Variations in the Power of Marketing Between Consumer and Industrial Firms

John P. Workman, Jr.
Kevin L. Webb

ABSTRACT. Researchers in marketing have long claimed that marketing's role varies between firms selling primarily to consumer vs. industrial customers. However, there has been no empirical examination of how the power of the marketing function varies between consumer and industrial firms. In this paper we use the functional background of the CEO as an indicator of the power of functional units within the firm and develop and test hypotheses relating the power of the marketing subunit to the firm's type of customers (consumer/industrial), resource allocations, and to strategic orientation. We find that marketing is more powerful in firms selling to consumers, spending more on advertising, spending less on capital expenditures, which are less diversified, and which have a lower debt to equity ratio. Further analysis using correspondence analysis indicates that the consumer/industrial distinction is the best single indicator of marketing's power.

[Article copies available for a fee from The Haworth Document Delivery Service: 1-800-342-9678. E-mail address: getinfo@haworthpressinc.com <Website: http://www.haworthpressinc.com>]

KEYWORDS. Marketing orientation, industrial/consumer dichotomy, chief executive officer

John P. Workman, Jr. is Associate Professor of Marketing, College of Business Administration, Creighton University, 2500 California Plaza, Omaha, NE 68178 (E-mail: Workman@creighton.edu). Kevin L. Webb is Assistant Professor of Marketing, College of Business Administration, Drexel University, 32nd and Chestnut Streets, Philadelphia, PA 19104 (E-mail: webbk@post.drexel.edu).

The authors acknowledge the contributions of Larry Garber in assisting with the correspondence analysis and David Ravenscroft, Hugh O'Neill, Charlotte Mason, Barry Bayus, Morgan Jones, and Bill Perreault in helping shape the ideas in this paper.

Journal of Business-to-Business Marketing, Vol. 6(2) 1999
© 1999 by The Haworth Press, Inc. All rights reserved.
How does marketing’s role vary across industries, between consumer and industrial firms, between service and manufacturing firms, and between high tech and low tech firms? Is the environment in which the company competes related to the functional background of the CEO or the activities and responsibilities of people in marketing? Should firms always be more “market oriented” or are there negative consequences to having a market orientation? Such questions are increasingly being asked within the marketing literature. However, with the exception of the literature on market orientation (e.g., Jaworski and Kohli 1993; Slater and Narver 1994), there are relatively few empirical results within marketing which systematically look at objective measures of variations in marketing’s roles and responsibilities across firms and industries.

Webster (1992) argues that at the corporate level, marketing managers have a critical role to play as advocates, both for the customer and for a set of values and beliefs that put the customer first in the firm’s decision making. Such a role can be difficult given the presence of organizational subcultures which exist within an organization where values, beliefs, and goals differ between subunits (Dougherty 1992; Hutt and Speh 1995; Workman 1993). It has been claimed that this is especially important in the context of business-to-business marketing because planning in this setting requires more functional interdependence and a closer relationship to total corporate strategy than planning in the consumer-goods sector (Ames 1970; Penn and Mougel 1978; Webster 1978). As Ames (1970, p. 96) states, “changes in marketing strategy are more likely to involve capital commitments for new equipment, shifts in development activities, or departures from traditional engineering and manufacturing approaches, any one of which would have company-wide implications.”

While several studies in the marketing literature have examined the relationships among the marketing group and other subunits or functional areas within the organization (e.g., Dougherty 1992; Frankwick, Ward, Hutt, and Reingen 1994; Workman 1993), none to date have investigated determinants of subunit power. While power has been studied in marketing in the context of organizational buying behavior (e.g., Kohli 1989; Ronchetti, Hutt and Reingen 1989) and distribution channels (e.g., Frazier 1983; Gaski 1987), there is little examination of the determinants of the marketing unit’s relative power within the firm. This is a significant gap in our understanding since we do not know the factors which may lead to variations in marketing’s role and do not have guidelines for senior managers concerning when marketing should play a greater role within the firm. As Lichtenthal, Wilson, and Long (1997) assert, business-to-business marketing management is moving toward a broader organizational view and research such as this study provides further insights into the complex dynamics of power and influence in the context of marketing’s role within the firm.

The purpose of this paper is to empirically test theoretically-derived hypotheses which relate type of customer (consumer vs. industrial), resource allocations, and strategic orientation to the power of marketing within the firm. Following the approach of researchers in strategy (Hambrick and Mason 1984), organization theory (Pfeffer 1981; Smith and White 1987), sociology (Flinkstein 1987) and marketing (Pasa and Shugan 1996), we use the background of the CEO as an indicator of the relative power of subunits in the firm. We note that our focus is on antecedents rather than consequences of subunit power. This research represents an initial step toward identifying the conditions that are associated with marketing having a more central role within the company. We begin by reviewing research which has examined factors affecting the power of subunits within the firm.

**LITERATURE REVIEW**

*The Power of Subunits Within the Firm*

Researchers in the management and strategy fields have long been interested in the social interactions within the firm and the power of various subunits. Because the formation of organizational goals was critically important in the “Carnegie School” approach to decision making, it received extensive treatment in their work. The concept of the organization as coalitions with conflicting interests, goals, and resources was developed more fully by Cyert and March (1963) in their behavioral theory of the firm:

We have argued that the business firm is basically a coalition without a generally shared, consistent set of goals. Consequently, we cannot assume that a rational manager can treat the organization as a simple instrument in his dealing with the external world.
Our impression is that most actual managers devote much more time and energy to the problems of managing their coalition than they do to the problems of dealing with the outside world. (p. 292)

The ability of various coalitions or subunits to establish their goals as the goals for the entire organization was addressed in a series of major theoretical works in the '60s and '70s. Thompson (1967), in his classic book on organizations, introduced the concept of the "dominant coalition" and claimed that organizational goals consist of "the future domains intended by those in the dominant coalition" (p. 128). He defined the dominant coalition to include both internal organizational members as well as external stakeholders who join forces when their "abilities to satisfy organizational dependencies are greater in combination than singly, and where the results of increased power can be shared" (p. 126).

Child (1972), in his widely-cited article on "strategic choice," critiqued the system-structural models of fit between the environment and the firm by arguing that they "attempt to explain organization at one remove by ignoring the essentially political process, whereby power-holders within organizations decide upon courses of strategic action" (p. 2). He draws on the dominant coalitions concept from Cyert and March (1963) and Thompson (1967) and argues that:

The dominant coalition concept opens up a view of organizational structures in relation to the distribution of power and the process of strategic decision-making which these reflect. . . . The dominant coalition concept draws attention to the concept of who is making the choice. It thus provides a useful antidote to the sociologically unsatisfactory notion that a given organizational structure can be understood in relation to the functional imperative of 'system needs' which somehow transcend the objectives of any group of organizational members. (p. 14)

Jeffrey Pfeffer further developed the coalitional view of the organization, both in a book with Gerald Salancik (1978) and in his own book (1981). Pfeffer and Salancik's "resource dependence" theory of the organization focuses on interdependencies organizations have with their environments and resources they require from the environment. According to Pfeffer (1982, p. 193), the two key elements of the resource dependence argument are (1) the external constraints placed on organizations by providers of critical resources, and (2) strategies employed by managers to cope with these external constraints. Pfeffer (1981) elaborated on the implications of this perspective for the power of subunits within the firm and argues that power goes to those groups which more effectively cope with key uncertainties in the environment and control resources which are critical to the organization. Pfeffer's work is similar to the work of the Aston group on power (Hickson et al. 1971; Hinings et al. 1974) in that control over critical contingencies leads to power.

