how the customer prefers getting their needs met. Typically, an organization wants to know basic demographic information, current interests, changes in life style, etc. The goal is to anticipate either trends in current consumer needs or needs that are either at the "want" stage or which are not yet within the consumer's level of awareness.

For example, a consumer using soap detergent might be bothered by the fact that a measuring cup is required to measure an amount of detergent to use. Thus, a firm creates a top with a dual purpose, to close the container and to measure the quantity needed. This represents a linear progression in product development, from a cap only to a cap with two functions, in response to changes in the consumers' preferences. The IPOD represents a different type of response to the consumer. The IPOD represents a transformational or supply-driven product. The IPOD is not a direct response to a particular consumer need. The IPOD represents a leap forward assuming convenience is a dominant need for potential users and Apple Computers took the initiative and risk to develop the IPOD without first identifying a specific target market and the needs of this market.

Customer analysis helps an organization determine how best to respond to changes in the customers' need requirements. Conducting a competitive analysis (Davenport, 2006) is a useful proxy measure for learning how other organizations respond to major trends in the market. In particular, assessing how like organizations meet customer needs is critical because these organizations deal with very similar types of consumers. We learn how other organizations approach meeting customer needs. An organization's also studies its' customers and potential customers. This type of research is characterized as a proprietary customer analysis.

Strategic focus (Porter, 1996) is the last major issue examined. We wanted to identify the most dominant trends by segmenting the educational institutions in several ways. Size was a significant element with schools sub-divided by four different size groupings. The basic assumption is that the larger the organization the more encompassing the organization's strategy in terms of the number and type of programs offered, delivery methods, etc. In short, large organizations control more resources, both financial and professional expertise, which gives these organizations an opportunity to offer more academic programs and deliver these programs in different ways. The smaller the school the fewer the resources and professional expertise, therefore the more narrowly focused are the services provided. Size, from the smallest to the largest organization, gives us a road map for the direction the organizations are likely to pursue in meeting the consumer needs within the constraints faced.

Both private and public schools were included in this study because each offers insights on how to meet consumer needs. Private schools, largely tuition driven, can be expected to be most proactive in anticipating and meeting consumer needs. Keenly interested in new revenue sources

and aware that other sources of revenue can be tenuous, these organizations are quick off the mark to both identify new consumer needs and to meet those needs, even if the response is narrowly focused. Public schools, in contrast, less sensitive to the need for tuition-based revenue, respond differently to changing consumer needs. These schools wait until market trends are more clearly defined because most are dependent on public largess. Once the trends are clear and the determination that the needs are not fads but trends with some sense of permanency, these schools move to get the financial resources and professional expertise to meet consumer needs.

Finally, schools within and outside of Massachusetts were included in the study. In-state schools were included to look at how local schools responded to the Massachusetts market, even if the target market is different. Our aim was to be inclusive enough to learn what the schools were attempting to accomplish. With this in mind, we looked at schools external to Massachusetts to avoid labeling the study "parochial" and to examine trends among other schools in states which may be further ahead in developing new academic programs, delivery methods, etc. This also includes the possibility that schools might lag Massachusetts schools as well. The author was less concerned with this issue assuming that all the schools could be placed on a continuum from most advanced to least advanced in comparison with to each other.

RESEARCH DESIGN

Approximately 20 schools were included in the study; 8 private schools and 12 public schools. The sample size was purposefully kept small because this study represented only the first in a series of larger studies. Examining initial trends was expected to provide information that confirms the authors' hypotheses and leads to an expanded study that is expected to provide further confirmation and clarification of the pilot study's findings.

The survey questionnaire was organized along four broad categories of information. These categories reflect the basic foundation for fulfilling the purpose of the study. The first category covers academic programs. Academic programs represent the basic product of schools. Within this grouping were four sub-categories, degree programs, certificate programs, non-degree programs (e.g., Developing the Executive Chef) and non-credit workshops. Degree programs included undergraduate, masters and doctoral degrees.

The selection of the schools was determined in part on finding some schools similar in size to BSC, larger in-state schools, both private and public, and small private and public schools operating in Massachusetts. A study (Yehia Kimmel, unpublished) was used in selecting the schools.

The next category covered the location of the programs. There were three sub-categories. Programs can be offered at the primary campus, satellite campus (es) and at corporate sites.

The third category focused on the way the schools chose to schedule the programs. Scheduling was an important issue in learning how the schools attempted to accommodate traditional and non-traditional students. The latter group requires greater schedule flexibility to

accommodate work and family obligations. Scheduling choices included: weekends, intercessions (between traditional semesters), evenings, and semester terms with lengths of time less than a traditional semester (e.g., six weeks). Then, methods for delivering programs were examined in the context of learning about the types of programs offered. Delivery methods included: traditional classroom, workshops, seminars and online.

Research Hypotheses

The primary hypotheses are as follows.

Hypothesis #1: The larger the school the greater the number of different types of academic programs.

Hypothesis #2: The larger the school the more locations offered to students that participate in academic programs.

Hypothesis #3: The larger the school the more varied the types of schedules used in providing academic programs.

Hypothesis #4: The larger the school the more varied are the methods used to deliver academic programs.

Hypothesis #5: The smaller the school the more differentiated the focus in the types of academic programs offered, the locations used, scheduling of course and delivery methods used.

Hypothesis #6: Private and public schools, in each of the size groups, are expected to differ from each other in all ways.

The basic premise underlying the hypotheses is that schools operate with limited resources which are the single most significant constraint on programming. Debt instruments are not a viable alternative to raising capital. Second, larger schools have access to more non-financial resources such as the knowledge-based abilities of professional employees who occupy leadership and specialist administrative positions. These individuals know the trends emerging among schools and can incorporate this knowledge in the form of new strategic initiatives or know how to access this information.

Leadership plays a vital role as the catalyst for change. Whatever the size of the school, a pro-active leader can be expected to pursue growth opportunities because of the need to maintain

a forward momentum in the face of increasing competition for the educational dollar. A worthwhile corollary study is to examine the relationship between leadership style and the scope and scale of growth initiatives to learn whether certain leadership styles are strongly associated with different types of growth initiatives.

Finally, the larger schools target from a broader market than smaller schools for the simple reason that more students provide more resources to support current and future programming. More resources enable larger schools to pursue initiatives that target different groups of consumers. Smaller schools focus on narrower market segments because resource constraints limit the range of markets these schools can target.

RESEARCH FINDINGS

The research revealed the following results.

1. Academic Programs

- 45% of the schools with over 6000 students offered executive education programs.
- 45% of the schools offered non-graduate certificate programs with smaller schools (less than 6000 students) offering 2-5 non-graduate certificate programs and schools with more than 6000 students offering between 2-12 non-graduate certificate programs.
- 80% of the schools offered non-credit courses; most of these (75%) were public schools.
- 65% of the schools offered graduate certificate programs; 65% of these schools offered between 2-12 graduate certificates with most of these schools having a student population exceeding 6000.
- 85% of the schools offered non-credit workshops; most of these schools had 6000 or more students.
- 45% of the schools offered executive education programs; 35% of these schools had enrollments greater than 6000.
- A larger percentage of public schools offered consulting services, international programs and other types of programs than private schools; more private schools than public offered corporate training.

Conclusions

Size matters to a point. More schools within the 6001-10000 student population range offered non-traditional academic programs, though schools with more than 10,001

students offered a greater number of program offerings within a category. For example, the largest of schools had more certificate programs. Public schools were more likely than private schools to offer non-credit workshops. Private schools were more likely to offer corporate training than public schools while public schools concentrated more on providing specialized academic programs.

Size is not the only factor associated with offering a diverse range of academic programs though it seems to be mores important because a larger school has more traditional degree programs with more faculty with more and varied expertise to offer specialized academic programs and services.

Public schools academic programming likely reflects public policy in Massachusetts and in local communities where public schools are located. Assisting local residents and local businesses as well as promoting diversity-based initiatives are reflective of public policy initiatives.

2. Location

- ♦ 50% of the schools offered academic programs at satellite campuses; 30% offered academic programs at corporate sites; 35% offered academic programs online.
- ♦ Larger schools (starting with a student population of 6000) reported more satellite locations.
- ♦ Most of the larger private schools reported offering programs at corporate sites.

Conclusions

Larger private schools are more likely to offer programs via satellite or corporate locations. This reflects an initiative to overcome the physical limit of the primary campus by moving closer to larger groups of potential users who are deterred by the commute. Non-traditional students are most affected by the distance issue and benefit the most by a closer proximity of services offered. The growth of online programming provides all schools with the potential of reaching more students, both traditional and non-traditional. However, larger schools have the resources to offer more academic programs and to support online services. With more schools offering online instruction as an alternative to the onsite option, service support becomes an important consideration for the student opting to pursue an online education. Public schools have the advantage of being part of a larger system of state supported schools. Thus, these schools are well-dispersed throughout the state and closer to major population center (A one site location is a disadvantage for private schools.)

3. Services Times

- 85% of the schools deliver credit and non-credit courses in the evening; 65% of the schools offered credit and non-credit courses within an "intensive" time frame of between 1-10 weeks.
- Both private and public schools offered credit and non-credit courses in the evening and on weekends. However, a large (88%) percentage of the private schools offered intensive scheduling of courses versus (less than the traditional semester) 50% of the public schools.
- The larger the school the more varied was the scheduling of courses; private schools provided a greater mix of schedules.

Conclusions

Non-traditional scheduling times reflect schools' efforts to respond to the needs of non-traditional students. Full time workers, full time mothers, people who work and have families and even part-time workers select schools to attend partly on scheduling times. The non-traditional student is often limited by the number of courses that can be taken at any one time. Therefore, these students look for schools that accelerate course times to complete a program of study (e.g., a degree or certificate program). For example, a non-traditional student might be expected to take two evening courses during a normal 15 week semester. With a six week schedule a student can take 3-6 courses during this same time frame.

4. Delivery Methods

- Delivery of academic programs focused primarily on two types of methods, the traditional classroom and online (35% of the schools provided online programming).
- Schools with a population of 6000 or larger were more likely to provide online programming.

Conclusions

Schools largely do not vary from the way courses get delivered. Online programming represents a significant departure from the classroom setting. Other options such as self-paced materials, video classrooms and instructional videos don't seem to be attractive options for delivering credit based courses and degree and certificate programs. This might be due to constraints imposed by accrediting bodies. Also, a limited understanding of these options also hinders their development. Anecdotally, some schools

do offer non-credit courses via videos (e.g., Harvard Business School Press). More for-profit organizations seem to offer these types of pedagogical activities. This is a potentially untapped area for future development.

5. Small School Size and Growth Initiatives

- The findings indicate that the smaller the school the fewer are the number offering non-traditional services and the less variety in the types of programs offered.
- A small sample size makes it difficult to ascertain generalizable trends beyond what was already described.

Conclusions

Though the sample size was limited, even small schools attempt to broaden their programming beyond the traditional programs (e.g., undergraduate degrees, etc.). Resource constraints, financial and limited on-campus expertise, limit what these schools can offer. This authors' experiences at a small schools suggests that smaller schools attempt to reach non-traditional students by building on their strongest programs and incrementally moving towards meeting the needs of the non-traditional student. Even online service delivery, the potential leveler between large and small schools is limited because of the limited course offerings and the difficulty in servicing large numbers of students satisfactorily.

ASSESSMENT OF HYPOTHESES

As this was a preliminary study with a small sample, no actual statistical analysis was used to test for significance.

Hypothesis #1: The larger the school the greater the number of different types of academic programs.

Findings: Larger schools were more likely to offer more types of academic programs and a greater number of choices within each type of academic program.

Hypothesis #2: The larger the school the more locations offered to students that participate in academic programs.

Findings: Larger schools were more likely to offer academic programs at different sites other than the primary campus.

Hypothesis #3: The larger the school the more varied the types of schedules used in providing academic programs.

Findings: Larger schools were more likely to offer different types of schedules for delivering the academic programs.

Hypothesis #4: The larger the school the more varied are the methods used to deliver academic programs.

Findings: Larger schools were more likely to vary in the way they deliver academic programs with the primary differentiator online services.

Hypothesis #5: The smaller the school the more differentiated the focus in the types of academic programs offered, the locations used, scheduling of course and delivery methods used.

Findings: Smaller schools (under 6001 students) appear to offer a narrower range of academic programs, with fewer locations, less variety in scheduling academic programs and greater reliance on traditional delivery methods. However, there was some indication that the smaller schools did offer programs via the internet.

Hypothesis #6: Private and public schools, in each of the size groups, are expected to differ from each other in all ways.

Findings: There appeared to be some evidence that private and public schools do differ in the number and types of academic programs, delivering methods, scheduling methods and in the use of multiple locations for presenting academic programs. However, there is definite overlap between the two types of schools. This overlap varies and requires further investigation to delineate the differences.

STRATEGY DEVELOPMENT

This study sheds light on several important issues associated with the creation of a strategic plan. First, schools need a strategy development process because a formalized process represents a systematic way to identify and sequence the critical components involve in creating the strategic plan (Ireland &Hitt, 2005). This is essential in organizing a comprehensive and thorough effort that

ensures the best results. Roles are defined, timelines created, task forces established that focus on the critical issues, standing committee(s) mandates get renewed, and the decision-making process defined. Obviously the major concern is that the bureaucratization of the process can lead to a parallel process that provides a strategic plan without the thorough preparation required. Yet no process leaves all to chance and luck which is never a good thing. By creating a self-monitoring component to the process, decision-makers benefit from ongoing feedback to diagnose and correct problems within the process.

Profiling of constituents and potential users is essential to crafting a strategy that addresses the key needs. This issue is basic in business but less so in academia. Schools must understand the key drivers that influence consumer preferences and assess which preferences to focus on with the goal of maximizing the return on the investment associated with providing the services. A corollary argument is that cutbacks, elimination of programs, etc. make sense if changes as consumer preferences change. Too often the arguments for maintaining the status quo are "give it more time, provide more resources, or promote the program more." All potential valid arguments, but strong empirical support is required to support the need for more effort. Without this supportive evidence, change is warranted. This approach is akin to the "Sunshine Laws" where a program ends within a certain time frame, unless ample evidence is provided to justify its continuation.

Targeting resources can contribute to the success of any new initiative. Under funding is the death knell to many great ideas. Using resources strategically increases the chance a new initiative can succeed. A few well-supported initiatives that were well-designed and which reflect the new strategy create successes. Success builds momentum for valuing the benefits associated with a strategic planning process that works.

It is important for schools to develop strategic plans that are based on a schools' core competencies. These competencies define what a school excels in. Creating strengths is one thing, creating a competency is very different. Unless a competency resides in an individual(s) that the school can recruit, building a competency is time consuming and the outcome is largely unpredictable. Better to focus on developing existing competencies and recruiting individuals with specialized competencies by creating program initiatives based on these competencies.

Finally, intelligence gathering is a critical activity because information along with resources and core competencies provide the basis for developing a strategic plan. Often referred to as marketing intelligence, information about competitive trends, environmental influences (i.e., economic, socio-political, technological and international factors) and consumers is vital to the success of strategic planning. Only by identifying key drivers that influence consumers and consumer preferences as well as competitor actions, can a school formulate a strategy that supports growth and enables the school to standout among competitors.

CONCLUSIONS

Demographic trends are no friend of schools today or in the future. Declining numbers of traditional age college students will force schools to confront their most serious challenge, overcoming the reliance on tuition as the primary source of revenue. Compounding this problem is "sticker shock" with more students becoming price sensitive to rising tuition costs and assessing the value of a college education vs. the heavy debt load incurred that must be resolved post-graduation.

The challenge to schools is to identify growth opportunities that lessen the dependence on tuition as a primary source of revenue and to reduce tuition rates. Only through the pursuit of strategic growth opportunities will schools realize a vision that emphasizes more diverse sources of revenue and greater reliance on non-traditional students for revenues. The words of Jeff Immelt, CEO of General Electric describe it best, "knowing a lot about markets and combining in-depth market and customer knowledge with a real desire to change. With that combination you can drive real innovation." (Citrin, 2006)

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LEADERSHIP ACROSS CULTURES: A COMPARATIVE STUDY

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ABSTRACT

Successful leadership behavior of today's more culturally diverse workforce is one of the most important challenges organizations face. Technology has driven this demographically mixed workforce toward consensus to harness the diverse talents of groups on the road to improving productivity. The need for world class leaders to address cultural and generational behaviors while operating in a more autonomously responsible world calls for fresh leadership behavior and action. This paper is a comparative analysis of specific cultural grouping, ethnicity, age and worker classification, exposed to 18 energizing leadership behaviours. Hypotheses of significant ranking differences are assessed across the cultural groups. A convenience sample of 600 non-traditional graduate students from various countries and backgrounds ranked the importance of 18 energizing leadership behaviours. A survey instrument was employed to collect data testing three hypotheses concerning significant group differences. It was determined that worker classification, alone, yields no significant ranking differences, however evidence was found that ranking by ethnicity and age group do show significant differences across the 18 energizing leadership behaviours.

INTRODUCTION

Leadership has taken on a significantly new dimension with today's diverse global workforce. Warren Bennis (1989) predicted: "Given the nature and constancy of change and the transnational challenges facing American business leadership, the key to making the right choices will come from understanding and embodying the leadership qualities necessary to succeed in the volatile and mercurial global economy." Research suggests that both similarities and differences exist in leadership behaviors and styles across cultures.

In their classic study, Haire, Ghiselli, and Porter (1966) researched managerial attitudes regarding different leadership styles in 14 countries. National groupings alone explained 28 % of the variance in managerial attitudes. In later research, Heller and Wilpert (1981) revealed that the degree of worker participation applied by managers was different across a sample of eight countries.

A study conducted by Luthans and colleagues (1993) showed that participative management techniques were actually ineffective when practiced in a Russian factory.

A leader's personal values along with those of the followers influence the leader, and these values can differ by culture (Ali & Wahabit, 1995). A study of similar U.S.-owned manufacturing plants located in five different countries (Italy, Mexico, Spain, United States, and Britain) revealed that the overall leadership approaches of the host-country nationals reflected the expectations of the local culture and workforce (Pavett & Morris, 1995). Preziosi and colleagues (1996, 2004) recognized the importance of identifying energizing behaviors for leaders working in diverse populations.

Considerable evidence supports that leaders differ across cultures in their views of rules and procedures, deference to authority, levels of dependence and independence, use of objectivity versus intuition, willingness to compromise, and other interpersonal tactics. Even transformational and transactional tactics used by leaders may vary in their levels of success in differing cultures (Jung & Avolio, 1999; Walumbwa, 2005).

A major international research project, Global Leadership and Organizational Behavior Effectiveness (GLOBE), over time has developed an empirically based theory to describe, understand, and predict the impact of cultural variables on leadership, organizational processes, and the effectiveness of the leader and the processes (House, et. al., 2004). In the process, 170 country-based co-investigators gathered data from 18,000 managers in 62 countries. A major goal of the GLOBE project was to develop societal and organizational measures of culture and leader attributes that were appropriate to use across cultures.

The GLOBE research pointed to nine dimensions of cultures that differentiate societies and organizations. These nine cultural dimensions are: power distance, uncertainty avoidance, humane orientation, institutional collectivism, in-group collectivism, assertiveness, gender egalitarianism, future orientation, and performance orientation. The first six dimensions were originally defined by Hofstede (1980). Following the development and validation of the scale used to measure leaders and cultural variables, studies were further conducted to empirically assess the psychometric properties of the dimensions that had been established therein. The general findings of GLOBE were that cultural dimensions that influence leaders do exist and that these dimensions can be identified and measured. A study conducted by Church and Wacalawski (1999) examining the relationship between leader style and organizational practices further supported the findings presented in the GLOBE report.

The literature indicates that the study of leadership across cultures is an expanding and significant field of research (Jones & George, 2006). As the studies suggest, there is reason to believe that cultural issues in leadership should be studied to reveal differences between cultures that will help leaders be successful. This study is an effort to contribute to this important and growing body of knowledge.

PURPOSE AND RESEARCH QUESTIONS

This study was conducted to achieve a greater understanding of current multicultural leadership theories such as the Leadership Substitute Model (Jones & George, 2006) and the Energizing Leadership Theory (Preziosi, 1996, 2004). Secondarily, work was performed to evaluate the role played by demographic characteristics of subordinates such as ethnicity, age, and worker classification, and how these factors affect motivation on exerting influence to meet challenges. According to Schuman (1995), Twenty-First Century leadership challenges include the needs to: obtain a competitive advantage, foster ethical behavior, and manage a diverse workforce fairly and equitably in a less ethnocentrically clear environment.

To this end, the following research questions were explored:

What do demographic characteristics such as country of origin, worker classification and age have on perceived leadership quality and necessity (versus autonomy)?

