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## SBU STRATEGY AND PERFORMANCE: THE MODERATING EFFECTS OF THE CORPORATE-SBU RELATIONSHIP

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*This study suggests that the link between an SBU strategy and performance is moderated by the SBU's relationship with corporate management. Information processing arguments suggest that this relationship, typically characterized by general measures of centralization, has been inappropriately conceptualized in prior research. An alternative view, one that considers which decisions and activities should be controlled by the individual SBU, is proposed and tested. The results of a study of 496 SBUs indicate that SBU performance is enhanced when: (1) SBUs with an external strategic orientation control environmental monitoring activities and strategic decision analysis, and (2) SBUs with an intraorganizational orientation control those activities relating to operations. Weaker SBU performance is associated with SBU control over those functions and activities not central to the SBU's business strategy. Therefore, it is suggested that the corporate-SBU relationship can either facilitate or inhibit the implementation of the SBU's intended strategy.*

### INTRODUCTION

A sizeable strategic management literature has focused on the relationship between the firm's corporate office and its SBUs (Berg, 1965, 1969; Pitts, 1976, 1977; Lorsch and Allen, 1973; Allen, 1978). The focus of this research has typically been on the role of corporate strategy in determining the most appropriate corporate-SBU relationships. Recently, several studies (Govindarajan, 1986, 1988; Gupta, 1987; White, 1986) have raised the following question: 'Should companies employ different degrees of decentralization depending on the strategy of the individual SBU?' (Govindarajan, 1986:844). These more contemporary studies, and the present one, are concerned with how the link between an SBU's strategy and its performance is moderated by the SBU's relationship with corporate management.

**Key words:** Business strategy, corporate-SBU relationship, strategy implementation.

All of this research is based on the premise that an SBU's particular distinctive competence, resource needs, and information processing requirements pose unique control and design demands that must be accommodated by the corporate-SBU relationship.

Of significance, previous investigators of the corporate-SBU relationship have failed to differentiate between the *kinds* of functions (e.g. marketing, production, purchasing) and activities (e.g. strategic planning) that should be in the purview of the individual SBU. In contrast, the present paper theorizes that the SBU ought to: (1) control those functions and activities most central to its strategy, and (2) avoid controlling, or devoting significant resources to, those functions and activities which are not central to its strategy. It will be argued that previous researchers have misconceptualized the determinants of functional and dysfunctional corporate-SBU relations. Therefore, the aim of this study is to provide a new understanding of

the corporate-SBU relationship, and to test the assertion, using a sample of 496 SBUs, that SBU strategy must be considered in designing that relationship.

## THEORY DEVELOPMENT

### **Business strategy and the corporate-SBU relationship**

Among other things, an SBU's strategy determines both the nature of its product-market environment(s), and the competencies required to implement its intended strategy. These requisite competencies include functional talents (Hitt, Ireland, and Palia, 1982) and information processing capacity (Galbraith and Kazanjian, 1986). With regard to the latter, the information processing perspective suggests that the organization's information processing system (in the form of hierarchical relationships and standard operating procedures) must be capable of accommodating both the variability and the uncertainty of the subunits' product-market environments (Duncan, 1972; Galbraith and Kazanjian, 1986). Therefore, under conditions of low variability and uncertainty, decision making should be centralized to maximize intrafirm coordination and minimize redundancies. In contrast, under conditions of high variability and uncertainty, decision making authority should be relatively decentralized in order to facilitate timely and appropriate local decision making.

The information processing arguments above are similar to those made by Govindarajan (1986, 1988), Gupta (1987), and White (1986), each of whom predicts that the SBU's strategy determines the most appropriate relationship between the corporate office and the SBU. These authors posit that, all other things equal, SBU performance will be maximized when decision making authority is decentralized under: (1) conditions of high environmental uncertainty facing the SBU, and/or (2) when the SBU's production technologies are nonroutine. This, they propose, results from corporate management's inability to adequately respond to local environmental exigencies. While the premise of the above arguments is not disputed here, it is argued that existing theories of the corporate-SBU relationship have not fully realized the power of the information processing perspective. This is because past researchers have

neglected to consider the centralization construct with respect to those particular decisions and activities which are theoretically associated with the SBU's strategy. That is, they have failed to ask the fundamental question: Decentralization of what activities?<sup>1</sup> It is, therefore, not surprising that previous research has concluded that '...from the perspective of strategic context, decentralization is not a highly salient design variable' (Gupta, 1987:495). It is suggested below that such a conclusion is thus far premature.

