AN EXAMINATION OF THE DIMENSIONS AND

OUTCOMES OF CEO POWER: THE

MODERATING ROLE OF

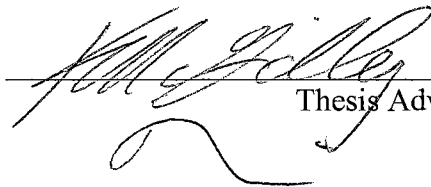GOVERNANCE

CONDITIONS

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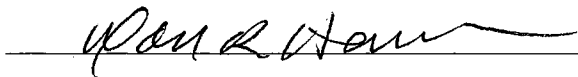DOCTOR OF PHILOSOPHY
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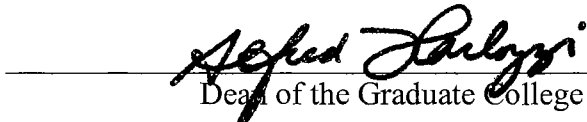
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CHAPTER 1

INTRODUCTION

I examine the interrelationships among the multiple dimensions of chief executive officer or "CEO" power proposed by Finkelstein (1992), and include the indirect effects that governance conditions have on these power dimensions and organizational outcomes. This chapter will provide a brief introduction as well a research question. A brief theoretical background will be then presented, followed by the dissertation objectives. Finally, theoretical and practical implications will be addressed.

The Research Question

Much organizational research has focused on the CEO (Cannella & Shen, 2001). The majority of CEO research has been conducted in areas such as CEO compensation (Tosi, Werner, Katz, & Gomez-Mejia, 2000) or strategic choice (Finkelstein & Hambrick, 1996). Explicit or implicit in these studies is the concept that CEOs are powerful and influential individuals within an organization who can have direct effects on organizational choices (Daily & Johnson, 1997). In fact, most scholars agree that the CEO is the most powerful member of an organization (see Barkema & Pennings, 1998; Bigley & Wiersema, 2002; Daily & Johnson, 1997; Ocasio, 1994; Pearce & Robinson, 1987). Therefore, I assume that CEO power is an underlying influence in the organization.

Power is defined as the "capacity of individual actors to exert their will" (Finkelstein, 1992). Power can be classified as formal or informal (Finkelstein & D'Aveni, 1994), as well as relative, such as CEO-board relative power (Finkelstein &

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Boyd, 1998; Pearce & Zahra, 1991). Formal power relates to factors that directly provide the CEO with decision-making influences, such as equity holdings (Barkema & Pennings, 1998), CEO duality (Cannella & Shen, 2001), or other formal organizational titles (Daily & Johnson, 1997). Informal power relates to factors that do not directly depend on the CEO's formal positions (Finkelstein & D'Aveni, 1994). Factors such as external directorate networks (Geletkanycz, Boyd, & Finkelstein, 2001), tenure (Magnan, St-Onge, & Calloc'h, 1999), and experience in various functions within the organization (Finkelstein, 1992) have been operationalized as informal power. Relative power relates to factors that indirectly affect both the formal and informal power base of the CEO. Boards of directors (Farrell & Whidbee, 2002), active institutional investors (Wright, Kroll & Elenkov, 2002), and other forces decrease the discretionary power of the CEO (Finkelstein & Boyd, 1998). Explicit in relative power studies is the understanding that there are inherit agency costs associated with the power given to the CEO, and that relative power factors are necessary to minimize self-interest costs (see Davis, 1991; Gerety, Hoi, & Robin, 2001; Johnson, Hoskisson, & Hitt, 1993; Redicker & Seth, 1995).

Although many studies have incorporated the various types of CEO power (informal, formal, or relative) to determine their effects on topics such as CEO compensation, strategic choice, and firm performance, the results have been mixed. In an exhaustive analysis of over 137 studies, Tosi, Werner, Katz, and Gomez-Mejia (2000) cite simplicity of CEO models and the lack of relevant antecedents and moderators as major reasons for these mixed results. Inconsistency of proposed main effects, for example, could be attributed to important indirect (or moderated) effects (Gilley, Walters, & Olson, 2002). Furthermore, studies that incorporate these CEO dimensions of power

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have done so inconsistently and normally in isolation. For example, Finkelstein and D'Aveni (1994) employ a global measure of informal powers, while Hitt, Bierman, Shimizu, and Kochhar (2001) employ individual indicators of informal power to explain organizational outcomes. Yet, no study has examined all dimensions of CEO power with both direct and indirect relationships.

Finkelstein (1992) and later Daily and Johnson (1997) encourage top executive researchers to incorporate a multi-dimensional power model. CEO power is a complex construct that cannot be measured by a single variable. Finkelstein (1992), in a seminal piece, provides an exhaustive top executive power model that is the basis for this dissertation. The proposed dimensions of power can be seen in Figure 1.

Structural Power

Number of titles Relative CEO compensation

Structural power is based on formal organizational structure and hierarchy authority.

Ownership Power

Executive shares Founder status Family shares

Ownership power is based on an executive's capacity as an agent acting on behalf of shareholders.

Prestige Power

Corporate boards Nonprofit boards Average board rating Elite education

Prestige power is based on an executive's reputation in the institutional environment and among stakeholders.

Expert Power

Critical expertise Functional areas Positions in firm

Expert power is based on an executive's ability to deal with industry factors and contribute to the organization's success.

Figure 1: Finkelstein's (1992) Executive Power Dimensions

As is shown in Figure 1, Finkelstein provides a more specific categorization of direct CEO powers than the informal and formal power classification schemes. Both structural and ownership power would fall under the formal power classification, while prestige and expert power would be classified as informal power.

To develop an objective-based model, Finkelstein surveyed 1,763 top managers to assess the reliability and validity of his proposed four power dimensions. Finkelstein found that each indicator loaded independently on its respective power dimension. In addition, all four dimensions had high internal consistency and discriminant validity. As well, three of the four dimensions (structural, ownership, and prestige) had predictive validity.

The aforementioned model was initially promoted as a top management team "TMT" model. There is no doubt that TMTs have profound effects on organizations. Hambrick and Mason (1984) proposed that a variety of observable and psychological TMT characteristics influence both strategic choice and organizational performance. Specifically, age, organizational tenure, education, and functional experience have been shown to be particularly important (Bantel & Jackson, 1989). An important assumption of this dissertation—that the CEO is the most powerful member of a TMT—does not downplay the significance of the upper echelon model proposed by Hambrick and Mason (1984). The CEO is different from other top executives (Daily & Johnson, 1997). The CEO has a unique advantage over other top executives to influence the organization due to the authority inherent in his/her position (Roth, 1995; Bigley & Wiersema, 2002).

Daily and Johnson (1997) modified Finkelstein's model to represent CEO power. The basic model was intact, but Daily and Johnson included board independence (outside

board members not appointed by the current CEO) and CEO duality in the classification of structural power, while they eliminated number of titles. They also eliminated critical expertise and positions in the firm in the expert power category, and average board rating in the ownership power dimension. Daily and Johnson, using a longitudinal design, extended the model by examining the direct relationship these power dimensions have on firm performance. Their model is shown in Figure 2.
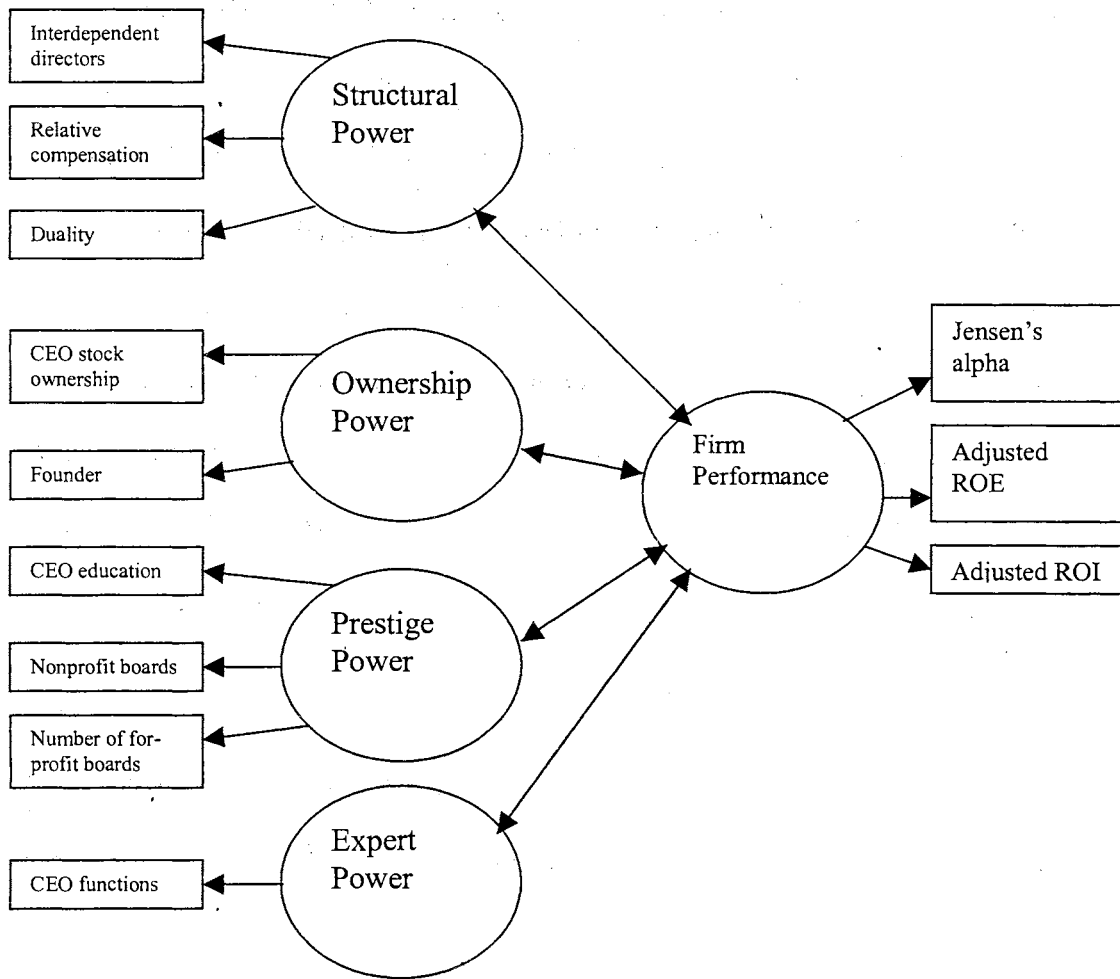
Figure 2: Daily and Johnson (1997) Executive Power Model

However, by using the structural equation method or "SEM", the measurement model had no acceptable solution. Therefore, Daily and Johnson had to test each item separately to determine the individual effects on performance measures. The results showed that the overall fit of CEO power indicators was generally acceptable, while CEO duality, CEO stock ownership, and number of nonprofit boards on which the CEO served were nonsignificant. Daily and Johnson's model, however, is a simple direct-effects model, whereas Finkelstein (1992) encouraged further extension of his power model to include examination of the interactions and effects on organizational outcomes.

I utilize the basic model of Finkelstein (1992) with a CEO power and agency cost emphasis, and propose an extension of the model that examines both direct and indirect effects on certain organizational outcomes, as well as interrelationships among the power dimensions. Therefore, the basic research question of the present study is: **Are there relationships among the CEO power dimensions and governance conditions, and do these relationships affect strategic choice, such as diversification and research and development investments?**

Dissertation Objectives

The objectives of this dissertation are:

1. To determine the explanatory power of informal CEO power dimensions on structural power.

2. To determine the explanatory power of the interactions of informal CEO power dimensions on structural power.

3. To determine the moderating effects of governance mechanisms and stock ownership on the relationship between informal CEO power dimensions and structural power.

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4. To determine the explanatory power of structural power on certain organizational outcomes, specifically strategic choice (diversification and research and development investment).

5. To determine the moderating effects of governance mechanisms on the relationship between structural power and strategic choice.

6. To determine the mediating effects of structural power on the relationship between informal powers and strategic choice.

Substantive Contributions

By examining an extended CEO power model, this dissertation will provide a stronger base for research on CEO topics such as strategic choice, compensation or succession. Further, this dissertation will provide relevant insights for practitioners to increase understanding of CEO powers, along with the mechanisms necessary to keep these powers in balance.

To CEO Research Literature: There is no doubt that TMT research has provided important findings that show its importance on organizational outcomes (Bantel & Jackson, 1989; Weinzimmer, 1997), but as part of the TMT, the CEO is the highest-ranking executive within the organization and, as such, has the most influence and formal authority (Bigley & Wiersema, 2002; Ocasio, 1994). Thus, this dissertation takes a more fine-grained approach by looking at the single most powerful actor within the TMT and the organization. It is incumbent upon management scholars who study CEO topics to understand the underpinnings of CEO power (Finkelstein, 1992), as well as to incorporate more sophisticated models in order to accurately predict and explain the influences and

motivations of CEOs (Daily & Johnson, 1997; Finkelstein, 1992). Most CEO studies are cross-sectional and include simplistic direct effect designs (Tosi et al., 2000). The extended model will contribute to a better understanding of CEO topics.

To the Management Practice: Topics such as CEO compensation are receiving more scrutiny within the business community. For example, the ten highest paid CEOs in America had an average compensation package of over $170 million (Business Week, 2002) yet, there appears to be a disconnect between CEO compensation and firm performance (Tosi et al., 2000). Thus, by examining the interrelationship of multi-dimensional CEO power and its effects on strategic choice, the findings could not only lead us to understand the underpinnings of CEO power but also gain a more enlightened perspective of CEO topics such as compensation. This increased knowledge may help address questions such as why some CEOs also become the board chairperson and/or company president; how the CEO influences the board of directors to increase executive compensation despite poor firm performance; or how CEOs withstand shareholder-friendly takeovers.

Outline of Dissertation

The first chapter is devoted to the introduction, which includes the rationale for and the objectives of this study. In the second chapter, a review of the relevant literature and theoretical foundations will be presented. Further, a conceptual model central to this dissertation will be presented, which will include the power dimensions of the CEO as well as moderators such as governance mechanisms. Research hypotheses and methodology will follow in Chapter 3.

CHAPTER 2

LITERATURE REVIEW

The purpose of this chapter is to review literature that is relevant to the proposed research question. First, there will be an overview of the important theoretical and empirical developments significant to the proposed study. Next, this chapter will discuss the rationale for the utilization of the various constructs in the dissertation's design. Finally, a conceptual model will be presented.

Power Perspective

Power is the ability to influence others in order to get one's will (Rahim, 1989). In fact, Pettigrew (1973: 240) states, "an accurate perception of the power distribution in the social arena in which he lives... is a necessary prerequisite for the man seeking powerful support for his demands." Therefore, understanding the uses and assessment of power within organizations is essential for addressing many organizational/management topics, including CEO research (Pfeffer, 1992).

The examination of executive power in organizational research is not new. Child (1972) argued that power is essential for top executives to be dominant in pursuing their preferences in strategic choice. There are many CEO and upper echelon studies showing that top executives can influence both strategic choice and firm performance (Child, 1972; Bantel & Jackson, 1989; Daily & Johnson, 1997; Finkelstein, 1992, Hambrick & Mason, 1984; Ruefli, Collins, & Lacugna, 1999). Daily and Johnson (1997) argue that since the CEO is the most powerful actor within the firm, an emphasis on CEO research is warranted. In fact, CEO studies in strategic management are plentiful, and include

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such topics as CEO duality (Boyd, 1995; Fosberg, 1999), CEO succession (Boeker, 1992; Vancil, 1987), and CEO compensation (Gomez-Mejia & Welbourne, 1989), among others. Yet, many CEO studies are simplistic in both measurement and design (Tosi, Werner, Katz, & Gomez-Mejia, 2000). Some measures of CEO power, for example, include CEO/board structure dependence (Mallette & Fowler, 1992), CEO ownership (Barkema & Pennings, 1998), and CEO informal powers (Finkelstein & D'Aveni, 1994; Hitt, Bierman, Shimizu, & Kochhar, 2001). However, these measures of CEO power are used without regard to the complexity and potential interactions among them.

Most researchers of executive power would concur that the power construct is too complex to be encompassed by a measure with a single dimension (Astely & Sachdeva, 1984; Geletkanycz, Boyd, & Finkelstein, 2001; Krackhardt, 1990). French and Raven (1959) provide a model of leadership power that is well used in organizational behavior research. This model multi-dimensional contains five sources of power. Legitimate power represents the formal authority, or, in other words the individual's position within the organization. Reward power relates to the utilization of positive rewards to influence others, while coercive power represents the use of negative punishments. Expert power relates to influences one can gain due to knowledge, expertise, or skills. Finally, referent power refers to influence generated because of one's desirable resources or personal characteristics. This model has provided interesting results. For example, both expert and referent powers were positively associated with employee satisfaction while legitimate power was positively associated with employee compliance and negatively related to satisfaction (Rahim, 1989). However, this early typology suffers from poor content and convergent validity (Rahim, 1986). The reason is that it incorporates the

perception of the subordinates to determine the amount of power possessed by their leader. Researchers using these perceptual measures assume that "social actors are knowledgeable about power within their organizations; informants are willing to divulge what they know about the power distributions; and such a questioning process will not itself create the phenomenon under study, namely, power" (Pfeffer, 1981:55). Perceptual measures used in various power models have been highly criticized as to the questionability of validity (Finkelstein, 1992).

Due to these oft-repeated criticisms, Finkelstein (1992) constructed and tested a multi-dimensional power model. In his design, Finkelstein conducted three studies to validate his model. In the initial study, Finkelstein constructed four dimensions of executive power using responses from top executives and inside board members. Both reliability and discriminant validity were established in these scales. Finklestein's four dimensions of power are expert power, which is defined as the ability to effectively manage the firm; prestige power, which is derived from the executive's level of status or prestige; structural power, which is derived from the formal authority given by the titles held by the executive, often referred as "hierarchical" power (Daily & Johnson, 1997); and finally, ownership power, which is obtained by those executives who maintain ownership ties to the firm.

Finkelstein's second study surveyed top managers to rate the dimensions of power in their own firms; using this data (perceived power) in conjunction with demographic data established convergent validity. Expert power, however, had some problems with convergent validity, since the indicators failed to have significant correlations with perceived power. Lastly, Finkelstein strengthened the validity and overall development

of the power dimensions by examining predictive validity. This study found that three of the four dimensions had predictive validity relating to organizational outcomes.

Daily and Johnson (1997) utilized Finkelstein's power dimensions to examine the effects of CEO power on firm performance. Although Daily and Johnson used the basic framework of the dimensions of power, they modified some of the dimensions. For example, expert power was modified to designate functional experience as the sole indicator of expert power. Another difference between the two designs was the testing methods utilized. Finkelstein factor analyzed indicators for each power dimension and then created a global measure for each of the four dimensions of power. To test these measures, he used multiple regression to determine relationships between these power dimensions and firm acquisitions. Daily and Johnson's design incorporated confirmatory factor analysis (CFA) and structural equation model (SEM) to establish relationships between power dimensions and firm performance. A setback in their study was that the CFA had no acceptable solution (i.e., no dimension reached the minimum level of overall fit or reliability); thus, the analysis incorporated the testing of specific indicators (i.e., CEO education) rather than the testing of latent variables (i.e., prestige power, which includes the indicators of CEO education, nonprofit board membership, and for-profit board membership). Therefore, instead of incorporating the four latent variables (the four dimensions of power) based on the CFA, the analysis included strictly SEM, which is analogous to a path analysis.

