

# Corporate diversification, strategic planning and performance in large multiproduct firms

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**This study explores the relationship between corporate diversification and strategic planning in large multiproduct firms by focusing on the strategic, organizational and performance characteristics associated with each avenue to diversification. High levels of horizontal sharing among Strategic Business Units (SBUs), together with a sophisticated planning system that embodies a long-term orientation, are associated with markedly higher measures of financial performance and revenues derived from new products. However, firms attempting to pursue horizontal sharing among SBUs with a strong external acquisition orientation evinced lower levels of performance. In addition, diversification based on portfolio management is linked to a high proportion of revenues derived from mature products and markets. Implications for integrating strategic market planning with corporate planning activities are discussed, especially as they relate to building shared marketing and other functional programs among SBUs.**

**KEYWORDS:** diversification, strategic planning, core competence, horizontal sharing, interrelationships

**INTRODUCTION**

During the past decade we have witnessed a growing body of research on the types of corporate diversification strategies pursued by large US firms (Ramanujam and Varadarajan, 1989). The issue of formulating and implementing effective diversification strategies becomes especially important as we now attempt to understand why many once-successful US firms have ceded technological pre-eminence and market share to new competitors from Europe and the Far East (Baysinger and Hoskisson, 1989; Franko, 1989; Hamel and Prahalad,

1989; Hitt *et al.*, 1990). Although Pitts (1977) suggested that internal development of new businesses and growth via acquisitions represented equally attractive opportunities for diversification, there is growing evidence to suggest that a high level of merger and acquisition activity may reduce long-term firm performance and managerial commitment to innovation in key value-adding activities, such as research and development in new products and processes (e.g. Hamel and Prahalad, 1989; Hill, 1988; Hitt, *et al.*, 1990; Hoskisson and Johnson, 1992; Jensen, 1988; Salter and Weinhold, 1979). Porter (1987) noted that firms pursuing strategies of unrelated, portfolio-based diversification often compromise their ability to uncover and exploit opportunities for developing shared horizontal interrelationships among business units that reinforce value-adding activities to build new sources of competitive advantage. These value-adding activities include R&D, production and marketing tasks that are critical to building and sustaining competitive advantage. Other researchers have suggested that firms may improve the efficiency of their operations through various related diversification approaches because of growing economies of scope that allow for the joint development and utilization of firm-specific skills (e.g. Barney, 1991; Baysinger and Hoskisson, 1989; Chandler, 1990; Govindarajan and Fisher, 1990; Gupta and Govindarajan, 1984, 1986; Hitt and Ireland, 1985; Hitt *et al.*, 1991; Kamien and Schwartz, 1982; Lorsch and Allen, 1973; Lubatkin and Chatterjee, 1991; Rumelt, 1974, 1982; Williamson, 1985).

The development and sustenance of competitive advantage across business units involves managerial decisions regarding the nature of horizontal sharing of activities among SBUs, merger and acquisition orientation, and the strategic planning systems used to coordinate and support multi-business operations, particularly as they related to value-adding functions. This study explores some of the underlying relationships that may exist between different product-based diversification strategies and strategic planning approaches, with special relevance paid to how marketing activities can be integrated with corporate planning approaches. Although numerous studies have analysed the diversification-performance (e.g. Ramanujam and Varadarajan, 1989) or planning-performance relationship (e.g. Greenley, 1986; Boyd, 1991) individually, few studies have empirically examined them simultaneously. We examine and review some of the dominant themes in the strategic management literature that focus on corporate diversification, strategic planning and their relationships to economic performance in this paper's first section. The second part of this paper synthesizes the findings and proposes several broad research questions and propositions to help lay the foundation for future analysis and exploration in this area. Methods, data analysis and results are discussed in the third section. The conclusion attempts to clarify and present some additional thought about the diversification-planning-performance relationship. In particular, we will examine the impact of different diversification approaches on building SBU-level strategies (Strategic Business Unit), the integration of marketing tasks with corporate strategy, and what managers can do to identify potential new sources of internal synergy. Implications for strategic market planning in particular are discussed and elaborated.

## **DIVERSIFICATION AND STRATEGIC PLANNING**

Theory development relating planning systems to the management of large diversified firms has primarily focused on examining the effects of multidivisional (M-form) structures on decision-making, risk propensities and the development of idiosyncratic, firm-specific assets that may contribute to superior financial performance (Barney, 1991; Hitt *et al.*, 1990). Chakravarthy (1987) noted that there has been little empirical testing of potential contingency

relationships that link diversification (and other contexts) with planning system design. Much of the empirical research has focused on the use of broad types of financial control systems that varied with related versus unrelated diversification (Hoskisson and Hitt, 1988; Hitt *et al.*, 1990; Hoskisson and Johnson, 1992). These control systems consist largely of evaluation criteria used to assess future capital investment projects. These findings suggest how managers should design the use of strategic and financial planning systems to covary with corporate diversification, but do little to show how other aspects of planning can help, particularly marketing and functional-level planning within and across SBUs. Yet, the strategic management literature is replete with recommendations concerning how strategic planning systems should be tailor-matched to the firm's diversification and formal multidivisional structures (e.g. Lorange, 1980; Bracker and Pearson, 1986; Pearce, Freeman and Robinson, 1987), although empirical testing remains limited (Greenley, 1986). Many of the recommendations are contradictory (Boyd, 1991) and suggest that use of planning systems will vary considerably not only according to broad, revenue-based measures of product diversification (e.g. related versus unrelated), but also with the extent and type of the firm's horizontal sharing across SBUs (e.g. R&D, production and marketing) (Govindarajan and Fisher, 1990; Gupta and Govindarajan, 1984, 1986; Porter, 1987).

### **The nature of diversification and interdependence among SBUs**

Thompson's (1967) notions of interdependence provides an excellent initial framework to examine the role of strategic planning and control systems in managing diversified firms. Unrelated firms are often characterized by high levels of pooled interdependence. Unrelated diversifier firms are also known as conglomerates, and have less than 70% of sales from any single business (Rumelt, 1974, 1982). SBUs tend not to share resources or have high levels of cooperation and communication between them. Related and dominant firms are categorized by high levels of both reciprocal and pooled interdependence. Unlike unrelated firms, related diversified firms exhibit a high relatedness ratio. Even though these firms derive less than 70% of its sales from any one single business, the underlying businesses share a related technology, market or other factor. Dominant diversified firms are those that derive 70% or more of its revenues from a single business area. Reciprocal interdependence is evident in these firms' sharing of core competences or skills (Prahalad and Hamel, 1990), and resources or value-adding functional activities (Porter, 1985, 1987; Gupta and Govindarajan, 1986; Govindarajan and Fisher, 1990; Hoskisson and Johnson, 1992). Often, reciprocal interdependence is evidenced by these firms' sharing of factories, centralized R&D labs, or marketing activities (e.g. sales forces, distribution, shared umbrella branding and images) that help provide opportunities to leverage key assets to create competitive advantage. Pooled interdependence manifests itself in the formal multidivisional (M-form) structure and the use of an internal capital market associated with standardized performance evaluation criteria. Firms such as General Electric or Eastman Kodak embody characteristics of both reciprocal and pooled interdependence that necessitate a planning system capable of balancing mutual adjustment with standardized approaches (Thompson, 1967). Therefore, firms using an M-form structure and continuing to share assets among SBUs face a difficult balancing act that is likely to place great pressures on the planning system.

#### *Horizontal sharing and diversification*

The issue of balancing reciprocal and pooled interdependence in related and dominant firms is especially salient, given the constant tension these firms face in nurturing and developing

horizontal sharing across SBUs, while simultaneously maintaining a multi-divisional (M-form) structure to enhance product/market responsiveness and intra-unit efficiency. The development of such sophisticated core competences as optical media, semiconductors, display systems, precision manufacturing and imaging technologies often requires corporate-based efforts and investments that cut across many different SBUs (Prahalad and Hamel, 1990). These products depend upon a steady flow of innovations and value-adding disciplines that can emanate only from steady and consistent sharing to build critical mass and learning effects. In turn, coordination of R&D production and marketing activities becomes difficult because of the simultaneous need to balance sharing with responsiveness. Organization of the related or dominant firm along a purely M-form structure may actually deter the necessary long-term investment, cross-unit coordination and cooperation necessary for successfully identifying and developing core competences that form the basis of future products. This problem has been noted in findings of Baysinger and Hoskisson (1989), Hitt *et al.* (1990), Prahalad and Hamel (1990) and Hoskisson and Johnson (1992). In this respect, careful design of planning systems to nurture core competences and horizontal sharing may help circumvent some of the short-term SBU-oriented biases that may be prevalent in pure M-form structures. Thus, a well-designed and balanced planning system can be an important source of competitive advantage if it promotes internal synergy (Armstrong, 1982, 1991; Greenley, 1986). The nature and type of horizontal sharing may in itself become important in determining the kind of balance that the planning system should embody to support different product/business diversification approaches.