### **An alternative view**

Imagine two SBUs, both part of the same firm. The first is a Prospector and has an externally oriented strategy (Miles and Snow, 1978). The Prospector continually searches for untapped or emerging market opportunities, and requires relatively great freedom (unconstrained by corporate dictates) to enter and leave markets in a timely fashion. This in turn poses considerable and *unique* information processing requirements for the Prospector and its relationship with corporate management. In comparison, the second SBU is a Defender and has a singular orientation; its managers 'devote primary attention to improving the efficiency of their existing operations' (Miles and Snow, 1978:29). The uncertainty characterizing the Defender's strategic behavior is associated more with its throughput technologies than with its markets. Like the Prospector, the Defender also has unique information processing requirements, but the substance of these requirements differs from those of the Prospector. Thus, while market awareness and responsiveness are the distinctive characteristics most essential to the Prospector, the Defender's success turns on an internal focus, and specifically, on achieving operating efficiencies.<sup>2</sup>

It should be emphasized that the above comments, in sharp contrast to arguments offered by others (Govindarajan, 1986, 1988; Gupta, 1987; White, 1986), do not imply that the

<sup>1</sup> For example, White (1986) created an aggregate measure of centralization from items which elicited the degree of centralization characterizing a variety of diverse functions (e.g. marketing, R&D, among others).

<sup>2</sup> One could make similar arguments using other familiar strategic typologies (cf. Porter, 1980) based on the requisite capabilities of each strategic type.

Prospector requires great control over all types of activities and decisions; nor is it suggested that the Defender abdicate all influence to corporate management. Rather, it is suggested here that any SBU strategy is facilitated by any relationship between the SBU and the corporate office which permits the SBU to control those activities most central to its strategy.

Also at odds with previous work, it is posited that the SBU is well served by giving relatively little attention to activities which are not fundamental to its strategy. The logic for this proposition flows from arguments about distinctive competencies. These arguments indicate that SBUs are likely to be relatively weak in those functional areas on which their strategies are not dependent (Andrews, 1971; Hitt *et al.*, 1982; Porter, 1980). For instance, Miles and Snow observed that while the Prospector may be especially able to respond to rapid changes in its environment (e.g. changes in consumer preferences), '...because of the need for flexibility in all of its operations, the Prospector seldom attains the efficiency necessary to reap maximum economic benefits from any of its chosen markets' (1978:58). In contrast, the Defender is likely to be weak, relative to either the Prospector or Analyzer, in its environmental monitoring capabilities. Again, the Defender's strengths lie in its ability to pursue operating efficiencies.

Given these observations, and the reality of limited resources (managerial and financial) available to the firm, it generally would be advantageous to the SBU if management were to devote relatively little attention to those activities which are not central to its strategy. Thus, such activities should be either centralized (recognizing the administrative burden possibly created for corporate management), or simply given minimal (but sufficient) attention by SBU management. Accordingly, not only can those competencies necessary for an SBU's success be identified *ex ante*, but also, so can its low priority activities.

Following the reasoning above, Miles and Snow's observation that 'the Defender and the Prospector reside at opposite ends of a continuum. . . Between these two extremes, we have observed a third type of organization called the Analyzer' (1978:68), and the likelihood that the Prospector may initially seek profitability by

way of increased market share (Miles and Snow, 1978), it is predicted that:

*Hypothesis 1A: Greater decentralization of key marketing decisions and activities will be more positively associated with profitability for the Prospector than for the Analyzer, and more for the Analyzer than for the Defender.*

*Hypothesis 1B: Greater decentralization of key marketing decisions and activities will be more positively associated with market share for the Prospector than for the Analyzer, and more for the Analyzer than for the Defender.*

and

*Hypothesis 2A: Greater decentralization of decisions and activities associated with cost reductions will be more positively associated with profitability for the Defender than for the Analyzer, and more for the Analyzer than for the Prospector.*

*Hypothesis 2B: Greater decentralization of decisions and activities associated with cost reductions will be more positively associated with market share for the Defender than for the Analyzer, and more for the Analyzer than for the Prospector.*

With respect to the strategic decision making process, it was implicitly suggested in earlier research (Gupta, 1987) that there exists a relationship between control of this process and SBU strategy. Unfortunately, Gupta (1987) was unable to directly investigate the nature of this relationship because his single measure of control over long-range strategic planning was combined with a measure indicating who dominated the annual-budget process. Despite this, he argued that the degree of centralization characterizing the strategic decision making process is likely to affect the SBU's ability to adequately respond to its environment, and to do so in a timely fashion. That is, the importance to the SBU of controlling, or not controlling, the strategic decision making process is expected to vary by SBU strategy. This argument is consistent with the logic articulated in the present paper.

