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POWER PLAYS: A LONGITUDINAL EXAMINATION OF CEO/BOD POWER CIRCULATION AND ITS IMPACT ON ORGANIZATIONAL PERFORMANCE

BY

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At the end of this journey, I find it fitting to quote the Grateful Dead – "What a long, strange trip it's been!!!" Fortunately, I have benefited from the encouragement and support of several significant groups of people.

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ABSTRACT

This dissertation focuses on CEO and BOD power relationships, examining individual and organizational antecedent and outcome factors impacted by CEO and BOD powers. Four primary research questions are explored, specifically 1) What is the temporal structure of power relationships, and how should these relationships be modeled in empirical study? 2) What is the nature of the dyadic relationship between CEO and BOD power?, 3) Is there a reciprocal relationship between CEO and BOD powers and firm performance?, and 4) What are the primary antecedents of CEO and BOD powers, and how do these antecedents influence CEO and BOD power development? A longitudinal study design is employed to inspect the determinants and consequences of organizational power circulation over time, and polynomial lag regression techniques are employed to explore different relationships within the study model.

The primary goal of this study is to develop a greater understanding of the nature of CEO and BOD power relationships, and to examine their impact on firm performance. A variety of corporate governance theories, including agency, managerial hegemony, resource dependency, and power circulation theories, are utilized to build a contingent model of power and governance. This merging of governance theories offers greater insight into the nature of CEO – BOD power relationships, as well as drivers of power shifts within the firm over time.

The study findings support reciprocity in the relationship between CEO power and firm performance, validating the Daily and Johnson (1997) study results and managerial hegemony theoretical perspectives of governance relationships. The study results did not support a reciprocal relationship between BOD power and performance, with significant findings for the BOD power – performance linkage but insignificant results for the performance – BOD power linkage. In addition, post hoc analysis supports the hypothesized relationship of Strategic Choice mediating the CEO Power – Organizational Performance linkage. The study findings also offer some support for temporal modeling of power antecedent and outcome relationships. Study conclusions, limitations, and directions for future research are also offered for consideration.

CHAPTER 1
DISSERTATION OVERVIEW

"The fundamental concept of social science is power, in the same sense in which energy is the fundamental concept in physics"

Bertrand Russell (1872-1970)

Section 1.1: Introduction

As the public gains more knowledge of questionable accounting practices and illegal business actions taken by major corporations such as Enron, Tyco, WorldCom, and Merrill Lynch, analysts, stockholders, and other firm stakeholders have begun to increasingly question the effectiveness of corporate governance mechanisms of firms worldwide. Central to these governance questions are issues of relative power. Specifically, do Boards of Directors (BODs) have the power, information, and incentive needed to monitor and control the behaviors of Chief Executive Officers (CEOs) and their Top Management Teams (TMTs)?

Corporate governance research has focused on two main groups to set the strategic direction of the firm, those of the CEO-led TMT, and the firm's BOD. Much of the early corporate governance research focused on the CEO, with a view that the CEO has the legitimate authority to set the strategic tone for the organization (Daily & Johnson, 1997; Norburn, 1989). The BOD role, on the other hand, has been primarily defined and empirically studied as a control function. These agency theory-based studies examine the extent to which the BOD monitors and controls managerial decisions and actions to ensure these behaviors serve the best interests of stockholders (Boyd, 1994; Pearce & Zahra, 1991). If managerial performance declines over time, the BOD is also empowered to replace the CEO and TMT members at their discretion.

However, a literature review by Johnson, Daily and Ellstrand (1996) denotes three primary BOD governance functions within organizations: control, service, and resource dependency. The control function entails "directors monitoring managers as fiduciaries of stockholders," the service function involves "advising the CEO and top managers on administrative and other managerial issues, as well as actively initiating and formulating strategy," while the resource dependency role relates to "facilitating the acquisition of resources critical to the firm's success" (Johnson et al., 1996). As a result of these intertwined relationships, in many firms both the CEO and BOD have been granted legitimate power, authority, and accountability to carry out leadership, strategy formulation, and performance monitoring responsibilities (Finkelstein & Hambrick, 1996, Johnson et al., 1996).