#### *Upstream versus downstream horizontal sharing*

Firms that share resources based on upstream (e.g. production and R&D) skills and capabilities often have a 'centre of gravity' that requires tight coordination of planning activities (Galbraith and Kazanjian, 1986). This reflects the high levels of reciprocal interdependence that cuts across SBUs. Firms in capital-intensive industries, such as computers, office equipment, semiconductors and automobiles, often try to build economies of scale and scope across production and R&D activities to enhance cross-unit experience curve effects and to transfer valuable manufacturing skills. On the other hand, firms that share extensive downstream activities, such as marketing and distribution, often rely on the sharing of brands, images and advertizing to build competitive advantage. Firms such as Procter & Gamble, Henkel and Kao, for example, exhibit more of a downstream 'centre of gravity', where market responsiveness is vital to competitive advantage. These activities often differ in the kind of integrative efforts required to marshal corporate-wide resources as compared with upstream activities. For firms competing in consumer non-durables industries (e.g. personal health-care products and foodstuffs), close coordination of production activities may actually denigrate attempts to build sufficient sub-unit differentiation for individual product/markets. Yet, corporate coordination and utilization of common distribution channels, brand images and quality may help such firms (e.g. Procter and Gamble, Unilever and Henkel) compete against other competitors with similar multi-point competitive attributes (Porter, 1985, 1987). Thus, the location of skill transfers and resource sharing within the value chain may in itself influence the type of planning system required to enhance operations and firm-level competitiveness, an issue that has not been previously explored or examined before in detail (Bartlett and Ghoshal, 1989).

Related and dominant diversifiers often seek to achieve economies of scope and competitive advantage via extensive sharing across SBUs to build the critical mass that is necessary for nurturing core competences (Rumelt, 1982). While strict financial controls associated with

multidivisional, M-form structures may enhance efficiency (Armour and Teece, 1978; Williamson, 1975, 1985), these controls may actually deter managers from engaging in high levels of interdivisional cooperation, communication and planning that is essential to building competitive advantage via horizontal sharing, particularly in those industries that require extensive upstream sharing to build critical mass and scale.

### *Unrelated or portfolio diversification*

Dundas and Richardson (1982) noted that firms pursuing an unrelated diversification strategy should adopt planning systems that encourage a high level of information flow for capital expenditures and budgeting between headquarters and subsidiaries. This finding is also consistent with the earlier research done by Pitts (1977), Berg (1965), Lorsch and Allen (1973), Porter (1987) and Salter and Weinhold (1979), all of whom found that high levels of pooled interdependence (Thompson, 1967) between headquarters and SBUs required a standardized and formalized planning format to monitor operations. Dundas and Richardson (1982) also noted how planning in unrelated firms often focused primarily on capital budgeting and financial goals as opposed to more 'strategic' criteria such as market share or developing new technology. Because of the high degree of pooled interdependence, planning often emphasizes financial return criteria in unrelated diversifiers since many of their constituent SBUs often compete in relatively mature markets with large cash throw-offs (Porter, 1987; Hitt *et al.*, 1991).

Moreover, senior management often tends to remain unaware of the industry-specific intricacies of competing in specific businesses. An interesting trend during the past decade has been the potential of unrelated firms to become more related in character. The widespread prevalence of a 'conglomerate discount' (Porter, 1987), the need to cultivate a corporate-wide identity (Dundas and Richardson, 1982), and the difficulty in building sustainable competitive advantage in both domestic and global markets (Hill, *et al.*, 1988) have encouraged many unrelated diversified firms to actively restructure their operations to better defend their core SBUs' product/market domains (Hoskisson and Johnson, 1992). This development has led many conglomerates to strengthen the hand of corporate management in formulating SBU strategies and in implementing a top-down planning system.

### **The role of planning system design**

Although there are numerous attributes of planning system design that may be important in implementing strategy (e.g. Camillus, 1975; Lorange and Vancil, 1976; Lorange, 1980; Armstrong, 1982; Greenley, 1986; Rhyne, 1986; Chakravarthy, 1987; Goold and Campbell, 1987; Ramanujam and Venkatraman, 1987; Reid, 1989; Boyd, 1991; Kukalis, 1991), four key characteristics appear to play different roles across broad corporate diversification approaches. These four characteristics include length of planning time horizons (Lorange, 1980; Chakravarthy, 1987; Ramanujam and Venkatraman, 1987), integration mechanisms (Lorsch and Allen, 1973), planning system formalization (Thompson, 1967; Rhyne, 1986; Kukalis, 1991) and degree of corporate interaction or involvement with SBU strategy formulation (Lorange and Vancil, 1976; Leontiades and Tezel, 1980; Dundas and Richardson, 1982; Gupta and Govindarajan, 1984, 1986; Hamel and Prahalad, 1989). They exert important influences on the degree to which a planning system can balance creativity with control or adaptation with integration (Steiner, 1979; Lorange, 1980; Capon *et al.*, 1987; Ramanujam and Venkatraman, 1987). These four characteristics were also noted by Porter

(1985, 1987) as being particularly important in implementing horizontal sharing among SBUs in diversified firms.

### *Planning time horizons*

Support for including long time horizons within the planning system is extensive from the early strategy literature. Miller and Friesen (1982), for example, found that innovative firms tended to have longer planning time horizons than less innovative firms, while Mintzberg (1979) noted that successful balancing of differentiation and integration pressures require long time periods for adjustment. In highly diversified firms, Hill *et al.* (1988), for example, noted that a critical aspect in fostering innovation was firms' incorporating sufficiently long time horizons in their planning and investment criteria to build the core competences needed for future products.

### *Planning integration mechanisms*

Many planning system attributes can help the firm achieve structural integration (Galbraith and Nathanson, 1978; Armstrong, 1982; Pearce *et al.*, 1987; Boyd, 1991; Kukalis, 1991). Structural integration in diversified firms could include tight linkages of critical functions across SBUs, communication and information systems, and allocation of key resources or capital budgets across business units (Lorange, 1980; Dundas and Richardson, 1982; Boyd, 1991; Kukalis, 1991). Such cross-unit, direct integration mechanisms can provide the underlying basis in helping firms locate potential new sources of competitive advantage and to mitigate some of the natural impediments to sharing in M-form firms.

Porter (1987) notes that managing horizontal interrelationships requires tight integration mechanisms that cut across divisional and SBU lines. The implementation of information networks within firms, the sharing of functional-based knowledge, and resource allocation activities represent direct integrative mechanisms that help coordinate multidivisional operations (Lorsch and Allen, 1973; Gupta and Govindarajan, 1984; Rhyne, 1986). Careful design of the planning system to help achieve these internal linkages is particularly important to counter the effects of excessive internal competition that often occurs in M-form firms.

### *Formalization*

The degree of planning system formalization has often been considered an important indicator of behavioural integration in managing large diversified firms. Formalization refers to the emphasis on following rules and procedures in managing and implementing different organizational activities. In addition, it is typically described or measured as the amount of freedom that managers have to pursue their activities as related to the amount of rules, standardized procedures and updates that exist (e.g. Aiken and Hage, 1971; Etlie, 1983; Ramanujam and Venkatraman, 1987; Boyd, 1991; Damanpour, 1992). Galbraith and Nathanson (1978), Khandwalla (1973) and Hitt *et al.* (1991) note that diversification often requires a high level of formalization to help build a consistent set of behaviours among subunit members. Behavioural integration can take the form of a high frequency of reviews and updates of managerial activities (Galbraith and Nathanson, 1978; Hoskisson *et al.*, 1993). These reviews and updates can be a particularly important form of mutual adjustment that is needed for managing reciprocal interdependence in related firms (Thompson, 1967; Hoskisson and Johnson, 1992). Dundas and Richardson (1982) consider planning formalization to be moderately important for unrelated diversifiers, particularly when SBUs did not communicate often. Lorsch and Allen (1973) found formalization to be important for the control of any type of multidivisional operation.