For example, the Prospector by definition operates in relatively dynamic environments and

searches for unexplored market opportunities. Because of its entrepreneurial nature, and its likely inefficiencies relative to the Defender and Analyzer, the Prospector's success depends largely on its ability to: (1) identify or create future markets, and (2) exploit first (or nearly first) mover advantages. This ability in turn rests in part on the Prospector's control over its strategic planning process *vis-à-vis* corporate management. In contrast, because the Defender tends to concentrate more on intraorganizational activities (e.g. cost control and technological refinements), failing to be proactive in strategic decision analysis is less likely to affect organizational performance. Thus, the relationship between control over the strategic decision making process and SBU performance (both profitability and market share) is predicted to be moderated by SBU strategy:

*Hypothesis 3A: Greater decentralization of the strategic decision making process will be more positively associated with profitability for the Prospector than for the Analyzer, and more for the Analyzer than for the Defender.*

*Hypothesis 3B: Greater decentralization of the strategic decision making process will be more positively associated with market share for the Prospector than for the Analyzer, and more for the Analyzer than for the Defender.*

## METHODOLOGY

### Overview

Questionnaire instruments were administered to the CEOs of 570 primary care hospitals located in 45 states. Eighty six percent of the hospitals were investor-owned, and the remaining 14 percent were private, not-for-profit organizations<sup>3</sup>. Each hospital was owned by one of the eight multihospital corporations participating in the study. Among the hospital and other service

<sup>3</sup> Given the increasing need to reduce costs and generate new revenues in this industry, the distinction between for-profit and not-for-profit hospitals has blurred. As a precaution, however, the analyses were performed with and without the not-for-profit hospitals. The analyses and results indicate no noteworthy differences between the full and partial sample.

industries (e.g. insurance, hospitality, and banking and financial services), it is common for there to be relatively little activity across SBUs. Therefore, while all of the SBUs operate in the same industry, they are essentially horizontally independent. It should also be noted that the hospital industry was one of the four industries from which Miles and Snow derived their strategic typology. Thus, this typology is especially appropriate for categorizing hospital strategies.

### Data

Both primary and secondary data were used in testing the predictions. A survey instrument was administered to the hospital CEO, with an 87 percent response rate ( $N = 496$ ). The CEO identified: the degree of centralization of several distinct functions and activities; SBU strategy; and SBU profitability and market share for 15 services chosen by the researcher in consultation with industry experts. There are a number of advantages to using the CEO as a key informant (Seidler, 1974). For instance, the CEO is typically most familiar with and responsible for the firm's strategy and the strategy formulation process (Mintzberg, 1978, 1985). Additionally, the use of the CEO as respondent is consistent with Hambrick's (1981) finding that compared to other executives in the firm, the CEO's perceptions of the firm's strategy are more closely aligned to external measures of strategy. Secondary data were also used to validate many of the measures.

### Measures

In accordance with the hypotheses, three centralization indices were constructed.

#### *Centralization of Environmental Monitoring*

Based on previous research using the Miles and Snow typology (Hambrick, 1983; Snow and Hrebinak, 1980), the centralization of environmental monitoring activities (i.e. those activities expected to be most important to the Prospector) was measured with a four-item index. The CEO was asked to indicate who was responsible for the following activities:

1. Assessing national trends.
2. Assessing local demographics and trends.

3. Analyzing your competitors.
4. Providing market research for your division.<sup>4</sup>

Responses were reported on a 3-point scale ('3' corporate office; '2' regional/divisional office; and '1' individual division). For all measures, the 'no one' option was available to the respondent. An index was created that represented the summed responses for the four items. Thus, for this measure, as well as for the other centralization measures, a higher score indicates greater centralization than a lower score.

#### *Centralization of Operational Activities*

Following the suggestion that the Defender's success is largely a function of its ability to control operational decisions and activities, a five-item index was constructed which indicated who participated most in:

1. Deciding to decrease the number of nursing hours provided per patient day at an individual hospital.
2. Deciding when individual hospital budget variances are significant enough for corrective action to be taken.
3. Evaluating individual division CEO performance.
4. Designing compensation and incentive systems to support the plans.
5. Monitoring performance against the strategic plan.

Items one through three were measured on a six-point scale ('6' corporate board; '5' corporate management; '4' regional management; '3' division board; '2' division CEO; and '1' individuals below the division CEO). Items four and five were measured using the same three point scale described above. To ensure comparability across the five items, the Z-score transformation of each of the five items was obtained and these five values were summed for each of the cases (Ghiselli, Campbell and Zedeck, 1981).

<sup>4</sup> In this industry, hospitals are commonly referred to as divisions, rather than SBUs. Thus, the former term was used for purposes of the survey instrument.

#### *Centralization of the Strategic Planning Process*

With respect to the strategic planning process, the CEO was asked to assign a score of '3' (most involved), '2' (second most involved), '1' (third most involved), or '0' (not involved) to the individuals involved in:

1. Initiating the strategic planning process at your division.
2. Formulating the strategic plan at your division.
3. Granting final approval of your division's strategic plan.

Each of the possible decision makers was assigned a weight ('3' corporate office; '2' regional office; '1' division) which was multiplied by the CEO's responses. These values were then summed for each of the three processes, and these sums were added for each case.