A primary purpose of this dissertation project involved extending the prior research of Pearce and Zahra (1991) and Finkelstein (1992) on CEO and BOD power relationships, and CEO and TMT power measurement, respectively. The ultimate goal of this project was to accurately model and test the multi-dimensional nature of relationships between the CEO and BOD, and then understand how these power relationships impact firm performance. Pearce and Zahra (1991) examined the relationship between CEO and BOD powers, and the impact of this relationship on firm performance. The authors developed a 2 X 2 matrix based on CEO/BOD

power relationship strengths, with the main finding being that BOD power is the primary determinant of firm performance. One limitation of this research was associated with data collection constraints. Since the Pearce and Zahra (1991) power data were collected via a survey of corporate CEOs and BOD members in one time period, the study was cross-sectional. Such a design precludes focusing on the dynamic nature of power shifts within corporate governance entities and how changes in power relationships impact firm performance over time. Therefore, a main emphasis of this project involved extending the Pearce and Zahra (1991) study by examining firm power relationships as dynamic processes that change over time.

Finkelstein (1992) developed and validated an objective, relational measure of power between firm CEOs and other TMT members. Subsequent research (Cannella & Shen, 2001; Daily & Johnson, 1997; Finkelstein & D'Aveni, 1994; Haleblian & Finkelstein, 1993) has utilized derivatives of the Finkelstein (1992) power measure to focus specifically on the role of the CEO power influences on firm performance. This study focused on CEO power, exploring TMT power only indirectly as it contributes to the CEO's power, firm strategic choices, and ultimately firm performance. In addition, the Finkelstein (1992) power structure is utilized to develop variables representative of BOD power and CEO/BOD power interdependencies.

This study employed a longitudinal research design with polynomial lag regression data analysis techniques in order to examine the impacts of CEO tenure and prior firm performance on CEO and BOD power, and how the power relationships, in turn, influence future firm performance. The basic premise driving the research project was that power shifts between entities in organizations are dynamic processes that require longitudinal research designs to study. A main assumption pertinent to CEO power in this study was that there are positive relationships between CEO tenure, CEO power, and past firm performance. Based in managerial hegemony theory, the primary BOD-based assumption was that BOD power tends to remain stable or decrease over time, unless strong, organizational-based trigger events (examples of such events include dramatic shifts in firm performance, CEO resignation or death, stakeholder and/or shareholder lawsuits, merger and acquisition engagements, and inappropriate or illegal CEO and/or Top Management Team behavior) force the BOD to take action and assume power (Herman, 1981; Kosnik, 1987; Pfeffer, 1972). As a result, it was posited that CEO and BOD power change at different rates and directions, shift with different organizational trigger events, and that these differential shifts impact the dyadic power relationships and the strategic direction of the firm. As a result, both CEO and BOD power were measured and included in the empirical testing of research models.

Section 1.2: Research Questions

Four primary research questions drive this study:

1. What is the temporal structure of power - performance relationships, and how should these relationships be modeled in empirical study?
2. What is the nature of the dyadic relationship between CEO and BOD power?
3. Are there reciprocal relationships between CEO and BOD powers and firm performance?
4. What are the primary antecedents of CEO and BOD powers, and how do these antecedents influence CEO and BOD power development?