### *Corporate-SBU relationships*

Central to Porter's (1987) skill transfer and shared value-adding corporate strategies are tightly woven corporate-SBU relationships that enable close meshing of objectives and strategies. Gupta and Govindarajan (1984, 1986) noted that high levels of openness in the corporate-SBU relationship greatly enhances the potential for sustained resource sharing, while Dundas and Richardson (1982) and Porter (1985) found that strongly interactive or top-down planning is needed in highly diversified firms that depend upon horizontal linkages.

Previous research suggests that the top-down nature of planning systems must be consistent with a firm's corporate diversification approach (Chandler, 1990; Hitt *et al.*, 1990). Planning systems are designed not only to help systematize the nature of corporate-SBU relationships, but also to provide a framework by which to evaluate strategies, investments and other directions in which the firm is likely to move in the future (Lorsch and Allen, 1973; Pitts, 1977; Grinyer and Yasai-Ardekani, 1981; Armstrong, 1982; Galbraith and Kazanjian, 1986; Kukalis, 1991). Govindarajan (1988) and Govindarajan and Fisher (1990) note that firms engaging in a low degree of resource sharing among SBUs should adopt control systems that emphasize financial criteria to measure performance and to assess future investment potential. Firms undertaking related or dominant diversification should ordinarily employ less financial and more strategic criteria to measure performance and to guide resource allocation (Baysinger and Hoskisson, 1989; Hitt *et al.*, 1990; Hoskisson and Johnson, 1992; Kerr, 1985).

### **Planning and functional-level activities**

Much of the theory and research that examined broad, revenue-based measures of diversification with strategic versus financial control orientation in M-form firms may be missing additional planning system ingredients to refine our understanding of corporate strategy. The nature and type of horizontal sharing undertaken among SBUs may be as important, if not more so, than the overall composition of revenues by different types of businesses to influence the kinds of controls needed. Yet, this idea has not been previously explored in depth, or in conjunction with the nature of the planning system's design attributes. Functional-based planning research tends to be comparatively scarce. Armstrong (1991) noted that strategic planning helps manufacturing efficiency and performance. Burt (1978) found that planning can help retailers better coordinate their marketing activities. With the growing propensity of unrelated firms to shed non-core businesses, the role of strategic planning systems may be changing in diversified firms, making theory development difficult. More important, the search for new core competences and more efficient ways to build internal sources of competitive advantage means that firms must carefully tailor their organization designs and planning systems to improve the potential for resource sharing and cross-SBU coordination. This suggests that broad, coarse-grained approaches to exploring and examining the diversification-planning-performance relationship may not fully capture the underlying richness of firm-specific attributes that make competitive advantage and superior performance possible. In addition, there may be multiple approaches that lead to superior performance as well.

### **SYNTHESIS AND PROPOSITIONS**

A successful corporate strategy builds upon an internally consistent set of strategic and organization design attributes. Yet, numerous variations of strategic and organizational attributes are possible even within the context of a single corporate strategy (Dundas and

Richardson, 1982; Rumelt, 1982; Porter, 1987; Hamel and Prahalad, 1989), a notion termed by many researchers as 'equifinality'. Managers in highly diversified firms often lack specific first-hand knowledge of industry conditions, technological changes or geographic diversity facing a wide variety of SBUs, even for related diversified firms (Hitt *et al.*, 1990; Hopkins, 1987; Hoskisson *et al.*, 1993). However, proper design of the planning and control system can compensate for the inherently limited information-processing capabilities of senior management in diversified M-form organizations. While the multidivisional structure lends itself well to measuring SBU performance according to strict quantitative measures, its effectiveness in supporting and developing corporate-wide skills and core competences is limited (Prahalad and Hamel, 1990; Hoskisson *et al.*, 1993). Firms that rely excessively on financial control criteria often find themselves competing defensively in mature markets, rather than building new products based on new technologies or innovations (Porter, 1987). Planning and control systems that focus on balancing SBU sharing with the search for efficiency are vital to supporting shared resources, economies of scope, and innovation. In addition, close vertical interaction between corporate and SBU management becomes important for those SBUs that must coordinate strategy and operations with sister units, particularly in the wake of growing technological linkages and multipoint competition making once disparate industries more related.

The literature above suggests some research questions that will be explored in this study and include the following:

- (1) Are firms with high levels of horizontal sharing able to produce superior economic performance compared to other diversification approaches?
- (2) Does a high level of horizontal sharing significantly enhance the firm's future prospects to enter new and growing businesses? Conversely, does unrelated diversification encourage firms to stay in mature businesses?

These research questions lead to a parallel set of formal propositions that will be tested and examined in the following section.

The literature above suggests two key propositions, which this paper seeks to test and to refine:

Proposition 1: Firms pursuing a corporate strategy of unrelated product diversification, portfolio management will exhibit the lowest levels of economic performance; firms undertaking a corporate strategy of closely sharing value-adding activities will exhibit the highest levels of economic performance.

Proposition 2: Firms pursuing a strategy of closely sharing value-adding activities will exhibit the highest levels of revenues derived from products in the early stages of the life cycle. Firms pursuing the unrelated diversification, portfolio management strategy will derive revenues mostly from products in the mature or declining stages of the product life cycle.

## **METHOD**

### **Sample**

The data used in this study were drawn from an extensive detailed questionnaire concerning strategy, planning and organization design that was administered to Fortune 500 corporate line officers and planning executives in the early 1980s. One hundred and fifty-five companies were invited to participate, with 113 providing the final sample. The original 155 firms were

Fortune 500 firms whose headquarters were located East of the Mississippi River in the US. Because MBA students were used to administer the survey questionnaire with key personnel at each company, limiting the sample to a pre-defined geographic region helped reduce costs. Since only 93 of the original 113 companies surveyed had sufficient financial data over an extended time period (1980–4) beyond the time the questionnaire was administered (1980–1), these were the only firms used for the data analysis. The effects of diversification strategies and planning are known to affect performance in subsequent time periods; thus we used return on assets (ROA) that is extended several years beyond the initial data collection period.

Formal surveys were administered by MBA students to two respondents in any one firm. The surveys were typically administered in two parts; the first part with the senior deputy in the corporate planning department, the second part with the senior corporate planning officer. If there was no clearly identified corporate planning officer, the corporate line officer closest to that function was asked to respond to the survey/questionnaire. By having two respondents answer different parts of the questionnaire in each firm, steps were taken to limit the potentially spurious effects of common-method variance. The questionnaire itself was a closed-ended instrument that asked the respondents to answer a series of questions, most of which were organized along a five-point Likert scale.

### **Key variables**

The preceding literature review and the research questions guided the choice of independent variables or scales used for this study. Measures of horizontal sharing, merger and acquisition orientation, and strategic planning system design elements are presented in the Appendix, where a detailed explanation of each variable or scale's construction is given. Where the measures employed in the analysis represent scales, their corresponding internal consistency levels were also measured. All scales had high levels of internal consistency and reliability ( $\alpha > .70$ ). In addition, the scales evinced high levels of discriminant validity as the inter-item correlations between measures of a single construct were greater than the correlations between any one measure of that construct than with any other construct (Campbell and Fiske, 1959; Slocum, 1971).

The central performance measure used for this study is return on assets (ROA) from 1980–4. Support for using ROA as a performance measure is extensive throughout the diversification literature (e.g. Bettis and Hall, 1982; Grant *et al.*, 1988).

### **Control variables**

Within the length of time covered by the study, industry effects on a firm's financial performance are a distinct possibility (Baysinger and Hoskisson, 1989). Although diversification in firms may remove some of these effects, even well-diversified firms may still exhibit possible industry effects through market power and position. To control for direct industry effects, the study classified all firms into two-digit SIC codes, using the method described by Hoskisson (1987). Sales revenues for a particular sector provided wide coverage within the codes. All 93 used in the analysis were eventually classified into 27 industrial codes.