The SEM analysis tested the effects of each indicator on firm performance. CEO duality, stock ownership and number of nonprofit boards were never significant, while founder status, number of for-profit boards and CEO elite education were found to have a

significant relationship with firm performance. Even though the results were not definitive for some indicators, this study suggested that CEO power indicators affect firm performance.

In addition to this framework, other scholars have differentiated the direct sources of power into two categories—formal and informal power. As mentioned in chapter one, formal power is the direct authority that provides the CEO with decision-making opportunities (i.e., CEO duality, ownership, and number of significant titles); informal power relates to factors that do not directly depend on the CEO's formal positions (i.e., tenure and education); and relative power (an indirect source of power) relates to factors that will affect both the formal and informal power base of the CEO. I argue that the formal/informal power framework is analogous to Finkelstein's four classifications of power, with structural and ownership power tapping into the formal power construct, and expert and prestige power channeling into the construct of informal power. Thus, in order to provide a more fine-grained design of CEO power, Finkelstein's four classifications of power will be used to operationalize formal and informal power. Further, board governance, the most popular relative power measure used in CEO studies (Finkelstein & Hambrick, 1996) will be incorporated to address CEO relative power.

The analysis of CEO power has exclusively examined structural, ownership, prestige, and expert powers as exogenous variables without examining the potential interrelationships among them. For example, there are numerous studies that have examined CEO duality or ownership, which are types of formal power, and their effects on various firm outcomes (see Allan & Widman, 2000; Daily & Dalton, 1994; Westphal, 1998 for CEO duality, and see Hill & Snell, 1988; Fredrickson, Hambrick, & Baumrin,

1988; Anderson, Bates, Bizjak, & Lemmon, 2000 for ownership). Yet, most designs treat these dimensions as "same-level" variables, which may not be appropriate due to the complexity of the power dimensions. Thus, I incorporate in the CEO model the inherent complex nature of CEO power by examining the interactions among the various types of power, as well as the effects of power on a firm's strategic choices.

Human Capital Theory

Becker (1993), a winning Nobel Prize economic scholar, defines human capital as the abilities and experiences of individuals that are of value to the organization. In the context of this dissertation, human capital theory is relevant since its theoretical framework suggests that as an individual's human capital increases so does his or her power. Accordingly, these human capital attributes increase information asymmetry and tacit knowledge, which in turn increases the motivation to retain human capital since it becomes internally valuable to the organization (Lepak & Snell, 2002) and can produce a competitive advantage (Hitt et al., 2001). Thus, it is to the organization's benefit to invest in this intangible resource (Becker, 1993).

Human capital is a socioeconomic-based theory that examines a broad spectrum of factors that contribute to the quality of the work force and enhance the wealth of individuals (Becker, 1993). Education, training, and family are considered important factors of human capital (Becker, 1993; Becker & Murphy; 1988; Freeman, 1976). Education is increasingly seen as a contributor to both personal wealth and quality of the work force. For example, Murphy and Welch (1989), in an extensive study, found that salaries of recent university graduates increased sharply to the highest level in fifty years, even after controlling for inflation. Thus, education has been deemed as more important

in recent years, likely due to the increased complexity of tasks in the workplace (Becker, 1993). Besides formal education, on-the-job training is a key factor contributing to the value of human capital. Economists such as Mincer and Higuchi (1988) provide estimates on the value of on-site training and suggest that this form of "education" is just as valuable as formal education. Finally, the family structure and environment have been shown to be influential on human capital. For example, abuse as children, low-income families, and large families have all negatively affected human capital (i.e., these generally have negative effects on children's knowledge, skills, and formed habits) (Becker, 1993).

Management scholars stress the importance of the human element when examining strategic management topics such as strategic choice and firm performance (Hitt, Bierman, Shimizu, & Kochhar, 2001) and CEO topics (Finkelstein & Hambrick, 1996). Thus, human capital theory is applicable for this dissertation since the concept and definition of human capital is similar to Finkelstein's (1992) expert and prestige power dimensions.

Expert power relates to the abilities of the CEO necessary for the success in the firm. Finkelstein's indicators of expert power include executive functions, critical expertise (i.e., experience in inputs, outputs, throughputs, and regulation of organizational functions, and regulatory concerns) and number of positions held. However, although these measures had internal consistency and discriminant validity, such indicators did not have convergent and predictive validity.

Indicators of expert power not included in Finkelstein's original model but used extensively in human capital theory designs are level of education and tenure (See

Becker, 1993; Harris & Helfat, 1997; Hitt et al., 2001; Lepak & Snell, 2002; Tharenou, 2001). However, in a later study, Finkelstein incorporated both tenure and education as important indicators of informal power (Finkelstein & D'Aveni, 1994). Numerous studies have shown a strong correlation between level of education and an individual's abilities (Becker, 1993). Abilities have been operationalized as an individual's intelligence or aptitude scores, and Becker argues that education contributes to these abilities and that these abilities provide value to organization. There are also studies indicating that level of education is perceived by middle-level managers as an important indicator of CEO abilities and competencies (Miller & Wiseman, 2001). This perception is particularly salient for those managers with greater work experience. Tenure also has been widely used in CEO studies, and has been associated with strategic management topics such as CEO succession (Cannella & Shen, 2001), compensation (Sanders, Davis-Blake, & Fredrickson, 1995), and firm performance (Sigler & Porterfield, 2001).

Indicators of prestige power included in Finkelstein's dimension (service on corporate boards, nonprofit boards, and elite education) are common factors used in operationalizing human capital. In their work on human capital's effect on firm performance, Hitt et al. (2001) found that elite education had positive direct effects on firm performance and indirect effects on strategy and firm performance. Elite education as well, as prestigious board appointments provide individuals with valuable knowledge gained through their interaction with elite individuals (D'Aveni & Kesner, 1993; Mizruchi & Stearns, 1989). Therefore, human capital theory provides additional validation of Finklestein's model, and thus bolsters the theoretical basis for examining

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the relationship among the various dimensions of power and their effects on strategic choice and firm performance.

Resource Dependence Theory

Resource dependence theory may be of value as well in explaining why an individual strives to attain more power. Organization theorists maintain that organizations must depend upon their environment in order to grow and survive within the industry. Resources, however, may become limited due to competition, complexity, dynamism, and other industry factors. This scarcity of resources can create organizational uncertainty. For firms to compete, they must acquire critical resources to minimize the uncertainties present in the external environment (Pfeffer & Salancik, 1978). Thus, organizations strive to minimize the impact of environmental factors by decreasing their dependence on other firms for access to these scarce resources.

A central tenet of resource dependence theory is the desire to reduce uncertainty. Many strategies could be incorporated to reduce this uncertainty within the industry. Strategic alliances are agreements among various firms that commit to a specific arrangement in order to share resources to develop business opportunities (Das & Teng, 1998). These alliances, in general, have two forms: equity and non-equity (Kogut, 1988). Joint venture, an equity form of alliance, is defined as the combination of two or more companies that form a separate legal entity. Joint ventures are mainstream strategies that offer advantages of efficiencies to obtain competitive advantages that may not otherwise be achieved (Hennart, 1988). Moreover, there is strong support that joint ventures are viable strategies to gain competitive advantage (Das & Teng, 1998). Networks, a non-equity form of alliances, are recently becoming popular due to the flexibility of their

structures. Networks are a collection of organizations that work toward common aims, but do not form legal unions as do the traditional joint ventures. Both networks and joint ventures are used specifically to deal with environmental uncertainty. Organizations may not readily have access to all the necessary resources to survive; thus, these alliances provide the basis for this access.

Besides alliances, outside board members are seen as a necessary conduit of external information for the organization to reduce environmental uncertainties (Burt, 1980). There is extensive research that supports this perspective. Firms select these external sources for important abilities that may not be available within the firm. In fact, Zahra and Pearce (1989) provide some important roles that outside board members contribute to firm. One role, strategy, is the resource-dependence role of board members, which enables these directors to act as a link between the organization and the environment. Another role, service, provides counseling that is not necessarily available from within the organization (Dalton, Daily, Ellstrand, & Johnson, 1998). Therefore, the traditional perspective of resource dependence is to reduce uncertainty in the firm by allowing outside actors to provide the knowledge and connections necessary to compete in the industry.

Another perspective, not yet developed within the realms of resource dependence theory, addresses the desire and potential for reducing uncertainty from the viewpoint of the CEO. The CEO is deemed the most important and dominant actor within the organization (Ocasio, 1994) due to his or her position as the top executive with the greatest responsibility. However, the CEO can experience personal uncertainty because of threats to his or her power base or decision-making ability by other top executives or

board members. Therefore, the CEO could reduce personal uncertainty by centralizing the few top positions, such as the board chairperson and president. By consolidating these positions, the CEO has become the "keeper" of additional resources and has decreased uncertainty within the internal environment since he or she will have fewer power struggles with senior executives. Moreover, the CEO with the added titles and responsibilities is apt to influence other executives with rewards and/or threats with these resources, since individuals that can provide the "most critical and difficult" resources are deemed to have the most power and influence within the organization (Pfeffer, 1981). In addition to gaining access to more tangible resources, a CEO with consolidated power is able to increase his or her personal resource of knowledge, further setting him/herself apart from other executives relating to the knowledge of the firm. For example, as the CEO, knowledge would be gained from gathering information as top executive about the daily operations of the firm, and as the chair, additional information could be gleaned from discussions during board meetings and one-on-one discussions with board members. Finkelstein and Hambrick (1996) argue that those in higher positions have greater influence over the organization, since these executives have the overall responsibility and direct authority over the critical resources of the firm. More recently, Finkelstein and Boyd (1998) argued that the top executive with these additional titles of higher authority would have greater influence since he or she would have much more discretion over critical knowledge and resources than a CEO without these added titles.

Agency Theory

From an agency perspective, power given to or obtained by executives would be problematic if proper incentives are not established or if power is not monitored to ensure

that it is used in the best interest of shareholders. There is much controversy as to the existence and magnitude of the conflict of interest between management and shareholders (see Amihud & Lev, 1999, and Lane, Cannella & Lubatkin, 1998, for contrasting arguments). The agency theory perspective argues that principals, who do not have the time to personally manage and yet have an interest in a firm, will engage agents to manage the firms (Jensen & Meckling, 1976). With this arrangement, there is a separation of ownership and control, and thus a potential for agents to engage in self-interest behaviors that may have negative outcomes for shareholders. For example, reducing employment risk could be the underlying motive of an executive. Because of the perceived employment risk (loss of job), executives (or agents) may have a tendency to make self-serving decisions, choices that could likely restrain growth and change. To reduce employment risk, top executives introduce strategies that could be unattractive to their corporations. Thus, the proponents of agency theory maintain that with this conflicting self-interest, executives in management-controlled firms will have different strategy motives than executives in owner-controlled firms (Amihud & Lev, 1981). Therefore, it is incumbent on shareholders not employed with the firm to ensure that a governing body will minimize the self-interests of top executives (Finkelstein & Hambrick, 1996). The more power distributed to the governing body, the greater the capacity it will have to minimize these agency costs.

One governing body is the shareholders. Redicker and Seth (1995) examined U.S. bank-holding companies to find that firms with larger contingents of outside shareholders required less monitoring than firms with fewer major shareholders, where the monitoring capacity was operationalized as the percentage of outside board members.

These majority shareholders can take an active role in leading firms to become a powerful governing force (Holderness & Sheehan, 1988). Hoskisson, Johnson, and Moesel (1994) found that when there were large block stockholders (i.e., major shareholders), the corporation was less likely to engage in diversification strategies. Hill and Snell (1989) found that when stockholders dominated the corporation, business strategies generally focused on building financial benefits to firm, such as investments in R&D; however, in corporations dominated by top management, strategies typically centered on issues of job security, such as unrelated diversification.

Besides major shareholders, the board of directors is the governing body that has received the most attention in relation to minimizing agency costs (Daily & Schwenk, 1996) and is deemed the center of corporate governance (Finkelstein & Hambrick, 1996). Independent boards are regarded as most appropriate when there are concerns about agency costs (Pearce & Zahra, 1992). Board independence is defined as the extent to which boards can effectively monitor management (Finkelstein & Hambrick, 1996). Thus, independent boards have been operationalized as the number of outside members of the board divided by total board members, with a higher ratio equating to greater independence (Judge & Zeithaml, 1992). Recently, some have defined an independent board member as an outside board member who is appointed *before* the CEO took office, since CEOs are influential on the selection of board members (Lorsch, 1989). Yet, the majority of research examining independent board effects on minimizing agency costs has used the percentage of all outside board members as the independent board measure (Daily, McDougall, Covin, & Dalton, 2002).

The effects of independent boards on firm performance are mixed (Dalton, Daily, Ellstrand, & Johnson, 1998). However, researchers have had much more success in finding board effects on other firm outcomes. Newman and Mozes (1999) found that board independence was positively related to CEO dismissals when firms were performing poorly, while Zantout and O'Reilly-Allen (1996) found a negative relationship between the percentage of outside board members and unrelated diversification. Hoskisson, Johnson, and Moesel (1994) found that as outside board equity increased, the number of divestitures decreased. Thus, an agency theory perspective is complimentary to the power theory framework, in that agency theorists would argue that providing a strong governing body to balance CEO power is an important tool in minimizing agency costs by giving top executives relative rather than ultimate power.

Conceptual Model

Thus far in Chapter 2, relevant theories have been discussed in order to provide a background for the proposed conceptual model. A power perspective is the underlying theoretical framework for this dissertation. An important proposition of this manuscript is that the four dimensions of power—expert, prestige, structural, and ownership—have a complex interrelationship. I propose that prestige and expert (informal powers) will provide the CEO with more structural power. Further, if the CEO also has ownership power, then this top executive will attain even more structural power.

Alongside the power perspective, human capital theory provides compelling evidence that with strong informal powers, such as expert and prestige power, individuals attain more structural power. Resource dependence theory adds support that increasing

structural power provides CEOs with greater influence over other executives of the firm.

Thus, with this power, the CEO has strong control over strategic decisions.

Besides the power constructs, I incorporate board vigilance, which is a safeguard against abuse of power by dominant CEOs. Agency theorists would argue that board vigilance would not only monitor the CEO to ensure that strategic choices are aligned with shareholders interests, but would also strive to limit the amount of power the CEO could attain. See Figure 3.
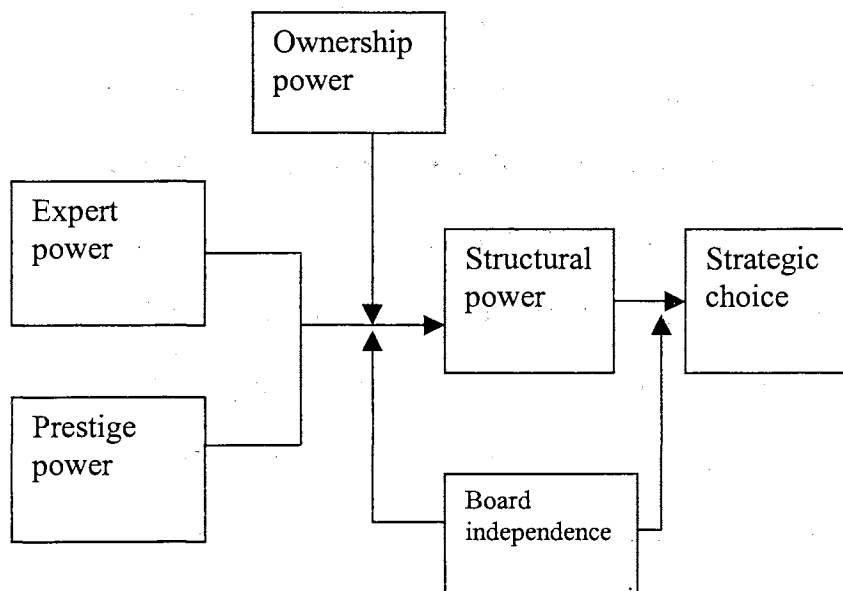
Figure 3: Dissertation CEO Power Model

To conclude, the Finkelstein (1992) model provides a comprehensive framework that can be used to examine the dimensions of power to determine their interrelationships and their effects on organizational outcomes. Finkelstein suggests that these dimensions of power are associated with strategic choices such as acquisitions and diversification. Daily and Johnson (1997) borrowed and adapted this multi-dimensional model to test its effect on firm performance. The results were encouraging, with many items within the

dimensions of power providing explanatory power to the direct effects on firm performance. However, both Finkelstein and Daily and Johnson, in the afore-mentioned studies, treat these dimensions as "same level" variables. Yet, there are likely complex relationships among the dimensions. A major contribution of this dissertation is the examination of these complex relationships, which will reveal that certain dimensions of power will beget other dimensions of power.

Utilizing these distinctions of CEO power, I propose that informal power, such as CEO tenure (expert power) or elite education (prestige power), may lead to a CEO holding additional titles of chairperson of the board, president of the firm, and/or other important titles in the firm (i.e., structural power). Thus, certain types of power may lead to other types of power. Pfeffer (1983) argues that individuals with informal power will gain personal mystique and loyalty, and with this loyalty should come more formal power. Leonard (1990) suggests that informal power works indirectly to affect outcomes such as compensation through increased hierarchal positions, while Brass and Burkhardt (1993) found that structural power (i.e., promotion to supervisor) arises from people's actions and abilities. Yet, such proposed relationships have not been tested from a CEO power perspective.

Finally, ownership power is another dimension of power that may directly affect the CEO's ability to obtain more structural power. From a model building perspective, this dissertation's focus is to isolate the direct effects of expert and prestige power and then predict the factors, such as ownership power, that could strengthen or weaken the effects of these informal powers on structural power.

CHAPTER 3

RESEARCH HYPOTHESES AND METHODOLOGY

The previous chapter dealt with the review of important theoretical frameworks that provide a basis for arguments to establish the proposed model that was presented in Chapter 2. This chapter is devoted to the hypotheses development and the methodology.

I utilize two well-respected theories to provide support that once a CEO has established strong expert and prestige power, more structural power will follow.

Human Capital Theory

The central tenet of human capital theory is that the skills, knowledge and experiences that an individual brings to the firm are individual-specific, and these individual qualities become valuable to the organization (Hitt et al., 2001). Becker (1993) states that there is exhaustive evidence that the more the investment in human capital, the more the productivity and earning power of the individual. This human element has grown in importance, because obtaining and retaining knowledge in a rapidly changing environment is essential for the success of an organization. Thus, intangible human capital (such as education and work experience) is particularly important to be able to compete in complex environments (Hitt et. al., 2001), and is a vital resource for strategic management (Lee & Miller, 1999).

As the CEO accumulates these important qualities, abilities, and experiences relevant to organizational success (i.e., increases informal power), he or she will likely be entrusted with other positions of authority and/or autonomy (Finkelstein, 1992). Such rationale is supported by management scholars such as Pfeffer (1978) who argue that

structural power is centered around informal power. Thus, individuals with a high concentration of structural power would have greater informal power than individuals with less structural power. Harrison, Torres, and Kukalis (1988) concur, and they argue further that titles such as CEO/chairperson of the board are likely a reflection of concentrated informal power, such as experiences gained from tenure or education. In other words, executives who have been given structural power, and thus greater authority over firm decisions, have demonstrated previously through their knowledge and abilities (i.e., high informal powers) that they were competent enough to be given more structural power.