The three centralization indices were partially validated by examining the relationship between centralization and the size of the corporations. Based on several empirical examinations of this relationship (Blau, 1973; Meyer, 1972; Hall, Hass and Johnson, 1967) it was expected that a negative association between organization size and centralization would be observed. Supporting the validity of the three centralization measures, Table 1 reveals a statistically significant negative association between each of the indices and the number of SBUs in each of the eight corporations ( $p \leq 0.001$ ).

#### *SBU strategy*

SBU strategies were categorized using the widely recognized procedure developed by Miles and Snow (1978), and subsequently adopted by Snow and Hrebiniak (1980) and Hambrick (1981). The CEO was presented with four characterizations of the strategic types (labelled Hospitals A through D) and was asked to indicate to which of the strategic types was the division most similar (see Appendix). The scale was designed such that a score of '1' represented a greater similarity to Hospital A (Defender), '7' to Hospital C (Prospector), and the midpoint to Hospital B (Analyzer). Similarity to Hospital D (Reactor) was indicated by a score of '0' (the Reactors were excluded from the analyses due to their lack of a consistent strategy).

Conceptually, the main advantage of characterizing the SBU strategy along a continuum is that in practice, organizations are likely to exhibit a strategy that is more or less similar to one of the types (Snow and Hrebiniak, 1980). Moreover, the Analyzer's strategy is essentially a dual-strategy; its behavior resembles the Defender for some product markets, and the Prospector for others (Miles and Snow, 1978). Thus, as opposed to a noncontinuous nominal measure, the continuous scale avoids the loss of relevant information by allowing the respondent greater freedom in characterizing the organization.

As Venkatraman and Grant (1986) note, the use of one-item scales raises a serious concern regarding construct validity. To address this concern in this study, the strategy measure was validated by determining the measure's predictive ability to differentiate between strategy types based on the number of diversified services actually offered by each hospital over several time periods. Using both the same data set as the present study and archival data from the American Hospital Association, Shortell and Zajac (1990) report generally strong support for the discriminant validity of the CEO's strategy typing. Among their findings, the authors show that Prospectors (as reported by the CEOs) were more likely than Defenders to: (1) devote greater resources to new services and new market development strategies, (2) offer a greater number of diversified services in the current period, and (3) offer a greater number of diversified services during the most recent 3 years. These findings were statistically significant at the 0.05 level or greater, and were consistent with the Miles and Snow typology.<sup>5</sup>

#### *Control measures*

Both the number of SBUs in a system and SBU size were expected to be correlated with SBU performance and centralization, so these are controlled for. Based on previous research in the hospital industry (cf. Shortell, Morrison and Friedman, 1990), SBU size is operationalized as the number of hospital beds in each SBU.

<sup>5</sup> Using multiple methods and multiple data sources (e.g. American Hospital Association data) over two time periods, Shortell and Zajac (1990) received support for 24 of 26 tests of discriminant validity for the single-item strategy scale.

#### *Performance*

As indicated in the hypotheses, two indicators of SBU performance were considered necessary to test the theoretical arguments. Since market share might precede profitability for the Prospector in emerging markets (Miles and Snow, 1978), the hypotheses are tested using both SBU profitability and market share as the dependent variables.

Measures of profitability and market share for 15 major inpatient and outpatient services were provided by senior management at each hospital, typically by the CEO in conjunction with the CFO. As a result of the diversity of accounting practices across the sample of hospitals, profit margin data for each of the 15 services were unobtainable. Instead, general measures of profitability were used for each of the 15 services. The CEO indicated the current profitability for the 15 services on a three-point likert-type scale ('1' not profitable; '2' operating revenues > operating expenses by between 1 and 10 percent; and '3' operating revenues > operating expenses by greater than 10 percent). Thus, it was possible to construct a variable measuring the overall profitability of the 15 services for each hospital. This measure was validated for a subsample of the hospitals for which complete and reliable profit margin data were available ( $p \leq 0.001$ ).

Market share was measured for each of the 15 services on a five-point likert-type scale. The scale ranged from '1' (much less than other providers; at least one other provider has 1.5 times or greater market share than we have) to '5' (much more than other providers; we have 1.5 times or greater market share than any other providers). A response category was also provided for those services which the hospital did not offer. The response for each value was multiplied by the number of hospitals in its local market area (i.e. likely competitors); these data were obtained from the hospital industry's Area Resource File. The adjustment for the number of potential competitors is necessary due to an idiosyncrasy of the service sector, and the hospital industry in particular. Unlike the manufacturing sector in which a firm's products can potentially be transported to distant markets, healthcare services can only be consumed near the hospital. Thus, the number of proximate competitors determines in part whether a particular market