Two general approaches have been taken to operationalizing the power of subunits within organizations. The first approach has been to use interviews and surveys with many members in a small number of organizations which directly ask about the power of various subunits (e.g., Enz 1986; Hambrick 1981; Hinings et al. 1974; Perrow 1970 Pfeffer and Salancik 1974). The second approach uses secondary indicators of the dominant coalition such as the functional background of the CEO or the members of the top management team (TMT) (e.g., Filgstein 1987; Michel and Hambrick 1992; Pfeffer 1981; Smith and White 1987). While these empirical studies generally support Hambrick and Mason's (1984) "upper echelons" perspective which postulates an association between strategic choices and the characteristics of the top management team, much of the research using functional backgrounds of the CEO (e.g., Gupta and Govindarajan 1984; Hambrick 1981) has collapsed functional backgrounds down to a few categories such as input (e.g., purchasing, personnel), throughput (e.g., production, process R&D, finance), and output (e.g., marketing, product R&D). In these studies, both marketing and "product R&D" are included in the output functional background. Yet, numerous studies have shown significant differences between the perspectives of marketing and R&D (e.g., Dougherty 1992; Gupta, Raj, and Wilemon 1986; Ruckert and Walker 1987; Workman 1993) and the use of a single category which encompasses both marketing and R&D is in need of empirical examination.

**Research on Marketing's Role Within the Firm**

"Marketing" can be conceived of in many ways, ranging from a focus on marketing as an academic discipline (Hunt 1992), studying such concepts as exchange (Bagozzi 1975), or relationships (Houston and
Gassenheimer (1987), to McKeena's (1991) broader "Marketing is Everything" argument that marketing is a way of doing business that should permeate the business. Recent interest in the concept of "market orientation" takes such an organization-wide view of marketing activities with conceptual and empirical papers arguing for a link between market orientation and overall business performance. However, as Varadarajan (1992) has argued, marketing can also be considered in a more traditional way as a functional group within the firm responsible for such activities as market research, advertising, and managing distribution channels. Given the focus of this paper on subunits within an organization, we use such a functional group perspective and consider which situations and contexts determine when marketing will have a more or less central role within the firm.

Within marketing, most of the research concerning marketing's role within the firm has been conceptual rather than empirical (e.g., Achrol 1991; Howard 1983; Webster 1992). Anderson (1982) provides one of the more extensive theoretical considerations of marketing's role and proposes a "constituency-based theory of the firm." Drawing on Pfeffer and Salancik's (1978) resource dependence theory, Anderson claims that goal setting and corporate strategy are shaped by a continual struggle among functional groups within the firm and that the power of functional groups is determined by the importance of the resources they bring to the firm:

... the constituency-based model views the major functional areas as specialists in providing particular resources for the firm. The primary objective of each area is to ensure an uninterrupted flow of resources from the appropriate external coalition... the chief responsibility of the marketing area is to satisfy the long-term needs of its customer coalition. In short, it must strive to implement the marketing concept. (p. 22)

Anderson recognizes marketing's role in setting priorities is not preordained and marketing "may not have a significant impact on strategic plans unless marketers adopt a strong advocacy position within the firm." (p. 24).

Walker and Ruekert (1987) consider marketing's role in a specific context, the implementation of business strategy, and examine which types of marketing structures, policies and procedures lead to higher business unit performance. Drawing from Miles and Snow's (1978) and Porter's (1980) strategy typologies, they develop a conceptual model with detailed propositions and relating marketing's role to the type of business strategy being used. In a related article, Ruekert and Walker (1987) postulate a general model of marketing interaction with other groups and develop fourteen hypotheses relating variables such as strategy, formalization, conflict, and problem solving methods. They empirically test this model using data from marketing's interactions with R&D, Accounting and Manufacturing people in three divisions of one firm, finding support for their general proposition that marketing's interactions with other groups is dependent on the environment the firm faces.

Several empirical studies in marketing have reported results that are indirectly related to our focus on determinants of marketing's power in various situations. The most common approach is to relate business unit strategy to the role of marketing in various strategies. The primary finding for our purposes is that business units typically place more emphasis on marketing when they are pursuing a Prospector strategy as opposed to the other three strategies in the Miles and Snow typology (e.g., Conant, Mokwa, and Varadarajan 1990; McDaniel and Kolari 1987; Ruekert and Walker 1987). Starr and Bloom (1992) tested a strategic contingencies explanation of the power of brand managers in a mail survey and found that centrality, amount of financial control, communication with the brand manager, and control over all contingencies were associated with departmental power. More recently, Pasa and Shugan (1996) focus on the "value of marketing expertise" and find that marketing is more valued when there is market instability while marketing is less valued when competition is more intense and firms have more assets.

A Theoretical Framework for Predicting Marketing's Power Within the Firm

This paper draws on resource dependence theory to develop a framework which claims that marketing's power is a function of three types of factors--type of customer (consumer vs. industrial), resource allocations within the firm, and strategic direction of the firm. Anderson (1982) has argued that marketing is a constituency representing customers within the firm and the importance of this customer resource varies based on a number of factors such as strategy and the importance of information from customers. Our choice of the three
types of factors which may affect subunit power is based on prior empirical research in strategy and organizational theory which has focused on subunit power. Supporting logic relating resource dependence theory to our hypotheses is provided in the text preceding each hypothesis.

Given our interest in looking at determinants of variations in marketing's power across organizational contexts, our measure of the power of a functional group within the firm is the functional background of the CEO. There is a long tradition in the management literature of using the functional background of the CEO or the top management team as a proxy for the power of functional groups within the firm (e.g., Flistein 1987; Hambrick and Mason 1984; Hickson et al. 1971; Pfeffer 1981). This linkage follows from the "critical contingencies perspective" (Hickson et al. 1971; Hinings et al. 1974; Hambrick 1981) which claims that subunits will have more power within the organization to the extent that they have control over critical contingencies facing the firm. Hambrick and Mason (1984) present the most extensive theoretical support for what has come to be known as an "upper echelons" theory and numerous empirical studies have shown systematic effects between the backgrounds of the top management team and variables such as strategy (Flistein 1987; Gupta and Govindarajan 1984; Smith and White 1987; Snow and Hrebiniak 1980), structure (Flistein 1987; Palmer, Jennings, and Zhou 1993), and various aspects of the environment the firm faces (Miller and Toulouse 1986; Norburn and Birley 1988; Thomas, Litschert and Ramaswamy 1991). In this paper, we follow the empirical approach of Flistein (1987, 1990) and Pasa and Shugan (1996), using a logit model with the dependent variable being a functional background in marketing. However, we differ from their work in the theoretical development and in the types of independent variables used to predict the CEO's functional background.