As mentioned previously, human capital has been operationalized in many ways (Berkowitz, 2001). The use of variables such as tenure, level of education, and prestige of the educational institution the individual attended have been found to be useful in research designs (see Hitt et al., 2001; Miller & Wiseman, 2001; Tharenou, 2001; Carpenter & Wade, 2002). Thus, the expert and prestige power dimensions developed by Finkelstein (1992) fall within the domain of human capital. These variables have provided much explanatory power on various outcomes. Prior research shows that ability, as previously defined as intelligence and aptitude, is correlated with indicators of human capital such as level of education (a form of expert power), and that higher levels of education will assist individuals in more complex situations (Becker, 1993). Wally and Baum (1994), in a survey of 106 CEOs, found a positive relationship between formal education and cognitive ability, an important determinant in decision-making. In addition, formal education has been linked to innovation (Bantel & Jackson, 1989; Thomas, Litschert, & Ramaswamy, 1991).

Hurley, Fagenson-Eland, and Sonnenfeld (1997) examined career advancement in a large multinational organization. They found that human capital (specifically, breadth of experiences and organizational tenure) was found to be associated with top management advancements. Tharenou (2001) found that the greatest returns on human capital were due to the increased work tenure for middle management and increased education for upper management promotions. In a recent study, Miller and Wiseman (2001) found that promotion history (rapid promotion to significant positions) and functional experience were statistically significant and equally weighted in importance in young managers' perceptions of the abilities and competencies of their CEO. Thus, many indicators of expert power are associated with the abilities and advancements of individuals.

In addition, service on outside boards (a form of prestige power) may lead to important experiences and knowledge not gained from education or functional experiences. The CEO obtains access to important external information (Pennings, 1980), gains contact with other influential and important business elite (Useem, 1979), and accrues greater status within the organization due to the prestige attributed to directorship appointments. Zajac and Westphal (1996) argue that the collective influence the upper echelon holds from these interlocking directorships are comparable and may even outweigh the influence gained from experiences within the focal firm with regard to corporate strategy.

The influence the CEO gains from external and influential contacts can aid in establishing the legitimacy of the organization (Daily & Johnson, 1997), while such legitimacy given to the firm may likely assist the CEO in obtaining other responsibilities

and/or autonomy within the firm. Legitimacy can be defined as the extent to which an organization "convinces its exchange partners" that it has a right to continue business with these various stakeholders (i.e., creditors, suppliers, buyers etc.) (Maurer, 1971 p. 361). D'Aveni (1989) examined bankrupt firms with "matched" survivor firms to find bankrupt firms were preceded by the exit of executives that held prestigious external directorship appointments. The implication is that these executives were able to provide some legitimacy to the firm and consequently may have helped firms avoid bankruptcy. Although there is no empirical study that examines the relationship between membership on prestigious outside boards and promotion of executives, there does appear to be solid logic that CEOs and other executives who have had tenure in these positions of prestige would likely have received greater opportunities for structural authority (i.e., promotion or obtaining more titles) than those who have had fewer or less prominent board appointments.

Elite education, another form of prestige power, can also be seen as a catalyst of accruing further structural power. Miller and Wiseman (2001) found that the university or universities attended by CEO was an important indicator of perceived CEO power from the perspective of middle management. This relationship became stronger when the analysis included tenure of middle management. In other words, the more seasoned these managers became, the more emphasis they placed on the importance of elite education on the CEO's perceived power. One study found that lawyers who graduated from prestigious law schools were able to obtain loyal clients and ultimately affect the law firm's performance (Hitt et al., 2001). In academic settings, there is a strong relationship between Ph.D. students of tier one schools being hired by top universities (Debackere &

Rappa, 1995). It is assumed that if scholars come from elite schools, they will have superior skills (Hitt et al., 2001). Debackere and Rappa (1995) examined the promotion of 373 scientists to find that prestige of their alma mater was found to be a significant indicator of the prestige of their academic appointment in the initial five years after graduation. Finally, D'Aveni (1989) found that having executives with elite education provided the legitimacy that helped contribute to the success of survivor firms, while the lack of top management elite education status decreased the legitimacy of the firm. Thus, when executives have elite education, such prominence provides legitimacy to the firm. Firms then may provide incentives such as greater structural power to retain these executives. To date, there is no study that has tested the direct effects of elite education on CEO structural power. Yet, there is compelling evidence suggesting that elite education will lead the executives to higher status positions and thus increased structural power.

Both directorships and elite educations provide executives with prestige based on their link with a particular educational institution or other organizations. Another form of prestige power that is an internal link to the firm is founder status. Founders have strong organizational influence, particularly if the founder is the CEO of the firm (Daily & Johnson, 1997). The founder can become the focal point of the organization because of the nature of the position based on the prestige of being the originator of the firm (Nelson, 2003). This status of the founder may then lead him or her to play an influential defining role within the organization such as developing a mission statement, outlining objectives, and making other important firm decisions (Vesper, 1996; Gimeno, Folta, Cooper, & Woo, 1997). In turn, this influence may lead the individual to more structural

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power. Yet, in the domain of strategic management research, very little empirical work has been performed on the influences of founders on the organization (Nelson, 2003). More specific to this dissertation, founder based research in the context of CEO topics such strategic choice are nonexistent; there are however, a few studies that deal with founder status and firm performance (Daily, McDougall, Covin, & Dalton, 2002). Despite this, there are those who argue that if the CEO is also the founder, he or she will gain power due to the interaction with important stakeholders of the firm (Finkelstein, 1992; Daily & Johnson, 1997). A recent study of CEO successions observed that CEO/founders were less likely to have succession than CEO/non-founders (Ocasio, 1999). Daily and Dalton (1994) observed that founder-led firms had CEOs who were also chairperson of the board more frequently than did nonfounder-led firms. Thus, founders may use their founder status in retaining structural power that is already present. Thus, structural power may be particularly important since there is support that as the firm becomes larger and older, the founder has an increased chance of being force from the firm (Boeker & Karichalil, 2002).

In summary, both dimensions of informal power—expert and prestige power—are important sources of power that contribute to advancements and promotions for individuals within organizations. These sources of power also provide legitimacy to the abilities of individuals, thus leading to higher status positions. Although no study has specifically examined the effects of expert and prestige power on a CEO's structural power, there is support that these informal powers increase structural power for others within the organization. I propose that, although the position of the chief executive officer is the most important position in the firm, the holder of this position will be given

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added responsibilities, and thus more structural power, based on the CEO's expert and prestigious sources of power.

Resource Dependence Theory

Human capital theory was used to explain why CEOs gain more structural power (i.e., because of their abilities, experiences, and knowledge – expert and prestige power); resource dependence theory, when viewed in the context of the CEO within the internal environment of the firm, could be incorporated as an important theoretical basis to explain why the CEO would *desire* more structural power. The central tenet of resource dependence theory is that firms attempt to reduce uncertainty in the environment (Thompson, 1967). This uncertainty is based on the need to acquire the necessary resources to survive. Normally, to reduce uncertainty, co-optation strategies are incorporated within the firm. The firm will enlist outside board members to provide access to resources that would otherwise be unavailable to the firm (Daily, McDougall, Covin, & Dalton, 2002).

Resource dependence theory may have different ramifications, depending upon one's viewpoint. As mentioned previously, from an organizational standpoint, one way that a firm can reduce uncertainty is to have members on the board that have outside experience and connections. However, from a CEO power perspective, uncertainty may be *increased* by outside directors, since outside directors may challenge the different interests and views of the CEO (Mizruchi & Stearns, 1988). These differing views may be exacerbated due to asymmetric information, which is information inequality (Shane & Cable, 1997). This asymmetry can present a problem since individual A may make different subjective decisions than individual B due to differences in quality and or

quantity of information. There is recent support that CEOs will use their influence to decrease this potential problem. Nelson (2003) found that firms with a founder as the CEO were more likely to have a greater number of inside board members than firms with non-founder CEOs.

Relating resource dependence theory in the context of the internal environment of the CEO, the CEO will likely have a different perspective of the operation of the firm than an outside board chairperson. The CEO is "in the trenches" of the operations of the firm and has obtained both tacit knowledge and intuition about the operations, while an outside chairperson examines the firm's operations, on the surface, that are gleaned from areas such as pro forma financial statements or from questions asked during the corporate board meetings or informal discussions. Disagreements may arise from the difference of opinions caused by information asymmetry. Therefore, the CEO faces potential uncertainty, such as disagreements, from others who hold prominent positions (i.e., the board chairperson) due in part to the differing quantity or quality of information that each possesses.

Although the corporation may require a certain number of outside directors, the CEO likely will have a desire to reduce some uncertainty by attaining more structural power (Nelson, 2003). For example, a CEO that becomes the chairperson has reduced the number of influential actors within the firm, and thus reduced uncertainty by minimizing challenges to his or her power. Besides gaining the title of chairperson, the CEO may strive to obtain other top executive titles to further bolster the CEO's structural power. With this consolidation of structural power, the CEO can acquire increased knowledge of the operations of the firm and likely more authority that would be inherent

when one increases the number of formal titles. The CEO can then use this knowledge and/or authority to control others' access to important information that is available only to the chairperson, president or top executives (Daily & Johnson, 1997).

There is theoretical support that the CEO would desire more structural power. Daily and Johnson (1997) argued that a CEO's most influential source of power is structural power. Nelson (2003) argues that a CEO/founder, who has vested interest in the firm, will strive to ensure that he/she holds a duality position within the firm. Finkelstein (1992) found that of the four dimensions of executive power, structural power had, by far, the strongest correlation with the perception of executive power. Other researchers argue that high structural power will protect the CEO from outside influences (Pollock, Fischer, & Wade, 2002). For example, Harrison, Torres, and Kukalis (1988) argue that a person holding both CEO and chairperson titles – thus having more structural power—is less easily dislodged than a CEO without this dual role. They also found that when the positions are separate, there is a greater likelihood of power struggles. Finally, Shen and Cannella (2002) found that CEO duality was negatively related to CEO dismissal. Thus, the CEO will seek to minimize power struggles by obtaining more structural power.

Pfeffer (1981) provides another argument as to how resource dependence theory would explain why a CEO would desire to attain more structural power. Pfeffer proposes that individuals that provide the most critical and difficult to obtain resources can become the most powerful in organizational relationships. A CEO, then, can become more of an integral source of these resources by attaining additional positions of formal power and authority, such as chairperson and/or president (Combs & Skill, 2003). Therefore, CEOs

that have access to more of the firms' resources have more opportunities to engage in personal agendas, and have less likelihood of being challenged by others.

In summary, both human capital theory and resource dependence theory suggest that CEOs with high expert and prestige power will have the desire and opportunity to increase structural power; thus, these theories are complementary in nature. Therefore, based on the above theoretical developments:

General hypothesis 1: Expert power will have a positive effect on the CEO's structural power, more specifically:

Hypothesis 1a: The education level of the CEO will have a positive effect on the CEO's structural power.

Hypothesis 1b: The length of tenure as a CEO will have a positive effect on the CEO's structural power.

Hypothesis 1c: The length of tenure with the firm will have a positive effect on the CEO's structural power.

General hypothesis 2: Prestige power will have a positive effect on the CEO's structural power, more specifically:

Hypothesis 2a: The amount of elite education obtained by a CEO will have a positive effect on the CEO's structural power.

Hypothesis 2b: The number of directorships held by the CEO will have a positive effect on the CEO's structural power.

Hypothesis 2c: The CEO being the founder will have a positive effect on the CEO's structural power.

Interaction Effects of Expert and Prestige Power on Structural Power

Besides the direct effects that both expert and prestige power may have on structural power, I argue that expert and prestige powers will interact to increase the likelihood of a CEO attaining more structural power. For example, a seasoned CEO with a prestigious external board position will have higher informal power than a just a seasoned CEO (Finkelstein & D'Aveni, 1994). The CEO is seen not only as an important figure within the firm (due to the experience gained) but also as an important figure within the industry (due to the prestige of board directorship). Similarly, a seasoned CEO with a prestigious advanced degree is likely to be viewed as more knowledgeable with more prestigious contacts than just a seasoned CEO.

Although there has been no study that has tested such relationships, there have been studies that have examined the effects of both expert and prestige power on various outcomes. Hitt et al. (2001) provide evidence that both expert and prestige powers positively affect firm performance. In this case, the study showed that prestigious education and tenure with the firm both were significant predictors of firm performance. Finkelstein (1992) and Daily and Johnson (1997) also found direct relationships between expert and prestige power on various outcomes. Using three variables to create a global measure of expert power and four variables to create a global measure of prestige power, Finkelstein found that both expert and prestige power were valid predictors of firm strategic choices, such as acquisitions. While Daily and Johnson's (1997) initial design was also to include global measures, they had to adjust the design to individually test each variable in order to examine their effects on firm performance. Utilizing this method, they, too, were able to find a direct relationship between CEO indicators of

power and firm performance. In addition, Finkelstein and D'Aveni (1994) created a global measure that incorporated both expert power (i.e., tenure) and prestige power (i.e., board directorship appointment) to show their effects on CEO/board chairman positions.

Other studies have examined expert and prestige power exclusively to find positive effects on outcomes such as promotion. For example, Combs and Skills (2003) incorporated tenure, a variable representing expert power to help explain CEO compensation. Pennings, Lee, and Van Witteloostuijn (1998) examined two expert power variables, tenure and level of education, and their effects on firm dissolution. Finally, Tharenou (2001) used organizational tenure and education level to determine their effects on management promotions. Based on an exhaustive literature search of studies incorporating either, but not both, expert and prestige power variables, the majority appear to use expert power. There appear to be very few studies that incorporate only prestige power variables, such as elite education or directorship appointments. This finding may support the importance of the interaction between both expert and prestige power. For example, an individual with prestige power, such as a doctorate degree from an elite school, will have power, but in combination with several years experience at a firm, this individual will be seen as more powerful. In this case, the individual is seen as someone who has the credentials to be powerful due to the prestige of attained education, but also someone who can be trusted as a loyal employee due to the time spent and experiences gained while employed with the firm. Thus, prestige education and tenure interact to create higher informal power for the individual.

In conclusion, I argue that CEO power dimensions are complex constructs that likely have interrelationships, which would affect other dimensions of power. Some

researchers have understood the importance of including both expert and prestige powers in their designs, while others have used either expert or prestige power exclusively in their studies. I acknowledge the importance of examining the direct effects of these powers on various outcomes, as has been done in past studies, but also suggests that a CEO with expert power will have greater capacity to obtain structural power when he or she also has prestige power. The reasoning is that expert and prestige powers draw upon different dimensions of power (Finkelstein & D'Aveni, 1994). Thus, these variables will be seen as complimentary, and will strengthen an individual's informal power base, which could then be used to obtain more structural power.

Hypothesis 3a: The education level of the CEO and the amount of elite education obtained by the CEO will interact to predict structural power such that CEOs with a higher education level and more elite education will have more structural power.

Hypothesis 3b: The education level of a CEO and the number of directorships held by a CEO will interact to predict structural power such that CEOs with a higher education level and more directorships will have more structural power.

Hypothesis 3c: The education level of a CEO and the CEO as the founder of the firm will interact to predict structural power such that CEOs with a higher education level and founder status will have more structural power.

Hypothesis 4a: The length of tenure as a CEO and the amount of elite education obtained by the CEO will interact to predict structural power such that CEOs with longer tenure as a CEO and more elite education will have more structural power.

Hypothesis 4b: The length of tenure as a CEO and the number of directorships held by a CEO will interact to predict structural power such that CEOs with longer tenure as a CEO and more directorships will have more structural power.

Hypothesis 4c: The length of tenure as a CEO and the CEO as the founder of the firm will interact to predict structural power such that CEOs with longer tenure as a CEO and founder status will have more structural power.

Hypothesis 5a: The length of tenure with the firm and the amount of elite education obtained by the CEO will interact to predict structural power such that CEOs with longer tenure with the firm and more elite education will have more structural power.

Hypothesis 5b: The length of tenure with the firm and the number of directorships held by a CEO will interact to predict structural power such that CEOs with longer tenure with the firm and more directorships will have more structural power.

Hypothesis 5c: The length of tenure with firm and the CEO as the founder of the firm will interact to predict structural power such that CEOs with longer tenure with a firm and founder status will have more structural power.

Interaction Effects of Board Independence and Expert/Prestige Power on Structural Power

Based on the above arguments relating to both human capital and resource dependence theories, the CEO with high expert and prestige powers will have not only the capability to obtain more structural power, but also the desire to obtain this power to decrease the amount of resistance within the upper echelon ranks. However, firms have

varying degrees of board independence and thus may react differently when debating if the CEO should be conferred additional titles. From an agency theory and managerialist perspective, an independent board will be vigilant in limiting this formal power, since CEO structural power has been shown to lead to entrenchment (Harrison, Torres, & Kukalis, 1988), reduce board involvement (Johnson, Hoskisson & Hitt, 1993), and restrict the amount of information presented to the board (Mallette & Fowler, 1992). Moreover, the CEOs with more structural power have more influence on board meeting agendas (Finkelstein & D'Aveni, 1994) and will be in a position to influence the nomination of directors and others who would likely be loyal to the chief executive (Berg & Smith, 1978). In fact, Westphal and Zajac (1995) report that the greater the CEO's power, the greater the similarity between the CEO and newly appointed board members. As the similarity increases, so does the likelihood that the CEO's aims will go unchallenged; hence, this strategy could perpetuate CEO power. Finkelstein and D'Aveni (1994) concur, and they argue further that when the CEO has high informal powers, vigilant boards will strive to limit CEO structural power by conferring positions such as chairperson of the board to an outside executive, thus counterbalancing the relative power of the CEO.

Vigilant boards tend to be composed of outside, independent board members (Finkelstein & D'Aveni, 1994). Both types of board members (outsiders and insiders) have a duty to ensure that the decisions are made in the best interests of the shareholders (Johnson, Daily, & Ellstrand, 1996). Yet, an inside director, which is defined as any individual that has either worked with top management (former executives) or is presently employed by the firm (Judge & Zeithaml, 1992), may feel indebted to the CEO

because of his or her employment history with the firm (Patton & Baker, 1987). Therefore, while inside directors will have more knowledge of the daily operations, they will also be less likely to challenge the CEO or other executives on important proposals (Johnson, Hoskisson, & Hitt, 1993). Thus, inside directors are often viewed as those that merely rubber-stamp CEOs' agendas (Finkelstein & Hambrick, 1996). Outside board members, however, are not reliant on the CEO for their main source of income. Moreover, these board members are not involved in the daily operations of the company and will not have to deal with the uneasiness of working closely with a CEO with whom they may disagree.

These independent directors have access to strategic and financial information regarding the firm, which enables them to ensure that strategic choices of top executives do not overshadow the best interests of the shareholders. In fact, several studies show outside board members are more likely than insiders to dismiss CEOs for poor firm performance (Coughlan & Schmidt, 1985; Weisbach, 1988). Moreover, outside directors may have the added incentive of maintaining their own reputations as directors, and avoiding the risks of negative exposure or discreditation for duties poorly performed (Fama & Jensen, 1983). Therefore, firms with outside, more independent boards will be more vigilant in minimizing the amount of structural power given to the CEO since they have vested interest in limiting the CEO's ability to constrain board independence (Baliga, Moyer, & Rao, 1996) and in preserving the board's governance ability (Millstein, 1992). This vigilance would be particularly salient with CEO's that have greater informal power.