Size was entered into the model as a covariate because previous studies have considered it to influence performance (Kamien and Schwartz, 1982; Scherer, 1980). The natural log of year end sales served as the measure of size; logarithmic transformation is justified when values of the variable may be highly disproportionate or skewed in one direction.

## Data analysis

Clustering analysis was used for identifying and isolating various gestalts or configurations of merger orientation, horizontal sharing and planning systems to capture different strategic and organizational planning archetypes. The four strategy variables (merger and acquisition orientation, plus the three horizontal sharing variables) and five planning system design variables were used to derive the gestalts. Cluster analysis is known to be a highly useful technique for exploring and testing for the existence of strategic archetypes or taxonomies that may reflect existing theories. Its use in the strategic management literature is quite extensive (e.g. Hatten *et al.*, 1978; Miller and Friesen, 1977; Hambrick, 1983; Harrigan, 1985; Kim and Lim, 1988; Miller, 1988; Wong and Saunders, 1993; Ghoshal and Nohria, 1989).

The squared Euclidean distance was chosen to determine the tightness of each cluster because this technique minimizes variance within clusters (Aldenderfer and Blashfield, 1984), although this algorithm can be sensitive to outliers. All clustering techniques involve two basic problems: accommodating different units of measurement in the variables and the difficulty in determining the appropriate number of clusters (Jermier *et al.*, 1991). To treat the first problem, all input variables that were measured on Likert-scales or continuous measures were standardized (mean = 0, SD = 1). Determination of the number of clusters to use was made by looking for a decided increase in the tightness (mean-squared error) or cohesion of the clusters as the algorithm moved from one solution to another (Hambrick, 1983). Inspection of the fusion coefficients for distinct jumps reveals that dissimilar clusters were then merged. Plotting the number of clusters by the coefficient fusions searches for a marked flattening effect. This means that further consolidations are probably inappropriate. To assess the distinctiveness of the clusters, one-way analysis of variance using Duncan's multiple range test and multiple discriminant tests were employed to test where clusters differed significantly. Analysis of covariance was used to test for performance differences (Proposition 1) across the clusters, with controls for industry and size. Analysis of variance was used to test for differences of product life cycle within configurations (Proposition 2).

## RESULTS

Variable means, standard deviations and correlations are given in Table 1. Alpha estimates of each scale's reliability, provided in the Appendix, all were in excess of  $\alpha = .70$ .

Data in Table 2 present the results of the cluster analysis, which show the characteristics of each gestalt, as well as its performance. Inspection of the fusion coefficients revealed a pronounced jump between five and four clusters. The graphic plot of the number of clusters by values of the fusion coefficients showed a flattening beginning at the four cluster solution. This led to the assessment that four interpretable clusters or gestalts was the best solution to capture the four strategy and five planning system attributes. Both analysis of variance with Duncan's multiple range tests and multiple discriminant analyses validated these results. Of the observations, 95% were correctly classified into the original four gestalts or clusters. The gestalts that were finally created represented a varying mix of merger and acquisition orientation, strategic planning system design and differing degrees of resource sharing among SBUs.

The four gestalts or empirically derived clusters do evince an interesting set of corporate strategy-strategic planning relationships that transcend the spectrum from little to extensive sharing among SBUs (strategy), low to high merger and acquisition orientation (strategy),

**TABLE 1. Means, standard deviations and correlations for variables<sup>a</sup>**

Variables	Means	SD	Correlations									
			1	2	3	4	5	6	7	8	9	
1. Horizontal Sharing: Tech.	3.09	1.39	-	-	-	-	-	-	-	-	-	-
2. Horizontal Sharing: Prod.	2.36	1.35	0.42**	-	-	-	-	-	-	-	-	-
3. Horizontal Sharing: Mktg.	1.86	1.23	-0.15	0.43**	-	-	-	-	-	-	-	-
4. Merger and Acquisition Orientation	3.44	1.22	0.43**	0.03	-0.05	-	-	-	-	-	-	-
5. Corporate – SBU Tightness in Strategy Formulation	3.66	0.87	0.24**	0.12	0.08	-0.04	-	-	-	-	-	-
6. Planning Time Horizons	3.02	0.99	0.27**	0.15	0.11	-0.01	0.24**	-	-	-	-	-
7. Use of Planning as Integration Mechanism	3.48	0.75	-0.07	-0.12	-0.03	-0.07	0.31**	0.26**	-	-	-	-
8. Planning Formalization <sup>b</sup>	0.02	0.98	-0.01	0.06	-0.10	-0.16	0.28**	0.31**	0.19	-	-	-
9. Use of Financial Controls to Evaluate Investments	3.78	0.66	-0.07	0.18	0.05	0.27**	0.27**	0.09	0.04	0.01	-	-

N = 93

\*\*p < .01

\*p < .05

<sup>a</sup>All variables measured on Likert (1–5) scale, except where noted.

<sup>b</sup>This measure is based on factor score.

as well as a broad array of different planning system formats that run from highly formalized and integrated to loosely coordinated (planning).

The four clusters that were derived from the solution can be labeled as follows from their strategic and planning system attribute profiles:

- Cluster 1: Top-Down, Stand-Alone Businesses,
- Cluster 2: Portfolio Managers,
- Cluster 3: Loosely Integrated, Activity Sharers,
- Cluster 4: Tightly Integrated, Internally-Driven Activity Sharers.

Table 3 presents the results of the analysis of covariance to test Proposition 1. After controlling for industry and size, the data revealed significant performance differences in adjusted ROA ( $p < .05$ ). Although firms undertaking a tightly integrated, internally-driven activity sharing strategy (Cluster 4) did exhibit the highest performance, it is surprising to note that those firms practicing the portfolio management strategy (Cluster 2) actually performed better than both Clusters 1 (Top-Down Driven, Stand-Alone Businesses) and Cluster 3 (Loosely Integrated, Activity Sharers). Support for Proposition 1, therefore, moved in the opposite direction. Top-Down, Stand-Alone Businesses (Cluster 1) and the Loosely Integrated,

**TABLE 2. Corporate strategy and organization archetypes derived from cluster analysis**

	Cluster 1 Top-Down Stand-Alone Businesses (n = 33)	Cluster 2 Portfolio Managers (n = 24)	Cluster 3 Loosely Integrated Activity Sharers (n = 25)	Cluster 4 Tightly Integrated, Internally Driven, Activity Sharers (n = 11)	F-Ratio	Scheffe Test at p < .05
Horizontal Sharing: Technology	2.48	2.58	3.88	4.27	11.15***	(1,4) (2,4) (1,3) (2,3)
Horizontal Sharing: Production	1.57	1.79	3.12	4.27	28.26***	(1,4) (2,4) (1,3) (2,3)
Horizontal Sharing: Marketing	1.21	1.66	2.64	2.45	9.35***	(1,3) (1,4) (2,3)
Merger and Acquisition Orientation	3.53	3.70	3.53	2.13	5.56***	(1,4) (2,4) (3,4)
Corporate – SBU Tightness in Strategy Formulation	4.05	2.73	3.96	3.83	19.74***	(1,2) (2,3) (2,4)
Planning Time Horizons Use of Planning as Integration Mechanism	3.25	2.38	2.90	3.96	9.47***	(2,4) (1,2) (3,4)
Planning Formalization Use of Financial Controls to Evaluate Investments Return on Assets	3.97	2.90	3.25	3.78	15.99***	(2,4) (1,2) (1,3)
(Adjusted for Industry and Size)	0.49	-0.62	-0.20	0.52	9.33***	(2,4) (1,2) (1,3)
	3.89	3.55	3.97	3.52	2.60*	
	4.8%	5.7%	3.8%	7.07%	2.32*	(1,4) (3,4)

\* p &lt; .05

\*\* p &lt; .01

\*\*\* p &lt; .001

**TABLE 3. Analysis of covariance testing the relationship between strategic archetypes and performance**

Source	F
Strategic archetypes (cluster)	2.32**
Industry	2.73***
Size	1.66
Overall model	2.93***
$R^2 = 0.4170$	

\*\* $p < .05$ \*\*\* $p < .01$ 

Activity Sharers (Cluster 3) performed worse than both the Portfolio Managers (Cluster 2) and the Tightly Integrated, Internally-Driven, Activity Sharers (Cluster 4). As was expected, industry proved to be an important control variable, while firm size had little impact on performance.