One of the limitations of this theoretical framework is that it assumes a causal direction from resource allocations and strategy to power of functional groups. However, the direction of causality may be opposite—power of certain functional groups may lead to certain resource allocations and strategies. As other theorists studying strategy and power within firms have pointed out (Asley and Sachdeva 1984; Child 1972; Enz 1986; Hambrick and Mason 1984; Mintzberg 1983; Pfeffer 1981; Salancik and Pfeffer 1977), there is a circular

pattern where those in power have the ability to set the organizational goals, determine resource allocations, and make strategic choices which further reinforces and institutionalizes their power base. Following the approach taken by others who have postulated a systems-structural link between the environment and power (e.g., Flistein 1987; Hambrick 1981; Pasa and Shugan 1996; Pfeffer and Salancik 1974), we use a cross-sectional design to empirically determine whether there is an association between resource allocations, strategy, and industry factors and the background of the CEO. Thus, this study should be seen as focusing on antecedents rather than consequences of subunit power. However, given the cross-sectional design and the potentially circular relationship between strategy, resource allocations and subunit power, it is not possible to establish the direction of causality in this study. With this background on the relationship between the firm's environment and the power of subunits within the firm, in the next section we present our hypotheses grouped into three categories: type of customer, internal resource allocations, and strategic orientation.

HYPOTHESES

Type of Customer

We first consider how the type of customer may affect the power of subunits within the firm. One of the more common dichotomies used to capture variations in marketing activities is the Consumer/Industrial dichotomy. Two of the key factors distinguishing consumer from industrial marketing are the intended use of the product and the intended consumer. A fundamentally different marketing approach is needed to reach the industrial or organizational buyer. Studies of differences in consumer and industrial product managers (Cummings, Jackson, and Ostrom 1984; Eckles and Novotny 1984) have identified some key differences in marketing responsibilities, with consumer product managers being more involved with branding, concept testing, forecasting, advertising, and sales promotion while industrial product managers tend to be more involved with personal selling, distribution, pricing, trade shows and field demonstrations.

Applying the resource dependence theory at the industry sector level, we argue that marketing is more powerful in industry sectors selling a
larger percentage of their output to final consumers. The reason is that an understanding of the final consumer and the management of the market research, advertising, communications, and distribution channel arrangements are critical resources provided to the firm by the marketing subunit in consumer firms (Zinkhan and Cheng 1992). In contrast, in industrial firms, it is more common for other subunits to directly interact with customers and distributors and for advertising and promotion to be less critical to the firm’s success. Moreover, consumer-goods marketers seem to have embraced the marketing concept more completely than have their business marketing counterparts (Ames 1970; Penn and Mougel 1978; Webster 1992).

Empirical support for the hypothesis that marketing is more powerful in consumer firms comes from a number of studies. In a study using PIMS data to empirically prioritize 10 types of contingency variables to see which ones were the most significant intervening variables between strategy and performance, Hambrick and Lei (1985) found that the two most significant contingency variables were the user sector (consumer or industrial) and the frequency of purchase by customers. Also, in a survey of 252 large U.S. manufacturing firms which focused on marketing and R&D interactions during new product development, Hise, O’Neal, Parasuraman and McNeal (1990) found that marketing had a greater role in development decisions in consumer firms than in industrial firms. While not directly measuring subunit power, these empirical results suggest that marketing is more powerful in consumer firms than in industrial firms.

H1: Marketing is more powerful as the percentage of output sold to final consumers increases.

Resource Allocations Within the Firm

Numerous researchers in marketing have hypothesized that the role of marketing within the firm is affected by internal resource allocations (Anderson 1982; Day and Wensley 1983). The set of hypotheses in this section relate the power of the marketing subunit to key strategic resources which can be operationalized from secondary data.

Advertising Intensity: One variable that most logically seems related to marketing is spending on advertising. To the extent that ad spending is reflective of situations where marketing plays a key role in communicating with consumers and differentiating the product, then it is an indirect indicator of the importance of the resources provided by marketing to the firm. Firms with larger customer bases with indirect distribution tend to rely more on advertising and promotion than on the sales force and distributors to communicate with their customers. In such cases, we propose that marketing will have more power.

Empirical support for a link between advertising and promotion expenses and the power of marketing has been provided by a number of studies. Piercy (1987) finds that perceived power of marketing is positively related to ad to sales ratio. While his direction of causality is from power to ad spending, he nonetheless shows a relationship between the two. Using PIMS data, Hambrick (1983) found Prospector businesses had significantly higher marketing expenses as a percentage of sales than defender businesses. This was also supported in a survey of 279 banks by McDaniel and Kolari (1987) who found that selling, advertising, sales promotion, and public relations are rated higher for the combined strategic types of prospectors and analyzers than for defenders. Since other research has found a link between the power of marketing and the prospector strategy, these studies provide indirect support that ad spending is related to the power of marketing. Finally, in a conceptual article, Hambrick and Mason (1984) hypothesize a link between output function experience (marketing and “product R&D”) and ad spending.

H2: Marketing is more powerful in firms with a higher Ad to Sales ratio.

Product R&D Spending: R&D spending tends to be higher in high tech firms and in firms with higher rates of growth. On the one hand, higher R&D spending tends to be associated with technology-based organizational cultures where one of the key resources provided to the firm is the product technology and links to key technical suppliers which are typically the province of the R&D organization. This would tend to increase the power of R&D and reduce the power of marketing. On the other hand, firms with high R&D spending tend to be growing firms with differentiated products where one of the key tasks is the establishment of sales and distribution arrangements and the expansion of the geographic, applications, and industry markets served (Drazin and Kazanjian 1993). Since marketing and sales groups are typically responsible for providing the resources of applications and service
support and distribution arrangements to the firm, this would argue for higher power for marketing.

The evidence regarding marketing's role in high tech firms suggests that for many high tech firms, marketing does not have as much power vis-à-vis R&D as in consumer firms (e.g., Dougherty 1992; Enz 1986; Workman 1993). Empirical support for the proposition that R&D has more power in high tech firms is provided by Drazin and Kazanjian (1993). Their results from a survey in the electronics industry sector indicate that in the two earliest growth stages, when the R&D/Sales ratio is highest, CEOs with technological backgrounds will dominate. Conversely, Hambrick and Mason (1984—Proposition 3) and others postulate a positive relationship between output function experience of CEOs (including marketing) and innovation, indirectly implying that marketing will be more powerful in a high tech company. However, by grouping CEOs with marketing backgrounds with those with product R&D backgrounds (but not process R&D), they imply a common orientation between marketing and R&D managers. However, research in marketing (Gupta, Raj, and Wilemon 1986; Ruekert and Walker 1987) and technology management calls into question this presumed similarity of backgrounds between marketing and R&D.

