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**AN EMPIRICAL INVESTIGATION INTO THE RELATIONSHIP BETWEEN
CHIEF EXECUTIVE OFFICER CAREER PATH PROFILE
AND FIRM STRATEGIC CHOICE**

BY

GINA L. DETMAR-PINES

**A DISSERTATION SUBMITTED TO THE GRADUATE FACULTY IN BUSINESS
IN PARTIAL FULFILLMENT OF
THE REQUIREMENTS FOR THE DEGREE OF DOCTOR OF PHILOSOPHY
THE CITY UNIVERSITY OF NEW YORK**

1997

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This manuscript has been read and accepted for the Graduate Faculty in Business in satisfaction of the dissertation requirement for the degree of Doctor of Philosophy.

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Abstract

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GINA L. DETMAR-PINES

Adviser: Professor S. Prakash Sethi

Based on 197 new chief executive officers from the Forbes 800 Top CEOs, this study empirically examines the relationship of CEO career path profile variables to the strategic choices made in the firm. Using a longitudinal research design and data on 203 Forbes companies from 1987-1993, CEO career path profile is examined to determine whether certain demographic variables affect the strategic choice variables of diversification and internationalization. Study findings suggest that the CEO's career path profile - in particular, the functional tracks - is associated with the firm strategic choice of diversification and internationalization. The results show that (1) when the CEO's functional background is either a "throughput" or an "other" category, he will tend to diversify the organization; (2) the functional background appears to not have any association with internationalization; (3) in concurrence with the succession literature, the insider CEO is equally as likely to make changes in the firm as the outsider CEO; and (4) the intra/inter-industry studies provide a clearer understanding of CEO versus industry effect. The implications of the association of CEO career path and firm strategic choice are discussed.

This dissertation is dedicated to my mother, Grace V. Brown Sargente, who gave me the courage to pursue any challenge life had to offer, and who gave me every reason to believe I would succeed.

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Chapter I

Introduction

There is ample evidence to suggest that a firm's strategic choices are influenced by numerous factors, among others: industry characteristics, a firm's relative position in the industry, and the predilections and predispositions of its top management team and especially the Chief Executive Officer (CEO). Of the three aforementioned factors, it is the CEO who provides the catalyst that operationalizes and mobilizes a firm's physical and human resources so as to create a strategic fit between the firm, the industry, and the environment. Therefore, it stands to reason that the personal characteristics and experience profile of the CEO will influence a firm's strategic choices, as well as its organizational structure and decision-making processes. There is sufficient evidence in the literature indicating that a CEO's career path profile influences a firm's strategic choices but may have little or no effect on firm performance (Lieberson and O'Connor, 1972; Miller, Kets de Vries, and Toulouse, 1982; Hambrick and Mason, 1984; Finkelstein and Hambrick, 1989; Wiersema and Bantel, 1992; Smith et al., 1994). Available evidence suggests a firm's performance is impacted to a large extent by the industry in which it operates and the CEO has little or no impact (Lieberson and O'Connor, 1972; Beard and Dess, 1979, 1981; Astley and Van de Ven, 1983). More recent research, however, suggests that the CEO does have an impact on a firm's strategic choice and only indirectly on a firm's performance (Miller, Kets de Vries, and Toulouse, 1982; Hambrick and Mason, 1984; Tushman and Romanelli, 1986; Finkelstein

Hambrick, 1989; Carroll, 1994; Smith et al., 1994). Hambrick and Mason (1984) suggest, in their upper echelons theory, that CEO-led top management teams influence firm strategic choice and firm profitability and performance. This research emphasizes the background characteristics of the CEO-led top management team positing a large behavioral component which is said to reflect the idiosyncracies and values of the decision makers ("Strategic choice under conditions of Bounded Rationality," 1984:195). The "perceptual lenses" through which decisions are made influence strategic choice and only indirectly influence performance. Other factors influence performance that the CEO cannot control (i.e., the industry in which the firm operates, the regulatory environment, stock performance, etc.). More recent studies confirm that executives' functional backgrounds affect their selective perceptions and influence choice (Waller, Huber, and Glick, 1995). Consistent with the current research, this study addresses the question, How does the CEO's career path profile affect a firm's strategic choice?

Background and Purpose of the Study

There is a considerable body of literature investigating various types of linkages among top management and CEO personality traits and characteristics, i.e., upper echelons theory (Dearborn and Simon, 1958; Lieberman and O'Connor, 1972; Miller, Kets de Vries, and Toulouse, 1982; Hambrick and Mason, 1984; Miller and Toulouse, 1986), firm strategic choice (Hambrick and Mason, 1984; Norburn and Birley, 1988; Pettigrew, 1973; Johnson, 1987, 1988; Hambrick, 1986; Hambrick and D'Aveni, 1992; Smith et al., 1994), and firm performance (Aguilar, 1988; Bowman, 1986; Ginsberg, 1988). Studies show that, in choosing a CEO, firms place considerable emphasis on seeking a "fit" between a CEO's strengths (e.g., personality traits and experience) and organization structure and corporate culture (Virany and Tushman, 1986; Ansoff, 1990).

A number of authors have undertaken studies describing the internal dynamics of strategic change in individual settings, placing heavy emphasis on the personality of the CEO (Hambrick and Mason, 1984; Hambrick and Finkelstein, 1987; Johnson, 1987; Miller, Kets de Vries, and Toulouse, 1982). Most studies of the effects of CEOs on firm strategic choice leave unexplored the particular behavioral dynamics, as well as the specific background and career options chosen by the CEO and their associated outcomes (Hambrick and Mason, 1984; Aguilar, 1988; Bowman, 1986; Ginsberg, 1988; Hambrick, 1986), leaving a relative paucity of research regarding a CEO's prior career experience

and other demographic variables that may suggest possible linkages between a CEO's career path profile and the firm's strategic choice. Relevant literature also provides no differential typology of the relationship between a CEO's background and work experience (henceforth, career path profile) and the firm strategic choice.

Historically, United States companies have had to deal with relatively high rates of CEO turnover (James and Soref, 1981; Reinganum, 1985; Puffer and Weintrop, 1991). Turnover in any form, voluntary (retirement, resignation) or involuntary (death, dismissal), constitutes a major event for a firm. Research shows that such a major event influences a firm's subsequent direction and performance (Virany and Tushman, 1986). CEOs are generally held accountable for a firm's performance. Research shows that there is a greater propensity to replace the CEO after a firm performs poorly (Norburn and Birley, 1988). Empirical findings have been mixed, however. For example, a change in return on equity was shown to be significant in studies by Allen and Panian (1982) and Lubatkin and Chung (1985) but not in studies by Robinson and Brief (1985) or Harrison, Torres, and Kuklis (1988). Inconsistency is seen in studies conducted by Furtado and Karan (1990) and Lambert and Larcker (1985) citing poorly performing firms that continue to provide salary increases and bonuses to the CEOs.

A more recent and related phenomenon, seen particularly in poorly performing firms, has been the increasing selection of CEOs from outside the firm (Furtado and Karan, 1990; Ang and Chua, 1981; Vancil, 1987; Zajac, 1990). Ang and Chua (1981)

found that 45% of the 134 firms in bankruptcy changed CEOs in 1974-1982, and, in the six years following the bankruptcy, 80.2% of the CEOs departed. New CEOs, in general, and CEOs from outside the firm, in particular, frequently attempt major strategic changes. For example, Helmich and Brown (1972) found that the "greatest amounts of change in firm performance was experienced by firms that appointed outsiders to the president's post" (Furtado and Karan, 1990:69). Contradictory evidence found that new CEOs' efforts at strategic change did not appear, on average, to make any significant impact on the firm's economic performance (Chung, Rogers, Lubatkin, and Owers, 1987). As a result, some studies report a relatively high rate of CEO exit early in their tenure. A study by Fredrickson, Hambrick, and Baumrin (1988) found that almost 50% of departing CEOs in major food-processing firms left within the first three years of their tenure. Furthermore, according to Furtado and Karan (1990:72), "the contradictory results may be due to differences in the designs of the studies, the varying definitions of top management change, and the sample selection processes." The results of these studies support the need for longitudinal studies, since the time element becomes critical to identifying actual changes in strategy that may be attributable to a CEO's tenure.

Traditionally, CEOs have been studied in terms of their personalities (Miller, Kets de Vries, and Toulouse, 1982; Miller and Toulouse, 1986), their functional background and experience (Dearborn and Simon, 1958; Lieberman and O'Connor, 1972; Hambrick and Mason, 1984; Norburn and Birley, 1988; Smith et al., 1994), their effectiveness as

a "turnaround" CEO (Grinyer and Spender, 1979; Helmich and Brown, 1972; Beatty and Zajac, 1987), and their impact on firm performance and organizational structure (Miller and Friesen, 1984; Norburn and Birley 1988; Singh, 1986; Smith et al., 1994; Waller et al., 1995). An alternative competing model suggested by Smith et al. posits that "the top management team's process will directly affect performance" (1994:417). Their model also predicts that both demography and process will be directly and independently related to organizational performance and "with process accounting for variation in performance that demography leaves unexplained" (1994:417). Yet, there seems to be a paucity of research regarding a CEO's career path profile, which, for the purposes of this study, can be viewed as a multivariate collection of career-related experiences that include actual career-related factors but also include career experiences such as functional tracks (Dearborn and Simon, 1958; Hambrick and Mason, 1984), the insider/outsider status or firm-specific experience (Zajac, 1990; Gupta, 1984; Friedman, 1991), formal education (Hambrick and Mason, 1984; Wiersema and Bantel, 1992; Datta and Guthrie, 1994), and age (Child, 1972; Hart and Mellons, 1970; Hambrick and Mason, 1984), that influence firm strategic choice. The present research study is designed to fill this void.

This research is divided into six chapters. Chapter I presents the introduction, where the background and purpose of the study are addressed. Chapter II reviews the scholarly literature on CEO career path profile (demographic variables) and firm strategic choice. Chapter III develops a theoretical framework that links CEO career path profile

to firm strategic choice and develops hypotheses for the relationships between CEO career path profile variables and firm strategic choice variables. Chapter IV describes the methodology and research design. Chapter V discusses the results and includes an appropriate representation of the research findings, as well as a thorough explanation of the analyses. Finally, Chapter VI provides conclusions and suggests implications for future research.

Chapter II

Literature Review

Although some researchers have argued that top management teams, and CEOs in particular, have little impact on organizational outcomes (Lieberson and O'Connor, 1972; Aldrich, 1979; Astley and Van de Ven, 1983), more recent research suggests otherwise (Hambrick and Mason, 1984; Miller, Kets de Vries, and Toulouse, 1982; Finkelstein and Hambrick, 1989; Wiersema and Bantel, 1992; Smith et al., 1994; Carroll, 1994; Waller, Huber, and Glick, 1995). Inspired by Cyert and March's (1963) work on dominant coalitions, Hambrick and Mason (1984) developed the upper echelons theory, which supports the recent stream of research that upper-level managers do have an important impact on organizational outcomes. The research posits that upper-level managers make decisions that are in concert with their cognitive base. Hambrick and Mason (1984) refer to this cognitive base as the "perceptual lens" through which the upper-level manager or CEO perceives the situation. Accordingly, the cognitive base is, in part, a function of their personal values, functional tracks, and experience, and can be linked to organizational outcomes. Based on upper echelons logic, researchers have linked top management teams and CEOs to strategy (Miller and Freisen, 1977; Miller and Toulouse, 1986; Finkelstein and Hambrick, 1989; Michel and Hambrick, 1992). Upper echelons research draws on three main concepts: demography, process, and firm performance. Demography refers to external characteristics of the top management team and/or the CEO, such as background or functional tracks of the individual CEO,

insider/outsider status (firm-specific experience), formal education, and age of the CEO. Process concerns the actions (choices) and/or behaviors of the CEO, such as diversification, internationalization, and resource allocation. Firm performance has been linked to CEO tenure, which has proven problematic since performance is traditionally measured in terms of market forces as well as industry forces, both of which clearly are not under the control of the individual CEO (Porter, 1980; Greiner and Bhambri, 1989; Hambrick and Finkelstein, 1987). As such, firm performance will not be used as a measure of CEO in this research.

Background

Hambrick and Mason (1984) argued that a manager's personal experience and personal values could be inferred from demographic characteristics such as background or functional tracks, years of experience, formal education, and age, and that, by studying these characteristics, they linked the top management team to organizational outcomes. Using Hambrick and Mason's research as a starting point, other researchers empirically linked demography with organizational performance (Eisenhardt and Schoonhoven, 1990; Michel and Hambrick, 1992). The first specific attempt to investigate the intervening processes was recently completed by Smith et al. (1994), whereby they looked at communication and psychological dimensions, such as social integration. Smith et al. (1994:413) posited: "If upper echelons theory is to become useful in improving our understanding of top management teams, we need to elaborate

and fully understand how team demography influences the organization."

To date, no empirical studies have directly investigated the process through which the CEO's demography influences organizational processes and outcomes. Michel and Hambrick (1992) used a social-psychological explanation (social integration) to explain the links between average top management team tenure and diversification strategy and performance. Team tenure, in their study, was used as a proxy variable for "team cohesion" and that, in turn, indirectly affected performance. Hambrick and D'Aveni (1992) and Eisenhardt and Schoonhoven (1990) attributed linkages between team demography and firm performance to unmeasured social psychological factors. The most recent research suggests that what executives perceive influences their actions and these actions are posited to affect the nature and performance of their organizations (Waller, Huber, and Glick, 1995).

Early research investigated the top management team and, in particular, the CEO in terms of their "functional tracks" (Dearborn and Simon, 1958). Dearborn and Simon (1958) found that when executives with different functional backgrounds were presented with the same problem (case study) and were requested to consider it from a firmwide perspective, they viewed the problem in terms of the goals and activities related to their respective areas. This aspect has continued to be of interest and has been expanded to include other related career experiences and was used as the basis for Hambrick and Mason's (1984) seminal work and development of "upper echelons" theory. Their study

suggested that the functional tracks had a significant effect on the types of actions an executive would pursue.

The magnitude of the types of actions that CEOs attempt in their organizations varies widely (Mintzberg and Waters, 1985). Cases cited to support this variation include that of Black and Decker's CEO, Nolan Archibald, who replaced the entire top management team, transformed the firm's manufacturing mentality to a market-driven culture, and developed a global business strategy to reposition the company's power tool business (Huey, 1989). In the same vein of research, John Sculley initiated a comprehensive strategic transformation at Apple Computers redefining the company's approach to the business segment and changing the organization "from a hippie culture to a yuppie culture" (Huey, 1989). Other CEOs have limited their focus on specific areas within the organization, such as the compensation system, the planning system, or the acquisition or divestiture of a single business unit. However comprehensive or limited the strategic choice, the research suggests it is ultimately linked to the CEO.