Agency theory proponents would argue the importance of monitoring a CEO with informal power such as expert or prestige power in order to minimize the potential abuse by the top executive. Although no study has directly analyzed the domain of informal CEO powers and their influence on obtaining more structural power (i.e., from a CEO and president to a CEO, president and chair), there are studies that have clearly shown that as employees of a firm increase in informal powers, they do attain more formal power (see Debackere & Rappa, 1995; Hurley, Fagenson-Eland, & Soonenfeld, 1997). As argued previously, a CEO will desire to attain more structural power based on both agency theory and resource dependence theory. With this desire, a CEO with increased informal power will leverage this power to increase structural power. With increased structural power, a CEO is likely to have a greater chance to avoid confrontation with other executives within the firm due the increased consolidation of formal power. Also, with this increased structural power, the CEO will have the capacity to pursue strategic choices that may better serve the top executive than the shareholders of the firm. Thus, independent members of the board will monitor the CEO intangible and tangible assets such as the expertise gained from the organization and CEO tenure as well as the prestige attained from sitting on numerous boards and achieving advance education from elite schools. For example, as CEO gains more tenure, the board knows the influence that this executive has on the firm and thus will strive to decrease the amount of structural power given to the top executive. Similarly, a CEO that is a founder will also have accrued influence; thus independent board members will be vigilant in limiting the structural power of the CEO, because this power provides greater influence on strategic decisions.

Hypothesis 6a: The effects of education level of the CEO on structural power are contingent on board independence such that the CEO's education level will have less effect on structural power with firms that have greater board independence.

Hypothesis 6b: The effects of length of tenure as a CEO on structural power are contingent on board independence such that the length of tenure as a CEO will have less effect on structural power with firms that have greater board independence.

Hypothesis 6c: The effects of length of tenure with the firm on structural power are contingent on board independence such that the CEO's organizational tenure will have less effect on structural power with firms that have greater board independence.

Hypothesis 7a: The effects of elite education obtained by the CEO on structural power are contingent on board independence such that the CEO's elite education will have less effect on structural power with firms that have greater board independence.

Hypothesis 7b: The effects of number of directorships held by a CEO on structural power are contingent on board independence such that the number of directorships held by the CEO will have less effect on structural power with firms that have greater board independence.

Hypothesis 7c: The effects of the CEO as the founder of the firm on structural power are contingent on board independence such that founder status will have less effect on structural power with firms that have greater board independence.

Interaction Effects of Ownership Power and Expert/Prestige Power on Structural Power

Most research has analyzed executive ownership in the context of aligning management's interests to that of shareholders (Tosi & Gomez-Mejia, 1989; Walsh & Seward, 1990; Amihud & Lev, 1999; Tosi et al., 2000). Coles, McWilliams, and Sen (2001) argue that as the CEO's ownership increases, there is a greater incentive for the CEO to ensure that the strategies implemented are in the best interests of the firm, and are thus beneficial to the shareholders.

Ownership can affect a CEO in at least two ways. First, ownership gives the CEO increased legitimate power, such as veto or approval, to influence management's decisions (Riahi-Belkaoui & Pavlik, 1993). With this legitimate power, the CEO can also influence the selection of board directors (Fredrickson, Hambrick, & Baumrin, 1988). Second, Shen and Cannella (2002) argue that ownership enhances the CEO image as a loyal employee that will seek the best interests of the firm, thus increasing the CEO's credibility.

Research suggests that CEO ownership can have various positive effects on firms' strategic choices (Ryans & Wiggins, 2002). For example, many researchers have found that executive stock ownership is negatively correlated with unrelated diversification (Riahi-Belkaoui & Pavlik, 1993; Denis, Davis, & Sarin, 1997; Anderson, Bates, Bizjak, & Lemmon, 2000). Hill and Snell (1988) found that stock ownership by the CEO has positive effects on innovation strategies. Finally, Buchholtz and Ribbens (1994) found that stock ownership was negatively related to the resistance of firm takeovers. Thus, CEO ownership can benefit the strategic policies of a firm.

While there are studies that examine the relationship between ownership and strategic choice, there are only a few analyses that focus on CEO ownership in the context of power. Intuitively, since CEO ownership increases credibility and legitimacy, these factors could be used to obtain or retain power. However, few studies have examined whether ownership is used to retain structural power, and there are no studies that have analyzed the effects of ownership on the attainment of structural power.

In a recent field study, Pitcher, Chreim, and Kisfalvi (2000) interviewed ten CEOs in the financial services industry to determine the causes of CEO succession. Results showed that CEO ownership was key in retaining the title of CEO. Thus, the authors encourage further research into the effects ownership can have on power issues such as CEO succession. In their study, CEOs who had ownership power were able to insulate themselves from unexpected or involuntary turnover; thus, they were able to retain the structural power already acquired. McEachern (1975), using a larger sample, found similar results: CEOs in owner-managed firms were able to hold their CEO position significantly longer than CEOs in employee-managed firms. Thus, the CEO of owner-managed firms may have greater power to retain his or her position.

Based on these studies, there is evidence that ownership provides a basis for retaining CEO structural power. The CEO understands that gaining more structural power is a means to becoming more entrenched in the firm. CEO stock ownership provides the top executive with legitimate power and creates an image for the CEO as a credible employee that will want only the best for the firm. Therefore, a CEO with expert or prestige power will utilize ownership to leverage the chances to obtain more structural power in order to more easily pursue his or her interests with fewer challenges from other

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executives and non-executive directors. Although previous studies have shown the importance of ownership in retaining structural power, I propose that the combination of informal power and formal ownership (i.e., voting) power will result in an increase of structural power.

To conclude, share ownership is the tangible voting rights an individual can exercise to position him/herself to influence firm decisions. Share ownership forms a basis of power to position oneself within the firm, and provides legitimacy to the CEO. Inside and outside members of the firm, such as other executives and outside board members, may view a CEO with strong ownership ties as a trusted agent for the firm. As argued previously, a CEO with expert or prestige power will gain more structural power due to his or her own abilities, experiences and desires. However, a CEO will seek to strengthen the power gained through other means by utilizing and drawing upon the additional powers of ownership.

Hypothesis 8a: The effects of education level of the CEO on structural power are contingent on ownership power such that the CEO's education level will have more effect on structural power for CEOs with greater ownership.

Hypothesis 8b: The effects of length of tenure as a CEO on structural power are contingent on ownership power such that the CEO's length of tenure as a CEO will have more effect on structural power for CEOs with greater ownership.

Hypothesis 8c: The effects of length of tenure with a firm on structural power are contingent on ownership power such that the CEO's organizational tenure will have more effect on structural power for CEOs with greater ownership.

Hypothesis 9a: The effects of elite education obtained by the CEO on structural power are contingent on ownership power such that the CEO's elite education will have more effect on structural power for CEOs with greater ownership.

Hypothesis 9b: The effects of number of directorships held by a CEO on structural power are contingent on ownership power such that the number of directorships held by the CEO will have more effect on structural power for CEOs with greater ownership.

Hypothesis 9c: The effects of the CEO as the founder of the firm on structural power are contingent on ownership power such that founder status will have more effect on structural power for CEOs with greater ownership.

The Effects of Structural Power on Strategic Choice

To date, most structural power research has focused on CEO duality. There has only been one empirical study designed to determine the explanatory significance of structural power in a range of high profile positions. Finkelstein (1992) designed his study to determine the predictability of the various dimensions of executive powers and to ascertain whether or not structural power (number of titles) would predict organizational outcomes, such as acquisitions. I take the broader view of CEO power by examining not only the traditional dual role of CEO/chairperson, but also other forms of executive power, such as president or chief operating officer or other important organizational titles.

While the effects of CEO duality on major constructs such as firm performance appear mixed (Boyd, 1995), CEO duality seems to affect organizational strategic decisions. For example, a study performed by Mallette and Fowler (1992) examining

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U.S. public firms found that firms with CEO duality were more likely to adopt a "poison pill" than firms with a separation between the CEO and board chairperson. Others have found an association between CEO duality and corporate diversification (Zantout & O'Reilly, 1996). Pollock, Fischer, and Wade (2002) found that firms with CEO duality were more likely to have increased option pricing than firms whose CEOs did not hold the chair position, thus benefiting executives with options. Magnan, St-Onge and Calloc'h (1999) found that CEO duality was significantly related to CEO compensation. Finally, Hayward and Hambrick (1997) found that firms with CEO duality paid greater takeover premiums during acquisitions than firms with separate CEO/chair positions. Therefore, CEO duality is seen as an indictor of power that can influence important corporate decisions (Sridharan & St. John, 1998).

Besides the power that is associated with the board chair position, there are other important and structurally powerful positions, such as the president (Combs & Skills, 2002) or the chief operating officer (Finkelstein & Hambrick, 1996). Child (1972) suggests that those with high structural power will have more influence on decision-making. Therefore, CEOs will increase their power by obtaining further high-profile positions within the firm. With the additional concentration of power gained from multiple titles, CEOs could influence the make-up of the board, while increasing information asymmetry to create less effective board monitoring, which could lead the CEO to engage in strategic choices that may not be in the best interest of the firm (Cole, McWilliams, & Sen, 2001; Tosi et al., 2000).

Diversification is one strategic choice in particular that would provide the CEO with substantial benefits. Top executives can diversify their firms in either a related or

unrelated manner (Palepu, 1985). Related diversification strategies have become popular because of the value created when firms increase or extend their resource base, thus gaining economies of scope (Capon, Hulbert, Farley, & Martin, 1988). Unrelated diversification strategies focus not on synergistic effects (Palepu, 1985) but on exploiting untapped markets, rescuing declining firms, or financial risk reduction (Eisenmann, 2002). Each diversification strategy can create value (Capon et al., 1988). Yet, studies on diversification have shown that the benefits gained from diverse units decrease as the firm's operations become more complex (Palich, Cardinal, & Miller, 2000). Therefore, there has been a reduction in these conglomerate-type organizational structures (Eisenmann, 2002).

From an agency perspective, executives would desire their firms to engage in diversification strategies to reduce management employment risk (Amihud & Lev, 1981; Zajac & Westphal, 1996). From a managerialist perspective, CEOs would employ these strategies to increase firm size, and thus obtain greater compensation (Zajac & Westphal, 1996). Both diversification strategies (related and unrelated) necessitate a CEO with the ability to command a more complicated organization, and require a CEO with a broader knowledge and higher skills than a CEO overseeing a less complex organization (Finkelstein & Boyd, 1998). Thus, both related and unrelated diversification strategies would lead to higher salaries and greater prestige. Besides the necessary abilities of the CEO to run this complex organization, the more diversified the firm, the more potential for information asymmetry between top management and the shareholders, thus increasing the chance for agency costs and CEO power abuse (Elloumi & Gueyie, 2001). This increase in organizational complexity provides the top executives an opportunity to

take advantage of firms with multiple strategic business units by making self-interested decisions (Tosi & Gomez-Mejia, 1989; Westphal & Zajac, 1997). Others have suggested that diversified firms can be influenced by top executives who use "information overload" that can create deceit within the lower ranks of management (Hoskisson, Hitt, & Hill, 1991). There is the possibility for even greater information asymmetry in diversified firms that are led by CEOs with multiple positions, since these powerful leaders would be privy to information that may not reach the corporate board. Thus, the risk of self-serving decisions in these complex firms could be particularly salient with CEOs who have the greater structural power and authority of additional upper executive titles. Therefore, from both agency theory and managerialist perspectives, structurally powerful CEOs will engage in diversified strategies in order to create a non-transparent corporation so they can more easily pursue personal agendas, such as increased compensation or decreased employment risk.

In addition to diversification strategies, a CEO may choose to avoid activities deemed as risky from an employment perspective, such as research and development (R&D) initiatives, since the benefits of these decisions may not be financially rewarding to the CEO in the short term (Carpenter, 2000). Previous research has shown that the failure rate in investment strategies such as R&D could be as high as eighty percent (Hill & Snell, 1989). Yet, scholars have theorized that R&D investments play a critical role in determining a firm's productivity growth (Long & Ravenscraft, 1993) and innovation (Hill & Snell, 1989). Agency theorists suggest that in employee-managed firms, top executives are risk-averse and thus will seek to maintain short run profits at the expense of strategies that have elements of risk but would likely benefit the firm on a long-term

basis (Eisenmann, 2002). For example, Hill and Snell (1988) found a positive relationship between greater CEO ownership of the firm and investment in research and development. Thus, CEOs with a long-term interest in the firm were more likely to engage their firms in R&D. These types of strategies bring variability and uncertainty to cash flow management, and are thus a risk to executives that seek to maximize short-term profits (Ryan & Wiggins, 2002). While there are few studies that have a design that incorporates the CEO's influence on R&D investments, existing studies do support that executives risk personal benefits such as higher compensation if they pursue in intense research and development (Barkema & Gomez-Mejia, 1998; Ryan & Wiggins, 2002). Balkin, Markman and Gomez-Mejia (2000) state, for example, that in some industries, CEOs were not rewarded for engaging in intense R&D strategies, and thus risked detrimental effects on compensation if these strategies failed to benefit the firm in the short term.

Thus, from both agency and managerialist perspectives, CEOs with structural power will select strategies that are designed to minimize risks associated with their personal interests, such as their employment and compensation packages. By engaging in diversification, a CEO can decrease employment risk while increasing his or her compensation. In fact, some researchers argue that since CEOs have limited resources within the firm, these executives divert resources from high risk (high failure) strategies, such as investments in research and development, to lower risk strategies, such as diversification (Hill & Snell, 1989). By limiting personal risk investments, such as R&D, the CEO can continue the status quo (Carpenter, 2000). Thus, CEOs with more structural

power will implement strategies that minimize their personal risk while maximizing their personal wealth.

Hypothesis 10a: Structural power will have a positive effect on diversification.

Hypothesis 10b: Structural power will have a negative effect on research and development investments.

Interaction Effects of Structural Power and Board Independence on Strategic Choice

I argue that the effects of CEO power on a firm's strategic choices will depend on certain governance factors. An important research question to be addressed is whether there are adequate governance mechanisms in place to ensure that CEOs do not unfairly take advantage of their structural power to pursue strategic choices that create a more complex diversified organization or to reduce investments in R&D in order to minimize the associated personal risks.

As mentioned previously, from an agency or managerialist perspective, an executive has self-interest biases that could cause them to pursue diversification strategies to reduce their employment risk, increase status and compensation (Zajac & Westphal, 1996), or reduce R&D expenditures to lessen risk of failure in such investments (Hill, Hitt, & Hoskisson, 1988). There is evidence that CEO self-interest biases may promote strategic choices that may not be beneficial to organizations. Hill and Snell (1988) found that when stockholders dominated the corporation, business strategies generally focused on building wealth (i.e., innovation and research and development). When corporations were dominated by executives, however, strategies

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tended to center on issues such as employment security. Recent analyses by Amihud and Lev (1999) and Denis, Denis, and Sarin (1999) confirm Amihud and Lev's (1981) original agency cost perspective that owner-dominated firms were less likely to engage in unrelated diversification strategies than employee-dominated firms. Although researchers such as Lane, Cannella, and Lubatkin (1998) downplay the explanatory power of agency theory in strategic management, they do agree that top executives will carry some biases or self-interests into the realm of corporate decision-making.

Given the self-interest biases of the CEO, the firm must ensure that it has adequate governance mechanisms to minimize these biases. The board of directors is an important governance body that is in place to ensure that strategic choices adopted by management are beneficial to the shareholders (Fama & Jensen, 1983). The relationship between boards of directors and organizational outcomes, such as firm performance, has been extensively researched (Pearce & Zahra, 1992). Yet, the consensus of tenable relationships between board effects on firm performance is mixed (Dalton et al., 1998). Dalton and colleagues do not dismiss a possible link between board composition and firm performance; rather, they advocate a finer-grained approach, such as looking at subcommittees' influence on organizations. Because of the difficulty in establishing a direct relationship between board composition and firm performance, I will examine the influence board strength can have on the CEO's power to pursue antecedents of performance, namely business strategy.

There is support for the merit of independent board members in firms, particularly firms that have powerful executives. In a study on U.S. bank holding companies, strong boards were given higher monitoring potential when firms had dominant top managers

(Rediker & Seth, 1995). Moreover, Judge and Zeithaml (1992) found a positive relationship between boards that were dominated by outside members and overall board involvement in corporate decision-making. In addition, others have shown that markets have a positive reaction to the announcement of poison pills when there is a good representation of outside directors (Brickely, Coles, & Terry, 1994). The fact that the stock market would act positively to takeovers shows the trust shareholders have in outside directors (Davis, 1991), which is highlighted by the fact that outside directors are more often appointed to organizations that have shown poor financial performance (Hermalin & Weisbach, 1988). Thus, outside board members are seen as important governance bodies.

To date, governance mechanisms such as boards of directors have been shown to affect some organizational outcomes. Hill and Snell (1988) found that the ratio of outside board members to total board members was positively associated with board involvement in restructuring. Evidence suggests that a greater proportion of outsiders on the board is associated with an increased likelihood that the board will replace the CEO after a period of poor corporate performance (Newman & Moses, 1999). Cannella and Shen (2001) showed that under conditions of low performance, firms with stronger boards were less likely to follow heir apparent promotions. Furthermore, Zantout and O'Reilly-Allen (1996) examined 102 takeovers to find that the probability of engaging in conglomerate diversification strategies decreased as the ratio of outside board members increased. However, there appears to be no study that has examined the effects of a vigilant board on a structurally powerful CEO in relation to strategic choices such as diversification or R&D. In Zantout and O'Reilly-Allen's study, their focus was not on

executive power per se, but on the composition of boards in corporations engaging in conglomerate strategies versus corporations that did not engage in such strategies.

As mentioned previously, powerful CEOs may want to engage in complex diversification strategies and avoid risky strategies such as R&D investments. Yet, directors have a duty to ensure that executive interests are aligned with shareholders interests. Outside, more vigilant directors are more apt to challenge strategic choices that are not conducive to the long-term benefit of the firm. With the vigilance and authority given to directors to ratify strategic choices, a powerful CEO's influence will likely be diminished, and thus unwise strategic choices will be minimized.

Hypothesis 11a: The effects of structural power on diversification are contingent on board independence such that powerful CEOs will lead their firms to fewer diversification strategies when firms have greater board independence.

Hypothesis 11b: The effects of structural power on diversification are contingent on board independence such that powerful CEOs will lead their firm to spend more on research and development investments when firms have greater board independence.

Structural Power as a Mediator

Child (1972) argues that CEO power is a central predictor of strategic choice. Finkelstein (1992) and others have provided empirical support that executive power is associated with some forms of strategic choice. In his study, Finkelstein (1992) found that both structural power and prestige power were important predictors of strategic acquisitions (diversification). Finkelstein and Hambrick (1990) found CEO tenure was

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positively related to strategic choices such as imitating other firm strategies or incorporating risk-averse strategies. Hambrick and Mason (1984) developed a model that highlights the effects of top executives on strategic choices such as diversification and innovation, and discovered that an executive's functional experiences, tenure and education positively effected the strategic choices of a firm such as product innovation, acquisitions and unrelated diversification. Michel and Hambrick (1992) found that executive tenure was associated with firm diversification. Finally, Wiersema and Bantel (1992) observed that executive tenure and educational level were positively related to changes in diversification.

Other researchers have incorporated CEO power variables to provide empirical support that certain powers held by the CEO positively effect firm performance. Daily and Johnson (1997) found that number of directorships, founder status and education level were positively related to firm performance. Others have examined the effects that elite education and organizational tenure of executives can have on firm performance to find a positive relationship (Hitt et al., 2001).