Our hypothesis is that marketing will have the highest levels of power at moderate levels of R&D. We believe that in firms with R&D expenses significantly above the average, R&D will dominate the culture and marketing will be less powerful. In cases were there are very low or no R&D expenses, competition often shifts to efficiency and financial leverage and marketing typically plays a lesser role.

H3: Marketing is more powerful in firms with moderate levels of R&D spending.

**Capital Intensity:** Much of the research on the life cycle progression (e.g., Anderson and Zeithaml 1984; Moore and Tushman 1982; Utterback 1981) argues for a shift over time from product differentiation based on innovation to an emphasis on efficiency and cost control. In more mature firms, one of the key resources provided to the firm is the efficiency of the production process which typically is associated with higher levels of power for operations and finance. One way of boosting efficiency is to invest more heavily in capital equipment to automate processes that were previously not automated. Because people in marketing tend to have more experience with innovation and differ-

entiation than with cost control and manufacturing, this would imply that marketing is less likely to be in charge as competition shifts to efficiency and automation.

Support for the proposition that marketing is less powerful when capital intensity is high has primarily come from the strategy literature. Using PIMS data, Hambrick (1983) found that Defenders had significantly higher gross fixed assets and value added per employee than did Prospectors and that Prospectors tended to spend more on marketing. In their upper echelons paper, Hambrick and Mason (1984) hypothesize an association between a throughput functional background (accounting, production) and such indicators as automation, plant and equipment newness, and backward integration. If we assume that marketing is more powerful for firms with a Prospector orientation and that Prospectors spend less on capital expenditures, we arrive at the following hypothesis:

H4: Marketing is more powerful in firms with lower levels of capital intensity.

**Strategic Orientation of the Firm**

Walker and Ruekert (1987) propose that marketing's role will vary with the strategy being pursued and noted that marketing may not always be the dominant coalition within the firm. A number of empirical studies have found support for the proposition that a given functional group's importance will vary depending on the corporate strategy pursued. However, there is little consensus on how to operationalize a firm's strategy (cf., Snow and Hambrick 1980). One of the most commonly used approaches has been through surveys where managers choose a text description that best characterizes the strategy of their firm. These surveys have frequently used either Miles and Snow's (1978) strategic typology (i.e., Prospector, Analyzer, Defender, Reactor) or Porter's (1980) typology (i.e., cost leadership, differentiation, focus).

Studies using secondary data sources (as opposed to surveys) have tended to study the strategic orientation of the firm by looking at the degree of corporate diversification. Chandler (1962) was one of the first to use such an approach, arguing that corporate structure follows from the strategy of the firm. More recently, Flinkstein (1987, 1990) has used a similar historical approach with archival data to study
changes in strategy, structure, and the background of the CEO. In this section, hypotheses relating the corporate strategy and organizational life cycle to the power of the marketing subunit are developed.

**Type and Degree of Diversification:** Many researchers studying diversification have tried to develop typologies to characterize the types of corporate diversification. Some of these typologies require the subjective judgment of the researchers and categorize specific firms at specific points in time (e.g., Rumelt 1974). Other schemes are more objective and rely on secondary data. In this paper we draw on the “entropy measure” of relatedness (Jacquemin and Berry 1979; Palepu 1985) which uses sales broken down by SIC categories to distinguish between related diversification (the first two digits of the SIC code are the same) and unrelated diversification (first two digits are different).\(^1\)

Most of the research in strategy has suggested that a firm with a marketing or sales CEO is more likely to be associated with related than unrelated diversification. The logic is that marketing will have expertise about the customers in related product markets (for example, Hewlett Packard’s move from computers to peripherals such as printers and scanners) but will not have much experience in expanding into unrelated product markets (e.g., Coca Cola’s purchase of Columbia Pictures in the 1980s). Conceptual and empirical support comes from a number of studies. For example, Song (1982) found that CEOs of “internal diversifiers” tended to have a background in marketing and production, while “acquisitive diversifiers” tended to come from accounting, finance, or law. In a conceptual paper, Gupta (1984) hypothesizes that a marketing background is more important for related diversification since similar types of customers are being served. In their upper echelons paper, Hambrick and Mason (1984) argue that an output function experience (marketing and product R&D) is more likely for related diversification while a “peripheral” function background (legal, finance) is more likely for unrelated diversification. Finally, Fiegenstein (1987) found a positive relationship between a “Sales and Marketing” background for related diversification, but less likely for unrelated diversification in two of his three time periods. These studies lead to the following two hypotheses:

\[H_5:\text{ Marketing is more powerful in firms with higher levels of diversification into related markets.}\]

**Prospector/Defender Orientation:** One of the more frequently used ways of characterizing corporate strategy within marketing has been use of the Miles and Snow typology (e.g., Gupta, Raj, and Wilemon 1987; McDaniel and Kolari 1987; McKee, Varadarajan, and Pride 1989; Ruekert and Walker 1987). In their study of four industry sectors, Miles and Snow (1978) developed a typology of overall corporate orientation using the labels “Prospectors,” “Analysts,” “Defenders,” and “Reactors.” The original typology proposed that the first three of these lay along a continuum while Reactors displayed no clear patterns. Researchers who have used this typology have often related it to the nature of marketing’s interactions with other groups. For example, Gupta, Raj, and Wilemon (1986) developed a model of the R&D-Marketing interface which had strategy (the four Miles and Snow categories) and perceived environmental uncertainty as determinants of the need for integration between the groups. Walker and Ruekert (1987) also drew on the Miles and Snow typology, arguing that:

Because prospector business units attempt to generate new business opportunities and to grow rapidly, those functions closest to the customer are of crucial importance. Competence in marketing, sales, and product R&D and engineering is the impetus for growth and therefore should be related positively to the success of such a strategy. (p. 24)

Researchers in strategy have typically looked at marketing as one among several functional groups and have claimed that different “distinctive competencies” are appropriate for different types of strategy (e.g., Hitt, Ireland, and Palia 1982; Snow and Hrebiniak 1980). Hambrick (1981) qualitatively identified outliers and found that in each of his three industry sectors, people in the output functions (marketing, sales, product R&D) had relatively greater power in firms with a prospector strategy vs. a defender strategy. In his PIMS study, Hambrick (1983) found Prospector businesses had significantly higher marketing expenses (as a percentage of sales) than defender businesses. Hambrick and Mason (1984, p. 197) claim that “an innovative ‘prospector’ strategy calls for competencies, structures, and processes
that support the firm’s continuing search for new products and markets; therefore, executives in marketing and product development areas come to have great power.” Finally, Thomas, Litschert and Ramaswamy (1991) found that CEOs of prospectors were more likely to have output backgrounds while CEOs of Defenders are more likely to have throughput backgrounds. Based on these studies, we hypothesize:

H7: Marketing is more powerful in firms using a Prospector versus Defender strategic orientation.