What demographic characteristics either support the Leadership Substitute Model (Jones & George, 2006) and the Energizing Leadership Theory (Preziosi, 1996, 2004), or make leadership action less necessary under a less ethnocentrically clear environment?

HYPOTHESIS DEVELOPMENT

These two research questions were addressed through development of three hypotheses concerning existence of:

1.) Congruity as to the priority or ranking of differences on perceived leadership quality and necessity (versus autonomy) based upon country of origin; 2.) Ranking priority based upon age group regarding leadership energizing behaviors (Preziosi, 2004); and 3.) Differences among worker classification groups as to the 18 leadership energizing behaviors. In testing these hypotheses, the highest ranked leadership energizing behavior priorities were identified that either tended to support the GLOBE findings (Hofstede, 1980; Church & Wacalawski, 1999) and the Leadership Substitute Model (Jones & George, 2006) or make leadership action less necessary under a less ethnocentrically clear environment. To answer these issues, three null hypotheses were developed.

Hypotheses

Ho1: There is significant congruity as to the ranking of the 18 leadership energizing behaviors across three culturally unique subgroups, including: Group A (Jamaicans), Group B (Americans), and Group C (various other countries).

Ho2: There is significant congruity as to the ranking of the 18 leadership energizing behaviors across four demographically (age) unique subgroups, including: (a) Group A - ages 18 to 25, Group B - ages 26 to 35, Group C – ages 36 to 45, and Group D – ages 46 and above.

Ho3: There is significant congruity as to the ranking of the 18 leadership energizing behaviors across four worker classification subgroups, including: (a) Group A -Technical, Group B – Non-Technical, Group C – Educators, and Group D – Managers.

RESEARCH METHODS

Research included a collection of both qualitative and quantitative data focused on the two research questions. This paper reports the results of polling participants to share their demographics, perceptions and ranking of 18 energizing leadership act questions from the Preziosi, Gooden, and Balloun (2004) study.

Instrumentation

A Likert-type questionnaire was designed using a panel of business school educators to establish content and face validity. The response pattern for the 18-item questionnaire was: 1) All of the time, 2) Nearly of all the time, 3) Most of the time, 4) Some of the time, 5) Never. (Appendix B). Demographic data were also collected to allow for comparisons between country of origin, age, and worker classification.

SAMPLE SELECTION

The questionnaire was administered to a convenience sample of 600 non-traditional students working on graduate management degrees in a Masters level capstone course at a large private university. All participants worked in professional or higher level management positions. Two respondents of the 600 did not indicate their gender, 584 had no missing data, 11 omitted one rating

item and three omitted responses to three rating items, each. There were 133 respondents from Jamaica, 411 from the U.S., and 56 from other countries. The first, second and third quartiles of ages for the Jamaicans were respectively 30, 41 and 52 years old. The U.S. age quartiles were respectively 27, 35 and 48 years old. Country of origin and age were significantly related in the sample, in that the mean age of the Jamaicans was 41, while the mean age of the Americans was 37. Due to considerable overlap of the age distributions of the two countries, country of origin accounted for only 3% of the variance in age.

Table 1: Eighteen Leadership Motivation Behaviors*	
1	Obtaining the needed technology and keeping it functioning.
2	Showing the connection between self and organization.
3	Finding ways to utilize each person's talents.
4	Focusing on high impact tasks.
5	Affirm alignment between personal and organizational vision
6	Measuring the risk of creative actions.
7	Knowing what gets each person excited.
8	Demonstrating the power of collaborative action.
9	Causing results quickly through efficient processes.
10	Shining the spotlight on others and their successes.
11	Considering alternative perspectives on a given set of data.
12	Helping people and their organization grow on a shared path.
13	Making people and organizations stronger through planning.
14	Holding people accountable for precise standards.
15	Raving about individual mastery that helps organizations master
16	Fostering consistency during periods of change.
17	Lighting the fires of passion that move people to maximum speed
18	Asking questions that lead people to answers.
*Source: Preziosi, Gooden & Balloun, 2004	

DATA ANALYSIS

The Kruskal - Wallis Rank Test, a nonparametric method, was used to test for differences in medians of the four independent age segmented samples across the three hypotheses. "The

Kruskal-Wallis rank test is most often used to test whether independent sample groups have been drawn from populations with different medians." (Levine, Stephan, Krehbiel and Berenson, 2001, pp 490- 492) The non-parametric Kruskal -Wallis test is analogous to the parametric pooled-variance t test for independent samples, and enables independence testing between sample groups having been drawn from the same population. The null hypotheses are stated: Ho: M1= M2 = M3 = Mc. That is, Ho1: M1= M2…M14; Ho2: M15= M16… M24; and Ho3: M25= M26… M35. Alternate hypotheses are: Ha1: M1≠ M2…M14; Ha2: M15 ≠ M16…M24; and Ha3: M25≠ M26…M35.

RESULTS AND DISCUSSION

Cultural Characteristic - Ethnicity

A total sample of 600 respondents were stratified into three subgroups including: Groups A of 133 respondents from Jamaica, Group B of 411 from the U.S., and Group C of 56 from other countries.

Significant non-congruity as to the ranking of cultural characteristic – Ethnicity or country of origin, was demonstrated across the three segmented groups (Group A – Jamaica, Group B – U.S., and Group C –Others.) Therefore, null Hypothesis One (Ho1) was rejected. The Kruskal - Wallis Test for Ho1was run at a 0.05 level of significance. The test results had an H test statistic of 4.412, a critical value of 5.991, and a p-value of 0.110, therefore rejecting the null hypothesis Ho1. The 18 leadership energizing questions generated the below Table 2 ranked results. (See Appendix A for test results).

The three ethnically diverse groups (Group A, Group B, Group C) evaluated in this study demonstrate significant ranking differences of the 18 leadership energizing question response means (H_0: $M1_{\text{Group A}} = M2_{\text{Group B}} = M3_{\text{Group C}}$), or prioritization of leadership energizing behaviors. This supports the GLOBE research findings indicating there are dimensions of cultures that differentiate societies and organizations (Hofstede,1980). This study also showed that the country of origin dimension influences leadership behaviors and these dimensions can be identified, measured and ranked. Success-oriented leaders such as Jack Welch (2005) assert that the actions of leaders that energize employees lead to successful outcomes. Further, as the cultural and geographic distance between elements of an organization grow, less direct control becomes feasible to maintain competitive advantage (Schuman, 1995).

Results of this study also support that current leadership theories such as the GLOBE findings and the Leadership Substitutes Model are important to maintain competitive advantage in a culturally mixed worker environment, but are successful only when cultural issues are considered.

Table 2 - – Ethnicity Rank					
Rank	Group A	Rank	Group B	Rank	Group C
Question	Jamaica	Question	U.S.	Question	Other
17	3.615	18	3.258	9	3.393
15	3.534	9	3.217	3	3.304
9	3.511	15	3.136	12	3.214
6	3.338	12	3.036	15	3.107
12	3.286	6	2.968	2	2.821
3	3.226	3	2.852	16	2.821
2	2.992	17	2.766	6	2.786
8	2.970	16	2.732	8	2.696
18	2.872	8	2.672	17	2.571
14	2.782	2	2.625	13	2.482
1	2.752	14	2.499	1	2.464
16	2.609	13	2.491	7	2.464
13	2.602	4	2.338	14	2.375
5	2.534	5	2.336	18	2.341
4	2.459	11	2.309	4	2.214
7	2.429	7	2.243	10	2.214
11	2.376	1	2.236	11	2.161
10	2.353	10	2.185	5	2.089

Demographic Characteristic - Age Group

A total sample of 600 respondents was stratified into four subgroups including: Group A (155 respondants) - ages 18 to 25; Group B (169 respondants) - ages 26 to 35; Group C (160 respondants) – ages 36 to 45, and Group D (117 respondants) – ages 46 and above. The two highest counts came from the 26 to 35 age group at 27.41% and the 36 to 45 age group at 26.90%.

The four diverse age groups evaluated in this study demonstrated significant ranking differences of the 18 leadership energizing question response means (H_0: $M1_{\text{Group A}} = M2_{\text{Group B}} = M3_{\text{Group C}} = M4_{\text{Group D}}$), or prioritization of leadership energizing behaviors The Kruskal - Wallis Test for Ho2 was run at a 0.05 level of significance. The test results had an H test statistic of 4.412, a critical value of 5.3569, and a p-value of 0.1474, therefore rejecting the null hypothesis Ho2. The 18 leadership energizing questions generated the below Table 3 ranked results. (See Appendix A for test results).

Table 3 – Age Group Culture							
Rank Question	Group A	Rank Question	Group B	Rank Question	Group C	Rank Question	Group D
	Ages 18 to 25		Ages 26 to 35		Ages 36 to 45		46 and above
qstn 13	3.58	qstn 9	3.30	qstn 9	3.27	qstn 15	3.16
qstn 12	3.36	qstn 6	3.09	qstn 17	3.27	qstn 9	3.13
qstn 8	3.25	qstn 12	3.06	qstn 6	3.01	qstn 6	2.92
qstn 5	3.25	qstn 3	2.90	qstn 13	3.01	qstn 13	2.92
qstn 18	3.25	qstn 18	2.88	qstn 5	2.94	qstn 18	2.80
qstn 11	3.25	qstn 2	2.68	qstn 3	2.94	qstn 5	2.79
qstn 9	3.23	qstn 1	2.60	qstn 10	2.94	qstn 3	2.79
qstn 3	3.00	qstn 14	2.54	qstn 18	2.87	qstn 2	2.42
qstn 17	3.00	qstn 5	2.40	qstn 7	2.67	qstn 1	2.42
qstn 16	3.00	qstn 13	2.31	qstn 2	2.67	qstn 4	2.37
qstn 1	2.77	qstn 8	2.29	qstn 15	2.67	qstn 12	2.37
qstn 6	2.60	qstn 16	2.26	qstn 1	2.67	qstn 7	2.37
qstn 15	2.60	qstn 4	2.24	qstn 14	2.51	qstn 17	2.36
qstn 14	2.20	qstn 15	2.00	qstn 4	2.38	qstn 14	2.25
qstn 7	2.00	qstn 10	2.00	qstn 12	2.38	qstn 10	2.23
qstn 4	2.00	qstn 17	1.95	qstn 8	2.28	qstn 8	2.20
qstn 10	1.80	qstn 11	1.93	qstn 16	2.25	qstn 16	2.20
qstn 2	1.25	qstn 7	1.41	qstn 11	1.92	qstn 11	2.18

Findings of this study support Covey (2004) in that the contemporary workforce is not only growing more diverse with regard to age, but also to the extent to which employees affiliate with a single culture. This obliges managers of organizations to be clear and compelling in communicating their vision so that all employees, regardless of age demographics, are aligned and dedicated to the organization's goals. According to Covey, as the workplace has become more diverse, society has also become less tolerant of organizations that fail to effectively manage this cross age group responsibility.

Consequently, it is not just the application of energizing behaviors that is crucial for managers today, but also the environmental culture in which the institution resides. Generation-appropriate behaviors are highly significant (Raines, 2003).

Cultural Characteristic – Worker Classification

A total sample of 600 respondents were stratified into four subgroups, including: Group A -193 technical workers, Group B - 161 non-technical workers, Group C - 101 educators, and Group D -145 managers.

The four worker classification groups demonstrated there is significant ranking congruity of the 18 leadership energizing question response means (Ho3: $M1_{\text{Group A}} = M2_{\text{Group B}} = M3_{\text{Group C}} = M4_{\text{Group D}}$), or prioritization of leadership energizing behaviors. This allows acceptance of the null Hypothesis Three (Ho3: $M1_{\text{Group A}} = M2_{\text{Group B}} = M3_{\text{Group C}} = M4_{\text{Group D}}$). The Kruskal - Wallis Test for Ho3 was run at a 0.05 level of significance. The test results had an H test statistic of 5.356, a critical value of 7.814, and a p-value of 0.1474, therefore accepting the null hypothesis Ho3. The 18 leadership energizing questions generated the below Table 4 ranking results. (See Appendix A for test results).

Table 4 – Worker Classification

Rank question	Technical group 1	Rank question	Non-technical group 2	Rank question	Educational group 3	Rank question	Manager group 4
qstn 18	3.583	qstn 5	3.305	qstn 5	3.269	qstn 13	3.159
qstn 17	3.357	qstn 4	3.085	qstn 14	3.269	qstn 5	3.134
qstn 7	3.250	qstn 17	3.056	qstn 4	3.006	qstn 4	2.919
qstn 8	3.250	qstn 2	2.903	qstn 18	3.006	qstn 18	2.919
qstn 10	3.250	qstn 10	2.881	qstn 2	2.941	qstn 10	2.796
qstn 16	3.250	qstn 1	2.680	qstn 12	2.941	qstn 2	2.792
qstn 5	3.231	qstn 15	2.604	qstn 16	2.941	qstn 16	2.792
qstn 2	3.000	qstn 6	2.540	qstn 10	2.868	qstn 1	2.420
qstn 9	3.000	qstn 16	2.399	qstn 1	2.668	qstn 15	2.420
qstn 14	3.000	qstn 18	2.307	qstn 11	2.668	qstn 3	2.370
qstn 15	2.769	qstn 7	2.294	qstn 13	2.668	qstn 17	2.370
qstn 4	2.600	qstn 9	2.260	qstn 15	2.668	qstn 11	2.370
qstn 13	2.600	qstn 3	2.239	qstn 6	2.514	qstn 14	2.363
qstn 6	2.200	qstn 12	2.000	qstn 3	2.385	qstn 6	2.250
qstn 3	2.000	qstn 13	2.000	qstn 17	2.385	qstn 12	2.235
qstn 11	2.000	qstn 14	1.950	qstn 7	2.279	qstn 7	2.201
qstn 12	1.800	qstn 8	1.925	qstn 9	2.246	qstn 9	2.196
qstn 1	1.250	qstn 11	1.414	qstn 8	1.919	qstn 8	2.183

Significant congruity is seen as to the ranking of the 18 leadership energizing behaviors across four worker classification subgroups, including: (a) Group A -Technical, Group B – Non-Technical, Group C – Educators, and Group D – Managers. This finding is in agreement with *Managing Knowledge Work* (Newell, Robertson, Scarbrough & Swan, 2002) and *Thinking for a Living* (Davenport, 2005). Davenport (p.191) states "Just as the proliferation of industrial workers created the need for a professional management class, the emergence and maturation of the worker role is the driver of what management will be in the next century." According to Newell, (2002, p.32), "many firms attempt to structure and organize along the lines of a technical environment, recognizing that the approach is likely to facilitate the knowledge process." However, support can be found from Grant (1996) and Lowendahl (1997) that firms will be keen to a cultural (normative) control of innovation in a very loosely organized environment, rather than an authoritative, rigid work classification organization. This discovery of worker classification congruity also supports the application of theories such as the Leadership Substitutes Model to maintain competitive advantage in a mixed worker environment.

IMPLICATIONS FOR PRACTICE AND CONCLUSION

The contemporary workforce is growing more diverse with regard to country of origin, age groupings and worker classifications. Furthermore, a growing employee body consisting of conditional workers (part-time, temporary, or out-sourced) is becoming more common. This will demand that managers of organizations be clearer and more compelling in communicating their vision so that all employees, no matter how weakly affiliated or distantly aligned, remain dedicated to the organization's goals. In addition, as the workplace has become more diverse, society has also become less tolerant of organizations that fail to effectively manage cross cultural responsibility. This work also corroborates Mintzberg (2004) in his study showing a disconnect with literature-defined opinions, postulates and positions and actual business practice.

According to Lowe (2002), educators should focus on workers' human cultural capital as reflected in their formal educational attainment in order to make substantial contributions to the economy. Lowe (2002), Mintzberg (2004), Newell (2002) and Davenport (2005) all underscore the dynamic view that new human skills and competencies found among culturally diverse and geographically segmented workers can contribute positively to economic outcomes, given the high level of public and private investments in their human capital.

According to this research, of the various cultural segmentations (country of origin, age group, worker classification), age related issues have the most consistently ranked significance in today's organizations. Using generational appropriate behaviors has high significance according contemporary literature (Raines, 2003). Mentoring programs are essential for addressing the needs of an age diverse workforce. A mentoring program provides culturally unique workers with learning and career opportunities. Mentoring "…helps expand an individual's contributions to the

organization, and provides a secure area in which to brainstorm ideas and solve problems" (Salomon & Schork, 2003).

Cultural mentoring programs can be organized in several ways. "Some mentoring programs are highly structured with formal training for mentees and mentors; other programs involve mentoring circles where a single mentor meets with a group of mentees" (Salomon & Schork, 2003). A mentor within the same department, or the same race, age or gender, is highly valued by some mentees because the mentoring relationship will foster security for open communication (Salomon & Schork, 2003).

LIMITATIONS AND RECOMMENDATIONS FOR FUTURE RESEARCH

Buttner, Lowe, and Billings-Harris (2006) found that the U.S. population is becoming increasingly diverse. By the year 2010, the Census Bureau estimates that minorities will comprise 34% of the U.S. population. Corporate management should understand the importance of successful administration of a diverse workforce (Buttner, Lowe, & Billings-Harris, 2006). This study suggests that more research is needed to establish validity and relevance for teaching didactics, classroom delivery systems, and instructor-perceived values of today's culturally diverse students. As industry-driven competencies and technology standards are culturally ingrained into the 21st century student environment, it is essential for educators to create relevant strategies and teaching methods to meet their needs in an environment not alien to the culturally diverse worker (Mintzberg, 2004).

This study reveals a definite demographic characteristic shift toward newly defined workers: a more mature student, median age 34 years old, more likely to be working in a high technology-driven worker classification, and likely considered an independent professional. Additional research may reveal if a new type of geographically diverse organizational population has emerged or if a significant divide has been created between a less culturally diverse manager and their multicultural-knowledge based organizational employees.

Combs suggests that employers focus on developing leadership that will "allow the effective utilization of diverse perspectives and viewpoints" (2002, p. 1). Vallario explains that "the most successful firms are already adept at using diversity and cultural differences as tools to contribute to their bottom line rather than as obstacles" (2006, p. 50). With a diverse workforce, an environment of continuous learning, increased knowledge, and better decisions are cultivated (Stephenson, 2004).

Future studies could expand the population universe to other countries where environments are also rapidly diversifying, such as Europe, India, and Japan. Solicitation of a larger sampling and different demographic segmentations could generate newly defined and stratified sample groups for additional hypothesis testing. Finally, a feedback process should be developed and implemented so that relevant cultural issues and didactics can be addressed within today's business and management

school frameworks to both maximize and expand existing resources to ensure ongoing curriculum improvement and the energizing of leadership across cultural environments.

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Appendix A	
Country Rank Data	
Level of Significance	0.05
Group 1	
Sum of Ranks	609
Sample Size	18
Group 2	
Sum of Ranks	447
Sample Size	18
Group 3	
Sum of Ranks	429
Sample Size	18
Intermediate Calculations	
Sum of Squared Ranks/Sample Size	41929.5
Sum of Sample Sizes	54
Number of groups	3
H Test Statistic	4.412121212
Test Result	
Critical Value	5.991476357
p-Value	0.110133655
Do not reject the null hypothesis	
Age Group Ranking Data	
Level of Significance	0.05
Group 1	
Sum of Ranks	778
Sample Size	18
Group 2	
Sum of Ranks	531
Sample Size	18
Group 3	
Sum of Ranks	736
Sample Size	18
Group 4	
Sum of Ranks	583
Sample Size	18

Appendix A	
Intermediate Calculations	
Sum of Squared Ranks/Sample Size	98268.33
Sum of Sample Sizes	72
Number of groups	4
H Test Statistic	5.356925
Test Result	
Critical Value	7.814725
p-Value	0.147451
Reject the null hypothesis	
Worker classification Group Data	
Level of Significance	0.05
Group 1	
Sum of Ranks	778
Sample Size	18
Group 2	
Sum of Ranks	531
Sample Size	18
Group 3	
Sum of Ranks	736
Sample Size	18
Group 4	
Sum of Ranks	583
Sample Size	18
Intermediate Calculations	
Sum of Squared Ranks/Sample Size	98268.33333
Sum of Sample Sizes	72
Number of groups	4
H Test Statistic	5.356925419
Test Result	
Critical Value	7.814724703
p-Value	0.147450934
Do not reject the null hypothesis	

ASSESSING MANAGERIAL DECISIONS USING THE DUAL SYSTEMS THEORY OF REASONING: FUTURE CHALLENGES FOR MANAGEMENT RESEARCHERS

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ABSTRACT

We focus on likely challenges that will be encountered by field researchers investigating managerial decision-making using theoretical frameworks based on the dual systems of reasoning. This decision-making theoretical framework is currently the subject of theory building research in the management literature (e.g. Dane & Pratt, 2007). Future field studies investigating how dual systems of reasoning affect consequential decisions made by entrepreneurs and managers in actual business settings are necessary for further development of this theory. Major issues that challenge the field researcher include choosing the decision or decisions to investigate, deciding on how to operationalize the criterion variable, consideration of alternate normative outcomes resulting from multiple legitimate goals of the decision-maker, the choice between measurements of the decision process or decision outcomes and choosing among possible operationalizations of predictor variables already shown to be significant factors in determining the extent logic-based reasoning is used in decision-making. We offer suggestions for dealing with many of these challenges and other issues in conducting field research investigating dual process theories.