Many links between managerial backgrounds and decision choices have been proposed (Hambrick and Mason, 1984) and partially verified (Chaganti and Sambharya, 1987; Waller, Huber, and Glick, 1995). Hambrick and Mason, among a series of wide ranging propositions, propose a close relationship between an executive's functional experience, formal management education, and age, serving as independent variables, and the firm's strategy emphasis, performance, and decision process, serving as

dependent variables. For example, they suggest that a positive correlation exists between output functional experience and growth, and between peripheral functional experience and unrelated diversification, and so on. Extending this line of reasoning to the CEO, a CEO who is new to the position with prior "general management and/or multifunctional experience" would seem more likely to make broader or more sweeping strategic choices soon after taking the appointment. On the other hand, again pursuing Hambrick and Mason's line of reasoning, CEOs with prior single functional experience possess narrow, in-depth expertise, which supports the research indicating that the CEO will make strategic choices confined to those areas in which he has the greatest experience. Continuing in this vein of research, the following study investigates functional tracks as well as other pertinent demographic variables that will be termed "Career Path Profile."

Career path profile (CPP) can be viewed as as a multivariate collection of career related experiences that includes actual career related factors but also includes career experiences such as: functional tracks (Dearborn and Simon, 1958; Hambrick and Mason, 1984), the insider/outsider status or firm-specific experience (Zajac, 1990; Gupta, 1984; Friedman, 1991), formal education (Hambrick and Mason, 1984; Wiersema and Bantel, 1992; Datta and Guthrie, 1994), and age (Child, 1972; Hart and Mellons, 1970; Hambrick and Mason, 1984), which influence one's career.

The dictionary (Merriam-Webster, 1983:208) defines career as " a course of continued progress in the life of a person ... a field for the pursuit of consecutive

progressive achievement, especially in public, professional, and business life." Since the social sciences are more discerning in the preciseness of definitions, and because nowhere in Webster's definition is there any indication of occupation, discontinuity, or, even, progressive failure, the definition of career will be better served using definitions from the behavioral sciences. Super, Crites, Hummel, Moser, Overstreet, & Warnath (1975), in their study, define career by distinguishing it from occupation and taking into account both continuity and discontinuity, as "a career is the sequence of positions, jobs, and occupations occupied by a person during the course of a lifetime, including the preoccupational role of student preparing for work, the work roles themselves, and the postoccupational role of annuitant or pensioner whose life is now structured by some occupationally determined and by some nonoccupational roles." According to Super, "It is the individual who supplies the continuity in the career, even when the sequence of occupations is discontinuous, for the career belongs to the person, not to the occupation (Super, 1974:227). He goes on to point out that a person can make a career of an occupation, particularly those who have invested a great deal in their occupation (i.e., medicine) but there still remain those who have made a career of an industry, changing occupations as they "move up the ladder" (i.e., banking, education, securities, food processing, etc.).

Other career experiences, which are not considered part of the functional track experiences, can also be anticipated to have a significant effect on the types of strategic choices a CEO will pursue. The succession literature is rife with research on the length

of service and a related variable, inside versus outside succession (Helmich and Brown, 1972; Gupta, 1984; Zajac, 1990; Friedman, 1991; Datta and Guthrie, 1994). The primary and consistent finding emanating from this vein of research is that the chief executive officers brought in from the outside tend to make more changes in structure, procedures, and staff than do CEOs promoted from within the organization (Helmich and Brown, 1972; Gupta, 1984; Zajac, 1990; Friedman, 1991; Datta and Guthrie, 1994).

Among the outcomes associated with internal promotion of the CEO are reduced costs associated with socialization, turnover, compensation, and false positive selection errors (Zajac, 1990). In addition, Friedman (1991) found that promoting from within led to an increased ability to attract and retain employees. The emphasis on internal hiring produced benefits associated with firm-specific knowledge because familiarity with services, markets, products, technologies, and standard operating procedures has been found to accrue with tenure in the organization (Gupta, 1984). On the other hand, the CEOs recruited from outside the organization are attributed with bringing a broader perspective and a penchant for change to the new organization. Wiersema and Bantel (1992) found a negative correlation between tenure and strategic change. Prior to the above findings, Miller (1991) concluded that CEOs with longer tenure were "stale in the saddle" and, therefore, were less likely to lead organizations whose strategies and structures adapt to, and remain aligned with, their environments.

The choice of an internal versus an external CEO candidate is influenced by the

firm's desire to achieve a specified performance level or type. The academic literature and the popular business press associate the insider with an increased commitment to the *status quo* and the outsider CEO with a penchant for change, therefore increasing the likelihood that an outsider will be hired for a poorly performing firm. The argument is also presented that recruiting an outsider has a symbolic effect; it sends a strong signal to both the internal organization and, to external constituents that serious change is imminent (Friedman and Singh, 1989).

Hambrick and Mason (1984) determined educational background to be an indication of the executive's orientation in terms of knowledge and skill base. They posited that "a person educated in engineering generally can be expected to have a somewhat different cognitive base from someone educated in history or law. Beyond that, if it is assumed that most people take seriously their decisions about education, then education serves to some extent as an indicator of a person's values, cognitive preferences, and so on" (1984:200). Hambrick and Mason also found that the amount of education, not necessarily the type, was positively associated with innovation. Wiersema and Bantel (1992) empirically linked top managers' education levels with the propensity to deviate from the *status quo* and implement strategic change.

Hambrick and Mason (1984) found the inclusion of educational backgrounds of managers in macro-organizational research was limited primarily to studies predicting innovation. Miller (1991) found that firms with an investment in R&D were

characterized as having made a strategic decision that indicated a propensity for innovation. Firms emphasizing R&D have been empirically linked with a competitive strategy of innovation (Martell, Carroll, and Gupta, 1992). A more recent finding argues that more creative/innovative organizations will tend to have more highly educated top managers (Bantel and Jackson, 1989). Hambrick and Mason note that most studies did not consistently include controls for age "and so may be masking the tendency toward increased education in recent years."

Earlier research by Collins and Moore (1970) suggested that professional management education was expected to have an effect on the administrative mechanisms and level of sophistication of firms, mostly because of the types of people drawn to business schools and because of the nature of the programs offered, which place great emphasis on complex administrative systems. Collins and Moore (1970) noted that MBA candidates are not as innovative or "risk-prone" as the "self-made" executive, and, that business schools are not inclined, or equipped, to develop innovative or risk-taking tendencies in their students.

The association between the age of the CEO and the firm's strategic choice has not been the subject of many studies. Hambrick and Mason (1984) associated managerial youth with corporate growth. Additional empirical research has demonstrated a relationship between age and a variety of work-related attitudes, including attitudes towards risk (Govindarajan, 1989). Vroom and Pahl's (1971) findings showed a negative

relationship between age and the value placed on risk. Hitt and Tyler (1991) found similar results while studying chief executive officers. Therefore, as posited by Hambrick and Mason (1984), since risk posture is an important element of corporate strategy (Beatty and Zajac, 1994), age differences should, in fact, predict differences in CEOs' beliefs about the proper strategic direction of the firm and, consequently, the strategic choices made regarding product diversification and internationalization. Hitt and Tyler (1991) also found that age significantly predicted variation in CEOs' strategic evaluations of possible acquisitions. Older CEOs, in particular, may be at a point in their lives where financial security and career security are paramount. Hence, any risky actions would probably be avoided by older CEOs (Hambrick and Mason, 1984).

CEO career path profile, as used in this study, is a multivariate collection of characteristics that is investigated through the following four variables. It is an extension of Super's (1974) definition of career and includes Hambrick and Mason's (1984) categories: (1) *Functional Tracks* - a) "output functions" - marketing, sales, and product R&D, and b) "throughput functions" - production, process engineering, and accounting (Hambrick and Mason, 1984:199); (2) *Insider/Outsider Status* - occupations occupied by a person in the course of a lifetime: a) firm-specific experience, b) experience in other firms; (3) *Formal Education* - level of education, MBA or non-MBA, and (4) *Age* - which will be incorporated simply to determine if the CEO is of retirement age or close to retirement. The specific properties of each of these variables and the manner in which they are measured are described in detail in Chapter IV.

Strategic Choice

When incorporating strategic choice into a theory of organization, it must be recognized that it is a process whereby constraints and opportunities are functions of the role of the CEO that are directly linked to the CEO's ideological values (Child, 1972). This line of thinking can be extended to include the CEO's own particular values that led to a specific career path. The CEO initiates the opportunities and problems, interprets pertinent information, considers the firm's capabilities and constraints, converts them into (what is termed in this paper) input factors and output factors, formulates, and, finally, implements, change. Thus, this paper will show, by evaluating the input and the output factors that influence the strategic choices the CEO will make, the CEO's career path profile may have an important role in the determination of the firm's strategic choices.

Throughout the late 1950s and 1960s, many increasingly elaborate contingency models were developed, depicting the links among environment, technology, size, structure, and process. Over a period of time, these contingency models became fragmented and deterministic, giving rise to Child's (1972) strategic choice perspective. Strategic choice, as defined by Child (1972:17), considers "what expectations are presented by resource providers such as business shareholders, what is the trend of events in the environment, what has been the organization's recent performance, the congeniality of its present internal configuration, and so on. Their prior ideology is assumed to colour this evaluation in some degree. The choice of goals or objectives for

the organization is seen to follow from this evaluation, and to be reflected in the strategic action which is decided upon." Child's strategic choice perspective was one in which organization-environment relations were viewed as resulting primarily from choices made by top managers. Drawing on Child's definition of strategic choice, this research posits that the top managers, and the CEO, in particular, determine the direction the individual firm will take (firm's strategic choice) in terms of product diversification, resource allocation, and internationalization.

The study of strategy has tended to occur at two levels of analysis: corporate and business (Ansoff, 1965; Lorange and Vancil, 1977; Hofer and Schendel, 1978). Corporate strategy defines the nature and range of businesses a firm intends to operate and often is characterized by asking, "What businesses should we be in?" Hence, corporate strategies are basically diversification strategies, and approaches have been developed for designing and managing a corporation as a portfolio of diversified businesses (Wind and Mahajan, 1981; Haspeslagh, 1982). Wrigley (1970), is credited with one of the earliest efforts to describe the different forms of diversification. He described how a "single-business" firm might diversify into areas that were "related" or "unrelated" to the firm's original business. Rumelt (1974) extended this framework to include ten types of corporate diversification.

Diversification generally refers to the number of products and services in a firm's product mix, and/or the extent of geographical dispersion of a firm's activities. Rumelt

(1974), in his classical study, first developed the notion of product diversification. He classified his product groupings into four categories: (1) unrelated firms, which are non-vertically integrated firms that have pursued a diversification strategy regardless of the existing relationships between new business and current business activities; (2) related-linked firms, which are non vertically integrated diversified firms operating in several industries but whose activities are linked in that they have diversified by combining several different strengths and, therefore, are active in widely disparate businesses; (3) related-constrained firms, which are related firms, all of whose activities are related to one central strength; and (4) vertically integrated firms, which are firms that have long-linked chains of activities, ranging from raw materials to fabrication of the product, and finally, to distribution of the finished product.

Rumelt's (1974) classification schema has since been tested by numerous researchers and the findings have been supported along various industry and product dimensions. His argument focuses on the individual firm and its distinct pattern of diversification: "Each company had a unique history and had developed its own pattern of relationships among technologies, products, and markets. What was a discrete business for one firm was often an integral and nonseparable part of a larger business in another firm" (Rumelt, 1974:12).

Rumelt's findings have since been replicated and expanded by numerous authors (Christensen and Montgomery, 1981; Montgomery, 1982; Varadarajan, 1986; Capon,

Hulbert, Farley, and Martin, 1988). Rumelt found that high performers diversified by building on a single strength or resource associated with the original business (constrained diversification) and low performers. Rumelt's research also found low performers were reflected in both sides of the diversification spectrum. The unrelated passive firms were among the most highly diversified in the study, while the dominant vertical firms were far less diversified (Christensen and Montgomery, 1981). Rumelt presented a new seven-category system, combining two categories from the original nine, each in the dominant and unrelated diversified groups. Again, the diversity/performance relationship was supported. Montgomery (1982), however, reclassified Rumelt's (1974) companies with a high degree of reliability despite the qualitative nature of the classification procedure.

Capon, Hulbert, Farley, and Martin (1988) identified three factors that contributed to the validity of Rumelt's diversification scheme and demonstrate a relationship between corporate diversity and performance. The first factor, business definition, is based on product/market combinations and not just on a product or service produced system, such as Standard Industrial Classification (SIC) codes. The second factor, the relative size of the largest individual business, is identified. The final factor, the manner in which individual businesses are related to each other, was made into an integral component of the scheme.

Over time, the changes initiated by the CEO can be observed and consequently

measured by the absolute differences between input factors and output factors. The components of the input factors that comprise the changes in strategy are R&D, labor, and capital, which are compared with the difference between the output factors of the degree of internationalization, and diversification.

Industry Characteristics

Other factors examined in the strategic management literature are industry characteristics, industry performance, and firm characteristics. The application of an industry framework has evolved from the recent literature regarding the industrial organization paradigm. In this paradigm, strategic choice and industry characteristics (e.g., concentration ratios) both explain the level of a firm's performance within an industry (Porter, 1981).

An industry may be characterized on a variety of dimensions that would (a) distinguish it from other industries and (b) indicate differences among firms within an industry when compared to differences among firms in another industry. A number of these dimensions have been identified and investigated in the literature.

Two of the more commonly investigated variables are the extent of concentration in an industry and its pattern of diversification. Concentration is determined in terms of relative market share accounted for by different firms in an industry. A highly concentrated industry is typified by the proportion of total industry sales accounted for by the top four firms in that industry. Other things being equal, the greater the dispersion of total sales among a large number of firms, the more fragmented will be the industry character (Pfeffer and Salancik, 1978). Not only are the concentration ratios important in describing an industry's structure, the distribution of relative market shares

among firms - the shape of the curve - is also indicative of the nature of volatility and intensity of competition among member firms in the industry. Consequently, it is expected that firms in highly concentrated industries should exhibit less diversification than firms in less concentrated industries.