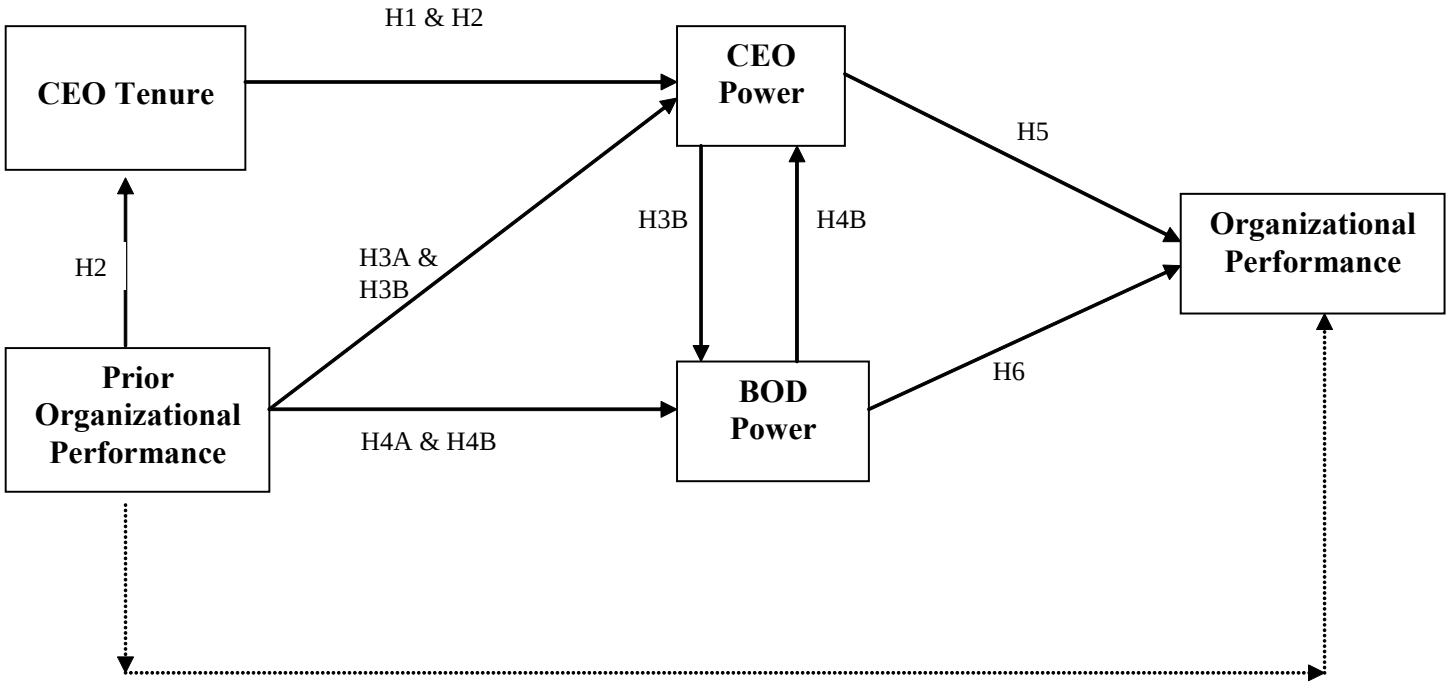


Figure 1.1: A Causal Firm Power – Performance Model*

***Firm Size & Industry Categorizations Will Be Utilized as Control Variables in the Study.**

---------- Refers to an exogenous relationship supported by theory but not directly tested in this study.

Section 1.3: Research Model and Constructs

The theoretical model tested in this study is displayed above. Included below are brief descriptions of the constructs examined in the conceptual model. The first two variables are viewed as primary determinants of CEO Power and BOD Power.

CEO Tenure- CEO Tenure refers to the number of years of service that the CEO has held that position within the organization of interest (Finkelstein & Hambrick, 1996; Hambrick & Fukutomi, 1991; Miller, 1991). Prior conceptual corporate governance studies (Hambrick & Fukutomi, 1991; Miller, 1991) propose a positive relationship between tenure in a leadership position and the power associated with the position, although this relationship has not been a primary focus of empirical investigation.

Prior Organizational Performance- This study posits prior organizational performance as an antecedent variable impacting both CEO and BOD power development and retention. Modeling prior performance as an antecedent to power formation and retention is consistent with Daily and Johnson (1997), who note that "performance was found to be both an antecedent condition and outcome of CEO power" (p. 97). In addition to testing this relationship with a different sample, this study extends the examination of the performance – power relationship by proposing that prior performance also has an indirect impact through CEO tenure on CEO power formation.

CEO Power- Based on the research of Daily and Johnson (1997), Hambrick and Mason (1984), and Harrison, Torres, and Kukalis (1988), the CEO is modeled and examined as the most powerful and dominant individual member of the 20th and 21st-century corporation. This study examines CEO Power from the perspective that as the power of the CEO increases, the CEO's ability to directly influence the strategic direction of the firm also increases (Daily & Johnson, 1997; Finkelstein & Hambrick, 1996). Following prior research, four dimensions of CEO Power are considered in this study, those being structural, ownership, prestige, and expert powers (Daily & Johnson, 1997; Finkelstein, 1992).

BOD Power- Using the multi-dimensional view of BOD responsibilities advanced in Johnson, Daily, and Ellstrand (1996), the BOD Power variable examines power relative to the BOD's ability to fulfill its control, service, and resource dependency responsibilities (Fama, 1980; Johnson, Daily, and Ellstrand, 1996). To maintain theoretical consistency across measures, the dimensions of structural, ownership, prestige, and expert power are employed to examine BOD Power as well.

Organizational Performance- Firm performance serves as the dependent variable of interest in this study. To represent the multi-dimensional dynamics of organizational performance, both accounting and market-based performance measures are employed in this study (Barney, 2002; Daily & Johnson, 1997; Hoskisson, Johnson & Moesel, 1994). Daily and Johnson (1997) note that "reliance on multiple performance measures is important, as no one indicator reasonably captures firm financial performance" (p. 107).