Table 4 presents the results of the analysis of variance of revenues derived from each stage of the product life cycle within a gestalt or cluster. A broad measure of product life cycle was made by assessing to what extent each firm's total revenues were derived from each of four life cycle stages: introductory, growth, mature and decline. This breakdown of broad revenues by each product cycle stage allows us to subsequently gauge the extent to which each cluster or group had a central tendency toward any single life cycle stage. As hypothesized in Proposition 2, companies in Cluster 4 (Tightly Integrated, Internally-Driven, Activity Sharers) had significantly greater levels of revenue derived from products in the introductory and growth stages of the life cycle ( $p < .05$ ), while Cluster 2 (Portfolio Managers) firms had significantly higher levels of revenue derived from mature markets ( $p < .05$ ).

### Descriptions of corporate strategy archetypes

The clusters were given names according to the principles explicated by Hartigan (1975). Each cluster is examined, described and discussed within this section. In addition, an illustrated corporate example is described and substantiated from previous research to better capture the type of configuration the cluster represents.

#### *Cluster 1: Top-down, stand-alone businesses*

This cluster of 33 firms to a large extent models a highly formalized, interactive approach to both corporate strategy and planning as described extensively by Steiner (1979), among other researchers. Cluster 1 embodies several key characteristics of an active M-form management system. Most notable is the relative de-emphasis of any type of resource sharing or horizontal strategy for upstream and/or downstream value-adding activities, thus strongly implying a high level of autonomy at the SBU level. What is telling about Cluster 1 is the configuration of the planning system. These firms apparently place great emphasis on closely coordinating corporate management with SBU management in formulating strategy, although such strategy appears to be SBU-specific and does not rely on intensive, cross-SBU sharing. In addition, high levels of planning formalization complement senior management's involvement in SBU strategy formulation. Thus, these M-form type of companies are not really

**TABLE 4. Breakdown of revenues derived from life cycle stage by cluster**

	<i>Cluster 1</i> <i>Top-Down</i> <i>Stand-Alone</i> <i>Businesses</i> (n = 33)	<i>Cluster 2</i> <i>Portfolio</i> <i>Managers</i> (n = 24)	<i>Cluster 3</i> <i>Loosely</i> <i>Integrated,</i> <i>Activity Sharers</i> (n = 25)	<i>Cluster 4</i> <i>Tightly Integrated,</i> <i>Internally Driven,</i> <i>Activity Sharers</i> (n = 11)
Introductory stage**	5.74	2.46	5.26	6.00
Growth stage**	22.08	15.79	26.44	32.18
Mature stage**	61.83	71.75	62.97	49.55
Decline stage	10.03	10.05	5.19	12.27
Total	100.00	100.00	100.00	100.00

\*\* $p < .05$

'conglomerates' in Lorsch and Allen's (1973) description, since conglomerates typically have a low emphasis on formal planning. Cluster 1 companies also have planning systems that encourage structural integration across SBUs by utilizing planning to link up information systems, budgeting and key people in different business units. In this sense, Cluster 1 firms practice both high levels of structural and behavioural integration (Galbraith and Nathanson, 1978), a characteristic found in firms with aggressive top-down or interactive corporate-SBU relationships. Thus, the planning infrastructure is laid in such a way that while SBUs appear to have significant autonomy, senior management can track the strategies, actions and performance of each unit. Pooled interdependence exists on an operational level, but planning activities seem to be more sequential or reciprocal in nature.

One company that exemplifies Cluster 1 is TRW. In the automotive, defense, electronics and components industries, TRW often seeks to locate and acquire small companies that possess promising technologies that are loosely related to the broad industry sectors in which the company is involved. Even during the early 1980s when these surveys were conducted, TRW was actively seeking potential small acquisition candidates to help it rejuvenate older areas of its core businesses. But because actual sharing of technology, production and marketing skills and resources across these sectors is often difficult, the company managed each of its businesses on a more autonomous basis with frequent planning meetings and reviews to coordinate operations.

### *Cluster 2: Portfolio managers*

This cluster of 24 firms captures Berg's (1965), Dundas and Richardson's (1982), Porter's (1987) and Salter and Weinhold's (1979) description of unrelated portfolio diversifiers. As expected from previous research and theory, these firms undertake extremely low levels of resource-sharing and exhibit a strong merger and acquisition orientation in its planning. Pooled interdependence on all dimensions clearly exemplifies the underlying organization design of these firms. These firms have very little corporate-SBU interaction and planning coordination concerning strategy formulation. Planning time horizons are short, and little structural or behavioural integration via planning is sought across SBUs, which is consistent with Berg's (1965) evaluation of conglomerate companies – findings that have been repeatedly found in more recent literature and testing (e.g. Hitt *et al.*, 1991). The firms in this cluster

effectively portray many earlier descriptions of how conglomerate-type firms are organized (e.g. Berg, 1965; Lorsch and Allen, 1973; Dundas and Richardson, 1982). What is particularly interesting is that firms in this cluster are not any more or less likely to use financial controls to evaluate investments than other clusters. This lack of differences in the utilization of direct, return-based criteria may subtly reveal the growing trend of de-conglomerization of unrelated businesses as they nurture and develop select core businesses.

One firm that has consistently exemplified a classical portfolio management approach to corporate strategy is Martin-Marietta. Throughout the 1980s, this firm participated extensively in a broad range of industries from aerospace to steel, electronics, chemicals, defense, construction, cement and leasing activities. What Martin-Marietta appears to have done on a continuing (and present) basis is to keep corporate planning activities at a minimum, while giving considerable autonomy to its constituent business units. This enables the company to maintain its presence across a broad array of mature businesses.

### *Cluster 3: Loosely integrated, activity sharers*

This cluster of 25 firms engages in a moderate to high level of horizontal sharing of technology, production and marketing activities, while simultaneously exhibiting a strong merger and acquisition orientation. This cluster approximates a weaker version of Porter's (1987) skill transfer typology to the extent that this particular strategy attempts to balance internal horizontal sharing of skills and physical resources with an external search for acquisition opportunities in beachheads representing new industries or products to build competitive advantage. Although these firms evince high levels of coordination among corporate and SBU management in formulating strategy, there is a markedly low level of formal structural integration provided by the planning system to support strategy implementation. Both planning system formalization and the use of planning mechanisms to link up information systems and key resources across business units do not complement the levels of horizontal sharing that exists among SBUs. In addition, planning time horizons in these firms are not as lengthy as anticipated by previous theory, indicating perhaps that a high orientation towards merger and acquisition combined with horizontal sharing generates heavy and conflicting information-processing pressures on the planning system. This finding suggests that maintaining a simultaneous, dual approach to corporate strategy – acquisition and internal sharing – may create significant planning tensions and dilution of managerial energy, a finding consistent with Hitt *et al.* (1990) and Pitts (1977). Thus, a lack of strong integrative support from the planning system, combined with a high acquisition orientation, may strain these firms' ability to develop competitive advantage and superior performance by way of skill transfer and sharing.

One firm that appears to exhibit Cluster 3 characteristics is that of Westinghouse. Throughout the early- to mid-1980s, Westinghouse has been a major player in such areas as power generation equipment, electrical machinery, nuclear technology, communication systems, defense electronics and control systems. Although many of its businesses have engaged in moderate levels of horizontal sharing (primarily key components, distribution facilities, marketing and service networks), the firm has also pursued a high level of acquisition and divestiture activity to reinforce its different broadcasting, communications, electric power distribution and supply businesses. The company has divested itself of any remaining consumer electronics and appliance operations during the early 1980s, while focusing on limited expansion into such related high-technology areas as microwave and satellite communications.