All these studies follow Finkelstein's (1992) basic design that executive power is multi-faceted, and that specific forms of power can directly affect strategic management topics such as strategic choice and firm performance. These designs treat the dimensions of power as same level variables without examining both the indirect and direct effects these variables can have on strategic choice. I argue that it is extremely important to examine not only the direct effects of multi-dimensions of CEO power, but also study the indirect effects and interaction of these dimensions. As discussed previously, a CEO will attain more structural power due to his/her abilities, experiences, and desires. With this

increased structural power, the top executive has decreased the likelihood of confrontations due to the increased legitimate and formal power, if the CEO is also the president and chair. If the CEO has only one title (CEO), then there will be arguably more confrontations and power struggles between the CEO and other executives who also have substantial power, such as the chairperson of the board and president. Less confrontations and power struggles will lead to more CEO influence on important strategic decisions such as diversification or investment in R & D. I argue that from a theoretical basis, the CEO will leverage the possessed informal powers in order to gain more formal power, and in turn become more influential in determining the firm's strategic choices. This increased influence is due to the decrease of other executives who would have filled those responsibilities (i.e., president or chairperson) and the increase of authority and responsibilities in the decision making of the firm's strategic choices. Thus, expert and prestige power will indirectly affect strategic choice through their effects on structural power. In other words, both types of informal power will lead to increases in structural power and will provide the CEO with legitimate authority to influence corporate decisions such as strategic choice. Therefore, I hypothesize that:

Hypothesis 12a: The effects of the CEO's education level on diversification are mediated by structural power.

Hypothesis 12b: The effects of tenure as a CEO on diversification are mediated by structural power.

Hypothesis 12c: The effects of the CEO's organizational tenure on diversification are mediated by structural power.

Hypothesis 12d: The effects of the CEO's elite education on diversification are mediated by structural power.

Hypothesis 12e: The effects of the number of directorships held by a CEO on diversification are mediated by structural power.

Hypothesis 12f: The effects of founder status on diversification are mediated by structural power.

Hypothesis 13a: The effects of the CEO's education level on R&D investments are mediated by structural power.

Hypothesis 13b: The effects of tenure as the CEO on R&D investments are mediated by structural power.

Hypothesis 13c: The effects of the CEO's organizational tenure on R&D investments are mediated by structural power.

Hypothesis 13d: The effects of elite education on R&D investments are mediated by structural power.

Hypothesis 13e: The effects of the number of directorships held by a CEO on R&D investments are mediated by structural power.

Hypothesis 13f: The effects of founder status on R&D investments are mediated by structural power.

Methodology

Sample

To test the above hypotheses, data were collected from large public companies. The reasons for the choice of this sample are fourfold. First, the data necessary for this

dissertation are readily available in various sources since these corporations are public entities, and, thus provide sensitive information, such as financial data that would be otherwise less available from private firms. Second, Finkelstein and Hambrick (1996) argue that gathering executive power data via surveys or interviews is highly sensitive and difficult to collect, and that primary data on executive power has experienced problems such as content and convergent validity. Third, Hoskisson and Turk (1990) argue that there is a greater likelihood that larger firms will engage in diversification strategies (a dependent variable) than smaller firms; thus, public firms, which are generally large corporations, would likely provide data with a wider variety of diversification strategies than smaller, private companies. Fourth, archival data from the typical executive databases, such as Compustat and Execucomp have been shown to be highly reliable and valid measures (Finkelstein & Hambrick, 1996). Compustat, for example, provides an objective system of categorizing that allows managers to determine appropriate business segments in which to categorize these organizations (Comment & Jarrell, 1995).

Recently, the average archival sample size for executive research was 152 (Finkelstein & Hambrick, 1996). I randomly selected 300 companies. There are many reasons for this larger sample. First, Joreskog and Sorbom (1993) suggest the following equation to determine the minimum sample, n (n-1)/2, where n = number of variables. The number of variables in this design is 13, with a minimum suggested sample of 78; thus a 300 sample exceeds the suggested minimum. Second, a larger sample size will help minimize departures from normality (Hair, Anderson, Tatham, & Black, 1998). Third, a larger sample means more statistical power. Statistical power, or the probability

of correctly rejecting a null hypothesis, should be of prime concern for researchers. In fact, Cohen (1992) suggests that a major concern in management research is the failure to incorporate power analysis in research designs. Although sample size or n is only one parameter of statistical power, obtaining a large sample size is the goal of this project. It should be noted however, that the larger the sample, the higher the probability of nonsampling errors, so there is a point of marginal utility, since a large sample may provide support for statistical significance but be void of practical significance.

Data Collection

The design incorporates secondary data. Compustat provides information for all publicly traded companies and is a main source of data collection. Another source utilized is corporation proxy statements that must meet stringent governmental guidelines, since this publicly available information must be accurate and reliable. The Execucomp database is another well-used archival source that is incorporated in the design. In addition, Fortune.com has a website that provides useful public information, which is also utilized.

Measures

Independent Variables

Expert Power – Expert power is based on an executive's ability to deal with industry factors and contribute to the organization's success. Three items are used to tap into this construct, namely, the CEO's tenure as a CEO (Combs & Skills, 2003), the CEO's tenure with the firm in any capacity, and the CEO's level of education (Hitt et al., 2001). Buchholtz, Young, and Powell (1988) argue that the CEO accumulates important

knowledge of the firm's activities that provides him or her with expertise. In addition, a CEO increases in expert power as he/she gains "personal mystique" and loyalty from others (Pfeffer, 1981). CEO/organizational tenure is measured in two ways: the number of years the executive has been the CEO and the number of years the executive has been with the firm. Literature provides strong evidence that education is related to abilities (Becker, 1993), and is an important indicator of abilities (Miller & Wiseman, 2001). The level of education is measured by the number of years of college education (i.e., 2 years for a diploma, 4 years for an undergraduate degree, 2 years for a master's degree, 3 years for a juris doctorate, and 5 years for a doctor of philosophy). CEO/organizational tenure and level of education were collected from the Fortune.com website, Execucomp and proxy statements.

Prestige Power – Prestige power is based on an executive's reputation in the institutional environment and among stakeholders (Finkelstein, 1992). Three items will be used for this power dimension—elite education, corporate directorships on which the CEO serves and founder status (Finkelstein, 1992; Daily & Johnson, 1997). Elite education is an important factor, which adds legitimacy and prestige to the firm (Daily & Johnson, 1997). Elite education is measured by determining whether the CEO attended a high-status school, according to the listing of prestigious schools provided by Finkelstein (1992). Following Finkelstein (1992), this variable is measured as 1 if the CEO had no college degree; 2 if no degree(s) was/were elite; 3 if one undergraduate or graduate degree, but not both, were elite; and 4 if both undergraduate and graduate degrees were elite. However, I dropped a firm if the CEO had no college degree (i.e., 1 in the elite education category and 0 in the level of education category) due to the problems of correlating these

two variables. In addition to elite education, participation in corporate boards provides prestige to CEOs through the connections and knowledge gained from external sources (Useem, 1979; Pennings, 1980). This variable is measured by the number of for-profit boards on which the CEO serves. Founder status is the indication of attachment a CEO may have to the firm and the prestige associated with that position (Nelson, 2003). The founder can become the focal point of the firm; someone that is influential in defining the vision and mission of the firm (Vesper, 1996; Gimeno et al., 1997). Thus, such influence is defined as more informal than the traditional formal power, since founder influence is not directly related to a CEO's formal position within the firm such as ownership (voting) and structural (legitimate) power. This variable is categorical and measured as 0 if the CEO is not the founder and 1 if the CEO is the founder of the firm (Finkelstein, 1992; Daily & Johnson, 1997). Elite education, corporate directorship and founder status information were collected through Fortune.com and proxy statements.

Ownership Power – Ownership power is based on an executive's capacity as an agent acting on behalf of shareholders (Finkelstein, 1992). One item will be used to represent this construct, namely percentage of the firm's outstanding shares owned by the CEO (Finkelstein, 1992). CEO stockholdings, an indication of formal power, is the physical ownership that CEOs may use to influence organizational matters. This measure is the percentage of CEOs' shares as compared to the total outstanding shares (Daily & Johnson, 1997). Stock ownership information was collected from ExecuComp.

Board Independence – One item is used as an indicator of board independence: percentage of independent board members. Percentage of independent board members is

used less frequently as an indicator for board independence than percentage of outside board members. The former, researchers argue, has fewer ties to the CEO since independent board members are not appointed by the CEO (Daily & Johnson, 1997; Wade, O'Reilly, & Chandratat, 1990). This measure will be collected by dividing the number of outside board members appointed *before* the CEO became the top executive by the total number of directors. This variable will be collected from the corporations' proxy statements.

Dependent Variables

Structural Power – Structural power is based on formal organizational structure and hierarchal authority. This measurement, however, is different from Finkelstein's (1992) measurement of structural power, which is operationalized by the number of titles held by the CEO. Finkelstein's (1992) measurement indicates that more executive titles equals greater structural power (Bigley & Wiersema, 2002). I suggest that a CEO could hold two titles, one being the CEO and president, while the other being CEO and chair, yet the latter would arguably have more structural power. The CEO is the most powerful position in the firm (Bigley & Wiersema, 2002). The president, while having many responsibilities concerning the operations of the firm, still reports to the CEO and is usually in line to be the CEO heir (Cannella & Shen, 2001). The chairperson of the board is responsible for organizing and overseeing board meetings, and the hiring or firing of the CEO (Conyon & Peck, 1998); thus, the position of chairperson is independent of the CEO and does not report to the CEO. Therefore, the CEO who is appointed chairperson will have greater responsibilities, authority and independence than the CEO/president. Structural power, then, is measured as follows: 1 if CEO; 2 if CEO and president or

COO; 3 if CEO and chairman; 4 if CEO, president *and* chairman. This variable will be collected from ExecuComp and the corporations' proxy statements.

Strategic Choice

Diversification – There are three measures of diversification, namely related, unrelated, and total diversification. This design will incorporate all three measurements of diversification. To calculate diversification, an entropy measurement will be used that was developed by Palepu (1985). Hoskisson, Hitt, Johnson, and Moesel (1993) tested Palepu's measurement for construct validity and found that it was more appropriate than Rumelt's diversification scale. Rumelt's approach to measurement, which involves classification of strategies, is both time-consuming and potentially subjective (Varadarajan & Ramanujam, 1987). Palepu's measurement provides a continuous, versus dichotomous, variable that supplies a richer, more fine-grained analysis. The basic equation of the entropy measure is

Total diversification $= \Sigma \, P_J \ln (1/P_j)$

where P is defined as the sales attributed to business segment J, and $\ln(1/P_j)$ is the logarithm of the inverse of sales. The analysis used in this dissertation will include the related, unrelated and total diversification indices. To obtain information regarding diversification chosen by a firm, Compustat will be used to obtain a breakdown of sales for each company by industry.

Research and Development Investments – R&D investments play a critical role in determining a firm's productivity (Long & Ravenscraft, 1993). This variable will be

measured using the annual R&D expenditures of the firm divided by total sales (Long & Ravenscraft, 1993). Compustat will be the database used to collect the data.

Control Variables

Control variables incorporate both firm level and CEO related factors, which are relevant for CEO power studies (Finkelstein & Boyd, 1998). The firm level variables include firm size and past firm performance. If past performance is high, it may provide the CEO with greater opportunity to attain more structural power and/or set firm strategic decisions. In general, the CEO is seen as the most influential member of an organization's success or failure (Barkema & Pennings, 1998; Bigley & Wiersema, 2002; Daily & Johnson, 1997). Thus, high performance of a firm is likely seen as an attribution of the CEO design, which could equate to an increase in structural power and a greater influence of the CEO to affect strategic choice. Firm size is measured by the logarithm of sales (Finkelstein & Hambrick, 1989; Geletkanycz, Boyd, & Finkelstein, 2001). The logarithmic of firm size is used to minimize heteroscedasticity (Finkelstein & D'Aveni, 1994). Past firm performance will be measured by return on equity (Daily, Johnson, Ellstrand, & Dalton, 1998; Finkelstein & Boyd, 1998). Board size will be used as a CEO related factor. Board characteristics, such as board size, are important indicators of a firm's passive or vigilant monitoring of the CEO and the other executives (Wright, Kroll, & Elenkov, 2002). Thus, the larger the board, the more difficult it may be for the CEO to pursue his/her agenda.

In some strategic management studies, industry has been shown to be an important control variable. For example, it has been shown to explain considerable variance in some areas such as firm performance (Wernerfelt & Montgomery, 1988;

Miller & Cardinal, 1994). Based on both theoretical and methodology reasoning, however, I have not decided to control for industry. There is no rationale why one industry would have CEOs with greater structural power than other industries. Recent studies that have incorporated power variables have not controlled for industry (Finkelstein, 1992; Daily & Dalton, 1997; Finkelstein & Boyd, 1998). In fact, I did an initial analysis with industry effects on the front half of the model, to find very little effects (i.e., no industry showing significance) and no differences in the interpretation of the results; thus industry effects will not be formally addressed with structural power as the dependent variable since there seems to be little merit in giving up so many degrees of freedom[1]. In addition, there appears to be very little rationale to control for industry based on the second half of the model since the entropy measure already factors in industry related data. Again, I did an initial analysis with industry effects on the second half of the model, to find similar results (i.e., no industry showing significance).

Data Analysis

I seek to examine relationships that are exploratory in nature. There has been *no* study in strategic management that has tested the relationship between expert and prestige power and their effects on CEO structural power. Nor has there been a design structure that incorporates interactions of these CEO powers and governance conditions. With the intent of establishing associations among these various constructs, I will incorporate a

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[1] There are 13 industry dummy variables based on the Standard Industrial Classification Code (SIC) that represents major industries. 1 = Chemical/renewable resources; 2 = Construction; 3 = Food/beverage processing; 4 = Clothing/fabric processing; 5 = Manufacturing of household goods; 6 = Publishing and printing; 7 = Manufacturing of rubber, plastic, glass, concrete and steel; 8 = Manufacturing of equipment/machinery; 9 = Manufacturing of specialty equipment; 10 = Transportation; 11 = Wholesale; 12 = Retail; 13 = Services.

large cross-sectional design. Cross-sectional designs are common in executive compensation literature (Finkelstein & Boyd, 1998; Tosi & Gomez-Mejia, 1989).

Although a longitudinal design may provide stronger support for causal relationships, there are issues that balance the cross-sectional/longitudinal debate. Some of these issues are that this design is very complex and new (in the context of CEO power), and that panel designs incorporate only a few measurement periods. To date, most longitudinal studies include time-series designs with multiple data points ranging from relatively few "persons, objects, or organizations", to panel designs with large samples but only a few data points (Mitchell & James, 2001); a cross-sectional design should provide important knowledge that can be further expanded using more sophisticated designs. Answering questions such as how informal power (expert and prestige) and structural power are associated, and addressing issues such as the role of an independent board in decreasing the likelihood of a CEO attaining other executive titles can provide valuable information for CEO research.

Descriptive Data

I did not create an overall index for each dimension of power (i.e., combining CEO tenure and level of education), as has been done in past designs (See Finkelstein, 1992, Finkelstein & D'Aveni, 1994, and Hitt et. al, 2001). Global measures can make it more difficult to interpret which indicators are contributing to the significance of the model and in which direction (positive or negative) these indicators are influencing the results. I incorporate a more fined-grained approach by testing separately each indicator (i.e., CEO tenure, founder status, etc.). With this design, it is easier to interpret the significance (and direction) of each indicator of informal power.

The first analysis that is performed is the scatter plot comparing the individual independent variables to the dependent variable to determine if there are any potential linear relationships between the independent and dependent variables. Another tool used to determine if there is normality in the variables is the normal P-P plot. A "snake like" pattern would be ideal; if not this pattern, there will be transformations such as the inverse and logarithm approaches. Finally, I prepared another plot comparing studentized residual and standardized predicted value of the dependent variable to ensure that there are no patterns (such as a cone shape or curvilinear) in the plot, and to thus determine homogeneity of variance.

Pearson product-moment correlations were examined to determine the extent to which the independent variables correlate with the dependent variables. This table provides a very general analysis as to the relationship and possible correlation between the variables. This table will also show if there is potential for multicollinearity.

Regression Analysis

To test the front half of the model, with structural power as the dependent variable, ordinal regression will be used as the statistical analysis. Ordinal regression is regression technique that is appropriate when the dependent variable has more than two levels and does not have ratio-scaled (or deemed as continuous) properties (Delios & Beamish, 2001), whereas independent variables can be both continuous and categorical. The dependent variable, structural power, does have some characteristics of a continuous variable in that it there is an order of greater structural power for each level of structural power (i.e., CEO and president has greater structural power than just the CEO) but the difference in the changes of the level of structural power from CEO to CEO and president

versus the changes of the level of structural power from CEO and president to CEO and chairperson would not be not equivalent. Although it would be appealing to use multivariate ordinary least squares (OLS) regression because of its wide use and its relatively easy statistical technique, it is not appropriate given an ordinal dependent variable (Peel, Goode, & Moutinho, 1998). SPSS versions, 10 and greater include a statistical program called polytomous universal model "PLUM", which allows SPSS to examine ordinal dependent variables (DeCarlo, 2003). This design for statistical technique is credited to McCullagh (1980).

The general equation for ordinal regression, using ordered logit procedures is:

$$P(i) = F(\alpha + X' \beta) = 1/1 + e^{-(\alpha + X' \beta)}$$

Where $I = 1, 2, 3, 4$ for the different levels of structural power; α is the intercept term, X' β is the vector of coefficients multiplied by the vector of the variables, and $P(i)$ is the probability of the outcome of i. (Agarwal, Davis, & Ward, 2001). The significance of each level of the dependent is uninteresting but is necessary to calculate the predicted values for the independent variables (See website http://pytheas.ucs.indiana.edu; Bowman & Narayandas, 2001; Delios & Beamish, 2001; Tabachnick & Fidell, 2001). The assumptions are less stringent than for OLS regression particularly concerning the normality and linearity of the predictors (Tabachnick & Fidell, 2001). In addition, I center the means of the independent variables, which is done in order to minimize the effects of multicollinearity (Tabachnick & Fidell, 2001).

To test hypotheses 1 and 2, which examine the effects that expert power and prestige power will have on structural power, the initial step in the ordinal regression analysis is to control for firm size, firm performance and board size. The second step

includes the expert power measures (level of education, CEO tenure, and organizational tenure) and prestige power measures (elite education, founder status, and number of directorships), as well as percentage of ownership and percentage of board members who are independent. Expert and prestige power variables are not global measures but are included in the equations as separate indicators (i.e., CEO tenure, level of education).

Hypotheses 3, 4, 5, 6, 7, 8 and 9 include three moderated models. The moderated regression analysis is used to determine the extent to which a moderator variable changes the relationship between an independent and dependent variable (Aiken & West, 1991). The three models are tested as follows: The first moderated model examines the interaction between education level, CEO tenure and organizational tenure (forms of expert power); and elite education, number of directorships and founder status (forms of prestige power) to determine the effects of such interactions on structural power. The first step in ordinal regression analysis is to control for firm size, firm performance and board size. Second, independent variables (3 expert power measures and 3 prestige power measures) are entered into the equation. Lastly, 9 interaction terms (3 expert power measures * 3 prestige power measures) are factored in. The other two moderated models follow identical steps as the first, only the interactions will be different (3 expert power measures * percentage of independent boards and 3 prestige power measures * percentage of independent boards; 3 expert power measures * percentage of CEO ownership and 3 prestige power measures * percentage of ownership). At each step, the regression coefficients are examined to determine their significance in the equation (Cohen & Cohen, 1983). To determine the statistical significance of moderating effects, ordinal regression does not use the squared multiple correlation coefficient (R^2) but

incorporates the change in chi-square test (Bentler & Bonnett, 1980). To determine if the importance of the individual independent variables to the overall model, the -2LL log likelihood test is performed by determining the degrees of freedom gained from model 1 to model 2 and then comparing the chi square difference of the two models to determine if there is a significant difference. The smaller the -2LL values, the better the model fit (Hair, Anderson, Tatham, & Black, 1998). If the difference of chi-square is at or above the critical value of chi-square (i.e., based on p value of .05, 01, 001) then there is a significant relationship and thus the increase in independent variables are important in the model. If the difference of chi-square is below the critical value of chi-square then there is a non-significant relationship and thus the added independent variables do not add value to the model, which means the more parsimonious model would be best model (DeCarlo, 2003). Also, the strength of association measure that is used is a pseudo r-squared that is similar to r-squared in multiple regression but does not have the same variance interpretation (Tabachnick & Fidell, 2001). The Mcfadden's pseudo r-squared is generally lower than the other measures, Cox and Snell and Nagelkerke. As well, the latter two pseudo r-square measures factor in sample size.