Section 1.4: Research Contributions

This study contributes to the body of knowledge and research in the corporate governance area in a number of ways:

- The dissertation examined the nature of the CEO – BOD power relationship. Again, there are two conflicting streams of corporate governance research in this area. From the agency theory and control perspectives, researchers often imply that CEO - BOD power relationships function as a zero-sum game, where an increase in CEO power leads to a decrease in BOD power, and vice-versa (Fama & Jensen, 1983; Mills, 1959; Zajac & Westphal, 1995). Other organizational researchers assume a positive-sum relationship, maintaining that firm power changes are not interdependent and an increase or decrease of one does not necessarily impact the power of other firm entities (Emerson, 1962; Parsons, 1951, 1956; Pfeffer, 1981; Pfeffer & Salancik, 1978). Most organizational theorists have taken the middle ground, noting that power relationships in organizations can manifest as either zero or positive-sum interactions (Bacharach & Lawler, 1980, 1998). This study modeled and tested CEO – BOD power relationships comprised of both zero and positive sum elements.

- The study used prior research to develop and employ an objective measure of CEO power. Finkelstein (1992) developed a four-dimensional (consisting of expert, ownership, prestige, and structural power elements), 13-item TMT power measure. While Finkelstein (1992) validated a measure for the "consideration of the distribution of power among top managers" (p. 505), the measure has also been employed as a proxy for a CEO power measure in subsequent research (Daily & Johnson, 1997; Finkelstein & D'Aveni, 1994). However, each of these projects utilized a sub-scale of the recommended 13-item measure, and Daily and Johnson (1997) notes that "the dimensions of CEO power included in this study do not constitute constructs of the power dimensions suggested by Finkelstein (1992), nor do they constitute a single construct of CEO power" (p. 112). However, Gove, Larraza, and Boyd (2000) argue that "since significant covariance (exists) among the four power dimensions…subsequent applications of the power model should utilize the model in its entirety" (p. 78). This research project constituted the first full scale examination of the Finkelstein (1992) measure as a proxy for CEO power since its development.

- This research extended prior research to develop objective measures of BOD power and CEO/BOD interdependence. A literature review of the corporate governance literature indicated that little research has been done examining BOD power, especially through the employment of archival power measures. Boyd (1994) employed a multiple-measure representation of BOD control, consisting of the elements of CEO duality, ratio of insiders to total BOD members, board stock ownership, number of directors representing large ownership groups, and level of director compensation. However, as mentioned earlier, theory suggests that the BOD control represents only one of the responsibilities entailed in BOD functions (Johnson, Daily, & Ellstrand, 1996). This research offered an initial attempt at expanding BOD study by separating out the zero and positive sum elements of BOD power and developing a multi-dimensional, archival BOD power measure.

- The project utilized a polynomial lag regression technique to examine the relationship between CEO-BOD power and firm performance. Most of the corporate governance research studying power relationships has employed a cross-sectional design tested over one time period. Exceptions to this argument include Daily and Johnson (1997), which utilized a four-wave survey data collection methodology to examine the CEO power – firm

performance relationship, and Rechner and Dalton (1991), which collected data over a six-year period to examine the CEO duality – firm performance relationship. This project most closely resembled Ocasio (1994), which employed a pooled time-series regression analysis to study the influence of power changes on CEO succession processes. An important premise fueling this project was that power relationships within firms tend to shift over time and context, and thus require a longitudinal research methodology to comprehensively examine. This study represented the initial attempt to model power changes between the CEO and BOD over time via longitudinal examination.

- The study employed polynomial lag regression to model elements of the proposed reciprocal relationship between firm performance and leadership power. Daily and Johnson (1997) tested this premise and found a significant, reciprocal relationship, where "performance was found to be both an antecedent condition and outcome of CEO power" (p. 97). This research re-examined this relationship by employing polynomial lag regression to establish the lag effect pertinent to the CEO tenure - past performance relationship, and then tested the model effect over a 10-year time period.

Section 1.5: Dissertation Outline

This dissertation consists of six chapters. Chapter One provides a general outline of the study, focusing on the research questions addressed and intended theoretical and empirical contributions of the study. Chapter Two is comprised of a theoretical overview of the study, reviewing the major theories employed in the development of the research model for the study. A literature review of relevant theoretical perspectives is also included in this chapter. Chapter Three consists of a literature review and discussion of the research variables employed in this study, and develops the study hypotheses. Chapter Four focuses on methodological issues pertinent to this research, specifically detailing the statistical methods used to explore the research questions, noting the measures employed to represent the research variables, and discusses the criteria selected to set sample parameters. Chapter Five reports the results of the statistical analyses and tests of the hypotheses. Finally, the dissertation concludes with a discussion of the theoretical and practical implications of the study's findings in Chapter Six, along with several suggestions for future research.