Organizational Life Cycle: Numerous researchers have proposed that the product life cycle is a major contingency variable affecting innovation strategy and resource allocations (e.g., Anderson and Zeithaml 1984; Etienne 1981; Hayes and Wheelwright 1979; Howard 1983; Moore and Tushman 1982; Utterback 1981). Moore and Tushman specifically address changes in the role of marketing over the PLC, arguing that marketing’s role diminishes in the mature stage when the emphasis shifts to price and manufacturing process. Howard (1983) has also argued that marketing’s role tends to be greater in the introduction and growth stages, with the emphasis shifting to production, control, and finance as the business unit approaches a mature stage. Hambrick and Mason (1984) also claim a link between output function experience and growth of the firm. Fliedstein (1990) and Chandler (1962, 1990) use historical data to examine changes in corporate strategy and structure over the past century. Both argue that marketing and sales people rose to power as firms expanded their scale and scope and needed to distribute their goods over wider geographic territories. For example, Fliedstein writes: “The sales and marketing conception focused the firm’s attention on finding, creating, and keeping markets. The strategies that this conception inspired were oriented toward growth by non-predatory competition” (1990, p. 14).

Empirical studies have supported the proposition that marketing is most likely to be in charge during growth stages, with administrative, finance, and operations people coming in as the business matures. Gupta and Govindarajan (1984) found that greater marketing and sales was positively related to effectiveness for growth strategies (“build” SBUs) while negatively related to effectiveness for mature strategies (“harvest” SBUs). Using PIMS data, Buzzell and Gale (1987, p. 206) show a relationship between the growth stage and marketing expendi-

In a study focused on technology-based start-ups, Drazin and Kazanjian (1993) propose a four stage model of corporate growth. They find that firms in the electronics sector were more likely to initially have CEOs with technical backgrounds, with marketing CEOs becoming more common in the growth stage as firms commercialize products and revenues increase. In a field study of 125 technology-based spin-offs from MIT, Roberts (1990) also found that over time the successful firms evolved from a focus on technology to a greater emphasis on marketing. Hitt and Ireland (1985), in a survey of CEOs of 185 of the Fortune 1000 firms, found that a distinctive competency in marketing (as measured by 8 scale items) lead to lower performance for firms in a retrenchment strategy. Because the growth rate of sales is related to the stage of the PLC, we propose:

H8: Marketing is more powerful in firms with higher sales growth rates.

Control Variables: We additionally include control variables in our model for which we have no specific hypotheses. First, we include two dummy variables to control for the type of product being produced (durable and non-durable industry sectors, with service omitted). This three part categorization of industry sectors is a reduction of the seven categories used in the PIMS studies. We also include the debt to equity ratio as a control. Decisions regarding the capital structure of the firm are distinct from decisions on the allocation of resources; thus we have not included this variable in our resource allocation hypotheses.

METHOD

Our model was tested using variables from Compustat, the Business Week “Corporate Elite” issue for 1987, and Department of Commerce Benchmark I/O tables of the U.S. economy. Starting in 1987, Business Week published a special issue on the CEOs of the 1000 firms. For each firm in the Business Week 1000, the special issue on CEOs provides information on demographic characteristics such as the educational background, the functional background, and the tenure in the firm and as the CEO.
For our dependent variable, we have used the Business Week functional background variables. These measures were self reported on a survey and respondents were allowed to indicate a background in more than one functional area. In all, approximately 50 different backgrounds were provided. Similar to the other empirical studies coding functional backgrounds from secondary data (e.g., Flinkstein 1987; Michel and Hambrick 1990; Palmer, Jennings and Zhou 1993), we focused on a limited set of categories (i.e., marketing, general administration, technical/R&D, finance, operations, and legal). The average number of backgrounds given was 1.41 and 51% of the CEOs who indicated marketing, also indicated another functional background. Since over half of the CEOs with a marketing background had experience in other areas as well, this prevented our use of techniques such as discriminant analysis which assumes membership in only one group. Instead we choose to concentrate on the dichotomous condition of CEOs with or without experience in marketing.

The type of customer measure (Consumer/Industrial) was computed at the industry sector level (all firms in the industry have the same measure), using the Department of Commerce 1987 Benchmark I/O tables. For each of the 37 Business Week segments, the DOC 2 digit industry sector which most closely matched the industry was independently identified by the two authors. For each DOC industry sector, the percentage of demand by final consumers was calculated as the “Personal Consumption Expenditures” divided by total demand (U.S. output less exports less inventory accumulation plus imports). In some cases (general machinery), there was no exact industry sector match and an approximate match was made by using an average of the next closest DOC industry sector(s). Because of the judgmental nature of mapping the Business Week industry categories to the DOC industry categories, this continuous measure was converted to a 1 to 7 Likert scale with 1 being primarily industrial and 7 being primarily consumer. The breakpoints were 12%, 24%, 36%, 48%, 60%, and 72% of output sold to final consumers.

All of our resource allocation and strategy and life cycle variables were operationalized based on data from annual reports in 1987 as reported in CompuStat. Ad ratio and R&D ratio are the ratio of ad expenditures to sales and product R&D expenditures to sales. The capital expenditures ratio is the average of the capital expenditure to sales ratio for the prior three years. The reason for averaging this variable is that it may be easier to defer capital expenditures or to have unusually low or high expenditures in a given year.3 The growth rate was calculated automatically by CompuStat by fitting an ordinary least squares regression line through the year to year growth rate of sales of the firm for each of the prior ten years. Where less than ten years were available (due to companies not being publicly traded that long), the calculation was done by the authors fitting an OLS regression equation using as many years of revenues as were available. The debt to equity ratio used the CompuStat measures of long term debt divided by common shareholders equity. Gross margin was defined as 1 minus the cost of goods sold measure from CompuStat. Finally, sales were the revenues for 1987 from CompuStat.

The Prospector/Defender categorization was made using an index of aggressiveness in resource allocations vis-à-vis other firms in the same industry sector. A normalized measure (value minus industry average divided by industry standard deviation) per industry sector of ad ratio, R&D ratio, capital spending (reverse scored), and average sales growth was calculated for each firm. The Prospector/Defender measure was then determined by averaging the four normalized measures and dividing this index into thirds. The top third was classified as prospectors (a value of 1), the middle third was coded as analyzers (a value of 0), and the bottom third was coded as defenders (a value of minus 1). This approach of developing a scale with normalized measures per industry sector using items such as ad ratio, R&D ratio, and sales growth and then comparing the top third or quartile with the bottom third or quartile has been utilized by other researchers in strategy (e.g., Fombrun and Ginsberg 1990; Halebian and Finkelstein 1993; Thomas, Litschert and Ramaswamy 1991).4

Related and unrelated diversification were calculated using the approach adapted by Jacquemin and Berry (1979). According to the FASB accounting guidelines, firms must break out sales, income, assets, capital expenditures and employees for each of up to ten major business segments they operate in. CompuStat then assigns a primary and secondary SIC number to each business segment. Total diversification at the 4 digit SIC level is defined as

$$DT = \sum_{i=1}^{x} P_i (1 - P_i)$$

where $P_i$ is the percentage of sales in a given segment. The primary SIC code for the segment was used in this calculation. Unrelated diversification
was then calculated using the above equation, however, using just the
two digit SIC code and combining sales of segments in the same two
digit SIC. Related diversification is defined as total diversification
minus unrelated diversification. These measures have been widely
used within strategy as a measure of related and unrelated diversifica-
tion (e.g., Baysinger and Hoskisson 1989; Hill, Hitt, and Hoskisson
1992; Palepu 1985). Finally, the type of product (durable/non-durable/
service) was done at the industry sector level using the judgment of
the authors and drawing on the DOC I/O tables.5