Multiple regression analysis is used to test hypotheses related to the second half of the model, which are 10a and 10b. To test hypotheses 10a and 10b, which examine the effects structural power will have on diversification and R&D investments, the first step in multiple regression analysis is to control for firm size, firm performance and board size, as well as percentage of CEO ownership. Secondly, structural power, as well as percentage of independent directors, is included in the equation to determine if structural power is a predictor of strategic choice (diversification and R&D investments).

Moderated regression is used to test hypotheses 11a and 11b. To test hypothesis 11a, I examine the interaction effects of board independence and structural power on diversification (one form of strategic choice). The first step in multiple regression analysis is to control for firm size, firm performance and board size, as well as percentage of CEO ownership. Second, the independent variable (structural power) is entered into the equation. The third step is the inclusion of the moderator variable (board independence). Fourth, the interaction term (structural power * board independence) is included as part of the equation. At each step, the regression coefficients are examined to determine significance (Cohen & Cohen, 1983). To determine the statistical significance of the moderating effect, the squared multiple correlation coefficient (R^2) from both equations (i.e., equations from step one to step two, from step two to step three and from step three to step four) is an F statistic.

To test hypothesis 11b, I examine the interaction effects of board independence and structural power on R&D investments (one form of strategic choice). The first step in multiple regression analysis is to control for firm size, firm performance and board size. Second, an independent variable (structural power) is entered into the equation. Third, a moderator variable (board independence) is also factored in. Fourth, the interaction term (structural power * board independence) is included as part of the equation. At each step, the regression coefficients are examined to determine significance (Cohen & Cohen, 1983). To determine the statistical significance of the moderating effect, the squared multiple correlation coefficient (R^2) from both equations (i.e., equations from step one to step two, from step two to step three and from step three to step four) is an F statistic.

Mediated Regression

This design includes a mediated regression analysis. A mediated relationship occurs when an independent variable is expected to affect the dependent variable only indirectly through the mediated variable (James & Brett, 1984). Further, a mediated relationship is best performed when there is a case for a strong relationship between the independent and dependent variable (Baron & Kenny, 1986). There is empirical support that informal powers have significant and positive relationships with strategic choice (Finkelstein, 1992; Michel & Hambrick, 1992).

Three conditions must exist to establish mediation: the variation in the independent variable causes significant variation in the predicated variable (a); the variation in the mediator causes significant variation in the dependent variable (b); and when the paths of a and b are controlled for, a is no longer significant.

The equations for mediation are as follows:

Equation 1 = regressing Y on X: $Y = \beta_0 + \beta_1 X + \varepsilon$;

Equation 2 = regressing Z on X: $Z = b_0 + b_1 X + \varepsilon$;

Equation 3 = regressing Y on both X and Z: $Y = \beta_0 + \beta_1 X + \beta_2 + \varepsilon$.

Full mediation occurs when β_2 in equation three is significant and β_1 is not significant, yet in equation one β_1 is significant. When both β_2 and β_1 are significant in equation three, but β_1 in equation three is lower than β_1 in equation one, this is a case of partial mediation. In addition, b_1 in equation two should be significant. Finally, there also has to be a significant change in r-squared and F when compared to equations one and three.

Data Analysis

Data includes 300 companies that were randomly collected from a sample of the Fortune 1,000. However, 30 companies were eliminated from the study since the level of education and the school where education of the CEO was attained was not available for those firms. As well, I eliminated 2 companies since the level of education for the CEO was 0 and elite education was 1 (no college degree); therefore, the sample is 268 firms. My analyses includes three major analyses, one that looks at the front half of the model and then independently examining the second half of the model, which examines the effects of structural power on diversification and R & D investments. Finally, I examine the full model, using mediation analysis.

Initial analysis of the data included scatter plots and normal P-P plots as well as, plus I examined the skewness and kurtosis measures, which are important tools to determine the normality of the data and thus an important step when the goal is for inference (Tabachnick & Fidell, 2001). The analysis of the scatter plot provided very little insight as to linear relationships based on the limited levels of the dependent variable and the fact that in most independent variables had a range that included all levels of structural power (the dependent variable). The normal P-P plot shows the necessary snake-like for all independent continuous variables but one, which was percentage of ownership. The following normal P-P plot shows the skewness of the percentage of ownership data. See Table 1.

Normal P-P Plot of OWNERPER
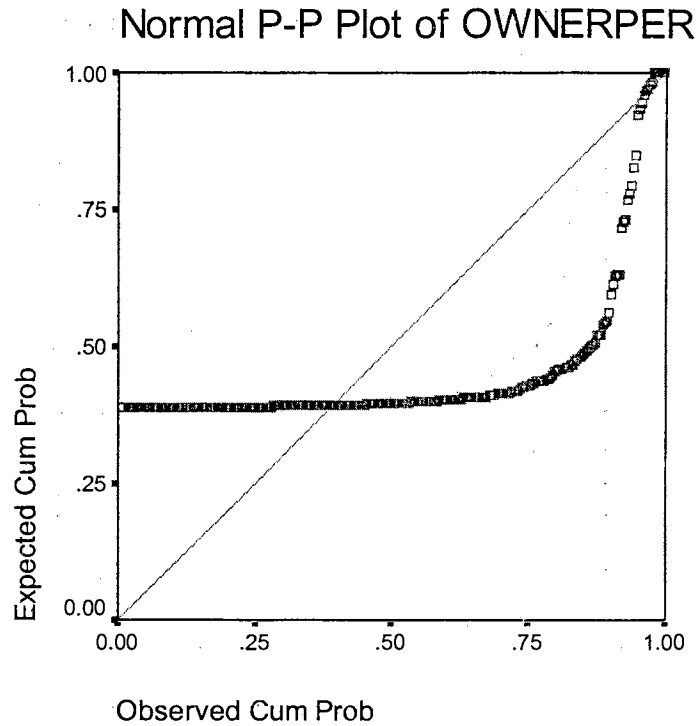
Table 1: Normal P-P Plot – Percentage of Ownership

An examination of the descriptive statistics such as skewness, which shows a statistic of 55.382 and a standard error of .297 and kurtosis, which shows a statistic of 6.694 and a standard error of .149, suggests that there may be concern with this variable. A log-transformation, which can be used to remedy failures of non-normality, although such as technique is not universally accepted (Tabachnick & Fidell, 2001). A natural log transformation provides the following results on the normal P-P plot. See Table 2.

Normal P-P Plot of OWNPTRSF
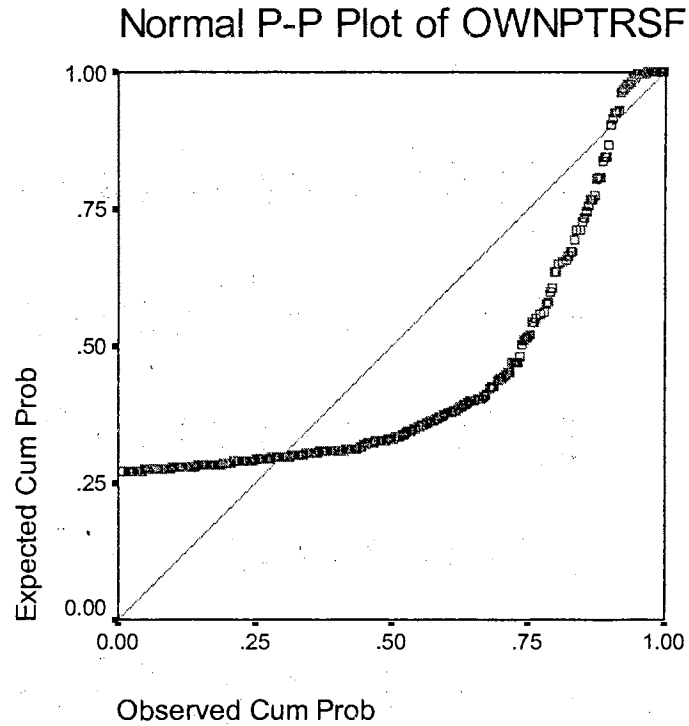
Table 2: Normal P-P Plot – Percentage of Ownership Log Transformation

As should be apparent, this transformation does appear to improve the data, although it still does not appear to follow the ideal snake-like pattern. In addition, the statistics for both skewness (2.557) and kurtosis (6.612) support the conclusion that the transformation has improved the normality of the percentage of ownership variable.

Results

Means, standard deviations, and zero-order correlations are reported in Table 3.

Table 3

Descriptive Statistics and Correlations

	Mean	S.D.	1	2	3	4	5	6	7	8
1. CEO tenure	6.23	7.11	1.00	.421**	-.078	.043	.043	.495**	-.642**	.278**
2. Organizational tenure	17.32	12.11	.421**	1.00	-.113	-.086	.026	.204**	-.228**	.131*
3.Education level	5.59	1.57	-.078	-.113	1.00	.358**	.150*	-.185*	-.002	-.196**
4. Elite education	2.59	.77	.043	-.086	.358**	1.00	.088	.056	-.069	-.080
5. # directorships	1.48	1.29	.043	.026	.150*	.088	1.00	-.155*	-.096	-.096
6. Founder status	.13	.34	.495**	.204**	-.185**	-.056	-.155*	1.00	-.325**	.533**
7. % independent board	.38	.28	-.642**	-.228**	-.002	-.069	-.096	-.325**	1.00	-.208**
8. % ownership	1.71	5.99	.278**	.131*	-.196**	-.080	-.096	.533**	-.208**	1.00
9. Prior year ROE	18.73	86.70	-.050	.010	.038	.079	.023	-.056	.060	-.0.38
10. Logsales	3.78	.56	-.083	.140*	.105	.085	.087	-.065	.142*	-.065
11. # board members	10.63	2.64	-.049	.143*	.101	.112	.090	-.028	.074	-.082
12. Structural power	3.04	.829	.227**	.042	-.006	.136*	.150*	.181**	-.198**	.139*
13. Related diversification	.19	.30	-.127*	-.079	.028	.085	.066	-.064	.139*	-.062
14.Unrelated diversification	.28	.33	-.006	.130*	-.042	.065	.121*	-.047	.092	-.081
15. Total diversification	.47	.43	-.091	.046	-.013	.107	.137*	-.080	.165**	-.105
16. R&D/Sales	.06	.08	.105	-.082	.064	.174*	-.039	.092	-.029	-.042

*p < .05, **p < .01, ***p < .001

Table 3

Descriptive Statistics and Correlations
Cont'd

	Mean	S.D.	9	10	11	12	13	14	15	16
1. CEO tenure			-.050	-.083	-.049	.227**	-.127*	-.006	-.091	.105
2. Organizational tenure			.010	.14*	.143*	.042	-.079	.130*	.046	-.082
3. Education level			.038	.105	.101	-.006	.028	-.042	-.013	.064
4. Elite education			.079	.085	.112	.136*	.085	.065	.107	.174*
5. # directorships			.023	.087	.090	.150*	.066	.121*	.137*	-.039
6. Founder status			-.056	-.065	-.028	.181**	-.064	-.047	-.080	.092
7. % independent board			.060	.142*	.074	-.198**	.139*	.092	.165**	-.029
8. % ownership			-.038	-.065	.082	.139*	-.062	-.081	-.105	-.042
9. Prior year ROE			1.00	.043	.125*	-.021	.015	-.072	-.045	-.032
10. Logsales			.043	1.00	.355**	-.042	.129*	.172**	.219**	-.245**
11. # board members			.125*	.355**	1.00	-.186**	.180**	.008	.129*	-.255**
12. Structural power			-.021	-.042	-.186**	1.00	.069	.191**	.193**	-.006
13. Related diversification			.015	.129*	.180*	.069	1.00	-.048	.644	-.130
14. Unrelated diversification			-.072	.172**	.008	.191**	-.048	1.00	.733**	-.221**
15. Total diversification			-.045	.219**	.129*	.193**	.644**	.733**	1.00	-.257**
16. R&D/Sales			-.032	-.245**	-.255**	-.006	-.130	-.221**	-.257**	1.00

*p < .05, **p < .01, ***p < .001

The examination of the correlations provides some insight in the proposed relationships. First, there does not appear to be any multicollinearity, at least on the surface. Organizational and CEO tenure have a correlation of .421 (p < .01) and founder status and CEO tenure have a correlation of -.495 (p < .01), but these are the highest correlation among the informal and formal (percentage of ownership) power variables. Control variable ROE has very little correlation with any variable in the design while log of sales and number of board members do appear to be relevant variables to be included in the design. In addition, I examined the variance inflation factors (VIF) in the main effects model and found that each variable was well below the problematic level of 10. Structural power, the dependent variable for the front of the model, does have correlations that are statistically significant with many of the independent and moderator variables (i.e., CEO tenure .227, p< .01, elite education; .136, p < .05, founder status .181, p < .01; number of directorships held .15, p < .05; and percentage of independent board members -.198, p < .01). These findings provide initial support for hypotheses 1 and 2, and lend credence to my assertion that some forms of power may beget other forms of power. The moderating variables also have correlations that are statistically significant with some informal power measures (i.e., percentage of independent board members with CEO tenure -.642, p < .001 and with organizational tenure -.228, p < .001). Finally, concerning variables from the front half of the model, CEO ownership appears to have significant correlations with many informal power variables as well as structural power (CEO tenure .278, p < .01; organizational tenure .131, p < .05; founder status .533, p < .01; and structural power .139, p < .05).

An examination of the second half of the model also shows some significant correlations. Structural power is significantly correlated with both unrelated and total diversification (unrelated diversification .191, p < .01 and total diversification .193, p < .01), whereas, R&D/sales has significant correlations with unrelated and total diversification (unrelated diversification -.221, p < .01 and total diversification -.257, p < .01). R&D/sales, however, has very little correlation with structural power.

Analysis of Ordinal Regression

The Log-likelihood (-2LL) test provides information concerning the overall fitness of the model, with a well fitting model having a p-value < .05. The first model to examine is the control variable model. As shown on Table 4, this model does fit well (p < .01). In addition, the number of board members has a significant negative effect (β = -.138, p < .01) on the structural power.

Table 4

Ordinal Regression Results for Hypotheses 1, 2, 3, 4, 5, 6, 7, 8 & 9

Predictors and Controls	DV = Structural Power				
	1	2	3	4	5
Prior year ROE	.000	.000	.000	.000	.000
Logsales	.200	.134	.179	.196	.196
# of board members	-.138**	-.166**	-.172	-.163**	-.161**
% of independent board	-1.12**	-.337	.009	.970	-.350
% of ownership	.035	.028	.027	.017	-.020
CEO tenure		.034	.083*	.159***	.042
Organizational tenure		-.004	.000	-.005	-.005
Educational level		-.021	-.005	-.019	-.013
Elite education		.372*	.309†	.357*	.367*
Founder status		.349	.943†	.609	.344
# directorships		.249**	.260**	.251*	.239
CEO tenure*Elite ed.			-.043		
CEO tenure*# director			-.012		
CEO tenure*Founder			-.105†		
Org. tenure*Elite ed.			.000		
Org. tenure*#director			-.013		

Org. tenure*Founder			-.009		
Education*Elite ed.			.079		
Education*#director			.034		
Education*Founder			.191		
%independent directors*CEO tenure				.430**	
%independent directors*org tenure				-.031	
%independent directors*education level				-.451	
%independent directors*elite education				-1.29*	
%independent directors*founder status				.343	
%independent directors*directorship				.687†	
% ownership *CEO tenure					.003
% ownership *Org. tenure					-.004
% ownership* Education					-.007
% ownership* Elite ed.					.005
% ownership* Founder status					.028
% ownership* #directorships					-.034
-2 Log Likelihood	607.95**	591.23***	576.22***	568.04***	585.45***
Model Chi-square	21.246	37.96	52.973	61.16	43.74
Incremental chi-square		16.72*	15.01†	23.20***	5.78
Pseudo R-squared	.084	.146	.198	.226	.167
Df	5, 263	11, 257	20, 248	17, 251	17, 251

†<. 10, *p<. 05, **p<. 01, ***p<. 001

Model 2 examines hypotheses 1 and 2. The overall -2LL test of model 2 is p < .001 which means the overall model fits well. Moreover, the chi square difference test is significant at p < .05 (incremental $\chi2$ = 16.72, pseudo r-squared = .146). Both elite education (β = .372, p < .05) and number of directorships (β = .249, p < .01) have significant and positive relationships with structural power, which supports hypotheses 2a and 2b. Hypothesis 2c and parts a, b, and c of hypothesis 1 are not supported. Thus, hypothesis 2 is well supported, which suggests that prestige power in an important indicator of structural power. Hypothesis 1 is not supported.

Model 3 examines hypotheses 3, 4 and 5. The overall -2LL test of model 3 is $p <$ .001 which means the overall model fits well; however, the chi square difference test is only moderately significant at $p < .10$ (incremental $\chi^2 = 15.01$, pseudo r-squared $= .198$) and the results do not support the hypotheses. The interaction of CEO tenure and founder status have a marginally significant interaction ($\beta = -.105$, $p < .10$), which suggests that the interaction of expert power and prestige power is marginally significant in predicting structural power.

Hypotheses 6 and 7 are examined in model 4. The overall -2LL test of model 4 is $p < .001$ which means the overall model fits well; the chi square difference test is also significant at $p < .001$ (incremental $\chi^2 = 23.20$, pseudo r-squared $= .226$). There are significant interactions between percentage of independent board members and elite education ($\beta = -1.29$, $p < .05$) and between percentage of independent board members and CEO tenure ($\beta = .43$, $p < .01$) and a moderately significant interaction percentage of independent board members and the number of directorships ($\beta = .687$, $p < .10$), which suggests that an independent board does interact with informal powers and thus has an indirect effect on structural power. Below are three interaction plots. I will start with the interaction of elite education and percentage of independent board members. See Table 5.