*Cluster 4: Tightly integrated, internally-driven, activity sharers*

This cluster of 11 firms represents the most advanced and sophisticated development of horizontal sharing across all activities of the value chain. In fact, these firms engage in extensive sharing especially among upstream activities, notably production and technological interrelationships among SBUs. These firms rate significantly lower than any of the other three clusters in merger and acquisition orientation. Cluster 4 seems to be an ideal type of diversification as described by Govindarajan (1988), Hitt *et al.* (1990), Hoskisson and Johnson (1992), Pitts (1977), Porter (1987), Salter and Weinhold (1979). Companies in this cluster rely on building and managing horizontal interrelationships to locate and exploit internal sources of competitive advantage. These firms have managed the complex task of capturing economies of scale and scope in their upstream and downstream operational activities. Shared production and development facilities contribute to high financial performance of these firms by reducing duplication of effort and permits these firms to concentrate on the necessary critical mass, skills and talents to build core competences based on tight SBU sharing and coordination (Itami, 1987; Prahalad and Hamel, 1990). Reciprocal interdependence among SBUs is the highest across all four strategic archetypes. The planning and control system configuration appears to support the high levels of horizontal interrelationships quite well. Integration mechanisms, such as the use of information systems, and formalization of the planning process indicate considerable structural and behavioural integration (Galbraith and Nathanson, 1978; Grinyer and Yasai-Ardekani, 1981). While corporate and SBU management appear to jointly formulate strategy, this integration is not as deep as firms in either Cluster 1 (Top-Down, Stand-Alone Businesses) or Cluster 3 (Loosely Integrated, Activity Sharers). This may suggest considerable pre-existing convergence of corporate and SBU mindsets and objectives for developing corporate-wide and SBU strategies. What is particularly notable is that Cluster 4 firms employ some of the longest planning time horizons of any strategy archetype. The difference between firms in the Loosely-Integrated, Activity Sharers (Cluster 3) and these firms (Cluster 4) is particularly salient as it applies toward merger and acquisition orientation. These firms also have the largest proportion of revenues derived from the introductory and growth stages of the life cycle as compared with all other clusters (Proposition 2).

Firms that best capture Cluster 4's advanced horizontal interrelationship characteristics include IBM and Merck. Throughout the early and mid-1980s, IBM has long been highly regarded in its ability to manage a complex web of interrelationships across its major lines of computer and information technology businesses. During this period, IBM has consistently sought to build and defend its competitive advantages by focusing on tightly related clusters of activities that mutually reinforce each business and by continuously investing in its core competences. These allow for cross-subsidization of core activities (such as R&D, semiconductor plants and sales forces) across all business units. Corporate laboratories are highly centralized, while production is carried out in large manufacturing sites geared to system flexibility and low-cost economies of scale. Despite its current difficulties, many other firms still believe that IBM's internal development approach conceived in the early 1980s represents the best balance of internal synergy. In the pharmaceutical industry, Merck has been known as a strong industry leader and innovator in a broad range of drug products. Unlike many of its counterparts such as Smith Kline-Beecham and Bristol Meyers-Squibb, Merck has tended to shy away from acquisitions of other drug companies to build competitive advantage in the fast consolidating and highly regulated drug industry. Instead, the firm has consistently

engaged in high levels of R&D expenditure to ensure a steady flow of new products. As with IBM, Merck has been cited consistently as one of *Fortune's* most admired American firms during the early to mid-1980s.

## DISCUSSION

Continued interest and research in corporate strategy over the past decade have long focused on how different types of diversification strategy may impact firm performance. Many studies on diversification have concentrated on examining the relationship between strategy and formal structure (such as the M-form) as primary influences on firm performance (e.g. Rumelt, 1974, 1982; Salter and Weinhold, 1979; Hoskisson and Johnson, 1992; Hoskisson *et al.*, 1993). Since the vast majority of US firms are organized along an M-form structure, it appears that other organizational design elements, such as the planning system, may also play a significant role in implementing different types of broad corporate strategies (Steiner, 1979; Grinyer and Yasai-Ardekani, 1981; Armstrong, 1982; Porter, 1987).

This study attempted to explore different organizational configurations of horizontal sharing, merger and acquisition orientation and planning system design to better understand the relationship between diversification, planning and performance. This study also appears to reinforce the recent research suggesting that a corporate strategy based on horizontal sharing across SBUs is more likely to engender higher levels of performance than by way of portfolio management or unrelated business restructuring (Roll, 1986; Hamel and Prahalad, 1989; Hitt *et al.*, 1991). Although the evidence still remains highly controversial, a high level of managerial attention devoted to merger and acquisition planning may eventually denigrate the firm's focus on its underlying set of core competences, skills and capabilities. This facet becomes more significant over time as skills, capabilities and competences become more technology-intensive, human-embodied and embedded in organizational routines that are dependent on firm-specific knowledge and sharing. Thus, planning becomes an important contributor to building idiosyncratic and internal sources of competitive advantage. The correspondingly high proportion of revenues derived from products in the early stages of the life cycle for the internally-driven activity sharers (Cluster 4), combined with significantly higher levels of mature products for portfolio management firms (Cluster 2), seem to lend further support for the above notion.

The significant performance differences found across the clusters did not fully support Proposition 1. What is especially telling about these performance results is that the two polar extremes of traditional views (or ideals) of diversification – portfolio management (Cluster 2) and Tightly Integrated Sharing of activities (Cluster 4) – appear to perform better than either the Top-Down, Stand-Alone Businesses (Cluster 1) or loosely integrated, activity sharers (Cluster 3) approaches. To the extent that generic characterizations of corporate strategy are meaningful, then both Top-Down, Stand-Alone (Cluster 1) and Loosely Integrated sharing (Cluster 3) strategies may be potentially thought of as transitional stages of corporate strategy. The tightly integrated sharing of activities (Cluster 4) represents the most sophisticated and ideal type of diversification, as exemplified by high levels of revenues derived from new products and markets and high financial performance.

Although there is no way to empirically test this hypothesis, top-down, stand-alone and loosely integrated sharing strategies may be viewed as corporate versions of 'stuck-in-the-middle' generic strategies. Porter (1987) himself suggested that corporate strategies beyond simple portfolio management represent difficult diversification approaches. In corporate

restructuring, Porter (1987) noted that all too often management in many firms first start out with an aggressive focus, but then fail to divest itself of the business unit once management determined that it could no longer add value. Firms undertaking a restructuring strategy often worked closely with SBU management, but retained them long after they probably should have been sold off. In this sense, firms in Cluster 1 (Top-Down, Stand-Alone Businesses) may come close to approximating some of the characteristics found in the restructuring approach to portfolio management, but do not provide the requisite levels of autonomy needed for SBUs to compete within their own product/market scope. Porter's (1987) description of the pitfalls of restructuring are noted below:

'Perhaps the greatest pitfall, however, is that companies find it very hard to dispose of business units once they are restructured and performing well. . . . While the transformed units would be better off in another company that had related businesses, the restructuring company instead retains them. Gradually, it becomes a portfolio manager. (Porter, 1987, pp. 52-3).'

The corporate strategy described in Cluster 3 (Loosely Integrated, Activity Sharers) also represents a possible transitional strategy. The high levels of horizontal sharing combined with an external merger and acquisition orientation makes for a difficult balancing act. Senior management is likely to be confronted with considerable information-processing, time and effort overload as they simultaneously engage in external searches for attractive acquisition opportunities and also serve as integrators to build internal horizontal interrelationships successfully. This conflicting set of demands and perspectives eventually reduces performance because of the extreme organizational complexity needed to support such an approach. Porter (1987) himself notes the difficulty in pursuing a corporate strategy that combines both horizontal skill transfer with external acquisition:

'Such diversification is often riskier because of the tough conditions necessary for it to work. Given the uncertainties, a company should avoid diversifying on the basis of skill transfers alone. Rather it should be viewed as a stepping-stone to subsequent diversification using shared activities. . . . The goal is to build a cluster of related and mutually reinforcing business units. (Porter, 1987, pp. 58-9).'

The low performance exhibited by firms in Cluster 3 may be indicative of not only the considerable organizational difficulties associated with maintaining such a balance, but also the costs of integration (e.g. high sharing combined with a strong acquisition orientation), that are likely to accompany such an arrangement (Pitts, 1977; Hitt *et al.*, 1990). The likely uncertainty associated with loosely integrated, sharing strategies also applies to designing the proper balance of planning systems to implement a dual and competing strategic focus.