CHAPTER 2

THEORETICAL OVERVIEW AND LITERATURE REVIEW

This chapter describes the main corporate governance theories employed to develop the dissertation research model. Governance perspectives such as agency, managerial hegemony, resource dependency, and dominant coalition theories are explored in greater detail in order to establish a theoretical foundation for the study. In addition, a brief history of model relationships not specifically examined in the study hypotheses is included. These perspectives consider governance aspects such as the study of CEO and BOD powers, the role of trigger events in power shifts between the CEO and BOD, the role of strategic choice and managerial discretion in governance, the study of CEO and BOD powers, and the mutual examination of both CEO and BOD powers in organizations.

Section 2.1: Theoretical Overview on Organizational Power and Governance

Before the major governance theories guiding this study are addressed, another primary issue of organization and strategic management research should be discussed. One of the major questions inherent to strategic management deals with strategic choice, primarily addressing the relevance of executive leadership and corporate governance as determinants of organizational performance. If the choices managers make are irrelevant to firm performance over time, then governance issues become largely irrelevant as well. For example, organizational ecology theorists argue that organizational strategic leadership has little or no impact on firm performance, while strategy and organizational behavior researchers and practitioners alike tend to emphasize the importance of strategic choice and leadership in firm performance (Child, 1972; Hannan & Freeman, 1977; Lieberson & O'Connor, 1972; Porter, 1980, Thomas, 1988). A compromise to these conflicting streams seems to have been reached, with researchers agreeing that while the strength of the leadership effect may be tempered by factors such as industry choice, regulatory constraints, and environmental factors such as national economics, corporate governance still often has an influential impact on firm performance. As a result, the strategic choice research has evolved from a debate of environmental versus leadership factors impacting firm performance to an exploration of internal and external conditions that influence effective firm leadership (Day & Lord, 1988; Hambrick & Finkelstein, 1996).

Previous research examining CEO – BOD power relationships and their effects on organizational performance has been grounded in several theoretical streams, each based in examining specific aspects of power relationships between organizational actors. This section starts with a discussion of the power theories and literature in an organizational context, and then proceeds by reviewing the three organizational theories that were the basis for this study.

For the purposes of this paper, a traditional definition of power was adopted, that being "the ability to initiate, constrain, circumscribe, or terminate action either directly or by influence exercised on those with decision-making authority" (Herman, 1981: 17). This definition is consistent with that employed by Pearce and Zahra (1991), focused specifically on CEO – BOD relationships, where power is defined as "the capacity of directors or CEOs to bring about the outcomes they desire through both formal and informal means" (Pearce & Zahra, 1991: 135). Yukl (1989) proposes that power relationships tend to be developed as an interactive function between the personal attributes of a leader/leadership entity and the situational environment in which the entity operates. This principle is reflected in French and Raven's (1959) power

dimensions of reward, coercive, legitimate, expert, and referent powers, which are derived from aspects of personal attributes and situational conditions. Corporate governance and power-based theories maintain that there are explicit and implicit benefits and rewards to be gained from organizational activities and performance, and that firm members controlling organizational processes and/or resource distribution through power and influence tend to be the primary beneficiaries of such benefits and rewards. In an organizational leadership context, there are two parties typically viewed as vying for control over organizational resources and decision-making processes, those being the CEO-led Top Management Team and the Board of Directors.

An examination of the corporate governance literature shows that a multitude of organizational theories have been used to investigate different elements of corporate governance. A literature review by Finkelstein and Hambrick (1996) evaluates the theoretical underpinnings of the 146 corporate governance studies conducted between 1980 and 1994, and notes "that strategic leadership is a broad domain that can be studied in numerous ways." (p. 331-2). The Finkelstein and Hambrick (1996) review found 17 predominate theoretical perspectives utilized in the corporate governance and strategic leadership research, with those of upper echelons theory, agency theory, strategy process perspective, managerial hegemony theory, and managerial fit perspectives being employed most often. Each of the aforementioned theories and perspectives are based on different assumptions, contribute to varying views of power and control within organizations, and therefore lead to different conclusions regarding the distribution and uses of power among organizational leadership entities. This section focuses on the specific theories which tend to address aspects of the CEO - BOD power relationships. In addition, since each of these theories tend to acknowledge the power of the CEO in organizational resource allocation and decision-making processes, the next analysis focuses on theoretical explanations regarding the role of the BOD in CEO – BOD interactions.