Table 5

Interaction Plot – Elite Education and Percentage of Independent Board Members
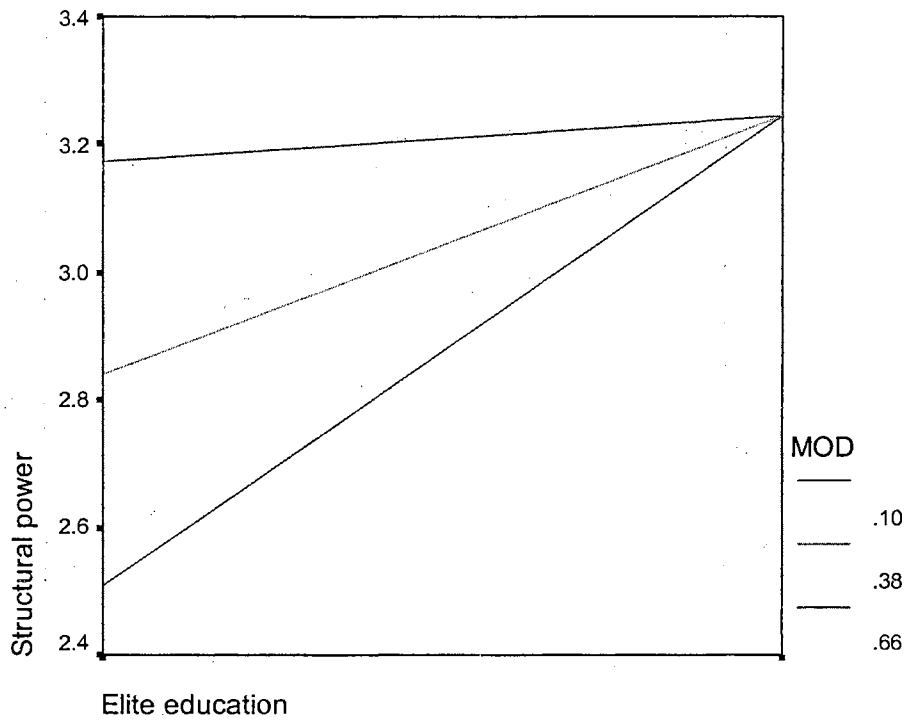
As shown in Table 5 the blue line represents the moderator at high levels of moderation, while the red line represents the moderator at low levels of moderation. At high levels of moderation there is a steeper line than at low levels of moderation. Thus, there is support that independent boards do influence the effects that elite education can have on structural power attained by the CEO. These effects are similar to the other significant moderation relationships. Table 6 represents the interaction of number of directorships and percentage of independent board members.

Table 6

Interaction Plot – Number of Directorships and Percentage of Independent Board Members
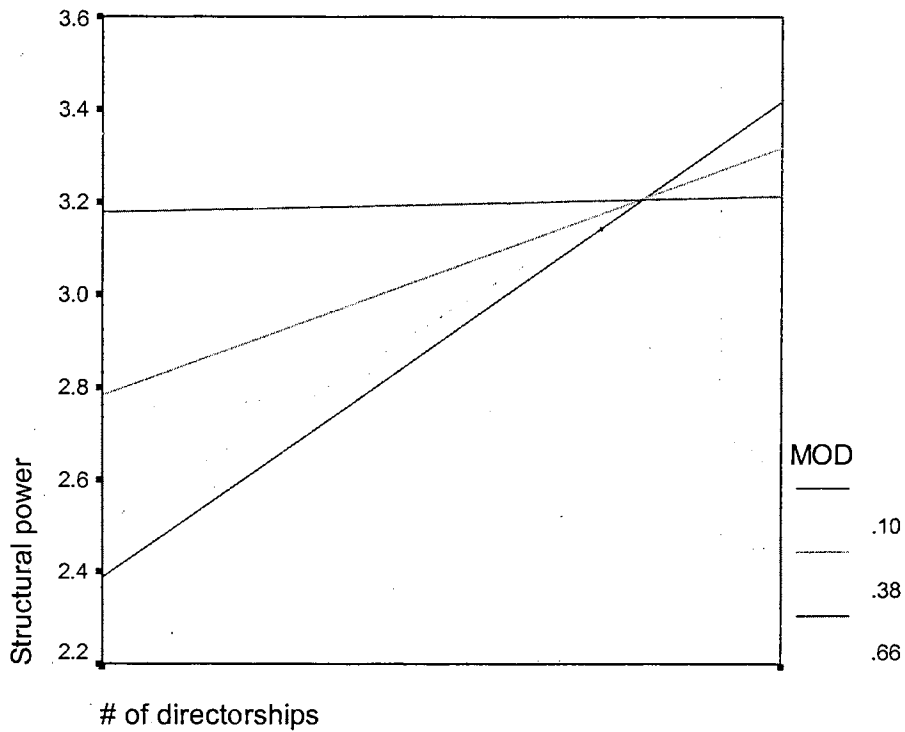
In Table 6, the low level of moderation is basically flat, while the high level of moderation is steep. Therefore, there is strong support that independent boards do influence the effects that the number of directorships have on structural power attained by the CEO. Finally, Table 7 shows the interaction of CEO tenure and percentage of independent board members.

Table 7

Interaction Plots – CEO Tenure and Percentage of Independent Board Members
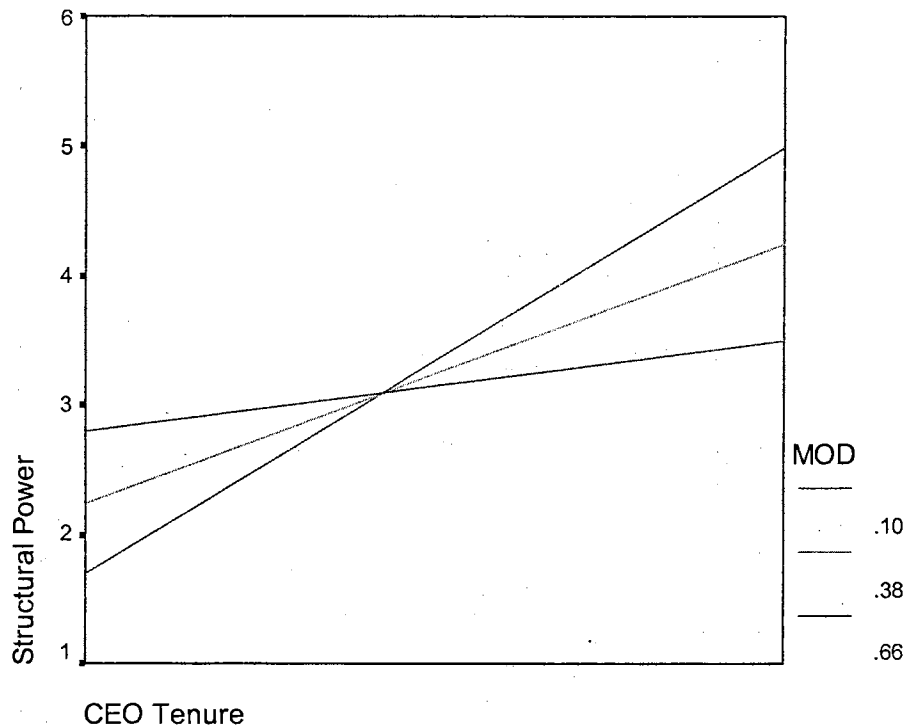
Based on Table 7, there is support that independent boards do influence the effects of CEO tenure on structural power attained by the CEO. The influence, however, is opposite (positive) to what was hypothesized.

Hypotheses 8 and 9 are examined in model 5. The overall -2LL test of model 4 is p < .001 which means the overall model fits well. However, the chi square difference test is non-significant (incremental $\chi2 = 5.78$, pseudo r-squared = .167). In addition, there are no significant interactions with percentage of ownership and the six informal power variables in this model; therefore, both hypotheses are not supported, which suggests that ownership does not have significant interactions with informal powers with respect to influencing structural power. I also examine the interactions with the transformed percentage of ownership and found similar results of non-significant interactions.

Multiple Regression Analysis

Structural Power Effects on Strategic Choice (Diversification Strategies)

To test hypotheses 10a and 11a, I included controls variables, with structural power as the independent variable, and incorporated in separate models the different modes of diversification. I also included the interactional term, percentage of independent board members * structural power. Table 8 provides the results.

Table 8

Multiple Regression Results for Hypotheses 10a & 11a

	DV = Related diversification			DV = Unrelated diversification		
Predictors and Controls	1	2	3	4	5	6
# of board members	.017*	.020**	.021**	-.011	-.005	-.005
ROE	.000	.000	.000	.000	.000	.000
Logsales	.033	.031	.028	.091*	.087*	.087*
% of ownership	.000	-.001	-.001	-.004	-.005	-.005
CEO tenure	-.002	-.002	-.002	.002	.000	.000
Organization tenure	-.002	-.002	-.002	.004*	.004*	.004*
Education level	-.007	-.007	-.009	-.022	-.020	-.020
Elite education	.028	.021	.024	.047†	.035	.035
# of directorships	.014	.009	.010	.031†	.022	.022
Founder status	.007	-.002	-.007	-.012	-.029	-.028
% of independent board	.097	.104	.431	.163†	.175†	.137
Structural power		.046†	.054*		.080**	.079**
% of independent board * Structural power			-.106			.012
F (full model)	1.677†	1.88*	1.868*	2.474**	3.191***	2.935**
R^2	.067	.081	.087	.096	.131	.131
Adj. R^2	.027	.038	.041	.057	.090	.086
Change in R^2		.014	.006		.034	.000
F (change)		3.899*	1.666		10.109**	.018
Df	11, 257	12, 256	13, 255	11, 257	12, 256	13, 255

†<. 10, *p<. 05, **p<. 01, ***p<. 001

Table 8 – cont'd

Multiple Regression Results for Hypotheses 10a & 11a

	DV = Total diversification		
Predictors and Controls	7	8	9
# of board members	.006	.015	.015
ROE	.000	.000	.000
Logsales	.124*	.117*	.115*
% of ownership	-.005	-.006	-.006
CEO tenure	.000	-.002	-.002
Organization tenure	.002	.002	.002
Education level	-.029	-.027	-.029
Elite education	.075*	.056	.059
# of directorships	.045*	.031	.032
Founder status	-.005	-.031	-0.35
% of independent board	.260*	.278	.569
Structural power		.126***	.133***
% of independent board * Structural power			-.094
% of outside board * Structural power			.
F (full model)	3.023**	4.187***	3.911***
R^2	.115	.165	.167
Adj. R^2	.077	.125	.124
Change in R^2		.050	.002
F (change)		15.16***	.665
Df	11, 257	12, 256	13, 255

†<. 10, *p<. 05, **p<. 01, ***p<. 001

Based on the results, hypothesis 10a is supported, while hypothesis 11a is not, which suggests that structural power does affect diversification, particularly unrelated and total diversification, while independent boards do not interact with structural power to affect diversification. The models including the main effects for both unrelated and total diversification are significant (p < .001, change in F score = 10.109, p < .01 for unrelated diversification and change in F score =15.16, p < .001 for total diversification), and each have respectable adjusted r-squares (.09 and .125). Structural power has a

positive relationship on both unrelated diversification (β = .080, p < .01) and total diversification (β = .126, p < .001). Thus, hypothesis 10a was well supported. However, the model that included related diversification was only moderately significant (β = .046, p < .10). Further, the interactional term added little to the overall equation (changes in F score were not significant) for all three models (related, unrelated and total diversification), and the interactional terms were all non-significant. Thus, hypothesis 11a is not supported.

Structural Power and R&D Investments

To test hypotheses 10b and 11b, all control variables were included in the first equation; the second equation also includes structural power; and the last equation adds the interactional term. See Table 9 for the results. In model 2, the regression equation is significant (p < .05) and there is a moderately significant (and negative) relationship between structural power and R & D investments (β = -.015, p < .10). In addition, the change of F is moderately significant (2.796, p < .10). Therefore, hypothesis 10b is moderately supported, which suggests that structural power marginally affects R&D investments. However, the change of F is non-significant (F score = 1.417) and the interactional term in model 3 is non-significant and thus does not support hypothesis 11b, which suggests that independent boards do not interact with structural power to influence R&D investments.

Table 9

Multiple Regression Results for Hypotheses 10b & 11b

Predictors and Controls	DV = R & D / Sales		
	1	2	3
# of board members	-.006*	-.007*	-.008**
ROE	.000	.000	.000
Logsales	-.030*	-.030*	-.029
% of ownership	-.004	-.004	-.004†
CEO tenure	.001	.001	.001
Organization tenure	.000	.000	.000
Education level	.000	.001	.001
Elite education	.019*	.022*	.021*
# of directorships	-.002	-.001	-.002
Founder status	.032	.033	.035
% of independent board	.039	.035	-.076
Structural power		-.015†	-.018†
% of independent board * Structural power			.036
F (full model)	2.264*	2.336*	2.273*
R^2	.16	.177	.186
Adj. R^2	.089	.101	.104
Change in R^2		.018	.009
F (change)		2.796†	1.417
Df	11, 257	12, 256	13, 255

†<. 10, *p<. 05, **p<. 01, ***p<. 001

Mediation Regression

To test hypotheses 12a-f and 13a-f, I examine mediation with the informal powers as the independent variable, structural power as the mediator and strategic choice as the dependent variable. See Table 10 for results. The first step of mediation (model 1) examines the relationship between the independent variables (expert/prestige power) and the dependent variable (strategic choice). The second step (model 2) examines the relationship between the independent variables and the mediator (structural power).

Finally, the third step (model 3) includes independent variables, the mediator variable and

the dependent variable.

Table 10

Multiple and Ordinal Regression Results for Hypotheses 12 & 13

	DV = Related diversification for Models 1 & 3 DV = Structural power for Model 2			DV = Unrelated diversification Models 1 & 3 DV = Structural power for Model 2		
Predictors and Controls	1	2	3	1	2	3
# of board members	.017*	-.166**	.020**	-.011	-.166**	-.005
ROE	.000	.000	.000	.000	.000	.000
Logsales	.033	.134	.031	.091*	.134	.087*
% of ownership	.000	.028	-.001	-.004	.028	-.005
CEO tenure	-.002	.034	-.002	.002	.034	.000
Organization tenure	-.002	-.004	-.002	.004*	-.004	.004*
Education level	-.007	-.021	-.007	-.022	-.021	-.020
Elite education	.028	.372*	.021	.047†	.372*	.035
# of directorships	.014	.249**	.009	.031†	.249**	.022
Founder status	.007	.349	-.002	-.012	.349	-.028
% of independent board	.097	-.337	.104	.163†	-.337	.175†
Structural power			.046†			.080**
F (full model)	1.677†		1.880*	2.474**		3.191***
-2 Log Likelihood		591.23***			591.23***	
Pseudo R²		.146			.146	
R²	.067		.081	.096		.131
Adj. R²	.027		.038	.057		.090
Change in R²			.014			.034
F (Change)			3.899*			10.109**
Df	11, 257	11, 257	12, 256	11, 257	11, 257	12, 256

†<. 10, *p<. 05, **p<. 01, ***p<. 001

Table 10 – cont'd

Multiple and Ordinal Regression Results for Hypotheses 12 & 13

	DV = Related diversification for Models 1 & 3 DV = Structural power for Model 2			DV = Unrelated diversification Models 1 & 3 DV = Structural power for Model 2		
Predictors and Controls	1	2	3	1	2	3
# of board members	.006	-.166**	.015	-.006*	-.166**	-.007*
ROE	.000	.000	.000	.000	.000	.000
Logsales	.124*	.134	.119*	-.030*	.134	-.028*
% of ownership	-.005	.028	-.006	-.004	.028	-.005
CEO tenure	.000	.034	-.002	.001	.034	.001
Organization tenure	.002	-.004	.002	.000	-.004	.000
Education level	-.029	-.021	-.027	.000	-.021	.001
Elite education	.075*	.372*	.056	.045*	.372*	.022*
# of directorships	.045*	.249**	.031	-.002	.249**	-.001
Founder status	-.005	.349	-.031	.032	.349	.033
% of independent board	.260*	-.337	.278*	.039	-.337	.038
Structural power			.126***			-.015†
F (full model)	3.023**		4.187***	2.264*		2.284*
-2 Log Likelihood		591.23***			591.23***	
Pseudo R²		.146			.146	
R²	.115		.165	.160		.177
Adj. R²	.077		.125	.089		.101
Change in R²			.050			.018
F (Change)			15.163***			2.796†
Df	11, 257	11, 257	12, 256	11, 257	11, 257	12, 256

†<. 10, *p<. 05, **p<. 01, ***p<. 001

My examination starts with related diversification as the dependent variable. In the first model, there are no significant relationships with any of the informal power variables; thus there is no mediation when related diversification is the dependent variable. Next, I examine the proposed mediation model with unrelated diversification as the dependent variable. This model provides more promising results. In model 1, organizational tenure has a significant and positive relationship ($\beta = .004$, p < .05) with unrelated diversification, while elite education ($\beta = .047$, p < .10) and number of

directorships ($\beta = .031$, p < .10) have a moderately significant and positive relationship with unrelated diversification. I relaxed the p-values for this analysis and feel comfortable in my decision. In perusing top academic journals, I was able to find numerous articles that designated a p-value of < .10 as significant (usually qualified as moderately significant), and with this designation, the authors were able to conclude that there was a relationship. Some were main effects (see Reuer, 2001 from SMJ; Egri, & Herman, 2000 from AMJ; Carpenter, Sanders, & Gregersen, 2001 from AMJ; Geletkanycz, Boyd, & Finkelstein, 2001 from SMJ; and Autio, Sapienza, & Almeida, 2000 from AMJ) and some were moderated effects (see Simons, Pelled, & Smith, 1999 from AMJ; Lovelace, Shapiro, & Weingart, 2001 from AMJ). Although my justification is not based on the fact that others were allowed to report significant findings based on p-value of < .10, I feel that there are valid reasons for relaxing p-values. This rationale is based on two fronts. First, recent research has suggested that it is more difficult to find effects in studies that do no incorporate experimental designs (McClelland & Judd, 1993). A reoccurring theme in the difficulty of finding statistical significance is that non-experimental studies have more noise, and are thus less sensitive than experiments. Power appears to be much lower in non-experimental studies. Therefore, power is an important matter when dealing with direct effect and moderated models. Second, I feel that I have provided a strong base for both hypotheses through solid literature reviews and sound arguments for the support of this moderated model. Therefore, I feel my findings do contribute important knowledge to management research. However, although I believe that relaxing the p-value in this model is justifiable, caution should be taken in utilizing such an approach.

In model 2, both elite education ($\beta = .372$, p < .05) and number of directorships ($\beta = .249$, p < .01) have significant and positive relationships with structural power. Organizational tenure, however, has a non-significant relationship. Finally, the third model, which includes both informal power variables and structural power, shows that while elite education and number of directorships have non-significant relationships with unrelated diversification, while structural power has a significant and positive relationship ($\beta = .080$, p < .01) with unrelated diversification. In addition, r-squared is .090 and the F change, from model 1 to model 3, is significant (p < .01). Thus, hypotheses 12d and 12e are supported, which suggests that structural power does mediate the effects of elite education and number of directorships on unrelated diversification.

My analysis next includes total diversification as the dependent variable. In model 1, both elite education ($\beta = .075$, p < .05) and number of directorships ($\beta = .045$, p < .05) have significant and positive relationships with total diversification. As well, in model two, both elite education ($\beta = .372$, p < .05) and number of directorships ($\beta = .249$, p < .01) have significant and positive relationships with structural power. Finally, model three, which includes both informal power variables and structural power, shows that elite education and number of directorships have non-significant relationships with total diversification, while structural power has a significant and positive relationship ($\beta = .126$, p < .001) with total diversification. In addition, the adjusted r-squared is .125 and the F change, from model 1 to model 3, is significant (p < .001). Thus, hypotheses 12d and 12e are supported, which suggests that structural power mediates the effects that elite education and number of directorships have on total diversification. A relationship

that I did not propose, but found, was a positive and significant relationship between independent boards and diversification ($\beta = .278$, p < .05).

My final analysis of mediation models includes R&D investments as the dependent variable. In model one, elite education ($\beta = .045$, p < .05) has a significant and positive relationship with R&D investments. As well, in the model two, elite education ($\beta = .372$, p < .05) has a significant and positive relationship with structural power. In model three, elite education ($\beta = .022$, p < .05) is still significant; thus partial mediation is present in this model. Therefore, hypothesis 13 is partially supported.