Our hypotheses were tested on the sub-set of the Business Week
1000 for which it was possible to obtain a complete set of data from
CompuStat. CompuStat maintains separate databases for banks and
financial companies (such as insurance and S&Ls) and for utilities,
due to the non-comparable reporting requirements for these firms. For
instance, banks and utilities do not report expenditures on R&D, ad-
vertising, or the cost of goods sold because they are less relevant than
for industrial firms. We thus removed the firms in the Business Week
industry sectors of Banks, Financial Services, and Savings and Loans
(173 firms), Utilities (113 firms), as well as those firms where no
functional background of the CEO was provided (33 firms). A further
10 were removed due to missing data on capital expenditures. Finally,
15 firms identified as outliers were removed from the analysis.6 This
left us with 655 firms for testing our hypotheses.

RESULTS

Our hypotheses were tested in two ways. We initially performed
simple t-tests of differences in the means for each variable for firms
with and without CEOs with a marketing background. As will be
discussed later, five of seven hypotheses are supported with such a
bivariate test of means (it was not possible to test hypothesis 2 with a
t-test). We also used a logistic regression with the dependent variable
being 0 or 1 for a background in marketing and the variables discussed
above as independent variables. For CEOs who indicated a back-
ground in more than one area (33% of the sample), we tested for the
presence or absence of marketing among the multiple backgrounds
provided.7 A summary of the means and correlation between the inde-
pendent variables is provided in Table 1.

We initially computed the means for each of the variables and tested
for differences between firms whose CEO had a functional background in marketing vs. those without such a background. Table 2 shows both the comparison of firms with marketing vs. non-marketing CEOs and also the comparison of marketing to other functional backgrounds. Five of the seven hypotheses regarding means are supported with the hypotheses on related diversification and sales growth not being supported. In addition to the bivariate comparison of marketing versus non-marketing firms, it is also interesting to compare how firms led by marketing CEOs differ from firms led by CEOs with other backgrounds. For example, for R&D spending, firms led by Engineering/Technical CEOs have higher levels of R&D spending while firms led by CEOs with backgrounds in law and operations spend less on R&D than marketing led firms. While we did not have hypotheses concerning outcomes, it is interesting to note in Table 2 that firms with marketing CEOs have significantly higher ROIs than firms with CEOs without marketing backgrounds.

When we use a binomial logit model with the dependent variable being yes or no for experience in marketing, the results are less clear cut (see Table 3). Since the logit model (like a regression equation) considers the effects of a given variable, controlling for the effects of the other variables, some of the results from the bivariate comparison no longer hold up. The initial model (Model 1) supports the hypotheses regarding capital intensity, unrelated diversification, and percent sold to consumers. The logit model indicates that the Ad to Sales ratio was not a significant predictor of the power of marketing. However, further analysis showed that the absolute level of ad spending ($ spent on advertising) was a significant variable (Table 3, Model 2). The mean level of Ad spending for firms with a marketing CEO was $96.7 million while only $45.7 million for other firms. We suspect that the ad level variable captures a missing variable effect of having nationally distributed, well promoted brands that goes beyond the ad percent measure. If there are truly economies of scale to advertising, the ad level may be a better indicator of marketing’s power within the firm than the ad ratio.

Our hypothesis that the percent of industry output sold to final consumers would be a predictor of the power of marketing is supported. While this is intuitive, this is one of the few empirical studies to document the effects of selling to consumers as opposed to industri-


### TABLE 3. Results of Logit Model Predicting Probability of Marketing CEO

<table>
<thead>
<tr>
<th>Variable</th>
<th>Model 1 (using AD/Sales ratio)</th>
<th>Model 2 (using Ad dollars)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Parameter</td>
<td>St. Error</td>
</tr>
<tr>
<td>Post Sold to Consumers</td>
<td>-.166</td>
<td><strong>.052</strong></td>
</tr>
<tr>
<td>Resource Allocations</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ad/Sales Ratio</td>
<td>-.05</td>
<td>2.84</td>
</tr>
<tr>
<td>Ad Dollar Amount</td>
<td>5.85</td>
<td>5.47</td>
</tr>
<tr>
<td>R&amp;D/Sales Ratio</td>
<td>29.71</td>
<td>32.83</td>
</tr>
<tr>
<td>Capital Expense/Sales Ratio</td>
<td>3.03</td>
<td>1.62</td>
</tr>
<tr>
<td>Strategic Orientation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Related Diversification</td>
<td>.566</td>
<td>.429</td>
</tr>
<tr>
<td>Unrelated Diversification</td>
<td>.330 **</td>
<td>.251</td>
</tr>
<tr>
<td>Prospector/Defender</td>
<td>-.111</td>
<td>.135</td>
</tr>
<tr>
<td>Sales Growth Rate</td>
<td>3.34</td>
<td>E-4</td>
</tr>
<tr>
<td>Control Variables</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Debt/Equity Ratio</td>
<td>1.75 E-3</td>
<td>.0011</td>
</tr>
<tr>
<td>Sales Amount</td>
<td>-.231E-6</td>
<td>1.1E-5</td>
</tr>
<tr>
<td>Dependent Functions</td>
<td>-.161</td>
<td>.298</td>
</tr>
<tr>
<td>Non-Durable Goods</td>
<td>-.122</td>
<td>.239</td>
</tr>
<tr>
<td>Intercept</td>
<td>1.18</td>
<td><strong>.34</strong></td>
</tr>
<tr>
<td>U square for model</td>
<td>.056</td>
<td>.081</td>
</tr>
</tbody>
</table>

Significance levels: **.01, * .05, * .10. Standard errors are shown in parentheses below the means. Note: Because the logit model fits the probability of no marketing experience, the signs of the coefficients are opposite those for the probability of having a CEO with a background in marketing.

This study also illustrates the use of a continuous rather than a dichotomous measure for type of customer.

One important result shown in this table is the need to look beyond bivariate comparisons of means in order to account for the effects of other variables. While two of the three resource allocation variables are significant in the test of the means (AD ratio and capital expenditure ratio), only capital expenditures are significant in the logit model. One reason for this may be due to the relatively low levels of advertising and R&D spending compared to capital expenditures. The sum of the average ad/sales and R&D/sales ratio for the sample used is 4.23% as opposed to 8.84% for the capital expenditure/sales ratio (see Table 2). Because twice as many resources are devoted to capital spendign than to advertising and R&D, in many firms the ad and R&D ratios may serve as poor predictors of a marketing CEO.
In regard to the strategic orientation variables, it appears that the level of total diversification (related plus unrelated diversification) is more important than the type of diversification. Contrary to our hypotheses, growth rate and a prospector strategic orientation are not predictors of the power of marketing. While we did find significance for the t-test of means for the prospector scale, our weak results may be due to the difficulty in operationalizing a measure of corporate strategy using secondary data. There is clearly a need for better measures of a firm's strategy using secondary data.