Table 1. Variable descriptives and zero-order correlations

	Mean	SD	2	3	4	5	6	7	8	9	10	11
1. CNTEM	6.23	1.53	0.23***	0.33***	-0.03	0.57***	0.23***	0.18***	-0.27***	-0.05	-0.07*	0.03
2. CNTO	0.04	2.81	0.38***	0.07*	0.20***	0.96***	0.31***	-0.22***	-0.02	-0.09**	-0.05	
3. CNTSP	28.20	8.17		0.04	0.24***	0.38***	0.69***	-0.23***	0.08*	0.05	0.09**	
4. S	4.55	1.47			0.78***	0.04	0.71***	-0.04	0.18***	0.13**	0.24***	
5. CNTEM×S	29.06	11.46				0.19***	0.68***	-0.20***	0.11**	0.01	0.19***	
6. CNTO×S	0.34	13.91					0.31***	-0.19***	-0.02	-0.08*	0.01	
7. CNTSP×S	130.45	56.32						-0.22***	0.17***	0.09**	0.22***	
8. N	243.41	148.31							-0.10**	0.13***	0.13***	
9. I	152.35	117.55								0.12**	-0.01	
10. PRFT	2.11	0.47									0.19***	
11. MS	1.21	0.07										
		N=344										

\*\*\* p < 0.001; \*\* p < 0.05; \* p < 0.10. CNTEM = Centralization of environmental monitoring; CNTO = Centralization of operational activities; CNTSP = Centralization of the strategic planning process; S = SBU strategy; N = Number of SBUs in corporation; I = Size of SBU; PRFT = SBU profit; MS = SBU market share.

share value is to be considered relatively high or low. To mitigate the effects of outliers in the sample due to the adjustment for competitors (Drazin and Van de Ven, 1985), the log transformation of the 15 responses was used in calculating the measure as the mean of the log transformed scores for the 15 services. Descriptive statistics and the zero-order correlations for each of the measures are presented in Table 1.

### Analysis

The earlier theoretical discussion suggested that the corporate-SBU relationship moderates the link between strategy and performance. Following the arguments of Southwood (1978) and Schoonhoven (1981), a moderating effect is indicated by the statistical significance of a multiplicative interaction term (*Strategy*  $\times$  *Centralization*) above and beyond the statistical significance of its constituent parts (*Strategy* and *Centralization*) in a hierarchical, or stepwise, multiple regression equation. Conceptually, this model can be represented by the equation:

$$Y = a + b_1 C + b_2 S + b_3 CS + b_4 N + b_5 I + e \quad (1)$$

where

*Y* = Performance

*C* = Centralization

*S* = Strategy

*N* = Number of SBUs in the corporation

*I* = Size of SBU.

When *b*<sub>3</sub> in the above regression equation is significant, the corporate-SBU relationship is said to moderate the association between strategy and SBU performance (Schoonhoven, 1981).

As Dewar and Werbal (1979) and Drazin and Van de Ven (1985) note, there are potential statistical estimation problems associated with the multicollinearity inherent in the multiplicative interaction term. However, multicollinearity is not problematic in this study since the test of the hypotheses requires only a test of the unstandardized coefficients *b*<sub>3</sub>, and not the main-effects coefficients *b*<sub>1</sub> and *b*<sub>2</sub> which are uninterpretable in these analyses, and for which no predictions were made (see Allison, 1977; Arnold, 1982; Sharma, Durand and Gur-Arie, 1981; Venkatraman, 1988). It should be noted,

however, that high multicollinearity reduces the likelihood of observing a statistically significant relationship between the interaction term and the performance variable. Thus, this analytic technique provides a relatively conservative test of the hypotheses.

While the statistical significance of *b*<sub>3</sub> indicates partial support for the hypotheses, it is necessary to proceed to a second stage of the analyses to interpret the form and direction of the relationship between the centralization variables and the measures of SBU performance, over the range of the strategy variable (see Schoonhoven, 1981:376-377) for a detailed explanation of this technique). Whether this relationship is monotonic or nonmonotonic can be determined from the partial derivative of equation (1) over the centralization measure:

$$d P/d C = b_1 + b_3 S \quad (2)$$

## RESULTS

To reiterate, the hypotheses posit that the relationship between SBU strategy and performance (profitability and market share) is moderated by the degree of centralization characterizing environmental monitoring functions (Hypotheses 1A and 1B, respectively), operational decisions (Hypotheses 2A and 2B, respectively), and strategic planning (Hypotheses 3A and 3B, respectively). Table 2 shows the results of the stepwise regression analyses for each of the six hypotheses. The interaction term is shown to be statistically significant in every case other than Hypothesis 2A. With this exception, the multiplicative interaction term significantly contributes to the variance explained *above and beyond* the strategy, centralization, and control measures. The results therefore indicate preliminary statistical support for five of the six hypotheses. The next step in the analyses is the determination of the form of the relationships.