INTRODUCTION

Decisions of major consequence occur in response to real life situations. Often these situations are very complex and require decision-making that occurs over lengthy periods of time. The theoretic framework based on two systems of reasoning draw a distinction between the reasoning processes employed in making these decisions (e.g. Sloman, 1996). One system is purposeful and rational, the other automatic and affective (Hamilton, Sherman & Maddox, 1999). These systems can coexist and influence decision-making behavior in everyday life (Epstein & Pacini, 1999). Although the terminology used to describe these two systems varies, the characteristics of the two systems are described in a similar manner. Epstein (1994) described the two systems as experiential and rational; Sloman (2002) characterized them as associative and rule-based, Stanovich and West (2000) and Kahneman (2003) have labeled them as System 1 and System

2. The System 1 or the experiential system describes a fast, effortless, intuitive reasoning process that is subject to emotional influences and which is often utilized to make many decisions in a near simultaneous manner. The System 2 or the rational system describes a slow, effortful, logic-based process that results in decisions that are made sequentially rather that simultaneously. The underlying assumptions regarding the use of the two systems are that System 2 reasoning requires a greater use of appropriate information and analysis (Kahneman 2003) and that a greater use of System 2 or logic-based reasoning by the decision maker will result in better solutions to more complex problems than a greater use of intuitive reasoning (Stanovich and West 2002).

While experimental research provides useful evidence regarding the nature of the dual systems and the significance of hypothesized factors that tend to enhance or inhibit the use of logic-based reasoning, certain distinctions between reasoning in an experimental setting and real-world decision-making are likely to limit generalizability of experimental results. While continued experimental research is clearly important for the further refinement of dual process theories, field research designed to help better understand how people make important decisions in everyday life settings should also be an integral part of this theory development. Because of the potential impact the quality of business related decisions by entrepreneurs or managers have on their company and its stakeholders, field research related to the dual systems of reasoning in business contexts is particularly important. However, future field research investigating how these consequential decisions are actually made, and how they could be made more accurately, faces challenges not faced by experimental research. This discussion will highlight some of these challenges to future field studies, and suggest alternative methods of meeting those challenges.

Individuals frequently make complex decisions in their various business roles such as manager, entrepreneur or director. Business researchers have an interest in improving individual decision-making in one or more of these areas. The dual process of reasoning theories show great promise in helping achieve a better understanding of decision-making behavior and, therefore, provide a pathway for its improvement. Field research that results in even modest improvements in this business decision-making has the potential to make a significant impact on society.

For purposes of this discussion, one common significant decision-making process will serve to illustrate some of the challenges field researchers face in investigating how the dual processes of reasoning affects how important business decisions are made. A typical decision-making process by an entrepreneur involved with creating a new venture will serve to illustrate some of the challenges to the researcher. The outcome of new venture creation decisions are important to these entrepreneurs because of the effect either success or failure will have on their personal lives and these decisions are commonly made by many entrepreneurs involved with a business startup. New ventures favorite less complex businesses in certain industries, due in part to low barriers to industry entry, and frequently have only one individual that serves as the primary decision-maker. Yet, although these ventures are often relatively simple, the study of the decision-making process surrounding the creation of this new venture will illustrate many of the complex issues field

researchers investigating the dual process theory of reasoning may face in numerous other research settings. The discussion will first consider field research issues related to the likely criterion variables reflective of the dual processes of reasoning, and then consider issues related to likely predictor variables whose relationships with those criterion variables will likely be tested in those field studies.

ISSUES RELATED TO THE CRITERION VARIABLE

Experimental decision research often involves assessing outcomes of a single decision with a single correct answer. Field research may involve decision processes involving multiple related decisions with many alternatives that may vary as to degrees of correctness under multiple decision logics. The specific decisions to choose for study, methodological challenges, and alternative goals of the decision makers are examples of the type of issues field researchers are very likely to encounter.

The Decision(s)

An investigation into the decision-making surrounding the new venture creation process immediately presents the researcher with choices. The researcher may seek to investigate the degree decision outcomes reflect a correct result or the degree the decision process reflect a normative logic-based methodology. One discreet decision for study or some or all of the numerous decisions comprising the entire decision-making process may be investigated. Selection of a single decision for study from a decision sequence requires the selected decision to be somewhat representative of the type of reasoning employed in the sequence. Selection of a multiple decision sequence for study requires definition of the start and the end of the sequence. The field researcher may experience difficulty in determining these starting and stopping points.

Our hypothetical entrepreneur has likely decided early in the entrepreneurial process to start a business, what goods or services the business will offer and has tentatively decided on other basic parameters of the business. These parameters might include such matters as approximately where the business will be located, product or service mix and target market. As the commencement of operations nears for the new venture, the entrepreneur will typically have to make numerous related decisions regarding the specific location of the business, type of facility improvements that will be necessary, equipment and supplies that will be needed, the number of personnel to be hired, the amount of capital that will be required during the initial period of operations and so on.

Singling out one important decision for study from a process that involves numerous related important decisions is problematic. One decision may be made intuitively, and subsequent decisions required by that intuitive decision may be made using logic-based reasoning. For example, the entrepreneur may intuitively decide to open a business without benefit of research into the economic

desirability of that industry and then intuitively decide to locate the business in the current neighborhood of residence merely because of the familiarity of the area. However, when choosing between alternative locations for the business in that neighborhood, the entrepreneur could then utilize logic-based reasoning to identify and evaluate the reasonable alternative locations and make the decision. The field researcher must then determine if the two primary decisions, that were made intuitively, effectively precludes subsequent logic-based decision-making if an entirely logic-based decision-making process would not have yielded the alternatives that are now being subjected to a logic-based evaluation.

If one logic-based decision out of a series of intuitive decisions can be considered reflective of a logic-based process, the field researcher may need to demonstrate why the predictor variables of the logic-based reasoning method employed in the decision of interest did not uniformly predict logic-based reasoning in any other decisions in the decision sequence. If the researcher is limited to a sequence uniformly reflective of logic-based reasoning, the researcher will need to clearly identify the significant decision at the start of the sequence and take the position that any prior intuitive decisions in the sequence were of much lesser significance.

However, even if the "important" upstream decision can be identified and is found to be made using logic-based reasoning, there may be sufficient downstream intuitive decision-making to reduce the entire process to being reflective of intuitive reasoning. For example, the entrepreneur may logically chose to participate in an industry after concluding that it would likely result in increased income compared to likely current wage prospects, and logically choose to locate the business in an area with great market potential. However, because of the numerous demands on his or her attention as the startup date approaches, the entrepreneur does not take the time to explore alternate locations and opts for the first available location that was presented for consideration. As a result, the entrepreneur commits to a facility that is too limiting and has occupancy costs that are much higher than would have been incurred at other locations. The resulting reduced revenue and higher costs result in organizational performance that is materially lower than would have occurred if logic-based decision making would have extended through the whole decision sequence. In this example, one could argue that "downstream" intuitive decision-making converted what was an otherwise logic-based decision-making sequence into what was in effect an intuitive one.

Methodological Challenges

The selection of a sequence of decisions for investigation presents the field researcher with a methodological dilemma, particularly when there is a lack of homogeneity in the reasoning method used for the decisions in the decision sequence. In this case, the empirical results derived from aggregating the reasoning criterion scale scores for each decision in the decision sequence could be difficult to interpret when assessing the characteristic reasoning method employed by an individual, or the effect of the reasoning method on individual or organizational level performance. The

example in the previous section where initial decisions were made using logic-based reasoning and subsequent decisions were made using an intuitive process illustrates this point. The scores on each on these decisions could be aggregated to yield some sort of overall representation about the degree of logic employed in the decision sequence. Alternatively, the number of decisions in the decision sequence made intuitively could be compared to the number of decisions that were using logic-based reasoning to yield this representation. In either case, analyzing aggregated results that do not reflect a pattern of either highly intuitive or highly logical decision-making could be difficult.

The field researcher will also need to consider what weighting to give each decision in a sequence if the scores are aggregated. Equal weighting of the decisions needs to be carefully evaluated by the researcher intending to aggregate results. Certain decisions in our hypothetical entrepreneur's decision sequence are likely to be much more important in terms of likely impact on organizational level performance and an argument could be made that the scores on the more important decisions should be given more weight. While equal weighting of decisions may not be theoretically supported, lack of data supporting alternative weighting protocols may result in equal weighting of decisions by default.

The design of measurement scales also raises issues, some of which are at the heart of differentiating the group of dual process theories from other theories. Administering a scale that has items representing completely logic-based and completely intuitive reasoning as anchor points on a single scale with other interim points representing methods of reasoning that have differing combinations of logic-based and intuitive components conceptualizes the method of reasoning employed as a continuum. Alternatively, two points could appear on the scale, one representing intuitive and the other representing logic-based reasoning. This approach requires a single scale cut point that differentiates the two methods of reasoning. Using our example, this approach might require an *a priori* determination as to the point where the amount of due diligence transforms an intuitive process to a logic-based process. Thus, one approach presumes an integration of the two systems, the other dominance of one system or another in each decision (Hamilton et al., 1999). Utilization of an *a priori* cut point presumes a certain level of theoretical refinement. Unfortunately, many fields such as entrepreneurship have not reached consensus on defining either normative outcomes or processes, much less specifying their threshold conditions that could be translated into cut points on a survey instrument.

It is likely any survey instrument will use ordinal scales. Unless the researcher treats the scale like an interval scale, the resulting analysis may possibly require the use of nonparametric statistical techniques (Velleman & Wilkinson, 1993) and complicate the aggregation of scores from multiple decisions. Choosing to treat the system of reasoning criterion variable as a dichotomous or continuous criterion variable affects the analytic methods the researcher may employ. Measuring the reasoning system as a continuous variable offers the ability to utilize regression or structural equations modeling to test relationships between hypothesized predictor variables and the continuous reasoning criterion. Measuring the reasoning system as a dichotomous variable dictates

that logistic regression or discriminant analysis should be used. Because of the requisite assumptions for discriminant analysis, logistic regression is preferable when dealing with a criterion variable with two possible values (Cohen, Cohen, West & Aiken, 2003).

Experimental research usually assesses decision-making in an environment where contact with other individuals during the decision process is eliminated. The field researcher assessing a decision-making process after the fact cannot assume that the process was done completely unaffected by interactions with one or more other persons. A study by Smith, Peterson and Schwartz (2002) illustrates how middle managers facing ambiguous situations frequently consult other persons for guidance and the pattern of consultation varies between cultures.

Patterns of communication with other individuals also present measurement challenges to the field researcher. The degree of logic-based reasoning employed may be related to the quantity and quality of consultation with other individuals. The entrepreneur will likely derive a decision-making benefit from consultations with other experienced entrepreneurs and qualified professional advisors. Measuring the quantity and quality of those consultations presents their own unique methodological challenges. For example, the entrepreneur can have fifteen consultations with one individual or one consultation with fifteen different individuals. The field researcher can measure the number of interactions between the entrepreneur and a second party, or merely the number of second party consulted. The researcher may also attempt to measure the quality of the consultation by attaching a weight to the party consulted based on professional credentials, industry experience or some other criteria. Patterns of consultation or communication may prove useful in explaining a portion of the variance in the method of reasoning employed, but also have the potential to influence the relationships between individual-level predictors and reasoning system criteria.

Another issue that researchers will consider in the research design is to what extent the study will be longitudinal. Typically, that would involve the decision maker's recall of the decision process for all of specific individual decision elements if a process-based criterion variable is used. Similarly, the use of an outcome-based criterion variable would also require recall of the elements of the decisions that were made. However, use of an outcome-based criterion would also require a measure of outcome stemming from the time of decision(s) to the time of the field work. The field researcher choosing an outcome-based criteria may have difficultly in assessing whether the time from the decision to the gathering of data has been sufficient to allow the effect of decisions to substantially impact performance and yet not so long that other variables have been able to intervene and also materially affect performance.

Alternative Logics of Decision Makers and Measurement of Outcomes

Outcome-based decision criterion variables presume the existence of an optimum result or set of results. While economic theory has traditionally presumed a decision maker sought to maximize economic utility, other goals that correspond to alternative decision logics are no less

important or rational (Schneider & Barnes, 2003). Normative decision outcomes can be related to achieving the logic-based goals of the decision maker or derived as representing best reasoning practices observed for a particular class of decision makers. Sarasvathy (2001) provided an excellent example of how a normative solution could be derived from an investigation into the best practices of a particular group of subjects. She investigated the decision-making behavior of entrepreneurs that were highly successful. She discovered they used a logic that she termed as effectuation. The basis of the logic used by that group was to maximize objectives based on a given set of means rather than the logic of seeking means to achieve given objectives.

The business literature has recognized alternative normative goals for business decision makers (e.g. Stewart, Watson, Carland & Carland, 1998). One logic is based on maximizing current earnings and achieving financial stability; another is based on maximizing growth. Owners of existing small businesses have been found to manage primarily to provide an acceptable, consistent level of income; the more entrepreneurial individuals have been found to manage with less emphasis on current earnings and more emphasis on growing the business as quickly as possible. Entrepreneurs and small business owners may choose different decisions alternatives based on their individual basis of logic that stem from their differing goals. Both logics are considered normative. In addition, the owner of a home-based business could employ an additional noneconomic logic based on the goal of maximizing time spent with his or her children that could be also considered normative. Thus, different researchers could conclude that any of these logics and possibly other additional logics could be considered normative in assessing important startup decisions made by entrepreneurs.

The field researcher using decision outcomes as the criterion variable will need to decide which logic or combinations of logics should apply in each research context in order to develop instruments to measure the decision-maker's behavioral conformity with that logic. However, the possible lack of comparability between studies that define different logics as normative could likely result in a variety of results within that research context and between various other research contexts. For these reasons, measurement of the reasoning system employed criterion by making an assessment of the decision-making processes that were used could be preferable to measurement of decision outcomes. However, an assessment of the decision-making process is not accomplished without overcoming significant challenges as well.

Assessing Decision Processes

This discussion has previously alluded to some of the practical difficulties with outcome-based criterion measures of decision-making. Different logics can result in different normative solutions and as result outcome-based studies are likely to be difficult to compare. Research studies in which the degree of logic used in the decision process is the criterion variable reflecting the type of reasoning employed can provide the basis for greater comparability among studies in different

research domains. For example, decision-making processes that are made in a very short time period with little or no information search and analysis or consideration of reasonable alternatives could likely be described as intuitive regardless if the process involved starting a business, selecting a personal residence, choosing a career or educational institution. Similarly, decisions that are made carefully after much information search, consultation, analysis and evaluation of alternatives could be considered logic-based in a number of research contexts. This would be true even if the decisions made using logic-based reasoning were ultimately found to be incorrect.

Consider the elements that are necessary for logic-based reasoning in a complex and dynamic real world environment that these entrepreneurs will be facing. Requisite knowledge and experience, together with the desire and the opportunity to employ logic in the decision process, are likely prerequisites for their logic-based decision-making. Our hypothetical entrepreneur serves as an example of how these requirements will limit the use of logic-based reasoning in many cases.

Not all entrepreneurs possess a formal business education. This would lead one to expect that many important decisions would be made intuitively simply because these entrepreneurs would not know what issues are important, what information about these issues is necessary to make a logic-based decision or where that information could be found (Cooper, Folta & Woo, 1995). In addition, unless they have received a formal business education, they may have never been exposed to analytic tools that are necessary to evaluate what information has been gathered. If only a small minority of these entrepreneurs possess the requisite tools to make these decisions logically it is unrealistic to expect they would employ a decision process that reflects logic-based reasoning. The entrepreneurs that have the requisite experience and education but possess certain traits, such as a low need for cognition, or are subject to situational constraints, such as severe time pressures, would also be likely to engage in intuitive decision-making (Kahneman, 2003).

Thus, one would expect typical samples of entrepreneurs to include a majority of individuals that make practically all of the important decisions rapidly and intuitively, a minority that makes some of the decisions intuitively and the rest logically and a very small minority of decision-makers that make virtually all the decisions logically. An exploratory study found this was indeed the case (Leaptrott, 2006). The majority of respondents in that study reported only cursory amounts of information gathering or analysis before making important functional new venture decisions. Approximately one third of respondents did not seek information from anyone about where to advertise the business, where to get inventory or supplies for the business or how much money it would take to start the business and made those decisions in one day or less. A majority of participants only sought information from one person or less, and spent a week or less to gather information, analyze it and reach a decision.

Assume for the sake of discussion that this distribution of decision-makers was typical and would commonly be encountered in several research contexts. If this is the case, the more pressing research priority would appear to be to develop and test interventions hypothesized to improve decision-making by the majority that primarily use an intuitive method, rather than to attempt to

further refine the definition of the normative logic-based decision-maker. The related methodological challenge would be to detect the threshold where the decision-making stops being primarily intuitive and begins to be logic-based. An argument could be made that process-based criterion variables could be more helpful in identifying elements of the decision process that could be more easily improved than an outcome-based criterion variable because relatively few decision-makers achieve the optimal decision outcomes.

OPERATIONALIZING LIKELY PREDICTOR VARIABLES

Field studies frequently involve the administration of survey instruments to study participants. Because of the negative relationship between instrument length and complexity and the response rate, the field researcher conducting survey research faces constraints as to the scope of a particular research project. Therefore, the field researcher may not be able to simultaneously assess the relationship between all likely predictors and the method of reasoning employed. The use of test studies and exploratory factor analysis often results in a modified instrument for use in the main study that will hopefully yield an acceptable response rate and meet the study objectives. Kahneman (2003) has summarized several factors that have been found to affect the degree System 2 cognition is utilized. How field researchers may operationalize some of these factors as predictors of the method of reasoning employed will now be discussed.

The Need for Cognition

Cacioppo, Petty, Feinstein and Jarvis (1996) define the need for cognition as "a stable individual difference in people's tendency to engage in and enjoy effortful cognitive activity" (1996, p. 198). Cacioppo and Petty (1982) developed an instrument to measure an individual's propensity to engage in such effortful cognition. Researchers have used variations of this instrument in over 100 empirical studies and have demonstrated that "…individuals low in need for cognition were likely to endorse items depicting heuristic rather than vigilant or effortful information processing, whereas individuals high in need for cognition were likely to endorse items depicting effortful rather than heuristic information processing" (Cacioppo et al., 1996, p. 202).

Cacioppo et al. note "…individuals high in the need for cognition are more likely to seek information about a wide range of tasks, issues and current events than are individuals that are low in need for cognition" (p. 238). The process of gathering information and considering alternative decisions regarding new venture issues is often time consuming, expensive and difficult. Individual who embrace cognitive activity rather than avoid it are more likely to be motivated to undertake the challenges of information gathering and put forth the cognitive effort required to analyze it. There is evidence that is indeed the case. Subjects higher in the need for cognition desired to see more information than subjects that were lower in the need for cognition (Verplankern Hazenberg &

Palenewen, 1992). In addition, subjects with a higher need for cognition put more effort into external information search prior to making a decision (Verplanken, 1993).

Measuring the need for cognition in a field study is relatively straightforward endeavor involving administration of a version of the need for cognition scale as part of the survey instrument. One version of consists of a rather parsimonious 18 items with the anchors "extremely characteristic" and "extremely uncharacteristic" as anchors on 5 point Likert-type scale.

Intelligence

Stanovich and West (2002) suggest that higher intelligence is predictive of a higher usage of the rational or System 2 mode of cognitive processing. Their empirical studies utilized a sample of university students attempting to solve either a conjunction fallacy reasoning problem (1998b) or a variety of abstract reasoning problems (1998a). They found the average SAT scores of correct responders were significantly higher than the scores of incorrect responders. They also noted that the effects of differences in intelligence were higher when the cognitive tasks were more difficult.

While some of the decisions the entrepreneur often faces are routine and could be made correctly with little cognitive processing, many important decisions involve great uncertainty and unfamiliarity with elements of the environment the new venture will face. Consequently, substantial cognitive processing could be required to correctly analyze the new venture's environment and provide an appropriate organizational response. As a result, studies such as those by Stanovich and West (1998c), would suggest that the more intelligent entrepreneur would be more successful making decisions that require substantial information gathering and analysis.