A significant potential limitation of this study is the relative age of the data and the time period of study. As mentioned before, data collection, compilation and validation occurred during the early 1980s, a time when many companies underwent the initial phases of significant corporate restructurings of their operations and subsidiaries. Thus, an additional question posed by this study is to what extent are the described phenomenon and research results of the early to mid-1980s applicable to the current environment? On the one hand, several researchers studying the issue of diversification and strategic planning have noted that the content of broad corporate strategies tends to remain fairly stable over time, in the sense that the degree of horizontal sharing and external merger and acquisition orientation are likely to be significant covariates and features of any firm's strategic posture, even though the marketing and operating sub-environments facing SBUs are likely to change faster (e.g.

Rumelt, 1974, 1982; Pitts, 1977; Porter, 1987). Rumelt's (1974) initial landmark study on diversification examined firms as far back as the early 1960s to determine to what extent broad corporate strategies were changing at that time. His conclusion was that many firms were becoming increasingly more related over time. On the other hand, the corporate competitive environment facing large manufacturing firms is likely to have changed on many dimensions over the past decade. Increased globalization, higher levels of market fragmentation, and the adoption of more sophisticated management information systems are among a growing number of factors that have changed the way large firms organize their operations. Yet, since the central focus of this study examined the broader relationship between diversification, planning and performance, many of these environmental and managerial changes are likely to further buttress this study's underlying propositions and conclusions in that related or tightly-focused diversification and planning coaligns with superior financial performance. The rise of multipoint competition, globalization and information systems makes a tightly focused diversification strategy both potentially easier and necessary to compete in a broad array of businesses. In this study, firms pursuing a highly related or dominantly focused diversification strategy make up for a significant portion of the total sample. Thus, the results and descriptions portrayed by this study represent another piece of evidence that reinforces the notion that related, highly focused diversification strategies do covary positively and significantly with higher financial performance.

In summary, this study's findings suggest that a congruent type of diversification strategy and organizational approach may indeed exist, thus confirming both Porter's (1987) and Rumelt's (1974, 1982) findings, among others. Even when controlling for industry, Cluster 4 firms (Tightly Integrated, Internally-Driven, Activity Sharers) do better financially than firms pursuing other corporate strategies. This finding is even more important when one considers that Rumelt's (1974) original finding of related diversifiers' superior performance was subsequently modified considerably by the later findings of Bettis and Hall (1982) and Montgomery (1982). These researchers noted that industry choice and attractiveness may actually have overdetermined the success of the related-diversification format.

The issue that many firms are potentially 'stuck-in-the-middle' indicates that numerous organizational obstacles remain when firms move from a set of unrelated businesses to a related and mutually reinforced set of activities (Porter, 1987). This point is particularly salient as many sectors of the US economy face global competition, while corporate competitors from other nations may be better organized to nurture their core competences (Hamel and Prahalad, 1989). These core competences can thrive only with high levels of internal horizontal sharing, communication and planning that cuts across divisional or SBU lines. Horizontal sharing in itself is not enough. What matters is the ability to generate new sources of economies of scale and scope through a balanced organization design (including planning and functional coordination) that becomes the basis for innovation, corporate renewal and firm-specific knowledge that competitors cannot easily imitate (Itami, 1987).

The findings in this study demonstrate that strategic and planning research using taxonomic approaches can be an effective means to explore, recreate, validate or identify alternative organizational configurations predicated by theory development and previous research. Further research is recommended because of the mounting planning and organizational problems associated with cross-divisional communication and resource sharing (Pitts, 1977; Greenley, 1986; Govindarajan and Fisher, 1990; Prahalad and Hamel, 1990; Hoskisson and Johnson, 1992). While identifying potential horizontal interrelationships may be a pressing corporate task, the task of designing appropriate planning systems to implement these interrelationships

may be much more difficult and time-consuming. The exploratory results of this study suggest that upstream-based horizontal sharing (e.g. production and R&D facilities) may involve its own idiosyncratic and separate set of contingency relationships with planning and control system attributes, particularly when compared to those firms that engage primarily in downstream-based interrelationships or sharing. Although the 'center of gravity' concept has been discussed in the strategy literature to capture the firm's dominant focus of activities (Galbraith and Kazanjian, 1986), its applicability to building horizontal interrelationships has largely been underresearched. Firms with upstream vs. downstream centres of gravity may indeed require different types of strategic planning system designs to nurture their underlying set of core competences and yet remain responsive to customers and end markets. Thus, additional research is needed to specifically isolate and identify possible contingency relationships that may exist between particular types of horizontal sharing and planning and control design elements.

### **IMPLICATIONS FOR MARKETING PLANNING**

Although the central focus of this study has been to examine the broad contingency relationship between corporate diversification strategy and different planning system designs, the results of this preliminary study do suggest that there may be additional implications to find the optimum link between marketing planning with corporate planning. Regardless of the form of horizontal sharing, marketing activities play a critical link in helping the firm to build a unified image and in developing intangible forms of competitive advantage. The role of marketing planning as a central tool in building corporate-wide synergies is particularly salient in Cluster 4 firms, where tight sharing of activities among different SBUs not only leads to higher financial performance (even after adjusting for industry and size effects), but also links up the firm's numerous subunits into a coordinated, highly integrated and firm-specific set of competitive advantages.

### **Marketing planning's role in managing diversified firms**

Marketing planning is particularly important for firms pursuing both Cluster 3 and Cluster 4 approaches to diversification. As Porter (1987) notes in his study on corporate strategy, both functional and planning activities are important in helping firms develop a rallying point by which a central mission, corporate-wide identity, and commonly shared values become important tools in fostering intangible, yet vital sources of internal synergy. Marketing activities certainly play a leading role in developing a central corporate-wide identity from which SBUs can share resources, sales forces and distribution channels to compete against other similarly-endowed multipoint competitors. Internally, this role of marketing as a corporate-wide 'integrator' or 'facilitator' of shared values and resources will become especially important as firms increasingly adapt to multipoint competition (Porter, 1985). Externally, marketing activities can play the added role of helping integrate acquired businesses within the acquiring firm's umbrella. Particularly for Cluster 3 firms, where there appears to be a dual orientation of mergers and acquisitions combined with high internal resource sharing, the role of marketing becomes even more pivotal. First, the need to smoothly integrate recently acquired businesses often means committing top management's energy and focus (Hitt *et al.*, 1991). However, top management often underestimates the difficulties of achieving smooth integration, particularly as they relate to the physical, fixed assets of the

acquired firm or business. Integration frequently involves time-consuming understanding and rationalization of the acquired firm's physical assets, such as central laboratories, production facilities, operating routines, etc. On the other hand, marketing activities and planning (which are often more intangible in nature) lend themselves well to preserving the acquired business' distinctive assets, competences, images and capabilities during this transition time, especially as they relate to customers, competitors, existing niches, etc. Second, an increased emphasis on implementing joint marketing planning activities can help the Cluster 3 firm become more centrally focused. To the extent that a Cluster 3 strategy may indeed be a transitional state between Cluster 1 or 2 (top-down businesses and portfolio managers) and Cluster 4 (internally driven activity sharers) strategies, then smooth coordination of marketing activities can serve as the preliminary vital step to build and reinforce internal attempts to gain corporate-wide synergies. The fact that Cluster 3 firms evinced the highest score in emphasizing the horizontal sharing of marketing activities (as compared to Clusters 1, 2 and 4) may potentially reveal the latent, but critical role of building intangible sources of interrelationships first before proceeding further 'upstream' towards R&D and manufacturing activities. Although this point remains speculative, other research by Hamel and Prahalad (1989), Itami (1987) and Porter (1985, 1987) note the increasingly important role that different types of 'invisible assets' play in helping firms learn and build new forms of distinctive competencies. Itami (1987) explicitly notes that key 'invisible' assets are marketing activities, planning functions, brands, franchises and other assets that grow, rather than depreciate, over time.