Industry Performance

Other evidence points to the relative importance of industry profitability (measured by pre-tax operating profits, return on equity, or percentage of sales) in explaining performance variation among firms. Beard and Dess (1979, 1981) assessed the relative importance of industry profitability in explaining performance variations among firms. They found industry profitability to be a statistically significant predictor of firm profitability for a sample of 40 nondiversified manufacturing firms. Beard and Dess also reported that industry profitability explained consistently more variance than any of three business-level strategy variables of relative market share, relative debt/equity ratio, and relative firm capital intensity. In their seminal work, Lieberman and O'Connor (1972) sampled 167 Fortune 500 firms and found industry profitability to be a more significant predictor of firm profitability than either general economic factors or changes in leadership. This study was seriously flawed, however, the order in which the variables were entered made a significant difference in the outcome such that change in leadership actually did make a difference.

The aforementioned evidence (Beard and Dess, 1979; Lieberman and O'Connor, 1972) suggests that researchers should strongly consider examining or controlling for industry effects when conducting strategic management research. The present research recognizes that there is sufficient evidence suggesting that factors other than industry characteristics and firm characteristics have an important effect on strategic choice variables. Therefore, by controlling for these effects, increased confidence in the results

can be expected. This position is consistent with the work of Porter (1980), Jemison (1981), Bourgeois (1984), and Porter (1986).

Researchers have traditionally used alternative measures when evaluating performance (Hambrick, 1980; Montgomery, 1982). These include market-based measures of performance (e.g., market return, dividend yield) and accounting-based indices (e.g., return on investment, sales growth, return on assets). From an economic viewpoint, performance for any period of time can best be represented by a change in the firm's real net worth.

Firm Characteristics

Ansoff (1990) offers a strong rationale for linking a firm's characteristics with that of top management. He argues that the turbulence in a firm's external environment, i.e., the degree of risk and uncertainty, must be compatible with both the aggressiveness of its management and the firm's resources to support the relevant level of managerial aggressiveness. Therefore, it follows that a firm's resource mix and the extent of its divergence from industry characteristics would reflect on the match between top management characteristics - in this case, the CEO - and the firm's resource mix.

Similarly, it has also been noted that industry structure variables may determine a firm's characteristics, diversification strategy, and performance (Hoskisson & Hitt, 1990; Reed & Luffman, 1986; Lecraw, 1984; Porter, 1980; Rumelt, 1974). Among the most widely known arguments regarding industry structure and firm performance are those posited by Porter (1980), who developed the Five Forces Framework to analyze the intensity of competition within an industry. Porter argued that, in order to understand the profit potential of the industry under scrutiny, the five forces must be examined: suppliers, buyers, industry competitors, product substitutes, and potential entrants.

However, the most compelling arguments for firm characteristics are those based on the firm characteristic of size (Child, 1972; Pfeffer and Salancik, 1978; Miller and

Droge, 1986; Miller and Toulouse, 1986; Miller, 1987; Harrison, Torres, and Kuklis, 1988; Fazel and Louie, 1990; Puffer and Weintrop, 1991). The size argument has a long history within organizational theory, beginning with Weber's (1947) classic analysis of bureaucracy, in which he stated that bureaucratic characteristics (i.e., complexity) would not be present in small organizations. The increased complexity led to more difficult managerial coordination of sub-units. Since larger firms control more resources, the power, influence, and privileges of leadership are greater (Harrison, Torres, and Kuklis, 1988). Recent theoretical work by Miller (1987) found firm size may partially explain the amount of influence the chief executive's personal characteristics may have on the organization. Miller and Toulouse (1986) extended this argument and only investigated 97 small firms (with less than 500 employees) to determine the influence of the CEO. They found CEO influence to be significant in small firms. Fazel and Louie (1990) found firm size was impacted by the CEO. Their study measured firm size both as the absolute level of sales and as the deviation from the firm's four-year trend in sales. Data on firm size (total sales at baseline and year four) will be collected for use in this study.

The present research is designed to reconcile the alternative views and investigate how the CEO's demographic characteristics affect firm strategic choice. The primary question this research will address is empirical: To wit, controlling for factors such as industry and firm characteristics, what is the impact, if any, of a CEO's career path profile in a firm's choice of a particular strategy? This research will investigate and evaluate the model of CEO career path profile and firm strategic choice.

Chapter III

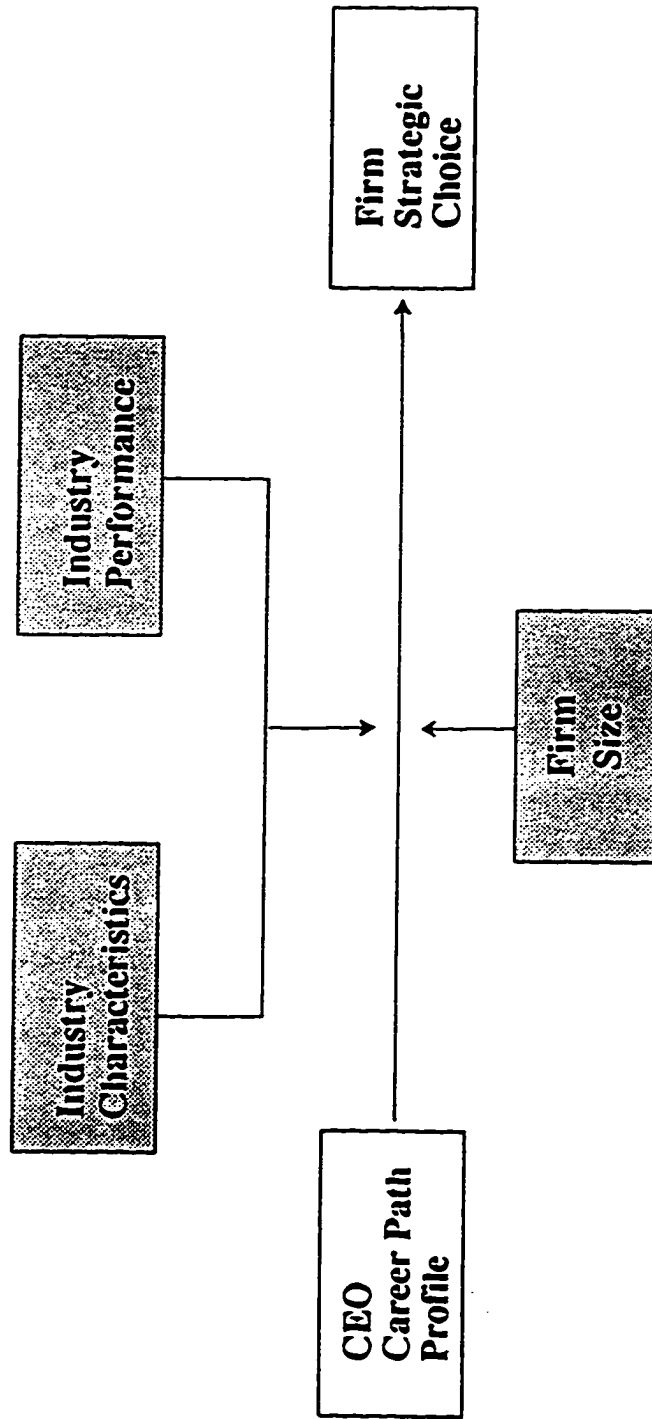
Theoretical Framework

The objectives of this research are: (1) to explore systematically the relationship between CEO career path profile and firm strategic choice, and (2) to expand on previous analyses of upper echelons theory (Hambrick and Mason, 1984; Smith et al., 1994) by extending its scope to include CEOs from different industries with varying career path profiles and by evaluating the differential effect CEO career path profile may have on firm strategic choice. More specifically, this study directs empirical attention to establishing a direct relationship between CEO career path profile and firm strategic choice. The theoretical framework being presented here is a process model (Figure 1). It is beyond the scope of this research to test the entire model, which is more comprehensive in scope and covers other elements of a firm's strategy-structure-performance nexus. Its intent is to indicate the relevance of the present study, which is much narrower in scope, with the overall framework strategy-structure-performance model.

Consistent with the past research on top management team and CEO demography (e.g., Hambrick and Mason, 1984; Michel and Hambrick, 1992; Hambrick and D'Aveni, 1992; Smith et al., 1994; Waller, Huber, and Glick, 1995), this research models a set of demographic variables in terms of the career path profile of the CEO. The CEO career path profile, as described here, includes (1) functional tracks (measured in terms

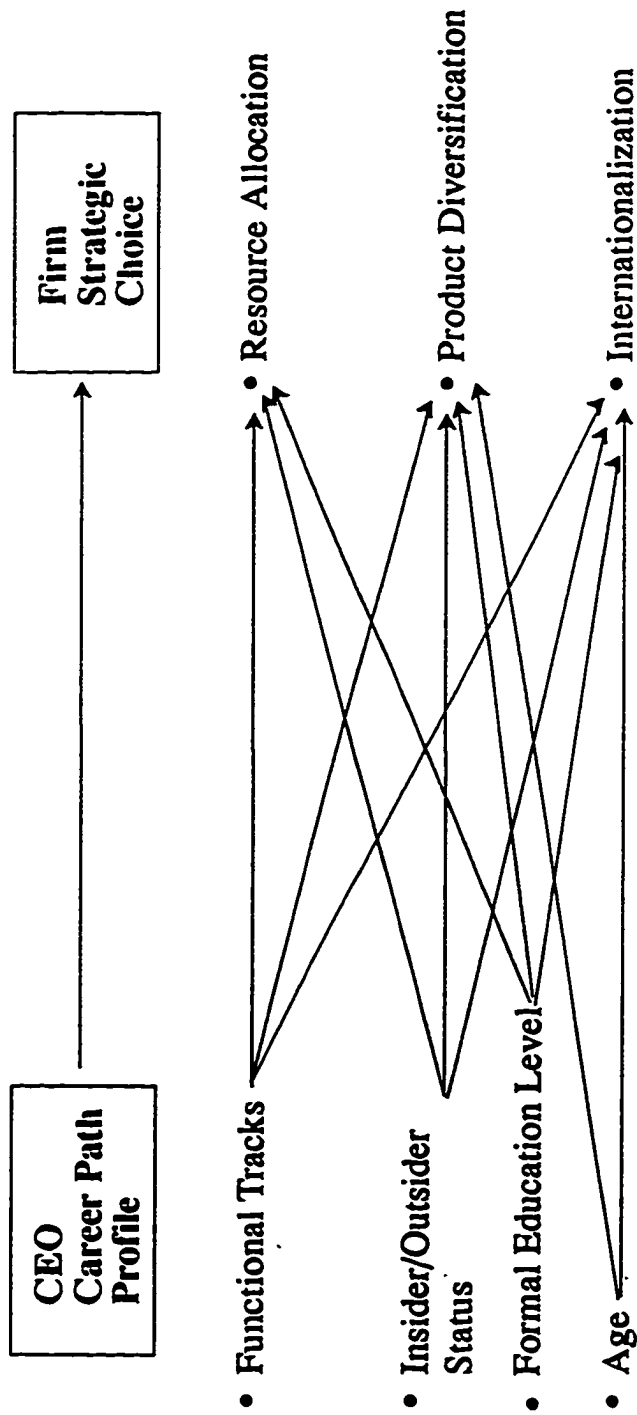
of output and throughput functions, per Hambrick and Mason, 1984), (2) insider/outsider status, (3) formal education, and (4) age. The model presented for this research seeks to examine the aforementioned factors in terms of the strategic fit that exists between the CEO and the firm's strategic choice. Conceptually, the relationship can be presented as a heuristic model in the following framework, Figure 1. Figure 2 describes the theoretical model and the relationships to be tested in this study.

FIGURE 1. CEO Career Path Profile and Firm Strategic Choice Model



▨ - Controlled for

FIGURE 2. CEO Career Path Profile and Firm Strategic Choice Model



The preceding framework examines the relationships between the components depicted in Figure 1. Hypotheses are developed, stating the relationships between the various CEO career path profile variables. The variables include: a) functional tracks, b) insider/outsider status, c) formal education, and d) age. The influence of each variable on firm strategic choice is examined. The firm strategic choice elements analyzed in this study are: a) resource allocation, b) diversification, and c) internationalization.

Career Path Profile

Career path profile (CPP), for purposes of this research, can be viewed as a multivariate collection of career-related experiences, that includes actual career-related factors but also includes career experiences such as: functional tracks (Dearborn and Simon, 1958; Hambrick and Mason, 1984), formal education (Hambrick and Mason, 1984; Wiersema and Bantel, 1992; Datta and Guthrie, 1994), age (Child, 1972; Hart and Mellons, 1970; Hambrick and Mason, 1984), and the insider/outsider status or firm-specific experience (Zajac, 1990; Gupta, 1984; Friedman, 1991) that influence one's career.

Continuing in this vein of research, CEO career path profile will be investigated using the following four variables. It is an extension of Super's (1974) career definition and includes Hambrick and Mason's (1984) categories. The first category is the

Functional Track. This category is comprised of two elements. "Output functions" which include marketing, sales, and product R&D. "Throughput functions" which include production, process engineering, and accounting (Hambrick and Mason, 1984:199). The second category is the *Insider/Outsider Status*. This category takes into account the occupations held by a person in the course of a lifetime combining both firm-specific experience and other firms experience. The third category is *Formal Education*. This category is specific to the type of education the CEO can be classified into, specifically, MBA or non-MBA. The final category is *age*. The age variable was incorporated simply to determine if the CEO was of retirement age or was close to retirement. The specific properties of each of these variables and the manner in which they are measured, are described in detail in Chapter IV.

Strategic Choice

A key element of this model is the firm's strategic choice. Strategic choice refers to the changes made by the CEO in: a) the firm's market behavior; b) input factor utilization. Market behavior will be measured in terms of changes in the composition of a firm's product offering and/or changes in its geographical coverage. The input factor utilization is depicted in terms of changes in the usage of capital, labor, and R&D.

Drawing on Child's (1972) definition of strategic choice, discussed in Chapter II, this research posits that the top managers and the CEO, in particular, determine the

direction an individual firm is likely to take (firm's strategic choice) in terms of product diversification, resource allocation, and internationalization.

Diversification generally refers to the number of products and services in a firm's product mix. Rumelt (1974), in his classical study, first developed the notion of product diversification. He classified his product groupings into four categories: (1) unrelated firms which are non-vertically integrated firms that have pursued a diversification strategy regardless of the existing relationships between new business and current business activities; (2) related-linked firms, which are non-vertically integrated diversified firms operating in several industries but whose activities are linked in that they have diversified combining several different strengths and, therefore, are active in widely disparate businesses; (3) related-constrained firms, which are related firms, all of whose activities are related to one central strength; and (4) vertically integrated firms, which are firms that have long-linked chains of activities ranging from raw materials to fabrication of the product and distribution of the finished product.