Intelligence has been a predictor of success in many occupational situations. Schmidt and Hunter (1998), citing findings from a meta-analysis on predictors of job performance, reported intelligence was the best job performance predictor. The correlation was highest for professional-managerial jobs and lowest for completely unskilled jobs. These results suggest that professional and management jobs more often require intelligence in decision-making to a greater degree than the more unskilled jobs.

The selection of an intelligence measurement technique presents practical challenges to the researcher engaged in a research design based on surveying busy respondents. The length of such an instrument may degrade the ability of the instrument to measure other variables of interest. This limitation would likely also apply to many other research contexts. One parsimonious approach to the measurement of intelligence has been to use the amount of education as a proxy for intelligence. Ceci and Williams (1997) report correlations of between .50 and .90 between intelligence and the amount of schooling one receives, with correlations of .50 to .60 typically resulting. Thus, field studies using intelligence as a predictor variable could consider assessing intelligence by measuring the respondent's years of formal education with a one-item scale. Conducting field research in a large organizational setting may allow a field researcher to access the results of any organizationally

administered test of general mental ability. Another field research alternative is to administer a parsimonious measure of general mental ability such as the Wonderlic Personnel Test. However, even though assessment tools such as this typically can be administered in 10-15 minutes, the choice to administer an intelligence measure will likely decrease the ability of the researcher to assess other predictor variables.

Exposure to Statistical Thinking and Other Analytic Tools

Kahneman (2003) lists exposure to statistical thinking as a factor that is positively correlated with System 2 cognitive processing. Several empirical studies have investigated the utility of such exposure on decision-making. Studies by Jepson, Krantz and Nisbett (1983) and Fong, Kratnz and Nisbett (1986) provided evidence to support a reduction in the use of incorrect inferential rules decision-making as a result of some statistical instruction. Kosonen and Winne (1995) found evidence to support the benefits of exposure to statistical thinking to everyday problem solving by students of various ages. These results tend to suggest that the incidence of System 2 reasoning will increase when the decision maker possesses analytic tools, such as statistical training, that might have gained from education or experience.

The implications of the relationship between prior mastery of analytic tools and their use in logic-based reasoning associated with solving complex reasoning problems possibly extend far beyond this context. The individual is more likely to use analytic tools that have introduced to them, primarily through formal education, than an individual who has not been exposed to them and would therefore have to develop these analytic tools independently before using them.

Different decision-making contexts may require different analytic tools. Analytic tools that may be useful to the entrepreneur in making decisions related to a new venture might include an understanding of statistics necessary to evaluate the estimated probabilities of various occurrences and the likelihood that strategies formulated in contemplation of those occurrences would have the intended effects. The list of other analytic tools that would help logic-based reasoning efforts by an entrepreneur is potentially a long one. It includes knowledge about the use of a business plan preparation and presentation process that would require a detailed analysis of many aspects of a new venture. In addition, an education in the business-related academic disciplines of accounting, management, marketing and finance would provide many analytic tools that the entrepreneur could apply to logic-based reasoning related to new venture creation. The experience an entrepreneur may have in the industry environment of the new venture will also likely provide analytic tools suitable for that particular environment. Cooper, et al. (1995) found that entrepreneurs will relevant industry experience performed more information search, presumably due to their familiarity with what information was important for new venture success and where they could obtain that information.

Assessment of the respondent's exposure to analytic tools that are relevant to the research context can be assessed indirectly with single item scales inquiring about particular educational

activities such as specific mathematics, science or business courses taken, or assessed by having respondents answers questions or solve problems that would require specific knowledge of the analytic skill of interest.

Time Pressure and Concurrent Involvement in Multiple Cognitive Tasks

Kahneman (2003) also has identified time pressure and concurrent involvement in multiple cognitive tasks as factors that tends to inhibit logic-based reasoning. Sources of time pressure and concurrent cognitive tasks can vary greatly and can be very domain specific. These factors can inhibit logic-based reasoning by the entrepreneur starting a new venture in a number of ways. Commitment deadlines for equipment, inventory, facilities and advertising can occur far in advance of the actual commencement of operations. The limited capital resources of the new venture can limit the duration and scope of the information gathering and analytic processes. The sheer number of decisions the entrepreneur has to make in a usually short time period limits the amount of cognitive resources that can be used for each.

Ordonez and Benson (1997) found empirical evidence to suggest that decision makers often expedite the decision process when under time pressure. Expediting the decision-making process can result in behavior that includes switching to simpler decision strategies, relying more heavily on negative information and reducing the input of information. The entrepreneur that is under time pressure might likely gather widely varying amounts of information about a range of alternatives and analyzing a small subset of attributes possessed by them rather than gathering an equivalent amount of information about each alternative and analyzing a substantial number of attributes of each (Verplanken, 1993).

Gilbert (2002) provides empirical evidence of the decision-making effects of concurrent involvement in multiple cognitive tasks, particularly with respect to correction of initial categorizations. His research was based on the premise that "conscious attention is a scant resource" (p. 169). As a result, concurrent involvement in multiple cognitive tasks reduces the ability of an individual to use information in decision-making. He offers evidence of the effect that initial categorization uses fewer cognitive resources than subsequent corrections to that categorization. His research has shown that information relevant to the correction of an initial categorization is often noticed but not utilized. He has found evidence that self-regulation by the individual involved in routine everyday tasks can create enough cognitive busyness to limit the amount of information that is utilized in correction of initial categorizations.

Many events, relationships or roles may be both a source of time pressure and concurrent cognitive involvement for a decision-maker over extended periods of time. While experimental research may manipulate the effects of time pressure and concurrent cognitive involvement separately, the field research may face a much more difficult task in assessing the individual effect of theses factors. One can easily envision the limitations on logic-based reasoning that might result

when the entrepreneur is immersed in a multitude of ambiguous and uncertain situations while facing decision deadlines during the startup and initial operation of a new venture. Family matters or other employment or business commitments could be examples of factors that enhance both a state of cognitive busyness and perception of time pressure that limit the decision maker's ability to engage in logic-based reasoning.

The field researcher investigating the effects of these factors on decision-making would be well advised to engage in preliminary qualitative research to develop an understanding of what roles, events or activities serve as sources of time pressure or cognitive busyness to the extent that they are likely to impact the reasoning method employed in making significant decisions. For example, if the decision maker's family or occupational role is found to be a common source of time pressure and cognitive busyness, measures relating to family-work conflict (e.g. Netemeyer, Boles & McMurrian, 1996) or family functioning (e.g. Olson, 1991) might be considered for inclusion in the survey instrument.

The measurement of predictor variables in testing relationships with criterion variables reflective of the type of reasoning system employed may perhaps present a lesser challenge to field researchers that the measurement of the criterion variables themselves. Many measures of these likely predictors have been previously operationalized and used in field studies performed in other contexts.

CONCLUSION

Much of the content of this discussion was derived from efforts to perform an earlier exploratory study (Leaptrott, 2006) that was designed to gain a perspective on how frequently each type of reasoning was employed in an important decision-making sequence by examining the decision processes involved. The study tested the significance of the relationship of between predictor variables and the use of logic-based reasoning in that reasoning sequence. While reporting specific results of the study are beyond the scope of this discussion, the general findings are of interest in providing a context for the present discussion and future theory development. The study included responses from 187 childcare entrepreneurs in Florida. Approximately 55% had no more than a high school education, 20% received an associates degree with the remaining 25% had received a bachelors or masters degree. About 50% had never taken a college level business class, about 23% had taken 4 or more classes, with the balance taking 1-3 classes.

Several typical startup decisions, such as the amount of money required for startup and which professional advisors to retain for the business, were selected as components of the decision sequence to be investigated and the decision process approach was selected to serve as the criterion method for determining the extent logic-based reasoning was employed. Four elements of each decision's process were chosen to represent the extent the decision process reflected the reasoning method. These elements were the number of people that served as sources of information, the length

of time it took the decision maker to gather information and make a decision, the number of alternatives considered and the number of factors the decision maker considered when choosing between alternatives.

The frequency of responses displayed a consistent pattern that tended to reflect primarily intuitive reasoning. About 1/3 of respondents did not seek information from anyone, made the decision in a day or less, and considered no alternatives. Approximately 20% sought information from one other person, took between one day and one week to make the decisions and only considered one alternative. At the other end of the spectrum, less than 10% sought information from more than 5 people, took more than 6 months to reach the decisions and considered four or more alternatives.

These results have several possible implications for future research and theory building. If we truly live in a world where intuitive decision-making is by far the predominant decision-making method even for very important decisions, research priorities and methodologies should reflect that reality. There appears to be little utility in engaging in much debate about the threshold for logic-based reasoning. It may never be clear exactly when that threshold level is reached. However, there appears to be much utility in improving the decision-making by the large numbers of characteristically intuitive decision makers. This is certainly true for entrepreneurs. The new business four year failure rates are approximately 50% (Phillips & Kirchhoff, 1989). The high new business mortality rate demonstrates that even small improvements in otherwise intuitive decision-making by entrepreneurs could have a tremendously positive social and economic impact.

In the present example, the great majority of the decisions that were assessed clearly should be described as having been made intuitively. It is very unlikely that a childcare care entrepreneur could reach a logic-based decision in a day, or even a week, and do so by getting information from at most one person. It is also unlikely that a childcare entrepreneur would acquire knowledge about business-related topics such as business plan preparation, accounting, new venture financing, or marketing outside a formal higher education setting. In addition, it would be difficult for such an entrepreneur to know what information to seek or where such information could be found without possessing this foundation of knowledge. In this exploratory study, the correlation between the number of college business courses taken and the degree logic-based reasoning was employed in making those business decisions was approximately .30. Although the correlation was significant, it is possible that the correlation wasn't higher because the method of measuring the type of reasoning employed criterion variable was not sufficiently refined. The criterion was operationalized in this study as an interval scale with items reflecting the two methods of reasoning as anchors. These scales represented intuitive-based reasoning as a speedy process with little or no information search and analysis and a logic-based reasoning as an extended process utilizing many information sources and substantially more analysis.

The issue of how best to represent the dual processes of reasoning in a field setting awaits further development. In many field research settings, what would constitute a normative process

or outcome is not yet resolved. The issue of what constitutes a normative entrepreneurship model of new venture creation is far from resolved. This lack of consensus on what decision outcomes or processes are normative obviously limits the rate of progress of decision-making research in the field. However, there is much research that can be done while the nuances of defining normative outcomes or processes evolve. In many research settings, such as in the present example, it is possible to identify decision-making behavior that is clearly intuitive. It is also possible to identify behavior that constitutes a reasonable improvement over what is clearly intuitive. The current array of experimentally-supported predictor variable can be tested for significance in making modest decision-making improvements. Much future research is necessary to explore how exposure to specific analytic tools gained from a formal education, consultations with professional advisors, communications with members of social networks, or life experiences contribute to the use of logic-based reasoning either directly or indirectly through interaction with other individual-level or situational variables. Despite the challenges to executing field research programs in this research domain, the potential societal rewards justify the time and resources that it will take to overcome them.

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TOWARD A MANAGEMENT STRATEGY FOR OPTIMAL RECRUITING: POTENTIAL APPLICANT CONCERNS ON GOODNESS OF FIT IN THE CORPORATE CULTURE

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ABSTRACT

Over the years a large body of literature has developed regarding cultural difference using Hofstede's cultural dimensions. In the course of studies regarding this literature attention has been placed on the differences between management and employees from a management perspective, yet little attention has been focused in the opposite direction. This study uses an in-basket laboratory experiment to determine if US students would prefer to work for a boss who shared cultural traits. The literature, methods and findings are followed by a discussion of the results and implications for entrepreneurs.

INTRODUCTION

Buntzman and Parker (2004) recently applied the Hofstede value system to an analysis of MBA student perceptions of CEO effectiveness and found evidence in a pilot study that their perceptions of CEO effectiveness might in fact be related to their internationally diverse cultural backgrounds. This study is in some ways a follow-on study. It examines the preferences of undergraduate students to possibly work for individuals whose philosophies reflect various cultural backgrounds typical of the USA and certain European, Latin American and Asian regions.

Currently a wealth of literature exists on the impact of culture on business operations particularly in the area of employer/employee relations. Much of this literature is useful in examining the role that cultural differences plays in the understanding of how business works. Culture though extends farther than just an individual's background; one must also consider the culture of business to which a new graduate will be entering upon completion of a degree program or an experienced worker might enter upon changing jobs. "Corporate culture is comprised of philosophy and mission, manner of internal communications and hiring practices. From the outside such things as dress code, flexibility of work schedules and level of volunteerism often form a company's public profile" (Pfister 1999).

This perception of corporate culture is particularly true in America. As one U.S. CEO stated: "I think the most important thing you can have is pride in how you dress, in how you act…when you have facilities that are clean and painted, people take pride in that, and you end up with a better safety record, a better environmental record" (Pfister 1999). The philosophy of the CEO was reflected in how the employees reacted to it. One employee indicated that as a result of the CEO's attitude the company had become "extremely image conscious" and failure to adhere to norms would result in co-workers quietly pointing out violations (Pfister 1999).

The American value system as pointed out in a number of studies is not universally accepted. In an application of the Hofstede values (collectivism vs. individualism, high vs. low uncertainty avoidance, high vs. low power distance, masculine vs. feminine and dynamic vs. Confucian) Gouttefarde (1996) observed the interaction between Americans and French working in French companies. The comparison was justified given the cultural differences between the two nations. The Gouttefarde study showed the French are high on the power distance scale whereas Americans rate low. The study also showed French and Americans are at odds on uncertainty avoidance. Not surprisingly many of the respondents in the Gouttefarde study expressed frustration at their cultural counterparts. The Americans were seen as brash and too individualistic. The French were seen as micromanagers who stifled the creativity of American employees and were mired in bureaucracy. French bosses were seen as aloof from subordinates whereas the feeling was among French subordinates that the American supervisors got too close.

In other international studies (e.g. MacMahon 1996 and Channon & Dakin 1995) the importance of cultural understanding and identity was seen as a key to business success. In terms of hiring practices by small business owners in Ireland one entrepreneur stated: "I think that in a small company you have to be careful in selecting your workforce anyway – you try to make sure that people will fit in with your way of thinking, your way of doing things and the other employees" (MacMahon 1996). One study conducted in the relatively calm years of the mid-1990s showed that in the emerging markets of Central and Eastern Europe after the fall of communism, over 70% of companies surveyed for a study in hiring practices were aiming for "99-100 per cent local staffing in the long term, as most felt local staff would have a better understanding of the local market" (Channon and Dakin 1995). Arguably Ireland and the individual countries of the former Warsaw Pact are for the most part internally homogenous. But the expressed preferences for hiring people who shared a common viewpoint may in fact reflect a widely held desire that new employees fit the mold of the corporation's culture.

The role of organizational culture within a corporation has been the focus of a number of studies during the last 30 years. Van Dick, Christ et al (2004) noted that social identification factors played a vital role in employee retention. Pearson and Porath (2005) examined the relationship and consequences between incivility and organizational loyalty. Additionally Macklem (2005) found that an unhealthy desire for profits created a cultural atmosphere that was detrimental to corporate

long-term health. But how does the idea of corporate culture play into job acceptance decisions by prospective candidates?

In reviewing the literature relating to job acceptance factors, we discovered that researchers choose to look at a number of items that impact decisions to accept a job offer. In a study by Turban, Campion and Eyring (1995) it was noted that factors including "site visit, perceptions of the location, and host likableness were related to job acceptance decisions" but no mention was made of perceived cultural attributes. Other studies by Swinth (1976), Sheridan, Richards and Slocum (1975), Schmitt and Coyle (1976), Saks (1989), Saks and Cronshaw (1990), Saks, Wiesner and Summers (1994) have sought to predict the likelihood of job acceptance by potential employees using realistic job previews and instruments which attempted to measure the candidates' perceptions of employers based on factors such as likeability and adequate communications. These studies appear to discount, ignore or minimize the role corporate culture plays in job acceptance decisions.

Saks and Cronshaw (1990) point out that the channels of communication used to provide potential applicants with "realistic job information" comes in two forms: either through written materials such as brochures or in oral communication during a job interview. Such verbal communications fail to provide potential employees with vital non-verbal communications which might provide clues and insights into the nature of specific cultures within companies.

Additionally we wanted to know what companies are doing to foster the culture that will best suit their strategic objectives (particularly those objectives related to hiring qualified personnel). Herb Kelleher, former CEO of Southwest Airlines is credited with establishing a culture that carefully "protects and nurtures its employees" (Fryer 2004). Other firms offer employees access to top executives and perks such as African safaris and other exotic trips. Such actions are significant in that "employee morale and performance improvement are top management concerns" (McMaster 2003). Problems begin to arise when bosses begin to label subordinates as weak performers. According to Jean-Francois Manzoni, a management scholar at a leading French business school: "employee performance tends to adjust up or down according to such expectations" (Mount 2002). As a highlight to the importance of these issues Manzoni and Barsoux (2005) recently conducted a study to determine the relationships between management and employees and how employees disconnect from both management and their jobs. Such studies are important in determining and understanding the role culture plays within corporations.

Corporate culture also is impacted by popular media image. Given that most people rely on the popular media to formulate and reinforce viewpoints, the observations of this group cannot be discounted or ignored. As an example the emphasis on cultural understanding in corporations was succinctly framed in a recent editorial in the *Dallas Morning News*: "A company is only as good as its employees. That employer-employee relationship is being tested as never before, making it more difficult for companies to get workers to agree with their leaders on the same business goals. Successful businesses will understand the trends that are undermining workplace morale and will respond accordingly" (March 15, 2004).

Being aware of employer responsibilities in creating and managing corporate culture as seen above, what can be investigated about the expectations or desires of subordinates coming into a new work situation? Do workers desire to be employed by someone who has a similar cultural background and values to them? In the United States, is cultural similarity a factor in determining whether or not a junior candidate would base a decision on job acceptance based upon the perceived opinions and judgments of similarity with the boss?

Research Questions

In order to investigate the whether or not cultural similarities are desirable between employees and employers, we posed the following research questions based on the above:

R1: Do US undergraduate students prefer a boss whose values are consistent with the US "archetype" that was identified by Hofstede?

R2: Do US business students prefer an entrepreneurial-type boss or one who is more conservative?

R3: Is the type of business, its size and environment, a factor in determining whether an entrepreneurial or conservative boss would be preferred?

METHOD

The sample consisted of 100 undergraduate students enrolled in several sections of the authors' required business courses. Participation was voluntary and extra credit was provided.

We devised an in basket-like laboratory experiment for this study. Written instructions asked respondents to assume the role of a relatively new employee who has been appointed as a member of a 360˚ style selection committee seeking a replacement for a "very senior management position" for either a large multinational corporation or a small local business in the service sector. After reading brief statements of philosophy attributed to each candidate in turn, subjects were asked to rate them as good for the organization, whether they would enjoy working for the person, whether the person would be a good role model for them, whether this person should receive priority in being given a personal interview, and the excellence of each candidate's philosophy. Each item was evaluated on a seven point Likert-type scale anchored by "Disagree" (1) and "Agree" (7).

Additionally, we collected data on how the candidates were perceived with respect to the Hofstede dimensions masculinity/femininity, low/high uncertainty avoidance, individualism/collectivism, and high/low power distance on seven point Likert-type scales. The scales asked subjects to rate candidate in terms of: hard driving or easygoing (to represent Hofstede's

masculinity/achieving orientation); concern for subordinates, to represent collectivism, or out for himself, to represent individualism; entrepreneurial, representing low uncertainty avoidance, or cautious, representing high uncertainty avoidance; and elitist, representing high power distance, or democratic, representing low power distance.

Four candidates were presented for evaluation. Alex's statement of philosophy was designed to have him perceived as masculine, individualistic, with low power distance (LPD) and low uncertainty avoiding. According to Hofstede (1980) this is a typical value structure in the USA. Bobby was portrayed as masculine, LPD, collectivistic, and high uncertainty avoiding, typical of value systems in Japan and other parts of Asia and Latin America (Hofstede, 1980).

Charlie's philosophy was intended to present him as feminine, high power distance (HPD, individualistic, and high uncertainty avoiding. This value system is consistent with Western European countries such as France and some Asian states (Hofstede, 1980). Finally Del's philosophy was intended to portray his/her value system as masculine, individualistic, HPD, and high uncertainty avoiding, typical of countries such as Belgium and Italy (Hofstede, 1980).

Independent variables were subject gender, business type (MNC v. Small Business) and type of value system. We used analysis of variance and stepwise multiple regression to analyze our data.

RESULTS

As stated above, Masculinity/Femininity was measured with the anchors "hard driving" (M) and "easy going" (F); Individualism/Collectivism was measured with the anchors "out for himself" and "concerned for subordinates." Low/High UA was measured with the anchors "entrepreneurial" and "cautious" and High/Low Power distance used the anchors "elitist" and "democratic" (Please see Table 1 below.)