**FURTHER EXPLORATORY ANALYSIS**

Our results show mixed support for our hypotheses. However, because relatively little empirical work has been done on this topic before, our research serves more as an exploratory investigation of the topic rather than a definitive theory test. After testing the hypotheses using the t-tests and the logit model, we performed further exploratory analysis of the data using two techniques—a logistic model with backward elimination of all non-significant variables and correspondence analysis. For the logistic model, we had omitted gross margin because we were interested in specific resource allocations and gross margin is highly correlated with ad and R&D spending. In our exploratory model, we entered gross margin and the variables shown in Table 3 with the exception that related and unrelated diversification were combined to form a single measure of total diversification. We then used the backward selection procedure in SAS with a threshold of .10 for retaining variables in the model. The final model retained four variables, all significant at the .01 level: (1) percent sold to consumers, (2) gross margin, (3) total diversification, and (4) capital spending/sales ratio. Future research may want to focus on the total value-added within the firm (as reflected by gross margin) as opposed to the specific allocations to R&D and advertising.

Correspondence analysis is an exploratory data analysis method which produces a parsimonious graphical display of multivariate categorical data (Hoffman and Franke 1986). In this study, we use correspondence analysis to provide an independent way of examining the structure of our data. Because none of the CompuStat variables or Dept. of Commerce data are used, this technique does not require any researcher coding of variables. The input table was simply a two-dimensional table indicating the number of CEOs with each of the six functional backgrounds for each of the 37 industry sectors. We use the first two dimensions produced by the correspondence analysis because they account for 66% of the variance in the data. A graphical display of the output using the two dimensions is shown in Figure 1.

We have shown the positioning of each industry sector and the centroids for each functional area. Similar to MDS and factor analysis, it is necessary for the researcher to interpret the x and y axes. We have labeled the x axis as Consumer/Industrial and the y axis as High Gross Margin vs. Low Gross Margin products. A correlation analysis between the values from the output of the correspondence analysis and percent sold to consumers and gross margin from our model produces correlation coefficients of .68 and .63, supporting the use of these labels.

It is interesting to note the differences between the position of the

---

**FIGURE 1. Graphical Display of Industry Sectors and CEO Functional Backgrounds**
research has focused on networked alliances (e.g., Achrol 1991; Webster 1992) and the development of a "market orientation" which may de-emphasize functional responsibilities (e.g., Glazer 1991; Jaworski and Kohli 1993; Slater and Narver 1994). Thus, distinct functional groups may be less common in the future. While we acknowledge the need for cross-functional integration, it does not necessarily follow that functional groups labeled "marketing" will disappear. As Varadarajan (1992, p. 341) has argued, "marketing" can be thought of as (1) a general management responsibility, (2) an orientation within the organization, or (3) a distinct functional group. This paper has used a functional group lens and to the extent that this lens is not relevant in all situations, the generalizability of the findings may be limited.

Secondly, this research has used a single indicator of subunit power, the functional background of the CEO. While numerous researchers have conducted empirical research using the CEO's functional background as a proxy for subunit power (Fliqstein 1987; Pasa and Shugan 1996; Pfeffer 1981; Smith and White 1987), some people have questioned this link and there is limited empirical research which has validated this measure. Thus, there is clearly a need for research which examines whether the functional background of the CEO is a valid measure of subunit power. Additionally, this research could be extended through secondary analysis that uses the functional backgrounds of all of the senior managers rather than the CEO alone and surveys which try to capture various dimensions of marketing organization and power. However, even assuming there is no link between functional background and power of functional groups, this paper has established an empirical relationship between variables such as type of customer, gross margin, diversification, capital expenditures and the CEO's background.

Third, as has already been discussed earlier, due to the cross-sectional nature of our study, we cannot establish a direction of causality between marketing power and the firm's resource allocations and strategy. A longitudinal research design which examines succession events and then looks at changes in strategy and resource allocations following the succession event is one way that it might be possible to better assess whether strategy and resource allocations lead to the selection of a certain type of CEO or whether a certain type of CEO leads to certain types of strategies and resource allocations. We additionally have focused on determinants of subunit power and follow-on

IMPLICATIONS

The results of this research offer several implications for practicing managers. In particular, a firm's top management and board of directors might utilize some of our findings to assist them with the process of CEO selection, retention or developmental "grooming" of a prospective candidate. The breadth of our data across so many industries is especially valuable in this sense as companies strive for the "optimal" match between the prior background of their CEO (i.e., experience, knowledge, skills) and the focus of their enterprise.

Our research suggests there are certain situations where it might be desirable to have a corporate leader with a background in marketing. Industries with characteristically high levels of advertising spending or a relatively high percentage of output sold to final consumers are especially good candidates. Also, firms with traditionally high gross margin businesses, where there may be less emphasis given to operations and finance, would be appropriate for a CEO with a marketing background. Conversely, companies in capital intensive industries or broadly diversified organizations may be better served by a CEO with a background in a functional area other than marketing, such as finance, operations or engineering.

LIMITATIONS

There are a number of limitations to the results reported in this paper. First, one assumption made throughout this paper is that organizations have distinct functional groups. However, much of the recent
research should consider more closely the consequences of subunit power.

Fourth, since our study used secondary data, our independent variables were limited to those which could be operationalized with available data. It would be desirable for future research to utilize independent variables that are more directly related to theoretically derived constructs (e.g., stage of life cycle vs. growth rate) and to incorporate additional industry controls which were not available in our dataset.

Finally, our findings are somewhat restricted due to the sample used. The Business Week 1000 consists of U.S. firms only and is limited to the firms with the highest market value. These rankings differ from the Fortune 500 rankings in that they do not have separate lists for Industrial, Service, and Financial firms and they are based on market value of the firms rather than revenues (industrials) or assets (financial). Thus, compared to the Fortune rankings, the Business Week rankings are more likely to list rapidly growing technology-based firms (which have a high P/E ratio) and less likely to list declining industrial firms. The results found here may not apply to smaller firms or to larger firms with low P/E ratios.

SUMMARY

Returning to the focus of the paper, we have found that marketing has more power within the firm: (1) when they are in industry sectors selling a higher percentage of their output to final consumers, (2) when they are less capital intensive, (3) when they are less leveraged, and (4) when they are less diversified. Contrary to our hypotheses, the ad/sales ratio and R&D/sales ratio are not predictors of a marketing CEO, although the total level of ad spending is significant. Further exploratory analysis leads us to recommend that gross margin is an important variable to include in future work examining variations in marketing’s role across organizational contexts. One of the main contributions of this paper is developing an objective, empirical way to look at associations between the context the firm competes in and the relative influence of functional groups within the firm.