Over time, the changes initiated by the CEO can be observed and consequently measured by the absolute differences within the a) input factors and b) output factors. The components of the input factors that made for the changes in strategy are: R&D, labor, and, finally, capital, which are compared with the difference between the output factors, a) degree of internationalization and b) diversification.

The definition and, consequently, the measurement of strategic choice is fraught with concerns. One of the issues raised is based on a specific time factor, e.g., the period over which the effect of a particular strategic choice should be measured. Given a choice, management (the CEO) would want to be evaluated when the financial measures are at their peak. Therefore, any objective measures such as industry standards or product life cycle would be vulnerable to the similar criticisms. Another issue is that of the external factors that the CEO cannot possibly foresee. These factors can be extended to include an entire industry as well as the economy at large.

Other Factors

Industry Characteristics

An industry may be characterized on a variety of dimensions that would a) distinguish it from other industries and b) indicate differences among firms within an industry when compared to differences among firms in another industry. A number of these dimensions have been identified and investigated in the literature.

Two of the more commonly investigated variables are the extent of concentration in an industry and its pattern of diversification. Concentration is determined in terms of relative market share accounted for by different firms in an industry. A highly concentrated industry is typified by the proportion of total industry sales accounted for by the top four firms in that industry. Other things being equal, the greater the dispersion of total sales among a large number of firms, the more fragmented will be the

industry character (Pfeffer and Salancik, 1978). Not only are the concentration ratios important in describing an industry's structure, the distribution of relative market shares among firms - the shape of the curve - is also indicative of the nature of volatility and intensity of competition among member firms in the industry. Consequently, it is expected that firms in highly concentrated industries should exhibit less diversification than firms in less concentrated industries.

Industry Performance

Other evidence points to the relative importance of industry profitability (i.e., pre-tax operating profits, return on equity, or percentage of sales) in explaining performance variation among firms. Prior research (Beard and Dess, 1979, 1981; Lieberman and O'Connor, 1972) suggests that researchers must strongly consider examining and/or controlling for industry effects when conducting studies in management research since industry characteristics may have significant effects on strategic variables and firm performance.

Alternative measures have been used in previous research when evaluating performance (Hambrick, 1980; Montgomery, 1982). These include market-based measures of performance (e.g., market return, dividend yield) and accounting-based indices (e.g., return on investment, sales growth, return on assets). From an economic viewpoint, performance for any period of time can best be represented by a change in

the firm's real net worth.

The two aforementioned environmental conditions (industry characteristics and industry performance) may affect firm strategic choice and, therefore, were analyzed in the model as controls. An attempt was made to control for industry effects for some of the hypotheses but not all. For example, since there is a greater likelihood of the within industry frequencies being small, (therefore the sample size would be too small to yield statistical significance) the demographic variable, age, could not be measured within industry. Also, age should not correlate with industry making it unnecessary to control for industry. Very recent research cautions us as to how much industry actually affects variance in the firm (Powell, 1996). Powell's empirical research using Federal Trade Commission Line of Business data reported that industry membership explains between 17 percent and 20 percent of the variance among firms. His study findings found only 20 percent of the variance was explained by industry and 80 percent of the variance was explained by other factors, including executives' perception.

Firm Characteristics

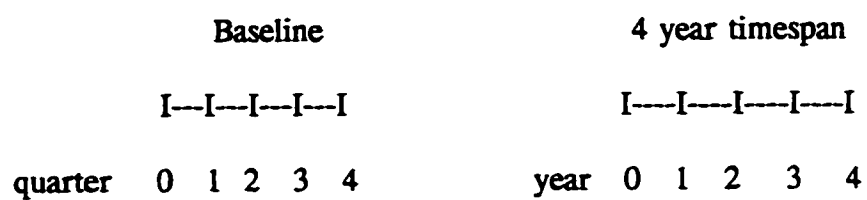
A firm's resource mix and the extent of its divergence from industry characteristics according to prior research should reflect on the match between top management characteristics - in this case, the CEO - and the firm's resource mix.

Similarly, it has also been noted that industry structure variables may influence a firm's characteristics, diversification strategy, and firm performance (Hoskisson & Hitt, 1990; Reed & Luffman, 1986; Lecraw, 1984; Porter, 1980; Rumelt, 1974). Fazel and Louie (1990) found firm size was impacted by the CEO. Their study measured firm size both as the absolute level of sales and as the deviation from the firm's four-year trend in sales. Data on firm size (total sales at baseline and year four) will be collected for use in this study.

Change

A baseline measure was developed in order to operationalize change. It will identify the firm's initial status such that a change to another category (i.e., Rumelt's diversification categories) will be assessed. The baseline data will be collected for four quarters (one full year) prior to the date the CEO assumes the new position. The next measure will be in the fourth year of the CEO's tenure. The operationalization of change will vary according to the individual hypothesis. According to Grant (1988), operationalizing changes in firm strategic choice directly linked to the CEO's career path profile poses a complicated task due to the cognitive nature of the concept. However, Prahalad and Bettis (1987) found that the use of "dominant logics," defined as the way in which management makes resource allocation decisions about a particular firm, is a way of addressing this issue. A graphic depiction of both the baseline and the four-year

timespan is as follows:



Hypotheses Development

The functional tracks of the CEO career path profile have attracted much attention in the strategic management literature since the CEO is presumed to be functionally specialized (Hambrick and Mason, 1984) and, therefore, is expected to bring to the position specific job knowledge, attitudes, and skills that are partly shaped by functional experience.

Functional Tracks. Dearborn and Simon (1958), in their landmark study, found that when a group of executives from different functional areas were presented with the same problem (in the form of a case study) and were asked to view it from a company-wide perspective, they each defined the problem in terms of the activities and goals of their own specific functional areas (Hambrick and Mason, 1984:199). Using Hambrick and Mason's two main categories of functional tracks, the first, "output functions" (marketing, sales, and product R & D), emphasizes growth and the continuing search for new opportunities. It is also considered in the monitoring and adjusting of products and markets. The second category of functional tracks, "throughput functions" (production, process engineering, and accounting), are those processes that are responsible for improving the efficiency of the transformation process. These two functions are based on the research of Katz and Kahn (1966). The open systems view of Katz and Kahn is "aligned with the functional areas described as key in Miles and Snow's (1978) strategic typology (Hambrick and Mason, 1984:199). According to Hambrick and Mason, these

two functions are as distinctly different in their emphasis as the individuals working within the two categories and "are likely to develop distinctly different orientations to the firm and its environment" (Hambrick and Mason, 1984:199). CEOs who do not fall into either of the above categories will be considered "other" for their functional track. The following hypothesis is consistent with the research on CEO functional tracks and specialized experience in that they tend to be matched to their company's investments (Hambrick and Mason, 1984; Pfeffer and Salancik, 1978; Hayes and Abernathy, 1980).

H1: Changes in a firm's strategic choice will be related to the functional tracks of the CEO: (i.e., "output" function CEOs will emphasize resource allocation in product R&D and "throughput" function CEOs will emphasize resource allocation in capital and labor).

Insider/Outsider Status. This category is viewed as experience that is firm-specific and that is not included in the functional track areas previously defined but is considered valuable since it was found to have a significant effect on the types of actions the CEO would take (Pfeffer and Salancik, 1978; Zajac, 1990; Gupta, 1984). Hambrick and Mason, in their seminal work, found that executives carry with them the experiences they have had during their careers. At first blush, this may seem to be a naive statement. However, Hambrick and Mason's research found that executives who had spent their entire careers in one organization had relatively limited perspectives. As a result, they had a very restricted knowledge base from which to operate when faced with unprecedented problems such as deregulation, intensive competition from imports, or

perhaps a radical technological shift (Hambrick and Mason, 1984:200). Zajac (1990) noted, in the insider vs. outsider succession research, that internal hiring was thought to lead to several positive outcomes. The positive outcomes included reduced costs associated with socialization, turnover, and compensation as well as an increased ability to attract and retain qualified employees (Friedman, 1991). Other potential benefits of internal selection are associated with the concept of firm-specific knowledge, since familiarity with products, markets, technologies, and standard operating procedures accumulates with firm tenure (Gupta, 1984). Consistent with the current criteria used by Chaganti and Sambharya (1987) and Vancil (1987), CEOs having fewer than five years of organizational tenure at the time they assume the CEO position will be considered outsiders. As noted above, the extent of firm-specific experience of CEOs and other top managers has been the subject of discussion and research in the organization and strategic management literature and leads to the following hypotheses:

H2a: Changes in a firm's strategic choice will be related to the insider/outsider status of the CEO: insider CEOs initiate smaller changes in resource allocation than outsider CEOs.

H2b: In large firms, the insider/outsider status of the CEO will be related to changes in product diversification and internationalization, (i.e., firms with outsider CEOs will exhibit greater change in diversification and internationalization).

H2c: In small firms, the insider/outsider status of the CEO will have no effect on product diversification and internationalization.

Formal Education. For this study, formal education will be defined as the preoccupational role of student preparing for work roles. It takes into account the total number of years of formal education and whether or not the individual has obtained an MBA. Collins (1971) noted that education implied membership in a particular socioeconomic group. British research strongly supported this theory since class structure presumably is more delineated in that country (Channon, 1973). Channon found that 50% of the chief executives in his study had been educated at Cambridge or Oxford and noted how the educational factor aided in establishing very strong interorganizational links. Hambrick and Mason (1984) posited that such strong findings were "unlikely to emerge in a U.S. sample." However, they did qualify this statement by saying that there may be certain industries where educational attainment -- including degrees from the "right" schools -- is important to business success.

It must be brought to the fore, however, that there is little research regarding formal professional education (the MBA degree in particular) and its effects on corporate outcomes. Hambrick and Mason (1984) found that the MBA was associated with moderation. "MBA candidates by their nature probably are not as innovative or risk-prone as more self-made executives" (Collins and Moore, 1970). Hambrick and Mason's (1984:200) findings support Collins and Moore's research, in that they proposed that "the amount, but not the type, of formal education of a management team will be positively associated with innovation." Wiersema and Bantel (1992) empirically linked CEO education level with the propensity to deviate from the *status quo* and implement strategic

change.

Additional empirical research indicates that investment emphasizing R&D is linked with a competitive strategy of innovation (Martell, Carroll, and Gupta, 1992). Given the existing literature linking education level with the above characteristics (Hambrick and Mason, 1984; Martell, Carroll, and Gupta, 1992; Wiersema and Bantel, 1992), the following hypothesis is presented:

H3: The education type of the CEO will be associated with changes in R&D allocation (i.e., CEOs who have an MBA will show greater increases in the proportion of spending in R&D).

Age. Although a CEO's age has been only infrequently studied, these studies, nevertheless, have revealed some interesting findings. Child (1972) and Hart and Mellons (1970) have associated managerial youth with corporate growth. Child qualifies this result by saying that it is not possible to disentangle the extent to which growth leads to youth or youth leads to growth. Also, in a related finding, earnings and volatility of sales is associated with managerial youth (Hambrick and Mason, 1984). Vroom and Pahl's (1971) findings showed a negative relationship between age and the value placed on risk. Regarding managerial age, Hambrick and Mason (1984) also posited that older CEOs, in particular those facing retirement, tended to avoid any risky actions. Consistent with the previous literature, the following relationships between the CEO's career path profile and the firm's strategic choice are suggested:

H4a: In large firms, older CEOs (56 and over), compared to younger CEOs (55 and under), make smaller changes in product diversification and internationalization.

H4b: In small firms, CEO age will have no effect on changes in product diversification and internationalization.

Chapter IV

Research Design

The research used a longitudinal research design to examine CEO career path profile and the relationship to firm strategic choice. The population included American firms as listed in the 1987-1993 Forbes. The longitudinal study provided specific information about the CEOs and their career path profiles and the relationship to firm strategic choice.

Sample

The data base consisted of 197 CEOs and was based on succession events listed in Forbes Top 800 CEOs during the years 1987-1990. All CEOs listed in the Forbes Top 800 who were new to the position in 1987-1990 were selected for the study. CEOs who were not new to the position in 1987-1990 were not selected. A variety of data sources were used regarding CEOs that included information from secondary sources such as: a Forbes survey of the 800 highest paid CEOs in America. Other data sources used were Standard and Poor's COMPUSTAT (which consists of the largest publicly held American firms) and Standard and Poor's Register of Corporations, Directors and Executives.

The Forbes CEOs were chosen for the following reasons. The first was the

convenience, easy availability, and verifiability of the data. Second, the alternative of collecting personal data regarding CEOs through a mail survey would have been infeasible, considering the sensitive nature of this type of information. Third, testing the hypotheses required a sample of CEOs from a variety of industries for greater generalizability. Finally, this procedure is consistent with past research in strategic management.

Firms included in the sample had to meet the following criteria. The CEO had to be identified in the May 1987-1990 Forbes "The 800 Top Corporate Executives," Standard and Poor's COMPUSTAT Database, and Standard and Poor's Register of Corporations, Directors and Executives. These data sources provided the demographic characteristics of the CEOs and other critical information for developing the career path profile. For the purpose of this study, all sources were based on American companies and their respective CEOs.

Strategic choice data was collected in the fourth year following the installation of the CEO and during the year prior to his assuming the chief executive position for purposes of baseline information. The year the CEO assumed this position may have been any of the four following years: 1987, 1988, 1989, or 1990. The baseline year extended from the appointment date and covered four full quarters, completing one full year. The baseline data and the fourth year of tenure provided five years of data. The five-year timespan is consistent with previous research regarding CEOs (Lambert and

Larcker, 1985; Norburn and Birley, 1988; Furtado and Karan, 1990) and, according to Fredrickson, Hambrick, and Baumrin (1988), should be no less than three years since they found that almost 50% of departing CEOs in major food processing firms left within the first three years of their tenure.

Method

Measures

Career path profile is a multivariate collection of characteristics and will be measured on four variables. It is an extension of Super's (1974) definition, and includes Hambrick and Mason's (1984) categories as well as a third category that includes CEOs not in the other two; (1) *Functional Tracks* - a) "output functions" - marketing, sales and product R & D, b) "throughput functions" -production, process engineering, and accounting (Hambrick and Mason, 1984:199) c) other - CEOs not included in the above categories such as lawyers, doctors and medical personnel, nonengineers, etc. The preceding variable is categorical and indicates into which functional area the CEO can be placed; (2) *Insider/Outsider Status* - is a dichotomous variable that indicates whether a CEO's prior position and experience is firm-specific (same firm) or in a different firm; (3) *Formal Education* - type of education, MBA or non-MBA, which is also a dichotomous variable; and (4) *Age* - is also a dichotomous variable that indicates whether a CEO is either 56 or older or 55 or younger.