As is shown in Table 1 below, Alex (A) is perceived as Masculine (mean <4.0) and significantly more masculine than Bobby (B). Del (D) is most masculine. Alex is perceived as more individualistic (>4.0), and more so than the collectivist Bobby. He is perceived as a low uncertainty avoider (entrepreneurial) (<4.0) and low PD (democratic) (>4.00). With two exceptions, the "applicants" were perceived as expected. The exceptions were that Bobby was perceived as feminine and Charlie (C) was perceived as masculine. Overall, subjects perceived the candidates as would be expected based on their "statements of philosophies."

There were no gender differences in how men and women perceived the candidates. There were no business-type differences in how subjects perceive the candidates suitability for the position. Means for the dependent variables based on type of business tended to be close to the neutral midpoint value of 4 on the seven point Likert – type scales.

The candidates' value systems do appear to have influenced subjects' perceptions and recommendations. We expected that Alex would be rated more favorably because his/her value profile was intended to be similar to that for the USA, and the vast majority of the subjects were also

from the US. In performing tests of differences in perceptions, we took the mean value of the rating for the dependent variable for Alex (representing the US value structure) as the test value against whether the others were compared. Results for these comparisons are discussed below.

Table 1: Mean Perceptions of Candidates

Lower Values	Alex	Bobby	Charlie	Del
Masculine	3.67	4.80*	3.66	3.27*
Collectivism	4.27	3.03*	4.70*	5.08*
Low UA	3.36	4.99*	3.88*	3.91*
High PD	4.35	4.84*	3.77*	3.78*

Note: Lower values imply more agreement.
*p<.05

Would this person be good for the organization? Using t-tests, Charlie (Feminine, High Power Distance, Individualistic, High Uncertainty Avoidance had a rating of 4.52 (s.d. 1.22) versus 5.09 (s.d. 1.09) for Alex, T=-4.65, p<.000. Thus Charlie was seen as somewhat neutral for the organization compared to Alex. (Please see Table 2 below).

Table 2: Mean values for "Would the candidate be good for the organization?"

Dependent Variable	Mean	SD
a-good	5.09	1.09
b-good	5.07	1.24
c-good	4.52***	1.23
d-good	4.90	3.93

*Note: ***p < .001.*

Would the subject enjoy working for this person? Bobby received the highest rating, 5.12 (s.d. 1.23). This was significantly higher than the ratings for Alex. (Please see Table 3). Del had a significantly lower rating and Charlie's low rating approached significance.

Table 3: Mean values for "Would you enjoy working for this candidate?"		
Dependent Variable	Mean	SD
b-enjoy	5.12***	1.23
c-enjoy	4.29*	1.45
a-enjoy	4.56	1.51
d-enjoy	4.08**	1.52
*Note: *p < .05. **p < .01. ***p < .001.*		

Would this person be a good role model? None of the candidates stood out in this regard with mean ratings close to the midpoint of 4.00, but C was significantly lower than A (3.99, s.d. 1.31, vs. 4.28, s.d.. 1.48) and t=-2.22, p< .03.

Should preference be given to this person to be offered an interview? No candidate stood out here either. There were no significant differences between A and the other candidates. (Please see Tables 4 and 5 below).

Table 4: Mean values for "Would this person be a good role model for you?"		
Dependent Variable	Mean	SD
a-model	4.28	1.48
b-model	4.49	1.38
c-model	3.99	1.31
d-model	4.06	1.41
Note: n = 100		

Table 5: Means for "Should this person receive an offer of an interview before the others?"		
Dependent Variable	Mean	SD
a-offer	4.05	1.58
b-offer	4.02	1.51
c-offer	3.91	1.49
d-offer	4.11	1.42
Note: n = 99		

Does this applicant have a good overall philosophy? B was rated marginally higher than A, T>1.81, p<.074. C was not significantly different and D was significantly lower (t=-2.29, p<.024). (Please see Table 6 below).

Table 6: Means for "This person has an excellent philosophy."

Dependent Variable	Mean	SD
a-philos	4.43	1.29
b-philos	4.66	1.25
c-philos	4.20	1.49
d-philos	4.12	1.34

Note: n = 99 *Note: n = 99* *Note: n = 99*

Finally, we wondered whether perceptions of an applicant's strengths (would he/she be good for the organization, would the respondent enjoy working with him/her, would be a good role model, has a good overall philosophy would be predictors of an offer for interviews. We used stepwise multiple regression to explore this issue. For candidates A, B, and C only "excellent philosophy" entered the equation, but for D "a good role model" added explanatory power. Adjusted R-squares ranged from about .26 to about .49. (Please see Table 7 below.)

DISCUSSION

We thought that US students would prefer a candidate, one for whom they might actually work according to our scenarios, who matched the value profile of U.S. culture as determined by Hofstede. This was not the case. In fact, using the mean for Alex as the reference point our subjects did not demonstrate a statistically significant preference that any of the candidates be offered an interview before the others.

The regression equations in which the candidates' philosophy was shown to be associated with making an offering all provide food for thought. These are no doubt many factors which bear on an individual's preferences in choosing to join an organization on the one hand, or whom to recruit to it on the other. Our results indicate that consideration of a candidate's philosophy (values) may be a major influence on those decisions. Often the emphasis in making such decisions is placed on using "hard" data such as income or profits or some other measure of achievement. In this experiment, however, we depicted the candidates as equally able and so there was not tangible data on which to base a decision. Another possibility would be to determine preference based on self-interest, but here self-interest concerns such as "would enjoy working with the person," or "would be a good role model," did not enter into the regression equations for three of the four candidates. In fact, for three of the four candidates nothing entered into the regression equation but philosophy.

Only is the case of D was "would be a good role model" a predictor with a beta of .37. Perhaps this association is related to the fact that on average our subjects did not think D would be as good a role model as the other candidates.

Table 7: Results of Regression Analysis for Offers

		Predictors DV	
		R	R Square
Step 1	Offer to A		.27***
	Constant	1.28	
	a-philos	.6	
Step 1	Offer to B		.30***
	Constant	.29	
	b-philos	.66	
Step 1	Offer to C		.49***
	Constant	1.20	
	c-philos	.65	
Step 1	Offer to D		.43***
	Constant	1.26	
	d-philos	.26	
Step 2	Constant	.93	.43***ΔR^2 .06
	d-philos	.40	
	d-model	.38	

*Note: ***p < .001*

Recently Gabarro and Kotter (2005) showed that "effective managers take time and effort to manage not only their relationships with their subordinates but also with their bosses." Perhaps given the relative young age of the participants in the study reflects the observation by Gabarro and Kotter (2005) that "some people's instinctive reaction…is to resent the boss's authority and to rebel against the boss's decision." As Hood (2004) noted "businesses are now using mentorship to hone top talent, to broaden staff skills and especially integrate new people into the organization." These mentorship programs would give new employees insights into cultural norms and mores within the corporation they might not otherwise receive from managers or other top executives. One question to consider is whether or not students who participated in internships or co-operative education programs would have greater insight into the dynamics of corporate culture than undergraduates who did not participate in such programs.

An interesting point to note is that Meglino and Ravlin (1997) found that when subjects had perceptions regarding jobs based upon previously obtained information, they tended to respond more negatively in accepting job offers, yet the opposite was true when subjects had no prior exposure. Bretz and Judge (1994) point out that "organizations tend to differentiate themselves on the basis of what is rewarded and how rewards are distributed" and that "individuals prefer to work in environments in which their individual efforts and contributions are recognized." If the subjects in this study tend to follow individualistic traits as most Americans do, then one must ask if a perception bias arose among the participants regarding potential recognition of individual efforts?

In their study of recruitment effectiveness Vandenberg and Seo (1992) point out that individual needs and rankings of items of importance vary and are time and circumstance sensitive. Vandenberg and Seo (1992) also point out that the communication efforts needed to provide all information individuals require for making decisions regarding job acceptance will invariably fall short due to "the infinite variety and combination of needs characterizing a group of applicants." Clearly a challenge exists in business communication efforts to recruit and persuade undergraduates to join organizations.

DIRECTIONS FOR FUTURE RESEARCH

Edwards and Kuruvilla (2005) identified culture as an area needing greater study and clarification in understanding how international human resources management works. We agree with their assessment and contend that more work needs to be done, with a cross-cultural study and with other types of samples, to determine the impact of senior management characteristics on the preferences of subordinates. In-situ survey research may be most appropriate for such a follow-up study. More research into the impact of organizational philosophies, degree of entrepreneurial culture and the like is warranted.

IMPLICATIONS FOR PRACTICE

In the real world, it is the subordinate who is most often the one under consideration to be hired and so is the one to be offered an interview, contrary to the scenario in this study. But the hiring process is a two way street since the subordinate has an opportunity to accept or reject an offer. Organizations that hope to attract the best candidates cannot ignore this part of the process and should be aware of the things that make them attractive to potential employees. That is where this study makes a small contribution. "Soft" issues such as leader philosophy, organizational culture and so on should not be ignored if organizations wish to attract the best candidates.

LIMITATIONS OF THE STUDY

As this was a laboratory study with a student population from a limited geographic area it would be unwise to generalize at this time. Nevertheless, as this sample is drawn from a segment of the population to which the results would be generalized the nature of the sample is not per se problematic (Arnold, 2004). More research is needed to clarify relationships and to validate the generalizability of the results.

CONCLUSION

From this study it appears that a "similarity to me" syndrome does not apply to the sample population making these evaluations (assuming that the students sample does itself match the US value archetype). It is striking that a candidate's overall philosophy is important as a determinant of offers (as indicated by the regression equations). This is a positive sign inasmuch as business schools of late seek to emphasize the importance of values in the workplace. But business schools also have emphasized the importance of an entrepreneurial culture, networking and mentoring and these do not seem to have been influential since an entrepreneurial orientation, role modeling potential and enjoying working with an individual were, for the most part, inconsequential considerations.

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STRATEGIC ORIENTATION, ORGANIZATIONAL STRUCTURE, AND THE ASSOCIATED EFFECTS ON PERFORMANCE IN INDUSTRIAL FIRMS

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ABSTRACT

The paper presents an investigation of the structural characteristics of firms with differing strategic orientations, as conceptualized by Miles & Snow (1978). The associated relationships to perceived performance are studied in a sample of executives at products firms across four industrial groups. The authors find that most firms have a mixed structural form, with fewer firms exhibiting either high-levels of structure or low-levels of structure. Also, Reactors represent the fewest firms, while the most firms are Defenders. No differences are found between the strategy types and their associated organizational structures, with each strategy type equally likely to implement either a high, mixed, or low structural configuration. Also, in regards to perceptions of performance, the structural form of firms has no impact and neither does the interaction of structure and strategy. Therefore, any structural form has an equal chance of achieving high performance, regardless of the strategy implemented. However, the results do indicate that strategic orientation has an influence on performance. Analyzers are higher overall performers than either of the Prospector, Defender, or Reactor firms. Also, Analyzers and Defenders exhibit better adaptability than Reactor firms. It is suggested that firms may increase performance by altering their strategic profile to be more aggressive, more focused, or be more thoughtful prior to implementing major decisions.

INTRODUCTION

Business strategy has been discussed from many differing perspectives (c.f. Porter 1980, Miller 1987, Katobe 1990). One common and useful conceptualization put forward by Miles and Snow (1978) focuses on a firm's strategic environmental adaptation or aggressiveness towards the market. Much research over the years has investigated differences among the four strategic types regarding a variety of internal factors, including innovation, management characteristics, organizational performance, and organizational design. The outlined Defender, Analyzer, Reactor, and Prospector strategies are suggested to be distinct in their actions, with each group enacting consistent decisions and activities across a variety of organizational areas (c.f. Aragon-Sanchez et al 2005, Slater and Narver 1993, Doty et al 1993, Conant et al 1990, Shortell and Zajac 1990).

Recent studies have supported and extended the findings of earlier works regarding Miles and Snow's typology: the strategic groups are found to differ amongst each other on a variety of factors, including implementation and usage of market research, organizational performance, and environmental perceptions (c.f. Auh and Menjuc 2005, Bednall and Valos 2005, Freel 2005, Moore 2005).

In particular, one main proposal of Miles and Snow (1978) is that the four strategic types vary according to their efforts at innovation and related activities, with Prospectors the most aggressive followed in order by Analyzers, Defenders, and Reactors (Slater and Narver 1993, McDaniel and Kolari 1987). However, the level of innovation does not always translate into profitability or better performance, due to cost factors or market factors. In order to improve the chances of success, a company might match its strategy with an appropriate structural form to achieve higher performance. The purpose of this study is to determine which type of organizational structure is implemented by the four strategic orientations and whether these combinations of strategy and structure influence performance or, rather, the main effects of strategy and structure are the drivers of performance. The authors use a sample of managers from industrial companies across four industrial groupings to investigate these relationships.

THE MILES AND SNOW STRATEGIC ORIENTATIONS

Miles and Snow (1978) introduced a typology which purported to classify the strategic orientation of firms based on specific strategic actions. Firms within any industry could be classified into one of four groups as Prospectors, Defenders, Analyzers, or Reactors. Firms are classified into the first three strategic types if they have a formal and implied strategic orientation and as Reactors if they do not have a formalized strategic orientation. Zahra and Pearce (1990) summarize the four types: "It is sufficient here to observe that *Defenders* emphasize a narrow domain by controlling secure (and often premium) niches in their industries. They engage in little or no product/market development and stress efficiency of operations. *Prospectors* constitute the other end of the continuum, constantly seeking new opportunities and initiating product development. *Analyzers* exhibit characteristics of both Defenders and Prospectors. Finally, *Reactors* do not follow a conscious or consistent strategy and are viewed as a dysfunctional organizational type." Most of these ideas have held up in research into a variety of industries over the years. It is noteworthy that the four strategy types are named after the single defining dimension for each. These names are misleading, in that the strategy types may have many similarities across other relevant dimensions. After all, each business is an ongoing and presumably successful business, regardless of the strategy.

In more detail, the following might describe each strategy. *Defenders* generally attempt to locate and maintain a secure niche in a relatively stable market environment. They try to protect their markets by offering high-quality, well-targeted products, while not often being at the forefront of industry developments. They are focused, rather than unfocused in their efforts. *Prospectors*

typically concentrate on many diverse markets which they periodically help to redefine. They value being first-in with new products or in new markets, even when these efforts are not highly profitable initially. They generally respond rapidly to most new opportunities. They are aggressive, rather than passive, in their efforts. *Analyzers* generally attempt to maintain a stable and secure position in the market while, at the same time, moving quickly to follow new developments in the industry. They are seldom first-in with new services or into new markets, but they are often second-in with better offerings. They emphasize longer-term planning and much thought about decisions prior to action in most instances. They are planners or thinkers, rather than reactors or doers, in their efforts. *Reactors* are said to have an inconsistent approach to their markets, oftentimes being indecisive. They are rarely aggressive in attacking new opportunities or to defend current markets. Rather, they take action mostly when pressured to by outside forces, such as the economy, competitors, or market pressures. They will most likely spend much time thinking about a decision prior to acting, even though little long-term planning is evident. Thus, they are not planners or doers, but rather reactive and thinkers by necessity.

Regarding performance of the strategies, Miles and Snow (1978) originally proposed that Reactors will be the lesser performers, while the other three types could perform equally well, depending on the situation and the industry. In most cases, empirical evidence supports these proposals (McKee et al 1989, Smith et al 1989, Hawes and Crittenden 1984). Somewhat contradictory results are found in a few instances in the performance of each strategy type, such as no impact on performance or the presence of successful Reactor firms (Shoham et al 2002, Slater and Olson 2001, Woodside et al 1999, Zajac and Shortell 1989, Hambrick 1983, Snow and Hrebiniak 1980). Plus, it is not uncommon for the ordering on performance to differ from suggested Prospector, Analyzer, Defender, then Reactor (Aragon-Sanchez and Sanchez-Martin 2005, Brunk 2003, Desarbo et al 2005, Haines et al 1990). These variations can oftentimes be explained by abnormalities of a given industry or possibly by the varying methods used to classify the companies (Zahra and Pearce's 1990). However, given the generally consistent findings over time, it might be expected that one of the Prospector, Analyzer, or Defender strategies will be the most successful and that Reactor firms will under-perform the other strategies.

STRUCTURAL FORM

Numerous structural characteristics are common in the literature. However, four major structural dimensions are prevalent: (1) formalization, (2) integration, (3) centralization and (4) complexity (c.f. Child, 1974, Ford and Slocum 1977, Fry 1982, Dalton et al 1980, Hall 1977, Van de Ven 1976, Fredrickson 1986, Miller and Droge 1986, Miller 1987, Miller 1988). *Centralization* refers to the degree to which the right to make decisions and control activities is concentrated (Fredrickson 1986). In other words, a high degree of centralization within an organization means that the critical decisions are made at the top management level. *Formalization* can be defined as

the extent to which an organization uses rules and procedures to prescribe behavior such as the details on how, where, and by whom tasks are to be performed (Fredrickson 1986). Formalization restricts the activities of employees to those proscribed in advance. *Complexity* describes the many, usually interrelated, parts of an organization (Fredrickson 1986). This includes the number of hierarchical levels, the span of control, or the geographical dispersion of operating sites, among others. Structural *integration* refers to the coordination of activities among the different specializations within the firm (Miller 1987). Highly integrated firms allow contacts between the experts within each department and also with the top level decision-makers. The relationship between organizational structure and performance can best be summarized as inconsistent, since the relationships between key structural dimensions and performance is not strongly supported (Dalton et al 1980). The findings on the associations of integration, centralization, complexity, and formalization to performance do not offer a consistent pattern, oftentimes being positive and other times being negative (c.f. Miller 1988, Dalton et al. 1980, Nwachukwu and Tsalikis 1990).

Although the inconsistency of the impact of structural dimensions on performance is accepted, it is, however, widely accepted that specific structural characteristics do indeed influence performance in some way (Miller 1988). In particular, it may be that the 'fit' between organizational structure and organizational strategy is the key criterion in a given situation (c.f. Venkatraman 1989, Miller 1986). Miller (1988) finds that integration and formalization are relevant for performance for specific strategic types. Therefore, it may be that certain structural dimensions must be present with given strategies in order for the firm to achieve high performance levels (Zeffane 1989). This would suggest that a 'fit' or, alternatively, an interaction between strategy and structure is relevant to performance.

Perhaps, the driver of performance is not the structural dimensions (formalization, integration, etc.) independently, but rather the combination of structural dimensions: referred to as structural configuration. Three possible configurations are possible from which firms might choose: (1) a *low-structure*, (2) a *high-structure*, or (3) a *mixed-structure* configuration. Firms implementing a *low-structure* environment will exhibit lower levels across all the structural dimensions than other firms. Firms implementing a *high-structure* environment will exhibit higher levels across all the structural dimensions than other firms. Finally, a *mixed-structure* firm will show a variety of levels of structural dimensions versus other firms. Porter (1980) claims that organizations require a high degree in all of the structural dimensions in order to implement generic strategies. Thus, the use of consistent structural configurations may lead to better performance. Mahajan and Vakharia (1990) support this empirically in a dynamic environment, where higher performing firms are found to have constant or similar levels across all or most of the structural characteristics. Thus, it may be that the structural configuration plays a significant role in an organization's performance.

INDUSTRY/SAMPLE DESCRIPTION

The sampling frame includes both consumer and industrial products firms from four randomly selected industrial classification groups across the United States. A systematic sample of three hundred from each, twelve hundred total, is drawn from four groups: (1) food and kindred products, (2) textile mill products, (3) primary metal industries, and (4) miscellaneous manufacturing. A single mailing is directed towards the chief executive officer in each of the selected firms. A personalized cover letter, a two-page questionnaire, and a self-addressed, stamped return envelope are sent to each executive. Of those responding, eighty one percent are either chief executives or owners, while the remainders are mostly functional managers.

This procedure yielded 141 total responses: a 12.2% response rate. The breakdown of the respondents by industrial groups is as follows: (1) food and kindred products: 26.6%, (2) textile mill products: 22.6%, (3) primary metal industries: 27.4%, and (4) miscellaneous manufacturing: 23.4%. A Chi-squared test of the respondents versus the sampling frame indicates that the responding firms are evenly distributed across the four industrial groups (Chi-sq = 0.84, d.f. = 3, $p < .80$). Additionally, an analysis of variance is performed to determine if the responses for the various SIC groups differ by firm size. Neither annual sales ($p<.15$) or number of employees ($p< .20$) are significant. Thus, there appears to be no group bias, with the sample representing a cross-section of industrial and consumer products firms in their respective industries.