The agency theory perspective deals with risk-sharing and monitoring behaviors and attitudes between two organizational entities, labeled as principals and agents. In their relationship, the principal is the risk-bearing entity that designates work and responsibility to an agent, which often has specific knowledge, skills, and abilities that the principal needs to conduct business (Eisenhardt, 1989; Jensen & Meckling, 1976). Agency theory denotes two main problems inherent to this relationship, in that principals and agents typically have different propensities and attitudes towards risk, and that principals often do not possess the means to adequately and accurately monitor agent behavior (Band, 1992).

In a corporate governance framework, organizational shareholders are viewed as principals, with the CEO and TMT members seen as agents. In the governance literature, CEOs and TMTs are posited as being less willing to engage in risk-taking behaviors and more likely to assume a shorter-term performance outlook than their corporate stockholders might desire, primarily due to inconsistencies in executive compensation and punishment strategies (Eisenhardt, 1989; Finkelstein & Hambrick, 1996). Examples of opportunistic behavior that managerial agents might pursue to the detriment of stockholder long-term interests include an excessive use of corporate resources for managerial perks and the adoption of strategies emphasizing short-term performance designed to maximize immediate compensation. In such a context, the shareholders need to develop a system of checks and balances to ensure that the CEO assumes a risk-taking behavior consistent with shareholders' desires, and that CEO and TMT behaviors are monitored to the extent that shareholders are sure that its agents' behaviors are appropriate. Under agency theory principles, a corporate BOD is designed to operate as this

check and balance, by designing executive compensation policies that represent stockholder desires, monitoring executive strategic decision-making processes and behaviors to ensure that they meet stockholder needs, and by making executive hiring and firing decisions (Eisenhardt, 1989; Jensen, & Meckling, 1976). The main assumption driving agency theory is that corporations exist to earn stockholders' dividends on their investments, and that all corporate decision-making and behaviors should reflect this premise. Agency theory tends to view the BOD as a possessor of legitimate power within an organization, since directors are appointed to protect the needs and wishes of firm stockholders from potential contradictory behaviors by the CEO and TMT members (Demsetz & Lehn, 1985).

On the other hand, the managerial hegemony perspective offers a differing view of the CEO – BOD power relationship. Theoretically, managerial hegemony is grounded in similar assumptions to agency theory, by noting the role the BOD plays as a check and balance system for CEO and TMT behaviors. However, the two philosophies are very different in their perspectives of BOD – CEO interactions. Managerial hegemony theory argues that while BODs are designed to protect the interests of organizational stockholders, several different practical circumstances regarding BOD operation and member selection serve to limit the BOD's eventual effectiveness as a control function. Examples of forces that serve to limit BOD activities as a control function include the ongoing trends regarding the dilution of corporate ownership into smaller stockholder blocks, increased CEO duality (a situation where the firm CEO also serves as the Chair of the BOD) in corporations, increased CEO participation in BOD member selection, compensation determination and dismissal, BOD dependence on the CEO and TMT members for accurate and timely information regarding the firm operations and short-term decision-making processes, and increases in multiple BOD member – CEO interlocks (Herman, 1981; Kosnik, 1987; Vance, 1983; Williamson, 1964). Managerial hegemony theorists note that each of these trends serves to increase BOD reliance and dependence on the CEO and TMT for its composition and continued operation, and therefore limits the BODs ability to function in the best interests of stockholders. As a result, BODs are viewed as "another management [-dominated] tool" (Pfeffer, 1972: 219), "ineffective in alleviating conflicts of interest between management and stockholders" (Kosnik, 1987: 166), and as a "rubber stamp" for management decisions and strategic plans (Herman, 1981; Kosnik, 1987). From the managerial hegemony perspective, the BOD is seen as an organizational entity with little or no power of its own.

The third theory considered in the examination of CEO – BOD power relationships was that of the resource dependency perspective. Emerson (1962) argues that a reciprocal relationship exists between power and dependency for organizational actors, noting that "power resides implicitly in the other's dependency" (p. 32). This reciprocal power – dependency relationship is key to the resource dependency framework, in that as an entity is able to provide the firm with vital resources, the more likely that entity will gain power within the organization. As the entity's power increases, so does its ability to build and develop an increased organizational dependence for its services. Based in this theory, the potential power of the BOD within the organization is determined by the extent to which its members have access to and can supply resources needed by the firm in its production and decision making-processes (Daily & Schwenk, 1996; Pfeffer & Salancik, 1978). Corporate governance research indicates that this resource acquisition process is usually accomplished by the co-optation of outside directors to the BOD to aid in organizational interactions with its external environmental entities (Pfeffer & Salancik, 1978, Selznick, 1949). These interactions enable firm performance by providing the

firm with information and knowledge residing outside the firm's normal boundaries, accessing capital and other valued resources, and "enhancing the reputation and credibility of the organization" (Daily & Schwenk, 1996: 191). From the resource dependency perspective, both CEO and BOD powers can be derived from abilities to provide the firm with essential resources not commonly available through internal organizational processes.