### **Formation of SBU-based marketing strategies**

To the extent that marketing planning activities are becoming a central force in developing new sources of competitive advantage (especially intangible or invisible assets), then SBU managers need to be aware of some of the potential differences that may exist in implementing marketing activities at the SBU level. For example, SBU managers in Cluster 1 and Cluster 2 firms (both of which do not engage in extensive internal sharing) may be able to implement SBU-specific marketing strategies independently of other subunits. Since business units in both Cluster 1 and Cluster 2 firms remain highly autonomous, marketing planning and activities are likely to remain a strong function of each business unit's individual operating or competitive environment. On the other hand, in Cluster 3 and Cluster 4 firms (where internal sharing is a significant feature), SBU managers will confront a significantly different series of marketing objectives, many of which will remain out of the immediate control of SBU managers. First, marketing planning and activities still need to remain responsive and sensitive to each individual SBU's sub-environment. Second, however, the demands of sustaining internal sharing and synergies mean that SBU managers, confronted with a high level of reciprocal interdependence, must constantly negotiate with other SBU managers on a day-to-day basis the specific plans and objectives of the marketing mix. This is likely to be particularly true for those Cluster 3 and Cluster 4 firms engaging in multipoint competition, where defending against competitor thrusts successfully will depend on the ease of marketing integration, synergy and response across the firm's SBUs. Thus, SBU managers in Cluster 3 and Cluster 4 firms will likely require a different set of skills, particularly interpersonal and negotiation-based, to manage the wide array of potentially conflicting internal demands and external competition. Thus, both SBU general managers, and marketing managers in particular, will need a significantly different set of skills, tools and outlooks to manage the complex coordination demands of implementing a corporate strategy that calls for significant levels of internal sharing.

The implications of managing SBU-level marketing and planning activities are significant for the selection and hiring of the SBU and marketing managers as well. For example, Cluster 3 and Cluster 4 firms' SBU and marketing managers are likely to face significantly different tasks from their counterparts in Cluster 1 and Cluster 2 firms, where the emphasis on sharing marketing activities is significantly less. Negotiation skills, managing 'internal networks', and coping with the high levels of reciprocal interdependence are additional demands placed on SBU and marketing managers that make them personal integrators or 'linking pins' between SBUs and other subunits. In essence, Cluster 3 and Cluster 4 firm managers need to be simultaneously responsive to both internal and external markets and environments, whereas managers in Cluster 1 and Cluster 2 firms are more likely to face more direct and externally-oriented tasks environments.

### **Building marketing-based interrelationships**

Identifying and building interrelationships among different SBUs can be a difficult task in even the best of circumstances. Costs of inflexibility, coordination and compromise can often hinder ease of communications, resource allocation and transfer, and sharing of the marketing mix across various SBUs if top management does not carefully design the appropriate incentives and reward systems to sustain systemwide cooperation. Building sustainable marketing-based interrelationships are particularly vital tasks for Cluster 3 and Cluster 4 firms, where growing levels of horizontal resource sharing mean that sister SBUs must view each other as partners, rather than 'competing companies'. This problem is potentially acute for Cluster 3 firms, where a high merger and acquisition orientation, combined with internal horizontal sharing, greatly strains the firms' planning and control systems. The high merger and acquisition orientation often suggests that the newly acquired businesses are prone to have their own strong unit histories and identities in their own right; this makes coordinated marketing planning and resource sharing (both further upstream and marketing-based) difficult, particularly in the early stages of the integration process. In addition, Cluster 3 firms are also likely to face the problem of managing and assimilating different corporate cultures that complicate the task of fostering open communications and working relationships. These strains of a dual corporate strategy (acquisitions combined with active sharing) on the planning system are likely not only to engender high managerial stress (Gupta and Govindarajan, 1984, 1986), but also to dampen efforts to kindle internal 'intrapreneurship' that support high product innovation (Burgelman, 1986).

For Cluster 4 firms in particular, key issues involving marketing-based interrelationships are likely to revolve around identifying important complementary and substitute products that lend themselves well to different bundling and cross-subsidization strategies (Porter, 1985). Selling components or products in a 'bundle' allows firms to gain potentially important economies of scale and scope in marketing activities, as well as reduced costs and greater predictability of production. Bundling is particularly potent for firms that produce high value-added products that are either underscored by a well-respected or known trademark, protected by patents or denotes a strong perception of quality and goodwill. Effective product bundling in Cluster 3 and Cluster 4 may create opportunities for enhanced product/image differentiation and heightened entry barriers that are important in multipoint competition. Cluster 4 firms may also be especially well-positioned to implement marketing-driven strategies based on product cross-subsidization, whereby a single product serves as a loss leader or market spearhead to open the way for other highly related products later. Products such as personal

computers, personal health-care items, packaged foods, and even industrial supplies and components are suitable to bundling and cross-subsidization strategies.

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## **APPENDIX**

### **Strategy measures**

Measures of horizontal sharing data were collected on three variables that broadly represented the various stages of value-adding activities: sharing of technological interrelationships across SBUs or divisions, sharing of production facilities across SBUs or divisions, and sharing of sales and marketing resources across SBUs or divisions. Each of these variables were calibrated on a five-point Likert scale ranging from 'disagree' to 'agree' the extent to which SBUs engaged in extensive sharing of these activities with other SBUs.

Merger and acquisition orientation was measured by assessing the extent of corporate planning effort that is dedicated towards merger and acquisition planning, as well as divestiture planning by the planning department. A five-point Likert scale was used with values ranging from 'no effort' to 'significant effort'. In addition, respondents were asked the extent to which the company's acquisition (and divestiture) planning was incorporated under the corporate planning process. A five-point Likert scale was used with values ranging from 'not at all' to 'completely'. The scores for the four items were summed for a combined scale.

### **Planning and control system design**

Corporate-SBU tightness in strategy formulation was measured by five variables: helping SBU or divisional management formulate goals and objectives, helping SBU or divisional management formulate strategy, reviewing and evaluating SBU plans, integrating SBU or divisional plans with corporate plans and improving the quality of thinking of SBU or divisional management. Each of three variables was constructed on a five-point Likert scale ranging from 'no effort' to 'high degree of effort' to characterize the amount of attention or effort that the corporate planning department expends on each of these activities. The scores for the five items were summed for a combined scale.

The planning time horizons scale was measured on the extent to which corporate planning effort was spent on each of these three-time horizons of planning: operational planning one to three years into the future, long-range (five to ten-year) planning, and what type of company do we want to be in ten years planning. Each of these variables was constructed on a five-point Likert scale ranging from 'no effort' to 'extensive effort'. Responses were summed for a combined scale.

Planning as an integration mechanism was measured along three variables that attempted to capture the most direct means of structural integration along notions developed by Lorsch and Allen (1973) and Galbraith and Nathanson (1978). Three planning characteristics deemed

analogous to Lorsch and Allen's (1973) and Lorange's (1980) constructs: the extent to which the planning process plays a central role in the firm's communications network, the extent to which the planning process stores and provides specialized knowledge and information to the whole firm, and the extent to which long-range resource allocation decisions are an integral part of the planning process. Each of these variables was constructed on a five-point Likert scale ranging from 'disagree' to 'agree'. The three variables were summed for a combined scale.

Formalization of planning has been considered an important surrogate measure of behavioral integration (Lorange, 1980). In many studies (e.g. Aiken and Hage, 1971) it is a complex measure that tries to capture the notions of standardization, following rules and procedures, or more broadly, the degree of autonomy or freedom that managers may enjoy in pursuing their own responsibilities or functions. Although standardization may to some extent be considered a separate measure in its own right, many planning researchers have considered it an important aspect of process formalization (Grinyer and Yasai-Ardekani, 1980, 1981). Three measures in this study that attempt to represent formalization include the degree to which SBU or divisional plans follow a standardized format, the frequency of progress review compared with the plan, and the extent to which SBU plans are updated over time. The first variable, standardization of SBU or divisional plan formats, was measured as a percentage (%). The second variable, frequency of progress review, was measured on a three-point scale ranging from 'less than once a year', to 'every year', to 'more than once a year'. The third variable, updates to SBU plans, was similarly measured on a three-point scale ranging from 'less than once a year', to 'once a year', to 'more than once a year'. Because of both the dissimilarity in underlying variable construction as well as the complexity of the dimension, factor analysis was used to construct the final scale used in the study. All three variables loaded on the same factor, and the factor score was standardized for the analysis.

Emphasis on using financial return criteria to evaluate strategic investments was measured on five aspects: short-term cash flow benefits, impact on earnings per share, forecast net operating profit, forecast return on investment, and discounted cash flow analysis. Each of these variables was measured on a five-point Likert scale ranging from 'totally unimportant' to 'very important' the degree of emphasis to which these criteria were important in evaluating strategic investment expenditures. The five variables were summed for a combined scale.

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