MEASURES

The Miles & Snow strategy typology (STRATOR) is measured using four questions related to the main description of each strategy type. The respondents are then classified into groups using k-means cluster analysis. The respondents are asked to rate the four questionnaire items on a scale from [1] strongly disagree to [7] strongly agree in regard to the efforts of their firm in the marketplace. The four items are derived from the general descriptions of the strategy types. The four scale items are: (s1) the search for new opportunities drives our firm, (s2) we generally defend a secure niche in the marketplace, (s3) our strategies are often short-term reactions to the market, and (s4) we analyze every situation prior to taking action.

S1 is suggested to be an Aggressive-Passive (A or P) dichotomy. Aggressive firms are the leaders in entering and developing markets and products. We would expect Prospectors and Analyzers to be the more Aggressive firms, while Defenders and Reactors to be Passive firms. S2 is a Focused-Unfocused (F or U) dichotomy. We might expect Defenders, Prospectors, and Analyzer firms to be Focused, while Reactors should be Unfocused. S3 is a Planner-Reactor (P or R) dichotomy. We would expect Analyzers and Defenders to be the Planners, taking the steps necessary to organize the efforts of the firm over the longer term. The Reactors and Prospectors are otherwise more likely to be Reactors, but for different reasons. Prospectors act quickly towards

market changes and opportunities, with long-term planning not really possible in many instances. On the other hand, Reactors only take action when forced to do so. S4 is a Doer-Thinker (D or T) dichotomy. We would expect Prospectors to be firms of action, the Doers. Analyzers and Defenders should be Thinkers, taking time to sort out a decision. Reactors might also be Thinkers, being slow in making a decision even though speed may be necessary. Therefore, on the four scale items, the following is expected: Prospector firms will have an A-F-R-D profile, Analyzer firms will show an A-F-P-T profile, and Defenders should exhibit a P-F-P-T profile, while Reactor firms will have P-U-R-T profile.

Although self-classification is probably the most common measurement method, and expert classification is also used by some, assigning firms to groups based on a variety of descriptors may have advantages over the other methods (c.f. McKee et al 1989, Smith et al 1989, Hambrick 1983). The major limitation in the self-classification method is derived from the nature of the classification itself: firms must be classified into one of the four groups, even though they may not share all of the requisite characteristics with the definition their specific strategy type. Therefore, the use in this study of the descriptors-followed-by-clustering method is appropriate and more realistic because it allows firms to deviate from the pure definition, while still leading to well-differentiated groups that represent each of the four major strategy types: Analyzers, Defenders, Prospectors, and Reactors. This method accepts that the four strategy types will have commonalities and differences across the measurement items and other factors as well.

The maximum number of groups derived from a k-means cluster analysis is the minimum of either the sample size (n=141) or the number of items used for clustering (i=4). Thus, the number of strategy groups must be four or less. In order to determine the appropriate number of groups, an indicator of stress is used: in this case, the average minimum absolute distance of all firms to the cluster means for those solutions which converged. The stress levels for each number of clusters follows: (a) for two groups: d2=2.45, (b) for three groups: d3=2.23, and (c) for four groups: d4=2.08. Therefore, as all solutions converged, the appropriate number of strategy groups, based on minimum distance, is four. Assigning each firm to strategy groups, based on minimum distances to the cluster means, results in the following number of firms within the strategic orientations: 26% are Prospectors (35/133), 26% are Analyzers (35/133), 18% are Reactors (24/133), and 29% are Defenders.

In justifying the measurement of the strategic orientation of the firms, it was noted that not all firms would perfectly match the theoretical definitions. To determine if the clustering method results in valid classifications, it is necessary to profile and describe each of the four strategy groups on the four items used to cluster, the dichotomies. Table 1 shows the strategy profile of each group for the clustering variables. As indicated, Prospectors are aggressive/focused/reactive/doers (A-F-R-D), as expected. Analyzers are aggressive/focused/planners/thinkers (A-F-P-T), as expected. Reactors are passive/unfocused/reactive/thinkers (P-U-R-T), as expected. Finally, Defenders are passive/focused/planners/doers (P-F-P-D), showing one dimension not as expected. Defenders were

expected to be thinkers, not doers. However, the rest of the profile is as expected. Note also, that the primary characteristic for each group is also the highest rating or second highest for each variable. Therefore, the clustering scheme appears to classify firms into the appropriate groups, offering a valid indicator of strategic orientation.

Table 1: Strategic Group/Cluster Means

ITEMS / STRATOR	Pros	Anal	Reac	Defe	average
s1: Passive-Aggressive	5.6 A	5.9 A	2.7 P	4.4 P	4.8 A
s2: Unfocused-Focused	5.5 F	6.4 F	4.3 U	5.5 F	5.5 F
s3. Planner-Reactor	5.5 R	2.9 P	5.2 R	2.5 P	3.9 P
s4. Doer-Thinker	4.5 D	5.9 T	4.7 T	3.9 D	4.7 T

Structural configuration (STRUCFN) is measured initially by sixteen items designed to determine the relevant dimensions, including structural formalization, integration, centralization, and complexity. Then, the configuration indictor used in the analysis is derived from these four dimensional measures. The firms' structural dimensions are measured using a scale ranging from [1] strongly disagree to [7] strongly agree. Respondents are asked to circle the number which best describes their firms' decision making structure in regards to questions such as: "decision making is highly controlled", "many hierarchical levels exist", and "policies exist for most decisions". The sixteen original items which comprise the structural dimensions measures are subjected to a factor analysis using principal axis factoring followed by a varimax rotation. One of the items was eliminated due to not loading on a single factor. The analysis resulted in four components which explain 67.5% of the original variance: (1) formalization - four items, (2) centralization - four items, (3) structural complexity - four items, and (4) integration - three items. Summated scales are used for each of the four components. Reliabilities are as follows: .799 for formalization, .742 for integration, .841 for centralization, and .771 for complexity.

A median split is used to divide each of the four structural components into high and low categories in order to arrive at the structural configuration (STRUCFN) indicator, which includes three groups: (i) *High-Structure*, (ii) *Low-Structure*, and (iii) *Mixed-Structure*. Thus, each of the useable respondent firms is now classified as having either relatively high or low levels of formalization, high or low levels of integration, high or low levels of centralization, and high or low levels of complexity. The structural configuration indicator (STRUCFN) is then derived in the following manner. Firms which exhibit high levels across *all* of the structural dimensions are categorized as High-Structure (10.6%, 14/133). Firms which exhibit low levels across *all* of the structural dimensions are categorized as Low-Structure (9.8%, 13/133). Firms which exhibit inconsistent levels across the structural dimensions are categorized as Mixed-Structure (79.7%, 106/133).

Organizational performance includes two perceptual indicators: (i) *perceived share and profits* (PPERF), and (ii) *perceived adaptability* (PADAPT). It is accepted that performance includes at least three conceptual areas: profitability, market share, and adaptability (c.f. Rueckert et al 1985). Plus, the use of perceptual measures helps to overcome the problems associated with accounting measures, while providing a valid indicator that oftentimes correlates with accounting information (Venkatraman & Ramanujam 1986, Varadarajan 1986, Rueckert et al 1985, Keats & Hitt 1988, Frazier & Howell 1983).

Seven items indicative of performance are included with a scale ranging from [1] terrible to [7] excellent. Respondents are asked to circle the number which best describes their perceptions of the firm's performance over the past year. The seven items are: (1) profitability vs our potential, (2) growth of profitability, (3) market share vs our potential, (4) growth of market share, (5) adapting to changing environment, (6) adapting to competitive activities, and (7) adapting to customer needs. A factor analysis is then performed using principal axis factoring followed by a varimax rotation. The analysis resulted in two dimensions, as expected, which explain 68% of the original variance. Summated scales are used for the components to make the overall indicators used in the analyses. The reliabilities, using coefficient alpha, are .895 for perceived performance (PPERF) and .846 for perceived adaptability (PADAPT).

Two control variables are included in the analyses. The first, *Environmental Dynamism & Heterogeneity* (EHEDY), is included as a proxy for external influences on the firm and its performance. The environmental construct is described as the amount of change occurring in an industry environment or the level of variability present (Miller 1988; Achrol et al 1983). The respondents are asked to evaluate their perceptions of the environment on a scale from [1] strongly disagree to [7] strongly agree across six items representing heterogeneity and dynamism. A factor analysis using principal axis factoring followed by a varimax rotation is performed. Two of the factors do not load on a single factor and are discarded. The remaining items load on one dimension explaining 41% of the original variance. A summated scale is constructed for EHEDY with a reliability of .697 using coefficient alpha. The second control, *Firm Size* (NUM), is included as a proxy for organizational characteristics (c.f. Hall et al 1967). The number of employees is used as the indicator and the information is acquired simply by asking the respondents to write the estimated number of employees of their firm. The number of employees of the responding firms ranges from approximately four to ten thousand and shows an average of 448.6.

ANALYSIS/RESULTS

First, to investigate which of the structural configurations is implemented by the strategic types, a cross-tabulation is performed. This is shown in Table 2. The Chi-square test statistic reveals an insignificant relationship between strategy and structure types (p=.09). Thus, there are no significant tendencies for specific strategy types to implement specific structural configurations or vice versa.

Table 2: Strategic Orientation vs. Structural Configuration				
STRATOR / STRUCFN	Low	Mixed	High	Total
*P*rospector	3	25	7	35
*A*nalyzer	1	29	5	35
*R*eactor	4	19	1	24
*D*efender	5	33	1	39
Total	13	106	14	133
$x^2 = 10.26$, p = .09				

Next, to investigate the impact of the main factors on performance, the general linear model is utilized to perform univariate analyses of covariance. Table 3 reveals this analysis regarding perceived performance (PPERF). As noted in the table, the analysis shows a significant impact on performance (p=.01), explaining about twelve percent of the adjusted variance. Neither the structural configuration (STRUCFN), the firm size (SIZE), the environment (EHEDY), nor the interaction of strategy and structure significantly influences performance. However, the Miles and Snow strategic orientation (STRATOR) exhibits a main effect (p=.01). Post-hoc tests using least-squared differences reveals that Analyzer firms are the highest performers, being significantly better overall performers than Prospectors (p=.00), Reactors (p=.00), and Defenders (p=.04). Note that the order of strategy types on perceived performance (PPERF) is Analyzer, followed by Prospector and Defender, then Reactor.

Table 3: Regression with Perceptual Performance (PPERF)					
variable	SSq	df	F	Sig	Finding
corrected model	577.47	13	2.37	.01	significant
intercept	1190.48	1	63.5	.00	
NUM	4.76	1	0.25	.62	
EHEDY	30.33	1	1.62	.21	
STRATOR	229.36	3	4.08	.01	A>P,R,D
STRUCFN	19.45	2	0.52	.59	
STRATOR*STRUCFN	112.75	6	1.00	.43	
error	2173.77	116			
total	46323.56	130			
corrected total	2751.25	129			
Adjusted $R^2 = .121$					

Regarding performance adaptability (PADAPT), Table 4 reveals this analysis. As noted in the table, the analysis shows a significant impact of the predictors on profits (p=.01), explaining about eleven percent of the adjusted variance. Neither the structural configuration (STRUCFN), the firm size (SIZE), nor the interaction of strategy and structure significantly influences performance. However, the environment (EHEDY) exhibits a moderate positive impact (p=.06) on adaptability and also the Miles and Snow strategic orientation (STRATOR) exhibits a main effect (p=.05). Post-hoc tests using least-squared differences reveal that both Analyzer (p=.01) and Defender (p=.04) firms are better adapters than Reactor firms. Note that the order of strategy types on perceived adaptability (PADAPT) is Analyzer, followed by Defender and Prospector, then Reactor.

Table 4: Regression with Perceptual Adaptability (PADAPT)

Vvariable	SSq	df	F	Sig	Finding
corrected model	414.99	13	2.32	.01	significant
intercept	1594.31	1	115.8	.00	
NUM	25.93	1	1.88	.17	
EHEDY	50.49	1	3.67	.06	(+)
STRATOR	107.02	3	2.59	.05	A,D>R
STRUCFN	14.42	2	0.52	.59	
STRATOR*STRUCFN	71.15	6	0.86	.53	
error	1610.51	117			
total	62759.56	131			
corrected total	2025.51	130			
Adjusted R^2 = .117					

DISCUSSION/IMPLICATIONS

The study is attempting to answer a number of questions. First, do firms with different strategic orientations (Miles & Snow: STRATOR) implement different structural configurations (Low, Mixed, High: STRUCFN)? Second, which of strategic orientation, structural configuration, or their interaction is more relevant to performance and in what ways? Finally, are the effects of these strategic variables the same for both overall performance and adaptability?

The statistics reveal that industrial firms utilize a variety of strategic orientations, but the Reactor firms are the smallest in number while Defender firms the largest in number. Also, most firms implement a mixed-structural configuration, rather than being consistent across the structural dimensions. The study finds no tendency of specific strategic orientations to be associated with specific

structural configurations. Also, no evidence is provided to support that fit or interaction of strategy with structure leads to improved performance, contrary to what might be expected (c.f. Zefrane 1989, Miller 1988). Thus, it is the main effects of the factors themselves, and maybe others not included, which are relevant. So, regardless of the strategy, a firm can implement either a consistent or mixed structural configuration without an overall performance penalty. However, the best strategy for overall performance (a mixture of profits and share) and adaptability appears to be the Analyzer firms.

It is not surprising that the Reactor firms are the smallest in number, as theory suggests they are the least desirable strategy (c.f. Miles and Snow 1978). Reactors are suggested to be the lowest performers and thus the most likely to terminate the business. This study shows that Reactors are continuing to survive, but that they are the lowest performers and the worst adapters of the four groups. This might explain the smaller number of Reactor firms. The large number of Defender firms may be explained as derived from the appeal of a relatively safe, focused strategy. However, the analysis suggests that Defenders are not the highest overall performers, but are good adapters. Companies looking for higher performance may want to implement an Analyzer strategy, the best overall performer and the best overall adapter. Within these industrial companies, the Prospector firms are not significantly great performers. Their overall performance is not significantly higher than Defenders or Reactors, even though it was second highest. Plus, Prospectors, while in the middle of the order, do not seem to be great adapters either. It might be expected that adaptability would lead to better overall performance, even though this was not tested in the study. However, of the two best adapters, only Analyzer firms show higher levels of overall performance, as the Defender firms do not. Therefore, it must be other factors that impact overall performance, other than adaptability, which are critical.

The strategy profiles might explain the performance differences among the strategy groups. Since there are many commonalities among the strategies on the four main dimensions used to cluster the firms, this may also not lead to a conclusion. Analyzer firms, the highest performers, are characterized as Aggressive-Focused-Passive-Thinkers, while Reactors, the lowest performers, are characterized as Passive-Unfocused-Reactive-Thinkers. Three of the four strategic dimensions are different, with both Reactors and Analyzers classified as Thinkers. Thinkers are firms which take time to make decisions, rather than quickly taking action. However, since Thinking is basically a delay in decision-making, an argument could be made that it might be either a positive or a negative impact on performance. However, it is easy to see how Aggressive-Focused-Planners are better performers than Passive-Unfocused-Reactors.

To test this premise, the authors now correlated the four strategy dimensions with overall performance. This additional analysis shows that three of the strategy dimensions are significantly and positively related to overall performance: Passive-Aggressive ($p=.001$), Unfocused-Focused ($p=.002$), and Doer-Thinker ($p=.000$). Thus, it may be that Analyzers are the best performers because they are aggressive, focused, and thinkers. In fact, maybe the remaining Reactors are still in business because they are Thinkers, rather than Doers. Following this line of thought, the weakness in the Prospector strategy appears to be that they are Doers, rather than Reactives which is not significantly related to

overall performance. Prospectors may rush into decisions which turn out to be ill-advised, rather than taking more time to think about the decision. This time delay associated with Thinkers may actually be a buffer towards bad, impetuous decisions. Defenders, while not poor performers should be better, since they are good adapters. But the weakness in the Defender strategy appears to be their Passive stance, a characteristic common to both Analyzers and Prospectors. This lack of motivation or action towards new opportunities seems to be holding Defenders back. Similarly, Reactors should be able to improve performance by altering their strategic profile to be more aggressive or more focused.

For similar reasons, the authors now also correlated the strategy dimensions with adaptability. Again, the same three strategy dimensions are significantly and positively related to adaptability: Passive-Aggressive (p=.000), Unfocused-Focused (p=.000), and Doer-Thinker (p=.056). Thus, the same argument as above holds for Analyzers and Reactors: Analyzers are adaptive due to their aggressiveness, focused approach, and thoughtful approach to decision making, while Reactors could improve adaptability by altering their strategic profile to be more aggressive or more focused. But, Defenders are also good adapters, which is surprising because of their Passive classification. An additional difference between Defenders and Reactors is that Defenders are Doers and not Thinkers. Prospectors, which are slightly less Doer than Defenders, are in the middle regarding adaptability. However, Analyzers are the highest level Thinker firms. So maybe the critical element for adaptability is really to be focused. It may be that focused firms are more knowledgeable and better able to adapt than less focused firms.

Thus, the recommendations are straightforward here. It is not necessary, at least in these industrial firms, to fit the structure to the strategy so much as it is to implement the correct strategy. Additionally, it may be possible to improve performance by altering strategy to be more aggressive or more focused and to take time to make sure the strategy is correct.

CONCLUSIONS/LIMITATIONS

The authors investigated the structural configurations implemented by the firms classified by the Miles & Snow strategic orientation. The study finds that strategic orientations implemented by firms are not associated with the types of structural configurations used, nor do the interactions of strategy and structure have an impact on overall performance or firm adaptability. The authors show that it is the strategic orientation, rather than the structural configuration of firms, which are relevant to overall performance and also to adaptability. If looking for a 'best' strategy for industrial firms, then it appears that the Analyzers are the most appropriate, being the highest performers in both overall performance and adaptability. However, it may be possible for other strategic types to improve performance by altering their strategy profiles to be more aggressive, more focused, more thoughtful or time-consuming when implementing decisions.

Caution should be used when generalizing this study to other firms, whether in products or services industries. A major limitation might be the single-shot measurement of strategy. Hatten et al

(2004) find that the effects of strategies evolve over time and that it is the implementation of the strategy which is truly important, rather than the classification of the strategic type. Additionally, one is cautioned about applying the conclusions to international venues, outside of the USA. Stremersch and Tellis (2004) suggest that successful strategies differ from country to country. Thus, repetition across regions and cultures might offer new insights. Finally, it is possible that objective or other indicators of performance may lead to different results than those used here (c.f. Kirca et al 2005). Future studies might investigate these relationships in other types of products industries or in the services area to further test the findings. Any future studies might also look at other control variables or other strategies.

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FAILING TO LEARN FROM FAILURE: AN EXPLORATORY STUDY OF CORPORATE ENTREPRENEURSHIP OUTCOMES

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ABSTRACT

Firms that are able to react and respond to today's dynamic environment through market, process and product innovations—also called Corporate Entrepreneurship (CE) —are better able to gain and sustain a competitive advantage. In fact, business strategy can be described as a firm's "theory of competitive advantage" or a set of hypotheses about the firm's competencies and their relationship to external factors. This implies that CE initiatives can be thought of as "tests" of the firm's strategic "theory-in-use." Thus an innovation that is aligned with a firm's strategy and is successful confirms the existing strategy; an unsuccessful innovation indicates a change in strategy may be needed. In this paper we examine 54 new product development projects and assessed whether they were successful, whether they aligned with the business strategy, and whether the strategy was subsequently modified. We found that successful projects aligned with strategy did indeed confirm the strategy, but unsuccessful projects resulted in strategy modifications only 38% of the time. The lack of strategy modification when projects are unsuccessful indicates that firms are not learning as much as they might from their failures.

INTRODUCTION

In today's dynamic environment, static firms are not likely to endure. Rather, companies must adapt to their environments' varying conditions, react to their competitors' actions, and respond to their customers' changing requirements. To be successful, organizations must find ways "to redefine or rejuvenate themselves, their positions within markets and industries, or the competitive arenas in which they compete" (Covin & Miles, 1999). Based on their particular situations, some firms favor sustained regeneration, which "support and encourage a continuous stream of new product introductions in current markets as well as entries with existing products into new markets" (Dess, Ireland, Zahra, Floyd, Janney and Lane, 2003: 354), while others engage in strategic renewal, in which "the firm is seeking to change how it competes" (Dess, et al. 2003: 355).

In the academic literature, these activities are generally aggregated under the terms intrapreneurship or, more recently, corporate entrepreneurship. Corporate entrepreneurship (CE), has been defined as the "formal and informal activities aimed at creating new business in established companies through product and process innovations and market developments…with the unifying objective of improving a company's competitive position and financial performance" (Zahra, 1991: 262). Research has found that CE initiatives can materially improve an existing organization's agility and are positively associated with financial performance (Zahra, 1991). Although these corporate entrepreneurship initiatives can "bubble-up" in informal, emergent manner from anywhere in the organization (Burgleman, 1983, Mintzberg & Waters, 1985), this study focused on the formal or deliberate entrepreneurial activities undertaken by existing firms to update or even radically change their strategy.