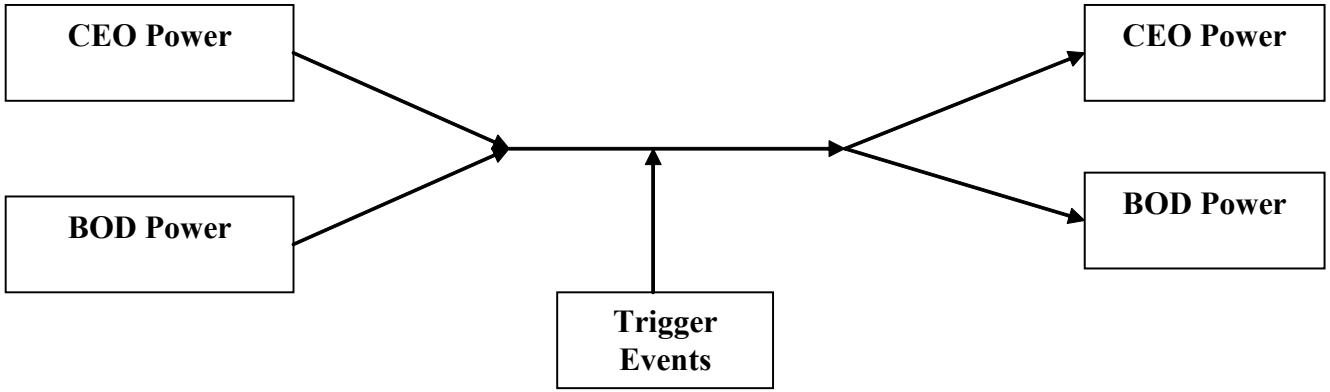
Finally, power and governance research examining organizational behavior and decision-making from a dominant coalition perspective also contributed to this analysis. In this study and prior governance research, the CEO was viewed as the leader of the firm's dominant coalition, which is defined as a "social network of individuals having the greatest influence on the selection of the firm's goals and strategies" (Pearce, 1995: 1075). Governance researchers have conceptualized the dominant coalition as consisting of the CEO, prominent TMT and BOD members, as well as influential individuals outside the organization's formal boundaries that control access to resources and information essential to the firm's performance and survival (Fincham, 1992; Pearce, 1995; Pfeffer, 1981; Thompson, 1967). While members from each of the aforementioned groups have legitimate reasons for inclusion in the dominant coalition based upon their structural positions within the firm, ultimate membership in the coalition can also be impacted by social, political, and demographic factors that are beyond individual control (Fincham, 1992; Finkelstein, 1992; Pearce, 1995).

Perhaps the most pertinent aspect of this study involved examining the extent to which the dominant coalition perspective explains corporate governance activities in organizations. Consistent with managerial hegemony theory, if the CEO possesses the power and ability to co-opt TMT and BOD members and form a single controlling coalition within the organization, then the BOD may lack the power and influence needed to effectively monitor and control managerial behaviors. On the other hand, if agency theory and the work of Child (1972), and Fincham (1992) represent effective governance behavior, then the BOD and certain TMT members may possess the ability and willingness to build a competing dominant coalition necessitating cooperation and compromise to achieve optimum organizational performance. Such a balance between competing dominant coalitions would fit the monitoring and control responsibilities prescribed to the BOD in agency theory (Eisenhardt, 1989; Jensen & Meckling, 1976). In addition, this research is consistent with the power circulation theories of control (Pareto, 1968; Ocasio, 1994, Ocasio & Kim, 1999), which acknowledges that power and control of organizational decision-making and resources shifts and moves between organizational coalitions and members over time.

A central thesis guiding this study was that, while no one theory can provide a comprehensive explanation of CEO – BOD power relationships and their impact upon organizational performance, a merging of the perspectives based on contextual factors may offer valuable insight into the nature of organizational power – performance relationships. The use of such a contingency approach with multiple theoretical lenses in examining governance relationships was intended to provide additional insight into the complex nature of governance activities.