### Centralization of environmental monitoring functions

The test of Hypothesis 1A addresses the relationship between profitability (PRFT) and the centralization of key environmental monitoring and marketing functions (CNTEM), for different

Table 2. Regression coefficients of centralization and division strategy on performance

Hypothesis	CNTEM	S	CNTEM×S	N	I	Constant	R <sup>2</sup>	F	ΔR <sup>2</sup>	F	N
<b>1A</b> [D.V.=PRFT]	0.006*** (0.017)	0.037* (0.017)	0.001** (0.001)	1.810 (0.151)	0.04	4.32***					354
	0.212*** (0.046)	0.343*** (0.063)	-0.049*** (0.010)	0.001* (0.001)	0.507 (0.296)	0.10	8.81***	0.06	25.56***	354	
<b>1B</b> [D.V.=MS]	0.003* (0.033)	0.087** (0.034)	0.001 (0.001)	0.001*** (0.001)	-0.810 (0.302)	0.15	17.38***				354
	0.193* (0.094)	0.355** (0.129)	-0.043* (0.020)	-0.001 (0.001)	0.001*** (0.001)	-1.950 (0.606)	0.18	14.98***	0.03	4.67***	354
<b>Hypothesis</b>	<b>CNTO</b>	<b>S</b>	<b>CNTO×S</b>	<b>N</b>	<b>I</b>	<b>Constant</b>	<b>R<sup>2</sup></b>	<b>F</b>	<b>ΔR<sup>2</sup></b>	<b>F</b>	<b>N</b>
<b>2A</b> [D.V.=PRFT]	-0.010 (0.009)	0.039* (0.017)	0.001** (0.001)	0.001* (0.001)	1.773 (0.091)	0.04	4.78***				365
	-0.025 (0.031)	0.040* (0.017)	0.003 (0.006)	0.001* (0.001)	0.001* (0.001)	1.771 (0.091)	0.04	3.87***	0	0.24	365
<b>2B</b> [D.V.=MS]	-0.199** (0.064)	0.087** (0.033)	0.045*** (0.075)	0.001 (0.001)	0.003*** (0.001)	-0.787 (0.181)	0.16	17.92***			365
	-0.215*** (0.061)	0.075* (0.033)	0.045*** (0.012)	0.001 (0.001)	0.003*** (0.001)	-0.755 (0.179)	0.19	17.52***	0.03	13.85***	365
<b>Hypothesis</b>	<b>CNTSP</b>	<b>S</b>	<b>CNTSP×S</b>	<b>N</b>	<b>I</b>	<b>Constant</b>	<b>R<sup>2</sup></b>	<b>F</b>	<b>ΔR<sup>2</sup></b>	<b>F</b>	<b>N</b>
<b>3A</b> [D.V.=PRFT]	0.004 (0.003)	0.037* (0.016)	0.001*** (0.001)	0.001* (0.001)	1.641 (0.126)	0.04	5.13***				381
	0.019* (0.009)	0.119* (0.050)	-0.003* (0.002)	0.001* (0.001)	0.001* (0.001)	1.290 (0.237)	0.06	4.75***	0.02	3.09**	381
<b>3B</b> [D.V.=MS]	0.002 (0.006)	0.087** (0.033)	0.001 (0.001)	0.003*** (0.001)	-0.743 (0.252)	0.16	18.74***				381
	0.029* (0.017)	0.265** (0.099)	-0.007* (0.004)	0.001 (0.001)	0.003*** (0.001)	-1.509 (0.0473)	0.18	15.82***	0.02	3.65***	381

\*\*\*\*p<0.0001; \*\*\*p<0.001; \*\*p<0.01; \*p<0.05; CNTEM = Centralization of environmental monitoring; CNTO = Centralization of operational activities; CNTSP = Centralization of the strategic planning process; S = SBU strategy; N = Number of SBUs in corporation; I = Size of SBU; PRFT = SBU profit; MS = SBU market share.

strategies. To determine the form of this relationship it is necessary to substitute the unstandardized regression coefficients from Hypothesis 1A (Table 2) into equation (2):

$$\frac{d \text{PRFT}}{d \text{CNTEM}} = (0.212) + (-0.049) S = 0 \quad (3)$$

$$S = -(0.212/-0.049) = 4.33 \quad (4)$$

The inflection point is shown to be at a value of 4.33 for the strategy measure (range:1-7). As we observe by substituting different values for S into equation (3), there is a negative association between centralization of environmental monitoring activities and SBU profitability for points greater than 4.33 on the strategy continuum (i.e. organizations most like the Prospector archetype). Conversely, there is a positive relationship between the centralization of these activities and SBU profitability for points less than 4.33 (i.e. organizations most similar to the Defender archetype).

Performing similar calculations with market share (MS) as the dependent variable, we observe nearly the identical relationship as above:

$$\frac{d \text{MS}}{d \text{CNTEM}} = (0.193) + (-0.043) S = 0 \quad (5)$$

$$S = -(0.193/-0.043) = 4.49 \quad (6)$$

The findings from this second stage of the analyses are supportive of Hypotheses 1A and 1B; SBU control over environmental monitoring and marketing activities appears to be most positively associated with both the Prospector's profitability and market share, followed by the Analyzer's, and lastly, by the Defender's.