To develop measures of CEO career path profile, first categorical measures were created for functional background, educational background, insider/outsider status and age. Following Hambrick and Mason (1984) and others (Dearborn and Simon, 1958; Chaganti and Sambharya, 1987) the various functional backgrounds were consolidated into three core areas: output functions, which include marketing and sales, product R&D and insurance; throughput functions, which include operations, production, process engineering, accounting and finance administration and technical; and peripheral functions, which include banking, law, and medical. A categorical measure of functional background was created. If the CEO had primary experience in marketing, sales, or product R&D a code of "one" was assigned; a "two" code was given if the CEO's primary experience was in production or operations, and "three" if his experience was in the peripheral function.

In keeping with prior research (Hambrick and Mason, 1984; Chaganti and Sambharya, 1987; Michel and Hambrick, 1992) the functional background was also assessed according to the CEO's current and prior job titles, while at the same time considering other aspects of personal employment history such as the kind of organizations for which the CEO had worked. Although coding functional background entails a certain degree of subjectivity, Michel and Hambrick (1992) found a high correlation (.86) between the ratings of two different sets of raters.

To measure the insider/outsider status of the CEO, a binary variable was created.

The CEO was coded "one" if he was an employee of the organization and "zero" if he was not an employee of the organization. The CEOs were coded as outsiders if they were not employed by the company or any of its subsidiaries prior to becoming CEO.

Consistent with prior research (Hambrick and Mason, 1984; Michel and Hambrick, 1992) a dichotomous measure was created for educational background where the CEO was coded with "one" if he had an advanced degree, in this study an MBA and "zero" if he did not hold an MBA at the time of appointment.

Empirical research has demonstrated a relationship between age and a variety of work-related attitudes, including attitudes towards risk (Vroom and Pahl, 1971). Vroom and Pahl found a negative relationship between age and the value placed on risk in a sample of corporate managers; and Hitt and Tyler (1991) found similar results for top executives. Therefore, as noted by Hambrick and Mason (1984), since risk posture is an important element of corporate strategy, age differences should be an indication of the CEOs' beliefs about the strategic direction for the firm. To measure the relationship of age to the strategic choices pursued by the CEO, a dichotomous measure was developed where CEOs who were 56 and older were coded "one" and those CEOs who were 55 and younger were coded "zero." To ensure that the two age groups were significantly different, a comparison of the two means was performed. The overall distribution of the age of the CEOs was determined by the comparison of the means and the variable was dichotomized accordingly.

Each CEO's firm was classified by the industry in which it operates. The classification of the industry included the following criteria: a) concentration ratios (CR4), the market share held by the top four firms in the industry, and b) SIC classification codes, which provide a more accurate sales breakdown as well as greater generalizability (the F-ratios indicated highly significant relationships between these measures (Montgomery, 1982)).

Each firm was classified by size. Firm size was measured by the firm's total sales. The data on total sales was collected at both baseline and year four of the CEO's tenure. Since there was a wide disparity in terms of firm size in the Fortune 500 companies in the study, firm size was categorized as small (\$250 million - \$1 billion total sales) and large (\$1.1 billion - \$10 billion). The Standard and Poor's COMPUSTAT Database, which was used in this study, provided data on the largest publicly held American firms. A dichotomous measure was created, assigning "one" to the large firms and "zero" to the small firms. The distribution of firm size was determined prior to dichotomizing the size variable.

Strategic choice was measured at baseline and at the fourth year of the CEO's tenure. The following three dimensions were examined: (1) resource allocation; (2) product diversification; and (3) internationalization. Resource allocation was measured in terms of the proportion of the funding allotted to each of the following areas: (1) capital, (2) labor, and (3) R&D, as a proportion of the total sales to adjust for the firm's

size. Internationalization was measured in terms of the ratio of a firm's overseas earnings and overseas sales to the company's total earnings and total sales. Product diversification was measured according to the number of product lines identified in each firm in the study.

Chapter V

Results

The purpose of this study was to examine the relationship of the CEO's career path profile, in terms of his functional track, to strategic choice, with the goal of moving the level of analysis from descriptive to explanatory. Accordingly, four groups of independent variables were studied to assess their impact on the dependent variable, firm strategic choice (diversification and internationalization). The first group of variables, the functional tracks set, included output function, throughput function, and peripheral function variables. These predictors are the ones that have been most often linked with strategic choice in earlier studies, and offer only predictive information. The present study also included three other sets of variables as possible inputs into the choice: insider/outsider status; education (MBA/non-MBA); and age.

Data Analysis

Several different statistical analyses were utilized, considering the hypotheses and the nature of the variables in the hypotheses. Three separate ANOVAs were used in Hypothesis 1. T-tests were used for testing Hypotheses 2a, 2b, 2c, and Hypothesis 3. Separate T-tests were used for diversification in Hypothesis 4a and again in 4b for internationalization. Data were collected at two different times for 197 firms. Time 1 was the year prior to the CEO assuming their position and Time 2 was at year 4 of their tenure. Individual analyses were conducted on all available data. However, because of

missing data on some variables, results from individual analyses often report fewer than 197 firms. The following section provides an explanation of each statistical approach for each hypothesis in the study.

H1: Changes in a firm's strategic choice will be related to the functional tracks of the CEO: (i.e., "output"function CEOs will emphasize resource allocation in product R&D and "throughput" function CEOs will emphasize resource allocation in capital and labor).

Allocation of resources was determined for each firm in the study at baseline, Time 1, and again at Time 2. The functional area was defined by prior business experience. Each area of resource allocation was looked at in terms of changes in each area as a proportion of the firm's total sales from Time 1 to Time 2. Each resource allocation variable -- capital, labor, and R&D -- was measured separately as a proportion of the total sales. The functional tracks of the CEOs are categorical variables and were compared on each of the three resource allocation variables at the two time points. There were two time points for each of the CEOs. Time 1 was the year prior to their assuming the CEO position (baseline). Time 2 was at year 4 of their tenure. Change scores were created as the changes from Time 1 to Time 2 were determined ($t_2 - t_1$). An ANOVA was performed for each resource allocation variable (capital, labor, and R&D). The ANOVA compared the three functional tracks on the change in each of the resource allocation variables.

Hypothesis 1 predicted that an association between the CEO's functional background and the strategic choice of diversification and internationalization. ANOVAs revealed that the functional tracks of the CEOs were not related to resource allocation in capital, $F(2, 146) = 1.69, p = .19$, and not related to resource allocation in R & D $F(2, 64) = 1.11, p = .34$ (Table 1).

However, the ANOVA did reveal a significant effect of functional tracks on labor, $F(2, 38) = 5.63, p = .006$. Since only one CEO was categorized as output function, the data were reanalyzed with that CEO removed, and a significant difference between peripheral function and throughput function was found, $t(38) = 3.04, p = .004$ (Table 2).

Table 1.

Hypothesis 1
ANOVAs for Functional Tracks of CEOs

Functional Tracks	Capital	Labor	R & D
Output	-0.064 (n = 21)	0.033 (n = 1)	0.009 (n = 13)
Peripheral	0.053 (n = 26)	0.019** (n = 10)	0.003 (n = 5)
Throughput	-0.023 (n = 102)	-0.005** (n = 30)	-0.005 (n = 49)

 Positive numbers refer to greater proportions at Time 2; negative numbers refer to greater proportions at Time 1.

**p < .01

Table 2.

Hypothesis 1
ANOVAs for Functional Tracks of CEOs

Functional Tracks	N	Capital		Labor		R & D	
		Mean	SD	Mean	SD	Mean	SD
Output	21	-0.064	0.292	0.033	.	0.009	0.031
Peripheral	26	0.053	0.383	0.019**	0.029	0.003	0.007
Throughput	102	-0.023	0.151	-0.005**	0.019	-0.005	0.032

Positive numbers refer to greater proportions at Time 2; negative numbers refer to greater proportions at Time 1.

**p < .01

H2a: Changes in a firm's strategic choice will be related to the insider/outsider status of the CEO: insider CEOs initiate smaller changes in resource allocation than outsider CEOs.

H2b: In large firms, the insider/outsider status of the CEO will be related to changes in product diversification and internationalization, (i.e., firms with outsider CEOs will exhibit greater change in diversification and internationalization).

H2c: In small firms, the insider/outsider status of the CEO will have no effect on product diversification and internationalization.

Resource allocation in Hypothesis 2a used a t-test to determine if insider/outsider status predicted whether the outsider CEO would initiate larger changes in resource allocation. The following technique was used to arrive at a t-test. Step 1: For each firm calculate the proportion of resources devoted to capital, labor, and R&D at Time 1 and Time 2. Step 2: Create difference scores based on Time 2 minus Time 1 for each of the three resource allocation areas. Step 3: Use a t-test to compare the insiders and the outsiders on the difference scores for capital, labor, and R&D.

T-tests comparing insider and outsider status on the difference scores for capital, labor, and R & D revealed no significant differences on any of the three measures. For capital, $t(195) = .47$, $p = .64$; for labor, $t(57) = .67$, $p = .50$; and for R&D, $t(89) = 1.63$, $p = .11$ (Table 3).

Table 3.

Hypothesis 2a
T-tests for Insider/Outsider Status of CEOs

Status	Capital			Labor			R & D		
	Mean	SD	SE	Mean	SD	SE	Mean	SD	SE
Outsider	-0.008 (n = 59)	0.238	0.031	0.004 (n = 22)	0.033	0.007	0.018 (n = 25)	0.065	0.013
Insider	0.025 (n = 138)	0.228	0.019	0.001 (n = 37)	0.221	0.004	0.002 (n = 66)	0.031	0.003

Diversification was analyzed in Hypotheses 2b and 2c separately from internationalization. Separate analyses were performed for large and small firms. Changes scores in diversification were created as a Time 2 minus Time 1 difference in product lines. Using the steps followed in Hypothesis 2a, the change scores were calculated for diversification and a t-Test was performed.

Internationalization was analyzed in Hypotheses 2b and 2c using the same steps as in Hypotheses 2a. The change score was calculated based on the change in the proportion of overseas earnings and overseas sales to the firm's total earnings and total sales from Time 1 to Time 2. A t-test was used in the analysis.

The size of the firm was determined by averaging Total Sales at Time 1 and Time 2 and then dichotomizing firms into small and large at the median of this variable, which was 2,590 (in millions).

Separate t-tests were conducted for small and large firms. The independent variable was insider versus outsider status. The dependent measures were diversification, international earnings, and international sales. Each dependent measure was a difference score as a proportion of the firm's total sales and earnings.

For small firms, t-tests between insider and outsider CEOs revealed no significant differences for international sales, $t = (DF = 41) = 0.11, p > .05$. There were no

significant differences for international earnings, t ($df = 30$) = .22, $p > .05$; nor for diversification, t ($df = 96$) = .14, $p > .05$ (Table 4).

Table 4.

**Hypothesis 2b
T-tests for Insider/Outsider Status of CEOs
Small Firms**

Status	Intern'l Sales			Intern'l Earnings			Diversification		
	Mean	SD	SE	Mean	SD	SE	Mean	SD	SE
Outsider	0.068 (n = 15)	0.112	0.028	3.736 (n = 11)	12.433	3.749	0.000 (n = 31)	0.632	0.114
Insider	0.063 (n = 28)	0.117	0.022	0.248 (n = 21)	2.711	0.591	0.002 (n = 66)	0.031	0.003

For large firms, t-tests between outsiders and insiders revealed no significant differences for international sales, t (df = 58) = .53, $p > .05$; international earnings, t (df = 55) = .20, $p > .05$; and diversification t (df = 97) = .40, $p > .05$ (Table 5).

Table 5.

Hypothesis 2b
T-tests for Insider/Outsider Status of CEOs
Large Firms

Status	Intern'l Sales		Intern'l Earnings		Diversification	
	Mean	SD SE	Mean	SD SE	Mean	SD SE
Outsider	0.033 (n = 17)	0.111 0.027	2.400 (n = 15)	6.705 1.731	-0.143 (n = 28)	0.891 0.168
Insider	0.019 (n = 43)	0.063 0.009	-0.240 (n = 42)	6.732 1.039	-0.310 (n = 71)	0.904 0.107

A second set of six t-tests, three for small firms and three for large firms, was conducted after trichotomizing the size variable. It was thought that even though there was a large and significant difference between large and small firms when dichotomized at the median ($\underline{M} = 1,369$ for small firms; $\underline{M} = 9,700$ for large firms), perhaps comparing just the top one-third of the largest firms with the bottom one-third of the firms would accentuate these differences. However, none of these t-tests revealed significant differences either. For example, for very small firms, three t-tests were conducted comparing outsiders to insiders, and the results were: for international sales, $t (df = 24) = .21, p > .05$; international earnings, $t (df = 16) = .79, p > .05$; and for diversification, $t (df = 64) = 1.80, p > .05$. On the other hand, for really large firms, t-tests results for international sales were, $t (df = 41) = .68, p > .05$; for international earnings, $t (df = 10.1, \text{for unequal variances}) = 1.41, p > .05$; and diversification, $t (df = 63) = 1.68, p > .05$, again revealing no significant differences.

H3: The education type of the CEO will be associated with changes in R&D allocation, (i.e. CEOs who have an MBA will show greater increases in the proportion of spending in R&D).

Each CEO in the study was classified into an education type, having an MBA or not having an MBA at the time of appointment. The proportion of spending on R&D was calculated at Time 1 and Time 2. Change in spending was measured by calculating the t2 minus t1 difference. The mean R&D proportional expenditure over the one year

baseline period preceding the CEO's appointment was compared with the fourth year of the CEO's tenure in this study. A t-test was used to compare the mean changes for MBAs compared to non-MBAs.

A t-test compared R&D differences in proportion of sales between Time 1 and Time 2. The test revealed no significant differences between non-MBAs and MBAs (\underline{M} = -0.002) and MBAs (\underline{M} = -0.000), $t(66) = .26$, $p = .79$ (Table 6).

Table 6.

**Hypothesis 3
T-tests for Non-MBA/MBA CEOs
R & D Proportion: T2 - T1**

Education	N	Mean	Standard Deviation	Standard Error
Non-MBA	47	-0.00224624	0.03667838	0.00535009
MBA	21	-0.00010007	0.01009595	0.00220312

Variances	T	DF	Prob > T
Unequal	-0.3710	59.0	0.7120
Equal	-0.2628	66.0	0.7936

**For Ho: Variances are equal, F' = 13.20 DF = (46, 20)
Prob > F' = 0.0000**

H4a: In large firms, older CEOs (56 and over), compared to younger CEOs (55 and under), make smaller changes in product diversification and internationalization.

H4b: In small firms, CEO age will have no effect on changes in product diversification and internationalization.