The underlying assumption of deliberate corporate entrepreneurship is that organization members—typically top managers—can accurately assess or predict what strategic changes are required by external events such as a new competitor entering its market space or the creation of a new technology. Importantly, deliberate CE also presumes that managers can accurately assess the implications of the outcomes that resulted from internal actions like successful implementation of a new process or the failed launch of a new product. Presumably, success would imply that the firm was on the right track, while failure would indicate a problem or issue.

Indeed, as Floyd and Lane (2000: 154) noted, "top management often must internalize, as part of the organizational knowledge base, information and initiatives that diverge from its view of strategy and must use these to shape new competencies." Thus, from this perspective, negative information—what doesn't work—is just as important to a dynamic concept of a firm's strategy as positive information—what does work. Negative information would imply a need to review an organization's assumptions or those "hypotheses" that form the basis for its strategy.

STRATEGIC MEANS AND ENDS

Indeed, some researchers have viewed strategy as a "theory-in-use," in that it is a "framework for critically understanding phenomena" and forms "a basis for considering how what is unknown might be organized" (Silverman, 2001: 4). It is comprised of "statement[s] of relationships between units observed or approximated in the empirical world" (Bacharach, 1989: 496), such that it "establishes the substantive meaning of constructs, variables and their linkages" (Bacharach, 1989: 501). By specifying a strategy, organization members are, in a way, constructing hypotheses as to what are the most appropriate ends for the organization given its environment, and which means will get them to the desired ends. Implied in the strategy is that reaching the specified ends using the right means will result in an overall successful outcome for the firm.

In the traditional, rational, top-down strategic planning model, top managers and their staff use formal planning tools to analyze data regarding internal resources and capabilities, external markets,

technologies, competitors and other environmental conditions. The results of these analyses are then used to determine the vision or "meaning" of the organization: why does the firm exist and how will it perpetuate itself? From this meaning, top managers derive an explicit, comprehensive, strategic plan, including specific "strategic ends," typically described by mission, goals, and objective statements (Brews & Hunt, 1999).

After top management disseminates the strategic ends, middle managers use the formal strategic ends as a mandate to drive the "strategic means." They determine what activities and initiatives will enable the firm to attain the desired outcomes. In the rational strategic planning model, middle managers analyze the firm's current ways of producing value for customers (e.g., processes and products) and any initiatives already underway. The current portfolio is compared to the desired one, and strategic gaps between the two are identified. Additional project ideas are then generated to address these issues. The intent is to construct a specific, well-balanced portfolio of initiatives that will address the firm's strategic ends within the context of available resources and capabilities (Baker, Green & Bean, 1986; Cooper, Edgett & Kleinschmidt, 1997).

Middle management's next step is to implement the plan through context management activities such as delegating decision-making authority (McDonough, 1986), structuring development activities (Olson, Walker & Ruekert, 1995), and allocating resources ENRef(e.g., Henderson & Cockburn, 1994; Ramanjam & Mensch , 1985). The latter activity is especially important, since the "allocation of resources to some [initiatives], and the denial of resources to others, is a key event or decision in the implementation of strategy" ENRef(Christensen & Bower , 1996: 215). Once again, there is an implicit assumption that the middle managers' portfolio and context management activities will lead to the appropriate strategic means, described as "the patterns of action which marshal/allocate organizational resources into postures that, once implemented, increase the probability of attaining organizational ends" (Brews & Hunt, 1999: 891).

Finally, the activities necessary to turn the planned CE into reality are typically performed by team members that represent the different functional backgrounds within the firm—such as research and development (R&D), marketing, sales, finance, engineering and other technical specialists—either sequentially or, preferably, in cross-functional teams ENRef(Brown & Eisenhardt, 1995). In some firms, the team is given an explicit contract or project charter with "deliverables," such as a launch date, a project budget and specific product attributes. Often formal tools, like project management techniques and Gantt charts, are used to plan project implementation, and are then subsequently used to track the team's progress.

At the project level, the link to strategy is mainly implicit, although at periodic points during the project, it may be formally assessed for its strategic fit. For example, Cooper et al. (1997) describe "strategic checks," which incorporate strategic criteria into initiative go/no-go decisions as a method that keeps projects aligned with the strategic plan. Thus team members will interpret the outcomes' implication for strategic means, but most likely from a functional or activity perspective. Team

members also have implicit assumptions; they assume that their implementation decisions—also a form of strategic means—will lead to the success of the resulting product or process.

Thus at the conclusion of an initiative, according to this "theory-in-use" view of strategy, organization members will assess its outcome--typically in terms of success or failure. Then they assess what that particular outcome implies for the validity of their assumptions regarding the firm's strategy. Successful projects that are considered aligned with the firm's existing strategy will affirm that the current strategy's means and ends are valid. Failed projects that are aligned with existing strategy, on the other hand, will raise the question that the current strategic goals or objectives (i.e., ends) might not fit with either the firm's environmental conditions or internal capabilities or that the firm's means of attaining these goals is flawed.

Hypothesis 1a: *When CE initiatives are perceived as aligned and successful, organization members will interpret that as a confirmation of the firm's strategy, and there will be no need for change.*

Hypothesis 1b: *When CE initiatives are perceived aligned but unsuccessful, organization members will interpret that as invalidating the firm's strategy, which will indicate a need for change to the firm's strategic means and/or ends.*

The reverse situation is expected when the project is deemed unaligned with strategy. In that case, if a project is successful, yet unaligned with the existing strategy, this is a clear signal that the strategy must be adjusted to accommodate the new initiative. If a project is unaligned with strategy and is also unsuccessful, this will serve as confirmation that the strategy is appropriate and needs no adjustment.

Hypothesis 2a: *When CE initiatives are perceived as unaligned yet successful, organization members will interpret that as invalidating the firm's strategy, which will indicate a need for change to the firm's strategic means and/or ends.*

Hypothesis 2b: *When CE initiatives are perceived as unaligned and unsuccessful, organization members will interpret that as a confirmation of the firm's strategy, and there will be no need for change.*

To review, in an analogous manner to experimental results and hypotheses, corporate entrepreneurship outcomes are implicitly considered "tests" of the firm's "theory-in-use" commonly

known as strategy. If the "test" is deemed accurate—i.e., the product is considered aligned with strategy—then a good outcome supports the strategy and a negative outcome refutes the strategy. The converse holds true when the outcome is not considered reflective of the intended strategy. The next section reviews how these hypotheses were tested, and describes the results. Finally, the limitations of this exploratory study are outlined, conclusions are drawn and suggestions for future research are made.

METHODS

As noted above, intrapreneurship or corporate entrepreneurship is composed of many activities including market, product and process development. To sharpen its focus, however, this research study investigated a subset of these CE initiatives, namely product development projects. This unit of analysis was selected for several reasons. First, most significant product development projects include elements of market and process development—like new manufacturing techniques, innovative distribution channels and equity-building marketing activities such as promotion and advertising. Second, new product development was a core competency for the firms that participated in the study; these companies are each known for their abilities in this arena. Finally, the firms had formal new product development processes in place, which made identifying deliberate entrepreneurial activities and the people involved in them easier to identify and track.

Over one-hundred interviews were conducted at multiple organizational levels—top, middle and project—within five strategic business units (SBUs) of a well-known consumer products company. To maintain confidentiality, these divisions are referred to here as Alpha, Beta, Gamma, Delta and Epsilon. The corporation that owned the SBUs was formed via a series of acquisitions over many decades; therefore, each unit had a different founder, a unique history and culture, and was run somewhat independently from corporate oversight. The firms used overlapping, but in some cases, quite different distribution channels and addressed different target markets. The manufacturing technologies they used ranged from traditional assembly line to batch manufacturing to continuous processing. So, despite their common corporate parent, these five operating companies varied significantly on a number of key organizational dimensions.

The pool of interviewees was also fairly diverse. For various reasons, not all respondents were asked or answered all the questions, so only ninety-two (92) of the interviews could be included in this particular analysis. Of these participants, twenty-two (22) were from Alpha, seventeen (17) came from Beta, eighteen (18) worked for Gamma, seventeen (17) were from Delta, and eighteen (18) were members of the Epsilon organization. Twenty-three (23) senior managers are represented in the sample, as well as twenty-five (25) middle managers, and forty-four (44) team members. The distribution of functional specialties in the sample is as follows: four (4) division presidents (i.e., general managers), thirty-four (34) worked in marketing, twenty-seven (27) were product developers or engineers, six (6) were in the sales department, sixteen (16) represented operations or logistics, and, finally, five (5) individuals were from finance.

The respondents were asked to discuss a completed initiative that they had worked on (the new product development project had to be completed so that the outcomes were known). These projects ranged in complexity from simple product improvements—sustained strategy regeneration—to radical new products that created new technologies and addressed new market segments—strategic renewal. Twenty-seven (27) of the projects were perceived to be successful and an equal number were judged unsuccessful; thirty-seven (37) projects were assessed as aligned with strategy when they ended, while seventeen (17) were deemed unaligned. Most projects had one respondent, but eighteen (18) of the initiatives had two or more.

The interviewees were asked to assess if the project was aligned with strategy when it was completed. They were also asked if the project was successful or not. Finally, they were asked if the project they were discussing impacted the firm's business strategy going forward (see APPENDIX 1 for interview excerpts). Therefore, the data represent the respondents' retrospective perceptions of the corporate entrepreneurship initiatives with which they had been involved.

RESULTS

The respondents' answers were coded by a trained, but independent research assistant who was not aware of the purpose of the study, nor the specific hypotheses to be tested. In particular, three factors were coded: did the respondent indicated that the project successful (yes-or-no), did the respondent judge that the project aligned with strategy when it was launched (yes-or-no), and did the respondent perceive that the project's outcome influenced strategy going forward (yes-or-no). All of the data are perceptual in nature, but, the success and failure assessments were corroborated where possible by documentary evidence (e.g., financial statements, continued market presence, business plans). In the rare cases where multiple respondents for a project disagreed, the majority opinion was used in the data analysis. In the extremely rare cases where there was a tie, the senior organizational member's perspective was used, since in these fairly hierarchical firms, top managers were considered "closer" to the strategy.

Table 1: Summary of Hypothesis Results.

Hypothesis	# responses	% supporting
H1a (aligned + success = confirmation)	43	72%
H1b (aligned + failure = modification)	13	38%
H2a (unaligned + success = modification)	0	n/a
H2b (unaligned + failure = confirmation)	37	51%

As Table 1, above, indicates, simple descriptive statistics were used to explore the data in relation to the hypotheses presented above. Given the exploratory nature of the study and the

retrospective, perceptual nature of the data, this approach was deemed the most appropriate. A sophisticated analysis using cutting-edge statistical techniques would not be warranted. The results are discussed the sections that follow.

HYPOTHESIS 1A

Not surprisingly, and in support of Hypothesis 1a, which proposed that aligned and successful CE initiatives will confirm strategy, most organization members did not indicate that strategy had changed when the initiative was considered aligned with business strategy and its outcome was considered a success. In seventy-two percent (72%) of those cases, respondents indicated the project had simply confirmed that the strategy was "on track." For example, a senior marketing manager of Beta company noted: "[the project] just reinforced what we did going in" (Interview 037) and a mid-level Marketing manager from Epsilon noted, "the strategy was pretty clear…it was the place to go for growth. It made sense since we already had a [large] share of the market in [product x]. So we'd still approach the strategy the same way" (Interview 051). This supports the concept of business strategy as being a "theory of competitive advantage," where the projects are analogous to experiments run to test the validity of implicit hypotheses underlying that theory.

A majority of the 28% who indicated the project did influence strategy (and were therefore coded as not supporting the hypothesis) spoke of the changes as enhancing current strategic means and ends, rather than materially changing or redirecting them. Organization members spoke of changing the weightings of future investments, broadening their perception of the product category, being more focused on process issues, and being more open to similar ideas. For instance, the president of Beta noted: "Yes. [The project] has [changed strategy]. I'm going to be more…willing to look at growth initiatives in categories and businesses that might not seem appropriate. But a good idea, well executed, leveraging a core competence can really make a difference even in categories where you can't naturally compete well" (Interview 043).

To summarize, in general, product development related corporate entrepreneurship initiatives that were considered successful and were perceived as aligned with strategy, are consistent with the implicit theories underlying current strategy. In other words, aligned, successful projects appeared to confirm strategic ends and means in the minds of organization members. Therefore, Hypothesis 1a is supported.

HYPOTHESIS 1B

Thirteen (13) interviews satisfied the conditions for hypothesis 1b—the project was considered aligned with strategy yet failed. However, respondents in eight of these cases or seventy-two percent (72%) indicated that strategy did not change as a result. Of those interviewees that made clarifying comments, most indicated that they still felt that the strategy was correct, like this quote from an Epsilon

team member representing Operations: "It makes sense; it's the right thing to do" (Interview 111). In another example, a marketing team member from Beta said, "I'd say that the business strategy employed was the right strategy; the thinking that led up to it was the right approach" (Interview 047).

Only five or thirty-eight percent (38%) of the respondents indicated that the strategy was modified as a result of their focal project's outcomes. In fact, of those respondents that did indicate that the strategy changed, and made clarifying comments, all of them focused on the changes to the *means* of strategy not the ends. Senior managers tended to highlight mistakes made regarding portfolio issues (a part of implementation or means), such as this comment by a senior sales executive from Alpha: "What we did was, we put so many resources against this concept, we threw so many advertising dollars and people resources against this project, that we reduced emphasis on other areas" (Interview 067). Team members also focused on modifications to the strategic means, rather than strategic ends, like this comment by a product developer from Beta: "Here's another product…that sounds good in concept, and we're going to spend a bunch of money bringing out because everyone thinks it's a great idea. But, let's be careful with how we bring it out" (Interview 099).

Thus, overall, Hypothesis 1b is not supported. Thinking of strategy as a "theory of competitive advantage," would imply that a failure would cast the strategy—either the means or ends or both—in doubt. However, it seems that this occurs only for a small minority of organization members. Even then, the failure of an aligned project only persuaded organization members that a modification of strategic means was called for. It rarely caused them to examine strategic ends. Thus, at least in the eyes of these respondents, strategic ends are entrenched and only some of the strategic means are amenable to change. Of course, given that the sample size is quite small—only thirteen projects—this conclusion can only be considered preliminary.

HYPOTHESIS 2A

Unfortunately, none of the interviews in the usable sample met the requirements necessary to test Hypothesis 2a. In other words, no interviewees discussed a project that was considered unaligned with strategy yet was also considered successful. Therefore, no conclusions can be drawn regarding this particular hypothesis, except perhaps that there may be some assumption on the part of organization members that successful projects must somehow be aligned with strategy, otherwise they would not have been successful. This, of course, is pure conjecture, but would be a very interesting topic for a future study.

HYPOTHESIS 2B

Thirty-seven (37) interviews in the data set met the conditions necessary to test this hypothesis—respondents in these cases spoke of unaligned projects that they considered unsuccessful. Here, however, the data are inconclusive. Nineteen, or roughly half (51%), of these interviewees

reported that the strategy changed after the initiative's failure, as was predicted by the hypothesis, but a significant minority (eighteen or 49%) of the interviewees responded to the contrary in regards to their particular projects.

Therefore, projects that are perceived as unaligned seem to send ambiguous messages to organization members. Given the equivocal "design" of the product development "experiment," organization members cannot be sure if the lack of alignment is due to poor strategic ends, improperly implemented strategic means, or both, or even some other extraneous factor. Unlike real experiments, firms rarely if ever have control groups or control factors in their strategic experiments, thus it can be very difficult, if not impossible, to determine causality.

Given that causality is difficult to determine, we further analyzed the data. We wanted to see if those respondents who indicated that strategy changed as result of the failed initiative, focused more on the strategic means or the strategic ends. Strategic means are more immediate and more concrete than strategic ends, so would seem to be more salient. Indeed, of the nineteen (19) respondents that perceived a change in strategy after the failure—i.e., supported the hypothesis, fifteen (15) or seventy-nine percent (79%) reported subsequent changes in the firm's strategic means. For example, a senior finance executive from Alpha, noted: "We came back and course-corrected. Not our desire to have new products [in this area—i.e., the ends], but what's the right mix of those new products from close in line extensions to new trademarks and to new technology [i.e., the means]" (Interview 042). Of the three (3) senior managers in this subset—arguably those who would be closest to the strategic ends—two (2) indicated that the means had been modified, and only one indicated the ends had changed. Given senior management's alleged focus on strategic ends, this finding, while it cannot claim to be significant, is interesting.

As noted above, however, a significant minority of the data did not support Hypothesis 2b. Eighteen (18) respondents in this category, in which initiatives were considered unaligned and unsuccessful, indicated that neither the strategic ends nor means changed due to these disappointing outcomes. Given the unexpected findings, we did the same finer-grained means/ends analysis of the available data (unfortunately, eight respondents did not elaborate on their assessments). We also assessed if the participant's location in the organizational hierarchy had any correlation with the responses.

Of those that did explain their conclusions, six (6) indicated that the strategic means were the reason the product was unsuccessful, and four (4) indicated that the strategic ends were to blame. One might reasonably suspect that the means versus ends explanation stemmed from the interviewees' particular hierarchical perspective: as noted above, senior managers typically focus on strategic ends, while middle managers and team members focus on the means of attaining these goals. However, a closer inspection of the data does not reveal a hierarchical pattern to the responses as might be predicted by the top-down processes used in these firms (see Table 2 below).

Table 2: Respondents' Perceptions of Strategy Changes Due to Unaligned Failed Initiative			
Hierarchical Level	Means	Ends	Total
Senior	2	0	2
Middle	2	2	4
Team	2	4	4
Total	6	4	10

Thus, the data, even when viewed from a more fine-grained perspective, are equivocal. Given the small numbers of respondents, especially within each category, it is difficult to draw definitive conclusions or even surface possible explanations for the anomalies. Therefore, Hypothesis 2b is not supported.

DISCUSSION

Overall, there was mixed support for the hypotheses. Despite the widely held analogy of strategy as a "theory-in-use" or as a "theory of competitive advantage" and product development related-CE initiatives as "tests" of the underlying relationships outlined in that theory, the data only supported the supposition that aligned projects that were successful were generally viewed as confirming existing strategic means and ends. The other hypotheses were not supported.

Given these surprising results we explored two additional, alternative explanations for what we observed. The results of this supplemental analysis are reported below. We speculated that the results might be (1) due to poor strategy specification on the part of the operating companies or (2) due to extreme stability in the industry, which would have a dampening effect on any attempts to modify existing strategy.

First, the surprising results might occur if the firms were not very good at specifying strategic ends and means. If the overall strategy was vague, organization members might have difficulty assessing the meaning of CE initiative outcomes. To assess this, we examined the strategic plans of all five strategic business units. The documentary evidence indicated that these five strategic business units have strong means and ends specificity, which is defined as having "many ends…developed for [the] firm and formally documented in the strategy formation process, including a statement of firm mission/purpose, and specification of strategic objectives/goals for different areas of the firm" (Brews & Hunt, 1999: 909). In the operating companies' business plans, the ends are clearly defined and labeled as strategic objectives, such as "deliver solid financial performance through organic [i.e., internal] growth" (Document 012: 4).

Likewise, the strategic means were also explicitly defined. "The firm has a carefully developed, comprehensive strategic plan, detailing on a step-by-step basis a number of specific actions and programs the firm is implementing, or will implement in order to achieve it objectives, and thus

accomplish its ends" (Brews & Hunt, 1999: 911). In these companies, for example, in the strategic plans, the ends were diagrammatically connected, through several levels, to specific initiatives like "address quality issues" and "leverage package innovation" (Document 012: 7).

The explicit means and ends were widely disseminated through out the divisions using several methods. The means and ends were communicated in person (e.g., managers explained the strategy to subordinates face-to-face; presidents held town hall meetings; strategy was discussed at CE initiative status meetings). Lower-level organization members also attended "strategy training" workshops. In addition, hard copies of the written strategic plans were distributed to all company employees at the level of manager and above.

Therefore, we conclude that the strategic means and ends in these operating companies were fairly well specified. In addition, the strategic means and ends were widely dissemination throughout the organizations. Given these conclusions, a lack of such specificity does not seem to be a reasonable explanation for the unexpected patterns in the data.

Second, another possible explanation for the findings may stem from the strength of industry forces. Brews and Hunt (1999: 906), after analyzing their data, concluded that, "in the case of ends, as environmental instability grows so does flexibility." Thus, if the environment was extremely stable, changes in means or ends—i.e., strategic flexibility—would be difficult to attain: too many environmental forces would be in place to reinforce current practices.