### Centralization of operational activities

The data provide mixed support for the predictions regarding the decisions and activities most associated with operations (CNTO). Contrary to the theory's prediction, Hypothesis 2A is not supported. Hypothesis 2B is supported, however, as indicated by the statistically significant interaction term in Table 2. In determining whether the sign of this relationship is constant over the range of strategies, it is again necessary to determine the partial derivative of the regression equation:

$$\frac{d \text{MS}}{d \text{CNTO}} = (-0.215) + (0.045) S = 0 \quad (7)$$

$$S = -(-0.215/0.045) = 4.78 \quad (8)$$

In contrast to the results for the centralization of environmental monitoring functions, and consistent with both the thesis of this study and Hypothesis 2B in particular, equation (7) above indicates a positive relationship between market share and the decentralization of operational activities for organizations most like the Defender (i.e. strategy values approaching 1 on the 1-7 scale), and a negative relationship for SBUs most like the Prospector (i.e. values approaching 7). This finding is especially noteworthy since it is the first to indicate that the effect of decentralizing activities for a given SBU strategy changes signs contingent on the *particular* activities considered.

### Centralization of strategic planning

The theory postulated that control of the strategic planning process (CNTSP) would be most important for the Prospector, less important for the Analyzer, and least important (though not unimportant) for the Defender. Based on the full regression equations for Hypotheses 3A and 3B, and taking their partial derivatives, we observe inflection points of 6.3 and 4.1 respectively:

$$\frac{d \text{PRFT}}{d \text{CNTSP}} = (0.019) + (-0.003) S = 0 \quad (9)$$

$$S = -(0.019/-0.003) = 6.3 \quad (10)$$

and

$$\frac{d \text{MS}}{d \text{CNTSP}} = (0.029) + (-0.007) S = 0 \quad (11)$$

$$S = -(0.029/-0.007) = 4.1 \quad (12)$$

The analyses indicate that the Prospector's profits and market share are indeed negatively associated with its sharing of the strategic planning process with corporate management; that is, the Prospector's performance is enhanced to the extent that it controls strategic planning. Unlike the earlier supported hypotheses, however, equation (10) indicates that the intercept point is relatively close to the Prospector end of the strategy continuum. This suggests that SBU control of the planning process enhances the profitability of all strategy types, though not equally.

To summarize, all of the predictions, with the exception of Hypothesis 2A, were supported by the data. Interestingly, the analyses reveal that the supported hypotheses were overly modest. Recall that it was predicted that control by the SBU of activities of theoretically low importance (e.g. environmental monitoring for a firm pursuing a Defender strategy) would be less important, not unimportant or detrimental, to the SBU. All of the findings, however, reveal a negative association between SBU performance and the decentralization of functions and activities not central to the SBU's strategy.

For example, we observe that by substituting in low values for S (i.e. indicating the Defender orientation) in equations (3) and (5), a negative association is revealed between the decentralization of environmental monitoring activities and both performance measures. Thus, the Defender's performance seems to suffer when significant resources are devoted to peripheral activities (e.g. intensive environmental monitoring). As an additional example, Prospects that assume great control over operational issues (relative to those Prospects that do not) apparently give up potential market share in exchange. Again, there seems to be a performance cost to the SBU when its managers concentrate on those activities which are not theoretically essential to its strategy. These findings lend credence to the earlier suggestion that the SBU is faced with limited managerial resources, and therefore, ought to devote primary attention to those activities most important to maintaining its strategic orientation (Hitt *et al.*, 1982; Porter, 1980).

An implication of these unexpected results, but one to be cautious of, is that corporate management ought to centralize all activities not theoretically central to a particular SBU's strategy. It should be noted that while the findings indicate that such an approach would benefit the individual SBU, doing so could potentially burden corporate management with tasks best left (from a corporate perspective) to the SBU.

## DISCUSSION

In summary, the findings indicate generally strong support for the model—SBU performance is

enhanced when the SBU controls those functions and activities on which its strategy depends. Moreover, these functions and activities can be specified *ex ante*. The results also suggest that SBU performance is enhanced when functions and activities which are not central to the SBU's strategy are either centralized or given relatively little attention by SBU management.

As its main theoretical contribution, this paper has argued that previous investigators of the corporate-SBU relationship (Govindarajan, 1986, 1988; Gupta, 1987; White, 1986) have misconceptualized the centralization construct. Whereas others have attempted to gauge the general information processing capabilities of the organization, this paper has articulated the theoretical association between access to different types of information and particular strategies. In short, efforts which fail to align the centralization of particular activities with distinct business strategies are not likely to further our understanding of strategic intraorganizational relationships. This assertion is supported by the empirical investigation.