For each firm in the study, CEOs were classified into older (56 years old and older) or younger (55 years old and younger). Diversification and internationalization were measured separately. Separate analyses were done for large and small firms. The baseline measure (Time 1) identified the firm's initial status. One baseline measure (Time 1), at the end of the fourth quarter, was used to determine the initial status of the firm's diversification. Time 2 status was determined by the number of product lines the firm had diversified into at the end of the fourth year of the CEO's tenure (Time 2). Change scores were created by determining the difference between t2 minus t1. The older CEOs were compared to the younger CEOs on the changes in diversification using a t-Test.

The median age for CEOs was 56. Therefore, each CEO was classified by firm into older (56 years old and older) or younger (55 years old and younger). The average age in the two groups was 60 and 50 years of age, respectively.

As had been done in Hypothesis 2b, the size of the firm was determined by averaging Total Sales at Time 1 and Time 2 and then dichotomizing firms into small and

large at the median of this variable, which was 2,590.

Separate t-tests were conducted for small and large firms. The independent variable was age of CEO and the dependent measures were diversification, international earnings, and international sales. Each dependent measure was a difference score as a proportion of the firm's total sales and earnings.

Internationalization was measured separately from diversification. The proportion of overseas earnings and overseas sales to the firm's total earnings and total sales was calculated at Time 1 and Time 2. Difference scores were created by taking the difference of the proportion of overseas earnings to the firm's total earnings at Time 1 from the proportion of overseas earnings to the firm's total earnings at Time 2. The difference scores were also calculated for overseas sales to the firm's total sales at Time 1 to Time 2. A t-test was used to compare the older CEOs to the younger CEOs on the difference scores for internationalization.

None of the six t-tests revealed any significant differences between older and younger CEOs. In small firms, for international sales, $t(df = 27) = -0.02, p > .05$; international earnings, $t(df = 19) = -1.12, p > .05$; and diversification, $t(df = 69) = 0.96, p > .05$ (Table 7).

Table 7.

Hypothesis 4a
T-tests for CEO Age: Small Firms

Status	Intern'l Sales		Intern'l Earnings		Diversification	
	Mean	SD SE	Mean	SD SE	Mean	SD SE
55 or less	-0.060 (n = 12)	0.126 0.036	-0.409 (n = 10)	1.395 0.441	-0.176 (n = 34)	0.834 0.143
56 or more	0.061 (n = 17)	0.112 0.027	0.908 (n = 11)	3.463 1.044	-0.405 (n = 37)	1.142 0.188

For large firms, for international sales, t (df = 45) = -0.62, $p > .05$; for international earnings, t (df = 43) = -0.46, $p > .05$; and for diversification, t (df = 76) = 0.86, $p > .05$ (Table 8).

Table 8.

**Hypothesis 4b
T-tests for CEO Age: Large Firms**

Status	Intern'l Sales		Intern'l Earnings		Diversification				
	Mean	SD	SE	Mean	SD	SE			
55 or less	-0.014 (n = 17)	0.087	0.021	-0.210 (n = 15)	0.602	0.155	-0.242 (n = 33)	0.751	0.130
56 or more	0.026 (n = 30)	0.053	0.009	0.905 (n = 30)	9.368	1.710	-0.422 (n = 45)	1.011	0.151

In order to more clearly distinguish older from younger CEOs, the firms were trichotomized on CEO age, and the oldest third (59-69 years of age) and the youngest third (42-53 years of age) were compared. Again, however, t-tests comparing older and younger CEOs on the variables of changes in proportion of diversification, international earnings, and international sales were not significant for either small or large firms.

Chapter VI

Discussion

The purpose of this study was to examine the various types of linkages between the CEO's career path profile and the firm's strategic choice. The intent was to move from a descriptive level, where only demographic and personality variables had been studied, to an explanatory level of analysis that included demographic variables but was expanded to include the unexplored behavioral dynamics as well as the specific background and career options chosen by the CEO.

In this chapter, the major findings of the study are discussed, based upon the hypotheses that were proposed earlier. Additionally, theoretical and practical implications are presented, as well as the limitations of the study.

The hypotheses can be divided into three groups: the demographic/functional tracks that were included primarily for comparison with earlier studies; the situational variables, the insider/outsider status; and those that examined the individual differences variables, education level and age.

Demographic/ Functional Track Variables

Earlier studies have proposed that the demographic variables assigned to a CEO

should be utilized as predictors of organization performance and/or direction of strategic change. The present study extends this line of reasoning by including the demographic variables, but by adding a different dimension and consequently broadening the scope to include the entire group of career path variables. The areas that have been examined and that have yielded some empirical support in previous studies are discussed below, and are compared to findings in this study.

Functional Tracks

It was hypothesized in the present study that there would be an association between the CEOs' functional backgrounds and their diversification strategy. Support for this association was determined for the "throughput" CEOs. However, this was not the case for the "output" and the "other" CEOs. The results indicate, *ceteris paribus*, that CEOs with the "throughput" functional background (marketing, sales, and product R&D) will tend to diversify their organizations more than the "output" and "other" CEOs. This result is in agreement with top management functional background and organizational outcomes studies by Dearborn and Simon (1958), Hambrick and Mason (1984), and Datta and Guthrie (1994). On the other hand, the functional background of the CEO appears to not have any association with the strategic choice of internationalization. In the case of internationalization, however, industry was not controlled for, since the sample size would have been too small to yield adequate power. Therefore, it appears that industry may have a greater effect than CEO when

investigating functional track and internationalization. Hambrick and Mason's work is limited specifically to intra-industry variability, whereas Norburn and Birley's (1988) work investigated both intra-industry and inter-industry differences and similarities. The finding in this study, where industry could not be controlled for, is in agreement with Norburn and Birley's work in that industry may make the difference for specific strategic choices and the CEO may have little to no affect.

Situational Variables

Insider/Outsider Status - Resource Allocation

Hypothesis 2a predicted there would be an association between the insider/outsider status of the CEO and change in resource allocation. It was proposed that the insider CEO is more likely to make changes in resource allocation. This hypothesis is consistent with CEO succession studies of Friedman and Singh (1989) and Dalton and Kesner (1985) but are contradicted in the literature by Zajac (1990) and Cannella, Lubatkin, and Kapouch (1991). One reason for the inconsistent findings across studies may lie in the operationalization of the insider/outsider construct (Datta and Guthrie, 1994). The operationalization of the insider/outsider construct for this study was in agreement with Dalton and Kesner (1985) where the construct defined newly appointed CEOs as outsiders if they were not in the organization during their predecessor's tenure as CEO. However, this hypothesis was not supported, since the data showed that no relationship existed between the variables under study.

Insider/Outsider Status - Large Firms

The evidence pertaining to the functional backgrounds of the CEOs is particularly noteworthy. In 1980, Hayes and Abernathy expressed concern over the increased propensity for large firms to select CEOs having nontechnical (e.g., finance legal) backgrounds regardless of insider/outsider status. The results of Hypothesis 2b support Hayes and Abernathy's concern. The overall findings suggest that the insider/outsider status of the CEO appears to be independent of his diversification and internationalization strategies in large firms. However, if industry was considered, which was not the case in this study, theoretically there should be a relationship between insider/outsider status of the CEO and diversification in large firms (Norburn and Birley, 1988). In general, the results of this hypothesis revealed no significant relationship.

Insider/Outsider - Small Firms

The results of Hypothesis 2c provide empirical evidence that the strategic choice dimension of the insider/outsider status of the CEO in small firms is not associated with either strategies of diversification or internationalization. The results reflect the intra-intra- and inter-industry problem, and a note of caution is suggested. Since the control variable of size in this hypothesis was CEOs in small firms only, the sample size was reduced to a very small sample, which might not be representative of the population under study. Industry effect would be masked in this hypothesis, and therefore it was

difficult to discern if there was a relationship between the insider/outsider status of the CEO and diversification and internationalization. However, the present findings are consistent with the research on CEO and strategic choice when industry is difficult to control because of the unique nature of the data (Norburn and Birley, 1988).

Individual Difference Variables

Education Level - MBA/non-MBA

Hypothesis 3 predicted that the education level (MBA/non-MBA) of the CEO would be associated with greater increases in the proportion of spending in R&D. As is common in the literature (Hansen and Hill, 1991), R&D intensity was measured as the firm's expenditure on R&D as a percentage of its sales. The mean R&D intensity over the four years after the CEO was appointed was used in this study. Each CEO was classified into an education level, either having an MBA or not at the time of his appointment. Again, the t-tests were attempted within industry, but the samples were too small and the SIC codes were combined, providing 68 CEOs. The results did not support the hypothesis. These results contradict results in the literature. Datta and Guthrie's (1994) findings strongly supported the prediction that education level is positively associated with R&D intensity and that R&D-intensive firms typically select CEOs with higher levels of education ($p < 0.001$). Their study included 195 CEOs and was based solely upon succession events.

Age - Large Firms

A very similar pattern of results emerged in Hypothesis 4a on both the diversification and internationalization variables. The results for large firms with older CEOs were not significant. Nor were the results significant for large firms with younger CEOs. Govindarajan's (1989) study on implementing competitive strategies and matching managers to strategies supports the findings in this study. His study investigated managers in terms of their risk-taking behavior and found that the older manager was more risk averse than the younger manager. The findings of H4a are consistent with Govindarajan's findings.

Age - Small Firms - Diversification

Earlier studies also reported that in small firms the age of the CEO would not be a significant factor in diversification or internationalization (Govindarajan, 1989; Furtado and Karan, 1990). Diversification in Hypothesis 4b was measured separately from internationalization. An interesting result emerged supporting the hypothesis that in small firms CEO age will not be related to diversification. Govindarajan's results support the findings of this study on the diversification variable in which only small firms were included. It is also supported by Furtado and Karan's (1990) study, which found that the closer the CEO was to retirement age (62) the less likely he was to indulge in risk taking.

Age - Small Firms - Internationalization

Internationalization in Hypothesis 4b was measured separately from diversification. The findings determined that CEO age and internationalization were also not related, suggesting that in small firms the age of the CEO did not have an effect on the internationalization strategies pursued, as was predicted.

The results of Hypotheses 4a and 4b suggest that CEO age is a factor that must be considered when investigating specific strategic choices, in particular, diversification and internationalization. More importantly, firm size must be considered when investigating CEO age.

In summary, it appears that only certain aspects of CEO Career Path Profile are associated with specific strategic choice variables. Specifically, the "throughput" CEO, the CEO with a marketing, sales and product R&D background, is only modestly related to resource allocation in the labor area. Also, it was found, as suggested, that age would not make a difference in strategic choice in small firms.

Conclusions

Earlier studies of CEO functional tracks have demonstrated a relationship between several demographic, situational, and individual variables and the dependent variable,

strategic choice. The purpose of the present study was to incorporate additional independent variables for the purposes of developing a more comprehensive model of CEO career path profile. The variables of interest were demographic, situational, and individual. The additional of these important variables moves the level of analysis from descriptive to explanatory. The goal of this study was to arrive at a more complete understanding of the factors that contribute to a CEO's overall fit and function within an organization.

The comprehensive model that was tested herein included variables that were intended to capture the diverse backgrounds and characteristics of the CEO that shape upon the individual's strategic choices for the firm.

The major findings of the present study are listed below:

1. "Throughput" functional track CEOs emphasize resource allocation in labor. There is no relationship of the "output" functional track CEOs with resource allocation in product R&D.
2. Insider CEOs do not necessarily initiate smaller changes in resource allocation than outsider CEOs.
3. The insider/outsider status of the CEO does not make a difference in the diversification and internationalization in either large or small firms.
4. Whether the CEO has an MBA or not does not affect resource allocation in R&D.

5. The age of the CEO does not make a difference in product diversification and internationalization in large firms.

6. The age of the CEO has no effect on changes in product diversification and internationalization in small firms.

Limitations

The limitations of the research suggest a few restrictions, particularly regarding sampling issues. First is the use of the Forbes list of firms, since it covers only Fortune 500 companies and, therefore, introduces a bias toward large firms and ones that may not be representative of an average firm in terms of size, strengths, and weaknesses. Small firms (total sales under \$250 million) will not be represented in this sample. Therefore, only limited generalizations can be made. The present study, therefore, shares some limitations that are common to much of the previous research in this area and common to other studies employing similar methodology. A future study might include smaller firms, providing researchers with greater external validity.

Second, the primary objective of this research is to study whether firm strategic choice is reflected by the career path profile of the CEOs. Therefore, it is a descriptive study, in that it will document the existence of the proposed linkages. Past researchers have argued that descriptive research is needed in conjunction with studies that examine other aspects of the firm, for example, performance implications (Mintzberg, 1979). However, the goal of the research is to identify "useful stylized facts" (Schmalensee, 1989:952) and/or "statistical regularities" (Nolle, 1991:60) rather than make direct causal inferences.

Third, the within-industry problem and total sample size must be considered. Whenever the sample size permitted, the companies were separated into their four-digit

SIC codes to determine industry effect. However, in several of the hypotheses this was not feasible since the sample size became too small to yield adequate statistical power. Industries were aggregated and the analyses were conducted, yielding a sufficient sample size for measuring and providing results.

Fourth, it is impossible to include all the variables of interest in a single study. Other individual difference and objectively measured variables could be included in future studies.

Fifth, a note about the sample employed. While the CEOs in the study demonstrated a good deal of variance on the factors of interest, they did share a common characteristic - they were all chief executive officers of firms with total sales greater than \$250 million. It is possible that some self-selection occurred along some variables unknown to the researcher, which may have yielded a sample that differs from the CEO population at large on some important dimension. However, an examination of the demographic variables shows a sample that appears to offer the opportunity to make meaningful comparisons.

Practitioners and researchers should find the preceding study of the associations between the CEO's career path profile and firm strategic choice of interest. The study extends past research by broadening the definitions of both firm strategic choice (beyond the effects of the usual profitability/size) and CEO background (to include a more

comprehensive career path profile). The proposed relationships suggested that the characteristics of the CEO are sensitive to organizational context and may be reflected in the firm's strategic choice.

Theoretical Implications

This study has a number of implications for future research on CEOs and strategic choice. There are both theoretical and empirical implications. The existing literature on the linkages between CEO and firm strategic choice was reviewed. The literature provided the basis upon which the conceptual model was constructed. The conceptual framework was used to develop the hypotheses stating the various proposed relationships between CEO and firm strategic choice. The study supports the organizational demography theorists' perspective in that it supports the viewpoint that organizational characteristics affect the types of individuals employed by the firm. From a theoretical perspective, the results of this study should help define how CEOs transmit, analyze, and act on information in their firms and industries, and then attempt to reconcile the findings with their career path profiles. This study also provided an extension of a segment of the strategic process literature that, as of yet, has not been fully explored. The empirical aspects may be fruitful in revealing some of the broad relationships that have been proposed.