This paper also clearly shows that the consumer/industrial variable is an important factor to consider when measuring the power of marketing’s role within the firm. Prior conceptual work has argued that the consumer/industrial dimension may not be all that important (Fern and Brown 1984), however, our results show that it is highly related to marketing’s power. This paper developed an innovative operationalization of the consumer/industrial variable, joining the Business Week industry sector coding with the Dept. of Commerce I/O data to approximate the percentage of industry output sold to final consumers. We know of no other empirical work in marketing that has used a continuum rather than a dichotomy when looking at consumer/industrial effects on marketing activities.

In summary, since over 75% of the CEOs of the Business Week 1000 do not have experience in marketing, it is important to understand when it is more or less appropriate for marketing to be in charge and the implications of this on performance. In their paper, Walker and Ruckert (1987) point out:

... when viewed as a whole, the propositions seem to imply an interesting conclusion: it is not always appropriate for marketers and their activities to have a primary role in implementing a business strategy... Though we suspect some marketers may find such a ‘contingency’ view of marketing’s appropriate role in the strategic scheme of things to be a bit heretical and deserving of debate—one that will lead to a marshaling of more empirical evidence—is a major purpose of our review. (pp. 30-31)

Given this dearth of empirical evidence on marketing’s role, this article has made an important contribution by developing propositions and empirically testing them using secondary data. Hopefully future research will provide additional support for such a contingency view of marketing’s power within the firm.

NOTES

1. Related and unrelated diversification are independent constructs—that is, it is possible to score high on one measure of diversification and either high or low on the other. For example, Figgie International has a high level of unrelated diversification (1.38) with no related diversification while Cincinnati Millicent has high related diversification (1.07) and no unrelated diversification. In our sample, the fact that the correlation between related and unrelated diversification is only .116 indicates that related and unrelated diversification are relatively distinct entities.

2. Prior research in strategy and organization theory has asserted a link between CEO background and subunit but has not empirically tested this association. However, we were able to test this association based on survey one of the authors did in a
separate study which measured subunit power of functional groups on a 100 point
counted sum scale and additionally asked for CEO background. In all cases, a given
subunit had more power when the CEO had a primary functional background in that
area. On average, subunits received 9.2 additional points on the power measure (on a
100 point scale) when CEOs came out of their functional areas. F-tests to test for as-
association between functional background and subunit power were significant at the
.01 level for each of the five functional areas examined. Additionally 20 pairwise t-
tests were done to test whether there were statistically significant changes in the pow-
er given to a specified subunit vs. the four other groups when CEOs came from each
of five functional areas. Eighteen of these 20 t-tests were significant at the .05 level.
In summary, data from a related study shows strong empirical support for the as-
ter that the CEO background is a proxy for subunit power. Details on this study are
available upon request from the first author.

3. An analysis of the correlations between the 1986 and 1987 figures for the Ad to
sales ratio, R&D to sales ratio, and the Capital Expenditures to sales ratio supports
the use of a multi-year index for Capital Expenditures. The correlation coefficients
between the two years are .933, .954, and .760 for Advertising, R&D, and Capital
Expenditures respectively.

4. The following table presents the means of the four variables used to derive the
index and indicates the statistically significant differences between the groups:

<table>
<thead>
<tr>
<th></th>
<th>Defenders</th>
<th>Analyzers</th>
<th>Prospectors</th>
<th>D&lt;</th>
<th>A</th>
<th>A&lt;P</th>
<th>D&lt;P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ad/Sales ratio</td>
<td>.83%</td>
<td>1.47%</td>
<td>3.45%</td>
<td>**</td>
<td>***</td>
<td></td>
<td></td>
</tr>
<tr>
<td>R&amp;D/Sales ratio</td>
<td>1.35%</td>
<td>2.10%</td>
<td>3.46%</td>
<td>*</td>
<td>***</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Capital Exp/Sales ratio</td>
<td>11.73%</td>
<td>7.66%</td>
<td>7.14%</td>
<td>*</td>
<td>***</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sales Growth rate</td>
<td>9.29%</td>
<td>15.54%</td>
<td>25.97%</td>
<td>***</td>
<td>***</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gross Margin</td>
<td>34.2%</td>
<td>35.3%</td>
<td>39.0%</td>
<td>**</td>
<td>***</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* = .10, ** = .05, *** = .001

Gross margin is also shown above since it was not used in the formation of the index
and can be considered somewhat of a manipulation check. In reporting the statistical-
ly significant differences, for capital expenditures we test for D<, A>, P, and D>P
since the theory says Defenders are more rather than less capital intensive. The general
pattern of these differences supports our operationalization of the Prospector
construct using the secondary data.

5. The correlation between the consumer/industrial ratings of the two authors was
.91 and disagreements were resolved by discussion and mutual agreement. For the
type of product (durable/non-durable/service), the authors agreed on 30 of the 37 rat-
ings (81%). Five of the seven disagreements concerned whether industrial supply
materials (i.e., metals and mining, tire and rubber, electronics, building materials,
and steel) were durables or non-durables. Consultation with experts indicated gov-
ernmental reports do not classify these supply materials as durables because they are
not capitalized and depreciated.

6. Outliers were defined as firms spending more than 60% of their revenues on
capital expenditures (6 firms), over 50% of revenues on R&D (2 firms), or having a
debt to equity ratio greater than 9 (7 firms).

7. We additionally tested our hypotheses using a more continuous measure of
CEO background in marketing. Specifically we coded the dependent variables as 0
for no experience, .3 for marketing as one of three backgrounds, .5 for marketing
as one of two backgrounds, and 1 for experience only in marketing. The results were
essentially unchanged.

8. The specific amount of variation explained by each of the five dimensions pro-
duced from the correspondence analysis were 42%, 24%, 15%, 12% and 7% respec-
tively. It is interesting to note that the consumer/industrial dimension explained
almost twice as much variation as the 2nd dimension.

REFERENCES

Turbulent Environments,” Journal of Marketing, 55 (October), 77-93.


Business Strategy, and Business Performance,” Academy of Management Jour-
nal, 27 (March), 5-24.


Axtell, W. Graham and Paramjit S. Sachdeva (1984), “Structural Sources of Intra-
organizational Power: A Theoretical Synthesis,” Academy of Management Review,
9, 1, 104-113.

(October), 32-39.

R&D Intensity in Multiproduct Firms,” Academy of Management Journal, 2, 310-332.

Buzzell, Robert D. and Bradley T. Gale (1987), The PIMS Principles: Linking Strate-
gy to Performance, New York: Free Press.


Role of Strategic Choice,” Socioology, 6, 1-22.

Conant, Jeffrey S., Michael P. Mokwa, and P. Rajan Varadarajan (1990), “Strategic
Types. Distinctive Marketing Competencies, and Organizational Performance: A

Cummins, Wm. Theodore, Donald W. Jackson, Jr., and Lonnie L. Ostrom (1984),
“Differences Between Industrial and Consumer Product Managers,” Industrial
Marketing Management, 9, 171-180.

Cyr, Richard M. and James G. March (1963), A Behavioral Theory of the Firm,

Orientation,” Journal of Marketing, 47 (Fall), 79-89.

Dougherty, Deborah (1992), “Interpretive Barriers to Successful Product Innovation
in Large Firms,” Organization Science, 3 (May), 179-202.