An independent analysis of the firms' environments (not cited here to protect the firms' and the respondents' confidentiality) revealed that the companies were operating in what is called "mature/unstable" environments. Their industries had been fairly stable in the past, but were now facing new entrants, mergers and acquisitions, intense industry rationalization, significant increases in customer power, and major technological changes, all destabilizing forces (Brews & Hunt, 1999: 894). Therefore it is unlikely that these industry factors have served as a "drag" on the rate of strategic change in these strategic business units.

Given that these two possible alternative explanations of the surprising findings are not likely, future research should investigate other possible causes. The data used in this study were retrospective and perceptual. Longitudinal studies that combine both subjective and objective data would help eliminate the possibility that the unexpected findings were due to respondent biases, halo effects and other "noise" in the data. In addition, conducting studies in non-consumer products companies (e.g., firms in high-technology, capital intensive or services industries) would improve the generalizability of the results. Finally, controlling for other factors, such as internal communication flows, project post-audits, and political agendas may shed additional light on this important topic.

IMPLICATIONS

When formulating strategic plans, managers rely on assumptions and "theories in use" regarding the relationship between means and ends. Having specific ends and means gives these managers a

frame of reference with which to interpret or make sense of the results. In other words, managers can use the plan to make sense of the environmental clues they receive from various new product development initiatives. Thus, instead of simply "implementing" strategic plans, entrepreneurial firms should be focused on "testing" both strategic ends and means. This shift is more than semantics; if one simply implements a plan, a failure automatically implies that the implementation was faulty. However, if one focuses on testing the plan, failure must then be interpreted as a call to find the source of the problem: was it the wrong ends, the wrong means, or the wrong relationship between the two?

These findings have significant implications for corporate entrepreneurship. It is a widely held assumption that investing in entrepreneurial activities enables firms to modify their strategies in response to environmental changes, competitive threats or changes in customer needs. This implies that the results from these initiatives are seamlessly integrated into a continually evolving theory of the firm's competitive advantage. However, the findings presented here are more in line with the concept of core rigidities (Leonard-Barton, 1992), especially since it does not appear that industry stability is constraining the potential for strategic change. In these firms, many past projects were aligned and successful, which reinforced the validity of the organization's prevailing strategy. When contrary evidence invalidates the firm's strategy, however, those years of supporting evidence may form an ingrained "wisdom" that is quite difficult to overcome.

Few would argue, given today's dynamic environment, against the notion that firms must continually update and improve their competitive advantages; and to do so they must continually update, renew and rejuvenate their strategy. This study indicates, however, that this process is quite difficult. Corporate entrepreneurship requires that people think beyond current conditions. It means that the firm's current strategy must serve as a springboard to future competencies, not as a straightjacket binding firms to its current activities, products and processes. Only a conscientious effort to fully integrate the learning that stems from corporate entrepreneurship initiative outcomes, both successes and failures, will fully enable this process.

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APPENDIX 1A
Interview Excerpts
Initiatives Perceived as Aligned Successes (Hypothesis 1a)

Interview #	*Did what was learned from this project influence strategy going forward?*	*Strategy Changed?*	*Focus of Comments*
066	No, from the standpoint of pointing to something that worked and again getting those lessons learned as to what worked and what didn't work. I think it just broadened our depth of understanding.	no	means
029	Probably not because [this product] was one where [the president] just said point blank, we're going to do this thing. She had a gut feeling. We fast tracked it, and we had we spent probably 50% more resources on the project then we really needed.	no	means
037	...it just reinforced what we did going in.	no	means
024	We said you know what? We've got a brand that is growing faster than [the competitor] does right now. So I think if nothing else it was a huge confidence builder for us. You don't need tons of money for advertising, but here's a case where it's a great product. We all got behind it and the consumer as the judge says you guys are doing the right thing. Not only do we think we can be the leaders in [this market segment], but now we are.	no	ends
117	Just again, in the fact that they would consider [products like this one].	no	means
116	No. Again, to be quite honest, I don't see the strategy changing for years. And the other piece that you do from a strategy -- from an advertising standpoint is you write a positioning statement. The positioning statement we've written is also evolutionary, so that it doesn't have to change, either, over time.	no	ends
046	No.	no	nd
048	No. No. The only thing that could happen with business strategy is [this objective] could get more integrated. It's interesting, because again, I read all the plans, two years ago I never saw the word customer, and I never saw the word [distribution] channel. You read a plan today and it's all over the plans. So that's been an impact.	no	ends
041	It's possible that if we waited and over analyzed, we would have lost an opportunity in the market. So sometimes you just have to strike, now. This is a clear example of strike, get the thing out there, get a success, and then we'll worry about margin improvement later. And the learnings here are: I think it's more important to establish the business, and then worry about having opportunities to fix it later.	no	means
073	No	no	nd
055	I don't think so. And this just fits; it supports that strategy of the new product category.	no	ends
090	No.	no	nd
105	I don't know. Probably not. I think through every project I'm hoping that the [marketing] team and senior management learn from what that project did as far as from start to finish and how it's doing on shelf.	no	means
081	No.	no	nd
051	No, because I think the strategy was pretty clear. Like I said, it was set a while back, and it was the place to go for growth. It made sense since we already had a [large] share of the market in [product x]. So I think we'd still approach the strategy the same way.	no	ends

APPENDIX 1A
Interview Excerpts
Initiatives Perceived as Aligned Successes (Hypothesis 1a)

Interview #	*Did what was learned from this project influence strategy going forward?*	*Strategy Changed?*	*Focus of Comments*
063	I don't think so. The process for business strategies, I would say in all cases, is pretty strong: cross-functional leaders from each area, meeting regularly, going through business strategies, and resource allocations. It's a pretty good process for setting those strategies. So I don't think that this new opportunity would change that.	no	means
085	I wouldn't think this would.	no	nd
087	No.	no	nd
045	You would hope that you realize that all brands need to have some type of focus. But I don't know if it truly will affect it.	no	means
021	Not really, but I think actually this particular project was a good example of how business strategy has changed over the past couple years in terms of doing things much more or planning much more proactively.	no	means
100	No	no	nd
115	No. No. Sorry.	no	nd
102	It's not going to because every brand has its own marketing people and they do their best that they can do so they can get promoted and everything else. That became like hey, listen, I want to do something with [product x], let's do this. I don't think it would affect that.	no	means
103	No. I don't think so. I think it fit well within the strategy. It delivered what it was supposed to deliver. So the problem was more the execution. The strategy was sound.	no	means
120	No. It's pretty much been the same, very directed for the last five years.	no	ends
059	No. Because [the competitor] came out to the marketplace, so it almost became more of a defensive posture: get another new product out there to dominate the shelf. So it was less of a extending the line, as much as it was protecting the shelf.	no	means
027	I think we achieved what we were supposed to according to the business strategy of growing our [product] presence, or our category.	no	ends
061	I don't think so. I don't see it having an impact. Just being more open to alliances, trying to build value for our customers. To me it just reinforces that. The way in which you deliver that value might change a little bit. But that essential component of the strategy remains unchanged.	no	means
083	No. I think, once again, probably a little bit to the extent that have a better understanding as far as what type of opportunity we're talking about.	no	means
084	No.	no	nd
072	I think more often than not because of the rushed pace, we just tend to fall back into the same old patterns.	no	means
043	Yes. I think it has. I'm going to be more…willing to look at growth initiatives in categories and businesses that might not seem appropriate. But a good idea, well executed, leveraging a core competence can really make a difference even in categories where you can't naturally compete well.	yes	means

APPENDIX 1A
Interview Excerpts
Initiatives Perceived as Aligned Successes (Hypothesis 1a)

Interview #	*Did what was learned from this project influence strategy going forward?*	*Strategy Changed?*	*Focus of Comments*
054	Yes, I think it is a wonderful case study in following the business strategy. And the business strategy was maintain [one area], grow [another area]. Pretty simple. The weighting may have changed a little bit. We're probably more, today, spending more money on [the growth area], because it's a bigger part of our business than we did previously. But that's, the fine tuning that goes on, as we get that marketplace, that dynamism that we talked about earlier, from the marketplace feedback coming back to us.	yes	ends
036	It allows you to think more broadly in your strategies, and then if you start, as you said, if you start standing for [a product category] then what can you do next, as opposed to if you stand for [a product type] you can do something different. So, it can broaden your possibilities.	yes	ends
070	I think one of the things we've talked about coming out of this is that we need to work more closely with [Alpha] on setting volumes and living with those volumes. And we're undergoing a similar challenge right now in [project y], another very hot product. And so that's an on-going challenge, versus how do you accurately forecast with really hot high-demand products?	yes	means
074	Yeah. I think it will. As [middle] managers sit down to plan for their [projects], that they consider the fact that once again, the potential for this [product line] to gain more exposure extends beyond just the traditional [distribution channels].	yes	means
069	It's much easier [now] to get a project [approved] if you [as the customer] and I together have said, you know, this is what you're going to buy, and you'd like it and we like it, and we can do it. [The customers] have driven the business in a way that when you go to them we're asking, what do you want? More of a partner relationship and not so much, this is all we have.	yes	means
013	Traditionally the, the [product] group had, for the last fifty years, just did me-too little introductions of new things. There wasn't anything that was truly breakthrough. I don't think that anybody thought there was anything break-through to go after. I think that by doing this and being successful that it opened the doors to try do a lot of other new products using technologies that we don't use. So I think it helped with making some of the strategies a little more blue-sky that what they would have done in the past.	yes	ends
065	The only thing is it really added the importance of [manufacturing] trials, and things like that. Operationally, it raised the awareness of that is an area that when you're doing something like this, outside of your norm, that you really need to pay specific attention to. So I don't think it changes it as much as it kind of adds the fact that you really need to be focused there.	yes	means
039	Only as far as where the pendulum is. When you come off a successful project, then everything is euphoric and you're expecting more successes. If you come off of some less than stellar introduction, then the pendulum may swing the other way and you're more concerned about risk.	yes	means

APPENDIX 1A
Interview Excerpts
Initiatives Perceived as Aligned Successes (Hypothesis 1a)

Interview #	*Did what was learned from this project influence strategy going forward?*	*Strategy Changed?*	*Focus of Comments*
093	Yeah, I think lessons learned from here--like testing the product with the concept--is going to be taken, at least by the group of people involved in this, to heart for the next couple of years... Everybody is now realizing the importance of having a strategy, and getting more people involved the first time.	yes	means
079	We need to look at it from a capital perspective. If there are dollars out there and we're going to stay in the [x] business, maybe we need to look at becoming more contained and more buttoned up in how we do the application.	yes	means
076	For [this product line], I think it will. Yeah. They saw it was something that worked well.	yes	means

APPENDIX 1B
Interview Excerpts
Initiatives Perceived as Aligned Failures (Hypothesis 1b)

Interview #	*Did what was learned from this project influence strategy going forward?*	*Strategy Changed?*	*Focus of Comments*
067	Only to the extent that we are clear on what products actually deliver against the strategy, because what we did was, we put so many resources against this concept, we threw so many advertising dollars and people resources against this project, that we reduced emphasis on other areas. So we essentially violated some of the principles of our strategies, because those other areas were important to the strategy, because we threw all our eggs here.	yes	means
044	Yes, but I'm not sure this project will [modify our objectives] as much as having someone taking an overview look at how we're incorporating the product development into an integrated [products] company. When things were done on a business by business basis, we tend not to look at things across the businesses so it's not this project as much as this project may be the result of, as opposed to a precursor to, a change in how we think about business strategy.	yes	means
099	To some degree. We spent a lot of time talking about that, what did we learn? I mean, here's another product that's coming on that sounds good in concept, and we're going to spend a bunch of money bringing out because everyone thinks it's a great idea. But, let's be careful with how we bring it out. If you get a real winner out there down the road and you want to put it [a different format], go out and spend another $x and get that for you, but let's see if the stuff sells first for this amount of money.	yes	means
097	I think the way the structure is nowadays, there's more focus on the individual businesses. People have ownership. I guess about all I can say is between what happened then and how it operates now is…people are aware of the new product process. There was a lot of shooting from the hip [x years] years ago.	yes	means
075	I think back to the upfront stuff. You know, assessing whether it really is an opportunity. Because you know what? Maybe we could have focused on, we though this was a big opportunity and in the end it wasn't, and maybe there was another thing that we could have focused on that was bigger. And maybe that wasn't a new product; maybe that was just spending time on your core business and promoting that was a better use of time and money.	yes	means
060	No. I don't think it changed the strategy.	no	nd
057	Probably not. Each brand has their own way of doing things. Actually, it's more appropriate to say that each vice president responsible for those brands has a different way of doing things. And that's been part of the problem and part of the challenges with these brands. We get new VPs every year. And every year, business strategy changes, and how we implement them change. So no. It's going to change with the executive management [not due to project learning]..	no	means
114	No.	no	nd
108	I don't think so.	no	nd

APPENDIX 1B
Interview Excerpts
Initiatives Perceived as Aligned Failures (Hypothesis 1b)

Interview #	*Did what was learned from this project influence strategy going forward?*	*Strategy Changed?*	*Focus of Comments*
047	No. I'd say that the business strategy employed was the right strategy, the thinking that led up to it was the right approach. If anything, it's probably one of our examples, that looked at the business strategy portion, as well as any process in how to do something right.	no	ends
062	No.	no	?
095	Not much. They follow their procedures and the procedures work well.	no	means
111	Again, it makes sense, it's the right thing to do. You need to support [the project] financially, [with] promotions and such. But also, don't neglect your base business, which is probably why some of this is being discontinued now, because the base business is neglected. So create your growth and new products, but also not miss the fact that you have people buying [the base product], you can't forget that.	no	means

APPENDIX 2B
Interview Excerpts
Initiatives Perceived as Unaligned Failures (Hypothesis 2b)

Interview #	*Did what was learned from this project influence strategy going forward?*	*Strategy Changed?*	*Focus of Comments*
042	Yeah, it did. Actually, we came back and course corrected. Not our desire to have new products, but what's the right mix of those new products from close in line extensions to new, to new trademarks and to new technology.	yes	means
033	Each failure makes you gun shy. Frankly, the fact that it didn't work and we walked from it so quickly now leaves us without a strategy in the business, which is a major hole, both in the new product plan, but even more importantly in the business strategy, because if not that, I'm not sure what we're going to do in that segment.	yes	ends
017	Not necessarily only as a result of [this project], but in part, are kind of rethinking our whole [category] strategy, which is not to say that we don't want to play, but we're rethinking how we're going to play, how is it appropriate for us to play? What kind of products are we going to go after or not go after?	yes	means
026	Hopefully it will help us be more outwardly focused than inwardly focused, because it all started from, well we have a marketplace gap, it had nothing to do with does the consumer care if there's another [product like this]. It's easy to try and pick off and say well, we don't have a share of this segment so let's go after it.	yes	ends
096	Yeah, I would say setting priorities in the right way. In other words, don't set a priority in the absence of other opportunities or priorities. And I think that's where this one, if it were held up to the standard of how it would compete against other concepts, if we had them, it might not have been number one priority.	yes	means
058	I don't know. Sometimes, I think we're not as rigorous as we could be. I mean, I do hear people saying, oh, we don't want to make that mistake again. If it's another [product x], we can't do that. It's a [product x]. Don't go there. But I think there is still more opportunity.	yes	means
077	Again, I think that they'll be mindful to say: We don't want to do another [product x]. There is an opportunity in the [Gamma] business to develop a strategy around how you go to market. Do you grab a [distribution channel "c"] national opportunity...or do you go after more the steady [distribution channel "d"] volume. And/or do a balance of the two. And we addressed all that in conversations with [project x]. We bid on [a distribution channel "c" customer]; they went with [a competitor] instead and we said: Oh, we'll just do this instead.	yes	means
092	It has to have some impact. I'm guessing somebody higher up knows why it didn't do well. So, [strategy] has to change...in resource allocation if it's not doing well, or move our resources elsewhere.	yes	means
050	If you try to put [this project] into the [product x] mold, it doesn't fit. Because to get into a [different format], you're just you're going further away from what you know. And some of the challenges that we ran into will have an impact on how [Epsilon] develops its strategy. But I don't think it will have, because it's got to be different and you have to go somewhere different with that business. So it will impact that, but I don't think it will change the overall [straetegy].	yes	means

APPENDIX 2B
Interview Excerpts
Initiatives Perceived as Unaligned Failures (Hypothesis 2b)

Interview #	*Did what was learned from this project influence strategy going forward?*	*Strategy Changed?*	*Focus of Comments*
078	I think so. You know, again, our [product lines] have lifecycles like anything else, and you might have something that's so classic like a [product x] that never gets faded, but we need to make sure that we're introducing items when they're at the peak, or when they're on the upswing of -- of the brand's cycle.	yes	means
064	Well, I think, one, perhaps just developing more realistic time lines, and that this might have been a case where we had thought that, say [a product x] rather than a whole line of [products], that a single entity, that it might have been better to, year one, get that product into various places to test. And then year two [later], be selling something that could demand more of a premium price, rather than being in this basically commodity kind of product line.	yes	means
022	[Alpha] will go out great guns and get the product out there and [then] doesn't support it. Doesn't give it the resources and then it dies a slow death. If you have the mindset this is a good product, this is a good strategy, let's get it out there, but we need to support it. Then projects have a better chance of succeeding.	yes	means
014	But again, from a business standpoint, it's fine enough for an R&D person to say we need to think out of the box, and come up with new ideas, but there must be a lot of financial resources kept aside for these types of things. And in this current marketplace that's tough to do, with the pressures of Wall Street...	yes	means
122	Not the strategy just the implementation and execution of it.	yes	means
112	We were in jeopardy of not meeting our commitments, the whole company was in pain together. So I would say even the business folks saw that . I mean, it had to be a lesson for everybody.	yes	ends
086	Yeah. I think the whole -- when [the new CEO] came in he just changed the whole business strategy.	yes	ends
104	The learning will change the strategy: to not try to do [product category x products] or small [projects] or things like that and focus on other things.	yes	means
107	I think so for the same reason. At the end, when the group disbanded, we all recognized the problems that we had encountered. Some of was out of our control, but obviously to a great extent we were being somewhat reactionary to things happening in the marketplace and unfocused from a leadership standpoint, and we would all resolve to approach that differently.	yes	means
089	What may come out of it is that in terms of the consumer's mind, that we want to make sure that all of our brands are differentiated. I don't know that we could differentiate it from the competition. Just more and more line extensions and stuff that doesn't really, in the consumer's mind, change the way that they think about your brand at all.	yes	means
049	I don't think so, no. We feel comfortable with [the strategy].	no	nd
116a	No.	no	nd

APPENDIX 2B
Interview Excerpts
Initiatives Perceived as Unaligned Failures (Hypothesis 2b)

Interview #	*Did what was learned from this project influence strategy going forward?*	*Strategy Changed?*	*Focus of Comments*
080	I don't think so. Because that the idea was a good idea. And if it had worked, we'd be sitting pretty -- not that we'd be resting on our laurels, but we'd have some laurels we could rest on if we so choose. Or at least point to.	no	means
053	It was probably on strategy. So no, it probably won't. We were probably on strategy, it was just technically too difficult to do. Throughout the entire company, marketing [managers] changes so often that the only people that have history are the technical people. And generally, they're not listened to enough on what they've seen, what we've been through, and stuff like that. So it's a constant re-education process. As new people come in, we try to share with them what we've seen, what we've done, to help them through it. But there's no formal transfer of history or knowledge, within the market organization. So it's a problem.	no	means
088	No.	no	nd
031	Only that it will only continue to help reinforce why we need to have some of that [process] discipline.	no	means
028	No, because I think the strategy of [achieving certain overall objectives] was already an established strategy.	no	ends
019	No.	no	nd
052	No. Our strategy has always been, and will be in the foreseeable future, [company goal]. Until we see that there's no more upside.	no	ends
091	No. I think it should. Just a little bit more research, or due diligence up front. We saw something we thought could be revolutionary, and it still probably will be. But the time factor is not what we anticipated.	no	means
035	The strategy was great. I don't think anybody would argue with the strategy. The strategy was head on. We need to compete; we needed to have a big idea, it's got to be $x plus, it's got to be incremental to the category. The strategy is very sound.	no	ends
101	I don't think it will.	no	nd
032	No, because we did in-depth analyses and everyone was on board with how we had done the research to understand what the strategy was. So you still have to go through those steps. I mean it's not like we left a stone unturned.	no	ends
098	No.	no	nd
040	No, I don't think so. It's very entrepreneurial, and you figure out a way of making that strategy work to be successful, and that's a good business practice.	no	means
071	I don't think so.	no	nd
082	No. I don't think it will. No. Because our strategy will stay right on course. Execution needs to be a little bit better, but strategically we're right in line.	no	means
113	No. No. I don't; not significantly.	no	nd