While this study provided interesting results, with modest support for the

proposition that the CEO's career path profile influences strategic choice, an important area for future study is an examination of individual industries over a longer time period in order to control for industry effect and separate it from CEO effect. It has been suggested (Hambrick and Mason, 1984) that any such study must control for industry, either through single industry samples or matched pair designs. In addition to industry, the control variable size was incorporated into this study, since firm size may be reflected in the characteristics of the CEO, as was confirmed by the results of Hypothesis 4b. Additionally, this research provided more support and some rejection of Hambrick and Mason's work, offering more recent data and a look at the effects of upper echelons theory, particularly as it relates to the CEO.

Practical Implications

The practical implications of the findings are less obvious. First, it appears that the CEO should be the person most likely to influence changes in product diversification strategy and internationalization strategy based on his career path profile. The findings of the present study showed that only "throughput" CEOs had any influence on resource allocation in the areas specific to their functional backgrounds. Therefore, at least for the present, the responsibility for change may rest in other unexplored factors.

Second, the insider/outsider status of the CEO was not associated with changes in resource allocation. However, the findings do suggest that further study is warranted where industry should be considered in order to control for industry effects.

Third, firm size was controlled for when the insider/outsider status was examined when considering changes in product diversification and internationalization. As suggested in the present study, no effect was predicted for the small firm. Therefore, from a practical standpoint, when investigating CEO succession and considering the incoming CEO, firm size becomes more relevant than whether the CEO is an insider or an outsider.

Fourth, education type has not been investigated very often. Perhaps the obvious reason is that, as in this study, there were no differences in the resource allocations of the CEO.

Fifth, as with education type, age has been infrequently studied. Again, perhaps the obvious reason is that age has no bearing on the strategic choices made and there are other factors yet to be explored.

Finally, a more troubling implication for strategic choice emerges from the findings in this study. If it is true that the CEO has little or no effect on the strategic choices of the firm, then who or what drives all the choices? Is it industry, markets, consumers, or a combination of forces? Only further research can determine what impact the CEO will have on firm strategic choice and where he may or may not make a difference.

REFERENCES

- Aguilar, F. J. (1988). General Managers in Action. New York: Oxford University Press.
- Aldrich, H. E. (1979). Organizations and Environments. Englewood Cliffs, NJ: Prentice Hall.
- Allen, M.P. & Panian, S.K. (1982). Power, performance and succession in the large corporation. Administrative Science Quarterly, 27, 538-547.
- Ang, J.S. & Chua, J.H. (1981). Corporate bankruptcy and job losses among top level managers. Financial Management, (Winter), 70-74.
- Ansoff, H.I. (1965). Corporate Strategy. New York: McGraw-Hill.
- Ansoff, H. I. (1990). Implanting Strategic Management. Englewood Cliffs, NJ: Prentice Hall.
- Astley, W.G. & Van de Ven, A.H. (1983). Central perspectives and debates in organization theory. Administrative Science Quarterly, 28: 245-273.
- Bantel, K. and Jackson, S. (1989). Top management and innovations in banking: Does the composition of the top team make a difference? Strategic Management Journal, Summer Special Issue, 10, 107-124.
- Beard, D. & Dess, G. (1979). Industry profitability and firm performance: A preliminary analysis of the business portfolio question. Academy of Management Proceedings, 123-127.
- Beard, D. & Dess, G. (1981). Corporate-level strategy, business-level strategy, and firm performance. Academy of Management Journal, 24, 663-688.
- Beatty, R. P. & Zajac, E. J. (1987). CEO change and firm performance in large corporations: Succession effects and manager effects. Strategic Management Journal, 8, 305-317.
- Beatty, R. P. & Zajac, E. J. (1994). Top management incentives, monitoring, and risk sharing: A study of executive compensation, ownership and board structure in initial public offerings. Administrative Science Quarterly, 39, 313-336.

- Bourgeois, L.J., III. (1984). Strategic management and determinism. Academy of Management Review, 5, 25-39.
- Bowman, E. H. (1986). How is strategy research different than it used to be? Presentation at the Academy of Management. Chicago, IL.
- Cannella, A., Lubatkin, M., and Kapouch, M. (1991). "Antecedents of executive selection: Additional empirical evidence." Proceedings of the Academy of Management Meetings, Miami, FL, 11-15.
- Capon, N., Hulbert, J.M., Farley, J.W., & Martin, L.E. (1988). Corporate diversity and economic performance: The impact of market specialization. Strategic Management Journal, 9, 61-74.
- Carroll, G.R. (1994). "A sociological view on why firms differ." In Fundamental Issues in Strategy, Rumelt, Schendel, & Teece (eds.), Cambridge, MA: Harvard Business School Press, 271-290.
- Chaganti, R. & Sambharya, R. (1987). Research notes and communications: Strategic orientation and characteristics of upper management. Strategic Management Journal, 8, 393-401.
- Channon, D. (1973). Strategy and Structure in British Enterprise. Cambridge, MA: Harvard University Press.
- Child, J. (1972). Predicting and understanding organization structures. Administrative Science Quarterly, 18, 168-185.
- Christensen, H.K. & Montgomery, C.A. (1981). Corporate economic performance: Diversification strategy vs. market structure. Strategic Management Journal, 2, 327-343.
- Chung, K. H., Rogers, R. C., Lubatkin, M., & Owers, J. E. (1987). Do insiders make better CEOs than outsiders? Academy of Management Executive, 1 (3), 325-331.
- Collins, R. (1971). Functional and conflict theories of educational stratification. American Sociological Review, 36, 1002-1019.
- Collins, R. & Moore, D.G. (1970). The Organization Makers. New York: Appleton-Century-Crofts.

- Cyert, R. M. & March, J. G. (1963). A Behavioral Theory of the Firm. Englewood Cliffs, NJ: Prentice Hall.
- Dalton, D.R. & Kesner, I.F. (1985). Organizational performance as an antecedent of insider/outsider chief executive succession: An empirical assessment. Academy of Management Journal, 28, 749-762.
- Datta, D.K. & Guthrie, J.P. (1994). Executive succession: organizational antecedents of CEO characteristics. Strategic Management Journal, 15, 569-577.
- Dearborn, D.C. & Simon, H.A. (1958). Selective perceptions: A note on the departmental identification of executives. Sociometry, 21, 140-144.
- Dess, G.G., Ireland, R.D., & Hitt, M.A. (1989). Industry effects and strategic management research. Paper presented at the Academy of Management Annual Meeting.
- Eisenhardt, K.M. & Schoonhoven, C.B. (1990). Organizational growth: Linking founding team, strategy, and growth among U.S. semiconductor ventures, 1978-1988. Administrative Science Quarterly, 35, 504-529.
- Finkelstein, S. & Hambrick, D. C. (1989). Chief executive compensation: A study of the intersection of markets and political processes. Strategic Management Journal, 10, 121-134.
- Fizel, J.L. & Louie, K.T. (1990). CEO retention, firm performance and corporate governance. Managerial and Decision Economics, 11, 167-176.
- Fredrickson, J. W., Hambrick, D. C., & Baumrin, S. (1988). A model of CEO dismissal. Academy of Management Review, 13, 255-270.
- Friedman, S.D. (1991). Why hire from within? Causes and consequences on internal promotion systems. Proceedings of the Academy of Management Meetings, Miami, FL, 272-276.
- Friedman, S.D. & H. Singh (1989). CEO succession and stockholder reaction: The influence of organizational context and content. Academy of Management Journal, 32, 718-744.

- Furtado, E.P. & Karan, V. (1990). Causes, consequences, and shareholder wealth effects of management turnover: A review of the empirical evidence. Financial Management, Summer, 60-75.
- Ginsberg, A. (1988). Measuring and modelling changes in strategy: Theoretical foundations and empirical directions. Strategic Management Journal, 9, 559-575.
- Govindarajan, V. (1989). Implementing competitive strategies at the business unit level: Implications of matching managers to strategies. Strategic Management Journal, 10, 251-269.
- Grant, R. (1988). On "dominant logic," relatedness and the link between diversity and performance. Strategic Management Journal, 9, 639-642.
- Greiner, L. E. & Bhambri, A. (1989). New CEO intervention and dynamics of deliberate strategic change. Strategic Management Journal, 10 (Summer), 67-86. (D. Hambrick (ed.), special issue on Strategic Leaders and Leadership).
- Grinyer, P. & Spender, J. (1979). Turnaround. London: Associated Business Press.
- Gupta, A.K. (1984). Contingency linkages between strategy and general manager characteristics: A conceptual examination. Academy of Management Review, 9, 399-412.
- Hambrick, D.C. (1980). Operationalizing the concept of business-level strategy in research. Academy of Management Review, 5, 567-575.
- Hambrick, D.C. (1986). Research in Strategic Management 1980-1985: Critical perceptions and reality. Presentation at the Academy of Management. Chicago, IL.
- Hambrick, D.C. & D'Aveni, R.A. (1992). Top team deterioration as part of the downward spiral of large corporate bankruptcies. Management Science, 38, 1445-1466.
- Hambrick, D.C. & Finkelstein, S. (1987). Managerial discretion: A bridge between polar views of organizational outcomes. Research in Organizational Behavior, 9, 369-406.
- Hambrick, D.C. & Mason, P. A. (1984). Upper echelons: The organization as a reflection of its top managers. Academy of Management Review, 9, 193-206.

- Hansen, G. S. & Hill, C.W.L. (1991). Are institutional investors myopic? A time-series study of four technology-driven industries. Strategic Management Journal, 12, 1-16.
- Harrison, J.R., Torres, D.L. & Kuklis, S. (1988). The changing of the guard: Turnover and structural change in top-management positions. Administrative Science Quarterly, 33, 211-232.
- Hart, P. & Mellons, J. (1970). Management youth and company growth: A correlation? Management Decision, 4, 50-53.
- Haspeslagh, P. (1982). Portfolio planning: Uses and limits. Harvard Business Review, 60, 58-73.
- Hayes, R.H. & W.J. Abernathy (1980). Managing our way to economic decline. Harvard Business Review, 58, 67-77.
- Helmich, D. E. & Brown, W. (1972). Succession type and organizational change in the corporate enterprise. Administrative Science Quarterly, 17, 371-381.
- Hitt, M.A. & Tyler, B.B. (1991). Strategic decision models: Integrating different perspectives. Strategic Management Journal, 12, 327-351.
- Hofer, C. W. & Schendel, D. (1978). Strategy Formulation: Analytical Concepts. St. Paul, MN: West Publishing.
- Hoskisson, R.E. & Hitt, M.A. (1990). Antecedents and performance outcomes of diversification: A review and critique of theoretical perspectives. Journal of Management, 16, 461-509.
- Huey, J. (1989). The new power in Black and Decker. Fortune, January 2, 89-94
- James, D. R. & Soref, M. (1981). Profit constraints on managerial autonomy: Managerial theory and the unmaking of a corporate president. American Sociological Review, 46, 1-18.
- Jemison, D.B. (1981). The importance of an integrative approach to strategic management. Academy of Management Review, 6, 601-608.

- Johnson, G. (1987). Strategic Change and the Management Process. Oxford, UK: Basil Blackwell.
- Johnson, G. (1988). Rethinking incrementalism. Strategic Management Journal, 9, 75-91.
- Katz, D. & Kahn, R. L. (1966). The Social Psychology of Organizations. New York: John Wiley and Sons.
- Lambert, R.A., & Larcker, D.F. (1985). Executive compensation, corporate decision-making and shareholder wealth: A review of the evidence. Midland Corporate Finance Journal, 2, 6-22.
- Lawrence, P.R. & Lorsch, J.W. (1967). Organization and environment: Managing differentiation and integration. Cambridge, MA.: Harvard University Press.
- Lecraw, D.J. (1984). Diversification strategy and performance. Journal of Industrial Economics, 38, 179-199.
- Lieberson, S. & O'Connor, J. (1972). Leadership and organizational performance: A study of large corporations. American Sociological Review, 37, 117-130.
- Lorange, P. & Vancil, R. F. (1977). Strategic Planning Systems. Englewood Cliffs, NJ: Prentice Hall.
- Lubatkin, M. & Chung, K. (1985). Leadership origin and organizational performance in prosperous and declining firms. Academy of Management Proceedings '85, 25-29.
- March, J. G. & Simon, H. A. (1958). Organizations. New York: John Wiley and Sons.
- Martell, K., Carroll, S. J., and Gupta, A. K. (1992). What executive human resource management practices are most effective when innovativeness requirements are high? In L. Gomez-Mejia and M.W. Lawless (eds.), Advances in Global High Technology Management, 1, JAI Press, Greenwich, CT., 3-30.
- Merriam-Webster. (1983). Webster's Ninth New Collegiate Dictionary. Springfield, MA: Merriam-Webster Inc., Publishers.

- Michel, J.G. & Hambrick, D.C. (1992). Diversification posture and the characteristics of the top management team. Academy of Management Journal, 35, 9-37.
- Miles, R. H. & Snow, C. C. (1978). Organization strategy, structure and process. New York: McGraw-Hill.
- Miller, D. (1987). The structural and environmental correlated of business strategy. Strategic Management Journal, 8, 55-76.
- Miller, D. (1991). Stale in the saddle: CEO tenure and the match between organization and environment. Managerial Science, 37, 34-52.
- Miller, D., & Droge, C. (1986). Psychological and traditional determinants of structure. Administrative Science Quarterly, 31, 539-560.
- Miller, D. & Friesen, P. H. (1977). Strategy making in context: Ten empirical archetypes. Journal of Management Studies, 14, 259-280.
- Miller, D. & Friesen, P. H. (1980). Momentum and revolution in organizational adaptation. Academy of Management Journal, 23, 591-614.
- Miller, D. & Friesen, P. H. (1982). Structural change and performance: Quantum versus piecemeal-incremental approaches. Academy of Management Journal, 25, 867-892.
- Miller, D. & Friesen, P. H. (1984). Organizations: A quantum view. Englewood Cliffs, NJ: Prentice Hall.
- Miller, D., Kets de Vries, M. F. R., & Toulouse, J. (1982). Top executives' locus of control and its relationship to strategy-making, structure, and environment. Academy of Management Journal, 25, 237-253.
- Miller, D. & Toulouse, J. M. (1986). Chief executive personality and corporate strategy and structure in small firms. Management Science, 32, 1389-1409.
- Mintzberg, H. (1979). The Structuring of Organizations. Englewood Cliffs, NJ: Prentice Hall.
- Mintzberg, H. (1987). The strategy concept I: Five Ps for strategy. California Management Review, 30, 11-24.