CHAPTER 4

DISCUSSION, LIMITATIONS, AND FURTHER RESEARCH

Discussion

Many strategic management studies propose that the CEO is the most powerful and influential figure in the firm (Barkema & Pennings, 1998; Bigley & Wiersema, 2002) yet in recent studies there has been less focus on the CEO and more attention on TMT (Daily & Johnson, 1997). Moreover, few strategic management studies that incorporate CEO power variables utilize multiple indicators of power and always assume that all forms of power occur at the same level. I incorporate a more fine-grained examination of executive power and its interrelationships on CEO power and its influences on strategic choice. I proposed and found evidence that the CEO may obtain informal power in order to garner more formal power. In addition, I proposed and found support that structural power is an important determinant of strategic choice. Finally, I found that some forms of informal power indirectly, through structural power, affect a firm's strategic choice.

Informal Powers Beget Formal Powers

There does not exist, in strategic management literature, a CEO power based study that examines the interrelationship of the multiple forms of power, both formal and informal. This dissertation provides insightful results concerning the effects informal power can have on some forms of formal power, the impact governance mechanisms can have on the CEO gaining formal power, and on the CEO influences once these formal powers are obtained.

I argue that those who increase informal powers will desire and eventually attain more formal power. There is strong support that CEO's who have greater informal powers do achieve increases in structural power. First, the number of directorships, or the number of boards a CEO was a member of, was a strong and consistent indictor of informal prestige power that was positively related to structural power. Service on outside boards provides the executive not only with important experiences that may not be available within the firm, but also with influential networks of prestigious contacts. This prestigious network then will likely provide the executive with exposure as an important figure within and outside the firm. This type of services also showcases the CEO as a legitimate business figure who can provide important advice to other firms outside its industry (Daily & Johnson, 1997). Thus, increasing the number of directorships will add significantly to an executive's legitimacy, exposure, and prestigious contacts, thus increasing the CEO's informal power; this type of informal power will provide greater opportunities for CEOs to obtain more formal power than their less "connected" counterparts.

Another strong indicator of informal power that was associated with increases in structural power was elite education. Elite education, a form of prestige power, provides assurances to the firm that the executive, who was educated at a prestigious institution, is a legitimate business figure. Additionally, this executive gains contacts with prestigious academics and practitioners associated with top tiered programs. Increased exposure as a legitimate and well-known business figure is gained from this type of informal power. Therefore, a CEO with an elite education can leverage this form of informal power to attain greater structural power.

Founder status, however, was not found to be an important determinant of structural power. Although the very nature of the position as the founder provides influence and legitimacy from within the firm, the founder's influence in a large, publicly traded firm may dissipate due to both the size and age of the firm (Finkelstein & Hambrick, 1996; Nelson, 2003). Despite these results showing founder status as a non-influential predictor of structural power, there is strong evidence that other forms of prestige power greatly affect how much formal structural power a CEO will attain. Two of the three indicators of prestige had explanatory power. Understanding the role prestige power has on attaining formal power is important in strategic management. As the top manager of the firm gains greater formal power, such as becoming the chairperson and president, the CEO can become more aggressive in the agenda that he/she thinks is best for the firm, or, from an agency perspective, become more entrenched in a self-interest agenda (Pfeffer, 1981). By leveraging the informal power of prestige, the CEO has decreased the power struggles that may occur if this position was independent of the chairperson and the president positions.

Surprisingly, there is no evidence that expert power influences structural power. All three indicators of expert power were very poor predictors of structural power. Education level, which was simply the number of years an executive studied in school, may have provided better results if the type of education was differentiated, such as a master in business versus a master in sociology. Education more relevant to the type of firm (i.e., engineering, computer) may play an important role in determining the expertness a CEO has within that firm.

Organizational tenure also provided poor showings concerning structural power. Although changing how educational level was measured may provide stronger results, measuring organizational tenure is a fairly simple procedure that provides no options for different measures. Obviously, organizational tenure, in itself, does not influence the CEO in gaining more structural power. Organizational tenure may show the level of loyalty and a certain level of competency but may not provide an acceptable basis for expertness at the level of the CEO. In other words, organizational tenure may not be a form of informal power that is considered when a CEO attains additional structural power.

Finally, there was no support that CEO tenure was an important main effect variable that increased structural power. This result is rather surprising since CEO tenure has been influential in many studies examining CEO topics such as CEO compensation (Sanders, Davis-Blake, & Fredrickson, 1995), R&D expenditures (Ryan & Wiggins, 2002) and CEO succession (Cannella & Shen, 2001). However, similar to the measurement of organizational tenure, greater levels of CEO tenure shows a level of loyalty and likely show some level competence, but does not seem to influence a CEO's formal power base. Although past literature shows that tenure with an organization, in the capacity of an employee, may assist promotions in lower levels (Tharenou, 2001), a CEO may require certain circumstances or situations in order to attain more structural power. In fact, CEO tenure does interact with governance conditions to create a strong and positive effect that influences structural power.

Finally, concerning main effects, one interesting finding is that the number of board members has a strong and negative relationship with structural power. This

suggests that with a larger board, the CEO has less influence. Most studies that have examined board of director data have incorporated measurement of board power/independence as percentage of outside board or percentage of independent board members (Dalton, Daily, Ellstrand, & Johnson, 1998) and more recently board tenure (Combs & Skill, 2003). Research on the effects of the number of board members on strategic management topics such as strategic choice, however, is scarce. Yet, in team performance literature, the size of an ideal team that instills a sense of responsibility and accountability (Tschan & Cranach, 1996) is roughly the same size as an average board. Extending this logic of an "ideal team" to a board scenario, accountability would be less with fewer board members because one individual could have more opportunity to pursue a personal agenda. Thus, in larger boards the CEO's influence would arguably be more diluted than if there were fewer members of the board.

Moderation Effects

A real disappointment of my dissertation is that there were no interactions between prestige and expert powers. In contrast, this study does provide support that whether a CEO is new to the position or is seasoned, a CEO has significant opportunities to attain more structural power if he/she has some forms of prestige power.

Ownership power was treated as a moderator variable, since a main focus of this study was to isolate the effects of informal powers on structural power. However, similar to Daily and Johnson's (1997) longitudinal study that showed percentage of ownership was a non-significant variable of firm performance, in our study ownership power had no significant effects either as a control variable or as a moderator on its influence on attaining structural power. One reason that may counter the importance of ownership power is that

CEOs with significant voting power, which accounts for only a few of the CEOs in this sample, may not desire to attain that greater level of structural power, since the they already have a source of very influential formal power, voting power. The majority of CEOs, however, own very few shares in relation to the size of the firm (i.e., the average percentage is 1.7%), and thus ownership does not seem to be powerful enough to be used as leverage in obtaining more formal (structural) power.

Finally, there is some support that governance mechanisms moderate the effect of high CEO informal powers on the CEO's attainment of increased structural power. Independent boards are important factors that can minimize agency costs to a firm (Pearce & Zahra, 1992). In this study, however, there is support that firms with a greater percentage of independent board members will allow CEOs with longer tenure, elite education and CEOs that sit on multiple boards more leniency in attaining structural power. Although these results do not support agency theory, such as the importance of limiting structural power of a CEO with high informal power, it does support the fact that as the CEO gains more experience by way of tenure, exposure by way of multiple directorships, and recognition by way of elite education, these independent board members may feel more comfortable in allowing a loyal and well-respected executive to obtain more structural power. In fact, contrary to the preceding agency arguments, Finkelstein and D'Aveni (1994) state that there are various perspectives of organizational theory that would support top executives' consolidation of power. For example, strategy formation perspective views powerful leaders as vital in order to ensure that strategy formation and implementation are performed in an effective way (Baliga, Moyer, & Rao, 1996). This perspective is particularly important when the firm is in a dynamic

environment: having an unambiguous leadership is essential in the new frontier of a rapidly changing landscape. Finally, Finkelstein and D'Aveni (1994) suggest that having a powerful leader is a strong sign to legitimize the position and thus provide confidence to all stakeholders that there is "a clear sense of direction".

Structural Power Effects on Strategic Choice

Baliga, Moyer, and Rao (1996) state that most CEO duality support comes from anecdotal data, and that the limited CEO duality empirical studies are too simplistic and thus lack important factors such as governance conditions. There is recent support, however, that CEO duality provides the chief executive with power over strategic decisions (Sridharan & St. John, 1998). I explore this relationship further by examining whether with the addition of structural power, such as going from CEO and chairperson to CEO, chairperson, and president, there is a greater influence on strategic choice. I found evidence of this, particularly concerning choices in diversification strategy.

Based on agency theory, CEOs with increased structural power are more likely to steer firms into complex strategies, such as unrelated diversification, for reasons such as increased CEO compensation, decreased employment risk, or decreases in the transparency of an organization in order to further pursue the CEO's personal agenda (Zajac & Westphal, 1996). Data presented provides some interesting results, namely, that the CEO will pursue more complex diversification strategies, such as unrelated diversification rather than related diversification. Yet, there is empirical support that certain types of diversification (unrelated) are not as beneficial, and even detrimental, to a firm's performance.

There are two types of diversification, namely related and unrelated strategies (Palepu, 1985). Related diversification strategies have become popular because of the synergies that are created when products/divisions complement each other. Unrelated diversification strategies focus not on synergies (Palepu, 1985) but more on exploiting untapped markets, rescuing an aligning firm or spreading the business-specific risk across industries (Eisenmann, 2002).

Palich, Cardinal and Miller (2000) argue that as diversification strategies become more complicated, the financial benefits of diversification, such as offsetting losses with gains from other business units, were diminished or even reversed. Hill and Snell (1988) found that unrelated diversification schemes were negatively related to profitability. A major study found that firms pursuing highly unrelated strategies from 1986 to 1991 had posted an average loss of 13% (Berger & Ofek, 1995). Conversely, Varadarajan and Ramanujam (1987) and Palepu (1985) examined both forms of diversification to find that related-diversified firms tended to outperform unrelated-diversified firms. Finally, Palich, Cardinal, and Miller (2000) found that diversification initially proved financially beneficial for corporations, but as the diversification strategies became more elaborate the financial benefits diminished or even reversed (i.e., their model was an inverted U type). Thus, as diversification strategies become multifarious, they become less advantageous to the firm.

As mentioned previously, there are various reasons that a CEO would choose a more complicated, less transparent strategy, even to the detriment of the firm. There is strong evidence that the CEO would more likely choose an unrelated diversification strategy over a related diversification strategy. In addition, the greater the structural

power, the greater the overall (total) diversification strategy that is followed by the firm, which is in keeping with the rationale based on agency theory.

Besides diversification as a strategic choice, the amount of R&D investments is also an important decision for a firm. Unlike complex diversification strategies, research and development investments tend to be more beneficial over time. Scholars have theorized that R&D investments play a critical role in determining a firm's productivity growth (Long & Ravenscraft, 1993), and innovation (Hill & Snell, 1989). Other studies support that R&D expenditures are beneficial to an organization's long-term financial performance (Hill, Hitt, & Hoskisson, 1988). Unfortunately, however, as the pressures from Corporate America focus more on short-term profits, firms are cost cutting programs such as research and development (Detz, 1996). In fact, a study performed by Long and Raven (1989) found that a major reason for the decline of American corporations in relation to foreign companies was the differences in R&D expenditures. Thus, even though studies have shown that R&D investments are beneficial to firm performance, agency theory proposes that CEOs with greater structural power will limit or minimize R&D in order to maintain the short run profits and decrease short term employment risk (Eisenmann, 2000).

The results of this study are not as strong for R&D investments as they are for unrelated and total diversification, but there is moderate support that structural power is negatively related to R&D expenditures. Thus, CEOs with greater structural power are more apt to engage in strategies that decrease R&D investments than CEOs with lower structural power.

There is substantial support that CEO structural power is an important factor in determining some form of strategic choice. I argued that the CEO would desire increased structural power in order to decrease the power struggles from other executives that would otherwise occupy the coveted top executive positions such as president and chairperson. With this consolidation of power, the CEO would be more easily able to pursue agendas, such as an increase in total diversification and a decrease in R&D investments, for the benefit of the executive's personal wealth but likely to the detriment of the firm's long term financial performance.

Moderating Effects of Board Independence and Structural Power on Diversification and R&D Investments

I did not find that an increase of independent board members provides important governance conditions that decrease agency costs. In all four models—related diversification, unrelated diversification, total diversification and R&D investments—there were no significant interactions; thus, independent board members appear to be neutral in support of the strategies that the CEO has crafted and proposed to implement. In fact, from an empirical standpoint, when I included percentage of outside board members in the equation, the interactions were still non-significant. These results show that there is still much work to be performed to determine the importance of these "independent" board members. Do they continue to "rubber stamp" strategies proposed by the firm's top executives or are there still important variables not incorporated in board studies that may provide more insight? Perhaps variables such as board tenure (Combs & Skill, 2003), with a combination of independent board status may provide a better basis for a board member to be more powerful and influential, and thus less likely

to ratify unhealthy strategic choices. Possibly the answer lies in including other executive power indicators such as elite education or number of directorships that may also increase the board members' legitimacy or influence over strategic choices. There is an explicit assumption (and there is some support) that independent/outside board members are an important component mechanism to ensure that the actions of management are aligned with the interests of shareholders; thus the results from this dissertation do not necessarily mean that outside board of directors are unnecessary or unimportant, just that there is need for change in the operationalizing of board independence and/or power.

Mediation – The Full CEO Model

Some promising results from my dissertation are observed when the analysis includes the full model. The summary of the data provides support for a full mediation model. In other words, some forms of informal power (prestige) indirectly affect, through structural power, strategic choice. Tosi, Werner, Katz, and Gomez-Mejia (2000) suggest that in order for research designs to have greater explanatory power of strategic management topics, it is imperative to incorporate not only applicable antecedents, but also relevant moderator and mediator variables. I have strived to incorporate a more complex design that has generated interesting results.

Earlier studies proposed main effects of informal powers on strategic choice and firm performance (Daily & Johnson, 1997; Finkelstein, 1992; Hitt et al., 2001). I propose, however, that these studies view the relationship among the various power dimension as too simplistic and that a CEO with increased informal power will attain greater structural power, in order to have greater formal influence on strategic choice. In

fact, my results show elite education and number of directorships indirectly influence strategic choice through the effects of structural power.

Prior research designs that have examined executive power have taken a simplistic approach, and as a result there have been admonitions for more complex designs (Finkelstein, 1992; Finkelstein & Hambrick, 1996; Daily and Johnson, 1997). I propose that designs that treat the dimensions of CEO power as same level variables and that examine the effects of each dimension on either strategic choice or firm performance would be in the category of a simplistic model. The mediation effects found in this study provide evidence of the importance of examining the interrelationships of these dimensions of executive power and their effects on strategic choice.

Limitations, Future Research and Conclusion

Limitations

Although cross-sectional designs are common in CEO studies (Finkelstein & Boyd, 1998; Tosi & Gomez-Mejia, 1989), a key limitation of this study is the fact that it is cross-sectional. Thus, there may be some argument for reversal causality. For example, some could argue that having multiple titles (i.e., structural power) may influence the appointment to multiple board positions. Yet, I would argue that it is just as valid to propose the reverse scenario, based on both human capital and resource dependence theories. In addition, I randomly sampled a number of firms to determine the structure of board composition, and found that board members have an array of different backgrounds and positions such as consultants, professors, vice presidents, president/CEO, CEO/chairperson/president, and so forth, with the majority of board members not holding multiple titles (CEO/chair and president). Therefore, I argue that

firms will want board members with varying areas of experience and expertise, or in other words variety of backgrounds. Zahra and Pearce (1989) provide an extensive model on the board of directors and its relationship to the organization. The model includes three specific responsibilities of the board: strategy, service, and control. A board consisting of a variety of backgrounds would likely contribute to the successful discharge of all three responsibilities. Therefore, a deciding factor in choosing a board member would likely have more to do with variety than number of titles held. However, when a CEO is appointed to a board, he/she receives recognition from both the business community and within the firm of the CEO. Concerning elite education, there is a strong argument that there would be no reverse causality. In other words, it would be a fairly weak argument that structural power would cause an increase in elite education.

Another limitation may be the exclusion of individual and personality characteristics, such as transformational leadership qualities, that may also provide a basis for informal powers. CEO's with leadership styles such as a transformational or charismatic may leverage this influence to increase structural power. In addition, some CEOs may be more driven to amass structural power than others. Therefore, gathering primary data concerning the type of leader would be helpful, but, as argued by Finkelstein (1992), this type of personal data from CEOs is much more difficult to gather because of the sensitive nature of such information.

Generalizability of findings is another limitation. While this study included a random sample of 300 corporations from the Fortune 1,000, it does not necessarily represent all of the U.S. or foreign firms. Public firms, and especially the 1,000 largest public firms, make up only a small fraction of all the firms in the U.S. Yet, this study focuses on CEO

power and strategic choices such as diversification. Thus, gathering CEO power data from smaller corporations would be important. However, an important outcome in this design is diversification and smaller, private firms may not have the resources to engage in a complex conglomerate type strategy.

A final limitation in this model (and study) is that it ignores the potential processes that occur within the top management team. Trust is a process variable that may likely affect the CEO in attaining more structural power. Trust, which is the "willingness of a party to be vulnerable to the actions of another party based on the expectation that the other will perform a particular action important to the trustor, irrespective of the ability to monitor or control that party" would likely be an important relationship to have between the CEO and others in TMT in order to attain greater formal power. (Mayer, Davis, & Schoorman, 1995, 712).

Future Research

A multiple stream of research from my dissertation would be to examine other effects besides strategic choice that structural power can have on strategic management topics. One study that I plan to pursue is to determine if a CEO that has more structural power, is better able to take advantage of a more complex organization (such as diversification) and abuse potential information asymmetry by garnishing higher compensation despite weak financial performance. CEO compensation research is extensive, but many studies demonstrate that the link between firm performance and CEO compensation is weak (Barkema & Pennings, 1998); therefore, many researchers are offering other explanations for CEO compensation. Tournament theory and social comparison theory are two theoretical frameworks that offer explanations for CEO

compensation. This model of CEO power could also contribute to an understanding of CEO compensation.

Another future study would be similar to the first, in its examination of structural power in the context of a complex organization, but the dependent variable would be modifications to financial statements. The more powerful a CEO, the more often there would be in adjusted financial statements, and this relationship would be strengthen if the firm was more complex. Finally, an interesting study may be to examine a combination of all the CEO powers (formal and informal) to determine if a more powerful CEO would be more apt to greater changes in strategic direction since the more powerful CEO is likely to have greater influence and thus greater control over the changes of the firm.

Conclusion

I incorporate two well-known theories to explain the interrelationships of the dimensions of CEO power. More specifically, there is support that some forms of power (informal - prestige) may promote other forms of power (structural power). Two forms of prestige power, namely number of directorship and elite education, have significant and positive relationships with structural power. I also found support that board independence does moderate the impact of informal power on attaining more structural power.

Besides the importance of informal power on structural power, I proposed and found support that structural power is related to strategic choice, having a positive relationship with diversification and a negative relationship with R&D investments. A finding that makes this relationship more significant is that the full model has mediation effects. Informal power, specifically prestige power, is important and influences strategic

choice but only indirectly through structural power. A major proposition of this dissertation is that of all the dimensions of power, structural power is deemed most important; therefore, those with higher levels of informal power will strive to attain greater structure power in order to have more influence over strategic choices. There is support for this proposition.

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VITA ②

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