In particular, this study sheds light on the impact of the corporate-SBU relationship on the implementation of the SBU's strategic plan. The findings indicate that relations between corporate and SBU management moderate the strategy-performance relationship. Thus, the degree of centralization characterizing the corporate-SBU relationship, a design parameter subject to managerial discretion, can either facilitate or impede the SBU's ability to operate in its local product-market environments. This is significant since the successes of the firm's SBUs in their local markets largely determine the economic well-being of the firm itself (Gupta, 1987; Montgomery 1985).

## Limitations

The findings must be interpreted in the context of this study's limitations. First, the model conceptualized the corporate-SBU relationship with respect to centralization. While this relationship can be characterized in other meaningful ways, this paper focused on centralization since this design parameter has been the subject of much strategy implementation research (cf. Galbraith and Kazanjian, 1986). Second, the empirical context of this study was a single

industry in which the SBUs of the sample firms were mainly functionally independent. Thus, the findings are not generalizable to those multibusiness firms which are more horizontally integrated. A third limitation of this study concerns its intended scope. The reader should recall that it was not the intention of this study to develop the strongest possible model for predicting SBU performance. Rather, this study employed a within-strategy types design to investigate which relationships between corporate and SBU management were most supportive of the SBU's strategic efforts, controlling for potential spurious relationships. More generally, this paper's goal was to explain a portion of the variance in SBU performance that has gone unaddressed by strategic management researchers.

### **Concluding remarks**

The relationship between business strategy and performance has rightly received considerable attention (cf. Porter, 1980). This paper reveals that this relationship is more complex than has been recognized previously. In particular, this study takes the first step in identifying ways by which relations between corporate and SBU management can either facilitate or impede the implementation of an SBU's strategic plan. Generally, SBU managers should not be constrained in their efforts to control those *particular* activities most central to their market level strategies. Furthermore, they should be encouraged to decrease their attention to activities on which their strategies depend less.

The arguments and findings also indicate that recent explorations of the corporate-SBU relationship (Govindarajan, 1986, 1988; Gupta, 1987; White, 1986) are grounded in flawed understandings of this relationship and its impact on SBU performance. Future researchers should recognize that corporate-SBU relations are multi-dimensional, and that the centralization construct is multifaceted.

Future research may also benefit from considering a logical extension of this paper—the issue of the firm's strategic portfolio, characterized by the diversity of strategies pursued by the SBUs. Though the sample in the present study (i.e. eight large corporations) did not allow the empirical examination of this issue, the theoretical

arguments lead us to speculate that as the number of distinct business strategies increases, so too should the ways in which the corporate office relates to the SBUs. This reasoning is consistent with arguments concerning the concept of multiple dominant logics within the firm (Prahalad and Bettis, 1986), and related arguments which propose the use of sector managers who are responsible for a cluster of SBUs that are grouped according to *both* SBU product-market diversity and SBU strategy (Hill and Hoskisson, 1987). Future studies, designed explicitly to explore this issue, have the potential to complement the arguments and findings of the present study.

Lastly, to compensate for the emphasis on corporate strategy in earlier studies of the corporate-SBU relationship, corporate strategy was held constant here. Moreover, this study attempted to identify one of the determinants of SBU performance, not of corporate performance. Consequently, important questions remain unanswered. For example, has this study identified a way by which to enhance SBU performance, while suboptimizing with respect to corporate performance? Under what conditions? The next step for researchers should be the simultaneous acknowledgement of both corporate and SBU strategies in order to determine the full impact of the corporate-SBU relationship on the well-being of the multibusiness firm.

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## **APPENDIX: CLASSIFICATION OF HOSPITAL STRATEGY**

*Hospital A (Defender)* occupies a 'niche' in the health care system by offering a relatively stable set of services to defined markets. Generally Hospital A is not at the forefront of new services or market developments in health care. It tends to ignore changes that have no direct impact on current areas of operation and concentrates instead on doing the best job possible in its existing arena.

*Hospital B (Analyzer)* maintains a relatively stable base of services while at the same time developing selected, promising new services and markets. The hospital is seldom first to provide new services or expand into new markets. However, by carefully monitoring the actions of institutions like Hospital C

(below), Hospital B attempts to follow with a more cost-effective or well-conceived service.

*Hospital C (Prospector)* makes relatively frequent changes in and additions to its set of services and markets served. It consistently attempts to be first to provide new services or develop new markets, even if not all of these efforts ultimately prove to be successful. Hospital C responds rapidly to early signals of market need or opportunities.

*Hospital D (Reactor)* operates like all three hospitals above (A, B and C) at different times, and therefore cannot be clearly classified in terms of its approach to changing its services or markets. It does not have a consistent response to market changes. At times, the hospital will not make service/market changes unless forced to by external events (like Hospital A); at times, it will move into new fields only after considerable evidence of potential success (like Hospital B); and at other times, it will be an early entrant into new fields of opportunity (like Hospital C). Please rate (circle) the number which best reflects how your hospital now operates along the seven-point continuum (or indicate Hospital D as most like your hospital).

A	B	C	Hospital D
1 2 3 4		5 6 7	