- Mintzberg, H. & Waters, J. A. (1985). Of strategies deliberate and emergent. Strategic Management Journal, 6, 257-272.
- Montgomery, C. A. (1982). The measurement of firm diversification: Some new empirical evidence. Academy of Management Journal, 25(2), 299-307.
- Nolle, D. E. (1991). An empirical analysis of market structure and import and export performance for U.S. manufacturing industries. Quarterly Review of Economics and Business, 31, 59-78.
- Norburn, D. & Birley, S. (1988). The top management team and corporate performance. Strategic Management Journal, 9, 225-237.
- Pettigrew, A. (1973). The Politics of Organizational Decision-Making. London: Tavistock.
- Pfeffer, J. (1983). Organizational demography. in L.L. Cummings and B.M. Staw (eds.), Research in Organizational Behavior, 5, 299-357. Greenwich, CT: JAI Press.
- Pfeffer, J. & Salancik, G. R. (1978). The External Control of Organizations: A Resource Dependence Perspective. New York: Harper and Row.
- Porter, M. E. (1980). Competitive Strategy. New York: Free Press.
- Porter, M. E. (1985). Competitive Advantage. New York: Free Press.
- Porter, M. E. (1981). The contributions of industrial organization to strategic management. Academy of Management Review, 6, 609-620.
- Porter, M. E. (1986). The contributions of industrial organization to strategic management in J.B. Barney and W.G. Ouchi (eds.), Organizational Economics. San Francisco: Jossey-Bass, 381-396.
- Powell, T. C. (1996). How much does industry matter? An alternative empirical test. Strategic Management Journal, 17, 323-334.
- Prahalad, C. K. & Bettis, R. (1987). The dominant logic: A new linkage between diversity and performance. Strategic Management Journal, 7, 485-501.

- Puffer, S.M. & Weintrop, J.B. (1991). Corporate performance and CEO turnover: The role of performance expectations. Administrative Science Quarterly, 36, 1-19.
- Quinn, J. B. (1980). Strategies for Change: Logical Incrementalism. Homewood, IL: Richard D. Irwin.
- Reed, R. & Luffman, G. (1986). Diversification: The growing confusion. Strategic Management Journal, 7, 29-36.
- Reinganum, M. C. (1985). The effect of executive succession on stockholder wealth. Administrative Science Quarterly, 30, 46-60.
- Robinson, B.S. & Brief, A.P. (1985). CEO succession among America's largest firms. Academy of Management paper presented at annual meeting, San Diego, CA.
- Rumelt, R. P. (1974). Strategy, Structure, and Economic Performance. Cambridge, MA: Harvard University Press.
- Schmalensee, R. (1989). Inter-industry studies of structure and performance, in Schmalensee and Willing (eds.), Handbook of Industrial Organization, Vol. II. New York: Elsevier Science Publishers.
- Schoonhoven, C.B. (1981). Problems with contingency theory: Testing assumptions hidden within the language of contingency theory. Administrative Science Quarterly, 4, 349-377.
- Singh, J.V. (1986). Performance, slack, and risk taking in organizational decision-making. Academy of Management Journal, 29, 562-585.
- Smith, K.G., Smith, K.A., Olian, J.D., Sims, H.P., Jr., O'Bannon, D.P., Scully, J.A. (1994). Top management team demography and process: The role of social integration and communication. Administrative Science Quarterly, 34, 412-438.
- Super, D.E. (1974). Career counselling in an industrial society. Canadian Counsellor, Vol. 8, 4, 218-232.
- Super, D.E., Crites, J.O., Hummel, R.C., Moser, H.P., Overstreet, P.L., and Warnath, C.F. (1975). Vocational Development: A Framework for Research. New York: Teachers College Press.

- Tushman, M. L. & Romanelli, E. (1985). Organizational evolution: A metamorphosis model of convergence and reorientation. Research in Organizational Behavior, pp. 171-222.
- Vancil, R.F. (1987). Passing the Baton. Cambridge, MA: Harvard Business School Press.
- Varadarajan, P. (1986). Product diversity and firm performance: An empirical investigation. Journal of Marketing, 50, 43-57.
- Virany, B. & Tushman, M.L. (1986). Top management teams and corporate success in an emerging industry. Journal of Business Venturing, (Fall), 261-274.
- Vroom, V. H. (1960). Some personality determinants of the effects of participation. Englewood Cliffs, NJ: Prentice Hall.
- Vroom, V. H. and Pahl, B., (1971). Relationship between age and risk taking among managers. Journal of Applied Psychology, 55, 399-405.
- Waller, M.J., Huber, G.P., & Glick, W.H. (1995). Functional background as a determinant of executives' selective perception. The Academy of Management Journal, 38, 943-974.
- Weber, M. (1947). The Ideal Bureaucracy. New York, N.Y. Prentice Hall.
- Wiersema, M. F. and Bantel, K. A. (1992). Top management team demography and corporate strategic change. Academy of Management Journal, 35, 91-121.
- Wilson, G. D. (Ed.). (1973). The Psychology of Conservation. London: Academic Press.
- Wind, Y. and Mahajan, V. (1981). Designing product and business portfolios. Harvard Business Review, 59, 155-165.
- Wrigley, L. (1970). Divisional Autonomy and Diversification. Doctoral Dissertation, Harvard University.
- Yip, G.S. (1982). Diversification entry: Internal development versus acquisition. Strategic Management Journal, 3, 331-345.

Zajac, E.J. (1990). CEO selection, succession, compensation and firm performance: A theoretical integration and empirical analysis. Strategic Management Journal, 11, 217-230.

RELATED READINGS

- Aldrich, H.E. & Pfeffer, J. (eds.). (1976). Environments of Organizations. Annual Review of Sociology, 2.
- Ashby, W.R. (1968). Variety, constraint, and the law of requisite variety. In W. Buckley (Ed.), Modern systems research for the behavioral scientist: a sourcebook, Chicago: Aldine, 129-136.
- Bass, B.M. (1981). Stogdill's handbook of leadership. New York: Free Press.
- Bass, B.M., Valenzi, E. R., & Farrow, D. L. (1977). External environment related to managerial style. (United States Army Research Institute for the Behavioral and Social Sciences, Technical Report No. 77-2).
- Beer, M. (1980). Organization change and development: A systems view. Glencove, IL: Goodyear/Scott Foresman.
- Berle, A.A., Jr. & Means, G.C. (1932). The Modern Corporation and Private Property. New York: Macmillan.
- Blau, P.M. & Schoenherr, R. (1971). The Structure of Organizations. New York: Basic Books.
- Brady, G.F. & Helmich, D. L. (1984). Executive Succession. Englewood Cliffs, NJ: Prentice Hall.
- Burck, C.G. (1976). A group profile of the Fortune 500 chief executives. Fortune, May 14, 1976, 173-177, 308, 311-312.
- Chandler, A. (1962). Strategy and Structure. Cambridge, MA: MIT Press.
- Chatman, J.A. & Jehn, K.A. (1994). Assessing the relationship between industry characteristics and organization culture: How different can you be? Academy of Management Journal, 37, 522-553.
- Cohen, Jacob. (1983). Applied Multiple Regression/Correlation Analysis for the Behavioral Sciences. Hillsdale, NJ: L. Erlbaum Associates.

- Conrath, D.W. (1967). Organization decision-making behavior under varying conditions of uncertainty. Management Science, 13, 487-500.
- Coughlan, A.T. & Schmidt, R.M. (1985). Exexecutive compensation, management turnover and firm performance: An empirical investigation. Journal of Accounting and Economics, (April) 43-66.
- Dewer, R. & Werbel, J. (1985). Universalistic and contingency predictions of employee satisfaction and conflict. Administrative Science Quarterly, 27, 467-488.
- Drazin, R. & Kazanjian, R.K. (1993). Applying the Del Technique to the analysis of cross-classification data: A test of CEO succession and top management team development. Academy of Management Journal, 36, 1374-1399.
- Drazin, R. and Van de Ven, A.H. (1985). An examination of alternative forms of fit in contingency theory. Administrative Science Quarterly, 30, 514-539.
- Driver, M. J. (1979). Individual decision making and creativity. In S. Kerr (Ed.), Organization Behavior. Englewood Cliffs, NJ: Prentice Hall, 59-91.
- Driver, M. J. (1983). A human resource data-based approach to organizational design. Human Resource Planning, 6(3), 169-182.
- Driver, M. J. & Mock, T. (1975). Information processing, decision style theory and accounting information systems. Accounting Review, 50, 490-508.
- Drucker, Peter (1976). The Unseen Revolution. Cambridge, MA.: Harvard Business Press.
- Duncan, R.B. (1973). Multiple decision-making structures in adapting to environmental uncertainty. Human Relations, 26, 273-292.
- Dutton, J. E. & Duncan, R. B. (1987). The creation of momentum for change through the process of strategic issue diagnosis. Strategic Management Journal, 8, 279-293.
- Dyke, L.S., Fischer, E.M., & Reuber, R. (1992). An inter-industry examination of the impact of owner experience on firm performance. Journal of Small Business Management, October, 72-87.

- Ely, Kirsten M. (1991). Interindustry differences in the relation between compensation and firm performance variables. Journal of Accounting Research, 29, 37-58.
- Farrow, D. L. & Bass, B. M. (Eds.). (1977). A phoenix emerges: The importance of manager and subordinate personality in contingency leadership analyses. Rochester, NY: University of Rochester, Army Research Institute, Technical Report.
- Fredrickson, J. W. (1984). The comprehensiveness of strategic decision processes: Extension, observations, future directions. Academy of Management Journal, 27, 445-466.
- Fredrickson, J. W. & Mitchell, T. R. (1984). Strategic decision processes: Comprehensiveness and performance in an industry with an unstable environment. Academy of Management Journal, 27, 399-423.
- Gabarro, J.J. (1987). The Dynamics of Taking Charge. Cambridge, MA: Harvard Business School Press.
- Gioia, D. A. & Poole, P. P. (1984). Scripts in organizational behavior. Academy of Management Review, 9, 449-459.
- Greiner, L. E. (1972). Evolution and revolution as organizations grow. Harvard Business Review, 50, 37-46.
- Gupta, A.K. & Govindarajan, V. (1984). Business unit strategy, managerial characteristics, and business unit effectiveness at strategy implementation. Academy of Management Journal, 27, 25-41.
- Hannan, M.T. & Freeman, J. (1977). The population ecology of organizations. American Journal of Sociology, 82, 929-964.
- Heller, F.A. & Yukl, G. (1969). Participation, managerial decision-making, and situational variables. Organization and Human Performance, 227-241.
- Ireland, R. D., Hill, M. A., Bettis, R. A., & Porras, D. A. (1987). Strategy formulation processes: Differences in perceptions of strength and weaknesses indicators and environmental uncertainty by managerial level. Strategic Management Journal, 8, 464-485.

- Isenberg, D. J. (1986). Thinking and managing: A verbal protocol analysis of managerial problem-solving. Academy of Management Journal, 29, 775-778.
- Jacques, E. (1976). A general theory of bureaucracy. London: Heineman.
- Jaeger, A. M. & Baliga, B. M. (1985). Control systems and strategic adaptation: Lessons from the Japanese experience. Strategic Management Journal, 6, 115-134.
- Janakiraman, S.N., Lambert, R.A. & Larcker, D.F. (1992). An empirical investigation of the relative performance evaluation hypothesis. Journal of Accounting Research, 30, 53-69.
- Kimberly, J. (1976). Organization size and the structuralist perspective: A review, critique and proposal. Administrative Science Quarterly, 21, 571-597.
- Lewellen, W. & Huntsman, B. (1970). Managerial pay and corporate performance. American Economic Review. (September), 710-720.
- Lewin, K. (1951). Field Theory in Social Science. New York: Harper and Row.
- Lorange, P. (1980). Corporate Planning: An Executive Viewpoint. Englewood Cliffs, NJ: Prentice Hall.
- McClelland, D. C. (1961). The Achieving Society. Princeton, NJ: Van Nostrand.
- McEachern, W.A. (1977). Managerial Control and Performance. Lexington, MA: D.C. Heath.
- Miles, R. H. (1980). Macro Organizational Behavior. Santa Monica, CA: Goodyear Publishing.
- Miles, R. H. & Snow, C. C. (eds.). (1984). Strategy and Organization: A West Coast Perspective. Boston: Pitman.
- Miller, D. (1986). Configurations of strategy and structure: Towards a synthesis. Strategic Management Journal, 7, 233-249.
- Mitchell, T. R., Smyser, C. M., & Weed, S. E. (1975). Locus of control: Supervision and work satisfaction. Academy of Management Journal, 18, 623-630.

- Pinder, C., Pinto, P. R., & England, G. W. (1973). Behavioral style and personal characteristics of managers. (Minneapolis: University of Minnesota, Center for the Study of Organizational Performance and Human Performance, Technical Report).
- Rockeach, M. (1960). The Open and Closed Mind. New York: Basic Books.
- Rotter, J. (ed.). (1966). Generalized expectancies for internal versus external control of reinforcement. Psychological Monographs, 80, (#609).
- Rowe, A. J. & Boulgarides, J. D. (1983). Decision styles - a perspective. Learning and Organization Development Journal, 4, 3-9.
- Slocum, J. W. & Hellriegel, D. (1983). A look at how managers' minds work. Business Horizons, 58-68.
- Smircich, L. & Stubbart, C. (1985). Strategic management in an enacted world. Academy of Management Review, 10, 724-736.
- Sturdivant, F. D., Ginter, J. L., & Sawyer, A. G. (1985). Managers' conservatism and corporate performance. Strategic Management Journal, 6, 17-38.
- Taylor, R. & Dunnette, M. (1974). Influence of dogmatism, risk taking, propensity and intelligence on decision-making strategies for a sample of industrial managers. Journal of Applied Psychology, 59, 420-423.
- Tushman, M. L., Newman, W. H., & Romanelli, E. (1986). Convergence and upheaval: Managing the unsteady pace of organizational evolution. California Management Review, XXIX(Fall), 29-44.
- Tushman, M. L., Viraney, B., & Romanelli, E. (1987). Effects of CEO and executive team succession: A longitudinal analysis. Working Paper Series. Columbia University. (July).
- Van de Ven, A. H. (1986). Central problems in the management of innovation. Management Science, 32, 590-607.
- Warner, J.B., Watts, R.L. & Wruck, K.H. (1988). Stock prices and top management changes. Journal of Financial Economics, (March), 461-492.