Normal Operating Conditions

Turbulent Operating Conditions



Governing Theoretical Perspective

Managerial Hegemony

Governing Theoretical Perspective

Agency Theory
Resource Dependency

Figure 2.1: A Power Circulation Model of Corporate Governance Relationships

The model proposes that trigger events such as performance declines, stakeholder and stockholder lawsuits against the firm or its top management, CEO resignation or death, legal prosecution of the CEO and/or TMT members, and merger and acquisition activities by the firm, signal shifts in the internal and/or external operating conditions of the firm. Such shifts lead to differences in firm governance relationships, with the nature of the post-trigger event power relationship being governed by contingent factors.

Section 2.2: Trigger Events and Governance Relationships

Trigger Events as an Influence on CEO-BOD Power Relationships- The initial research model was based upon decades of corporate governance findings, in that organizational power is largely viewed to lie within the domain of the CEO, unless the firm's legal or fiduciary responsibilities are violated. The main premise underlying this model was that under normal circumstances, CEO power tends to grow over time, while BOD power tends to remain the same or decrease. This relationship was proposed due in part to the differences in the multi-dimensional nature of the CEO and BOD power constructs. While both the CEO and BOD power constructs are comprised of the same four component factors, these factors are utilized and employed in very different manners during the normal operations of the firm. The CEO is typically required to utilize power derived from each of the four main power bases (structural, ownership, prestige, and expertise) in order to develop and implement viable strategies for the firm. On the other hand, while structural and ownership are the primary sources of BOD members in their monitoring and control functions, prestige and ownership power are more latent power elements that must be enabled in concert with managerial facilitation in order to influence firm performance. As a result, even in most organizational situations, it seems likely that CEO and BOD powers change at different rates, with CEO power experiencing a faster growth rate due to the latent effects pertinent to BOD power usage. In addition, since the primary responsibility for maintaining organizational performance lies with the CEO, it also seems logical that the CEO is the primary beneficiary of superior performance.

However, corporate governance research also suggests that certain organizational activities and interactions with the environment serve to influence the BOD to assume its legal and fiduciary monitoring and control responsibilities. In this research, such activities were labeled as trigger events, and it is proposed that such events impact the CEO/BOD power relationships. Trigger events have been employed in prior organizational research (Isabella, 1990, 1992; Meyer, 1982; Meyer, Brooks, & Goes, 1990) as factors impacting individual and firm strategic decision-making processes. Such trigger events are also representative of the environmental constraints or opportunities discussed in Hambrick and Finkelstein's (1987) and Hambrick and Abrahamson's (1995) research regarding the environmental component of managerial discretion. In other words, trigger events were viewed as environmental changes that can impact levels of managerial discretion in organizations, as reflected by power shifts between the firm's CEO and BOD. Examples of such trigger events include:

- Strong shifts in firm performance (although this trigger event will be captured in the *Past Performance* variable).
- CEO resignation or death.
- Stakeholder and/or stockholder lawsuits against the firm [prior Corporate Governance research such as Kesner & Johnson (1990) can be utilized to establish baseline boundaries for the lawsuits].
- Prosecution for illegal activities by the CEO and firm TMT members.
- Mergers and acquisitions between firms of equal size or larger, where shifts in organizational leadership groups are more likely to occur.

While trigger event data were not directly measured or included in the dissertation research model, they do play a key conceptual role in explaining how and why governance power shifts occur in organizations. As part of the development of a dissertation-based research stream, data on trigger events will eventually be collected via searches of firm Annual Reports and keyword searches of the *Lexis-Nexis* database. In addition, the corporate governance literature will be examined again to identify additional trigger events that might lead to power shifts. These data will be used in post-dissertation research to explore and seek understanding as to how certain environmental changes contribute to shifts in CEO-BOD power relationships as reflected in power measure changes over time.

Section 2.3: A Literature Review of Managerial, CEO and BOD Powers

Managerial and CEO Power Literature Review and Measurement- Examinations of the role of power and its influence on organizational performance are typically based in the strategic choice leadership stream, which maintains that executive leadership and strategic decision-making are primary determinants of organizational performance in the long run (Child, 1972; Mizruchi, 1983). Most of the corporate governance literature views the TMT (and specifically the CEO, as the leader of the TMT) as the decisive force guiding organizational strategic decisions and direction, with the BOD typically playing more of a support and resource provision role (Eisenhardt & Bourgeois, 1988; Finkelstein, 1992). Strategy research typically divides these strategic choice responsibilities into two main functions. The first is management's ability to formulate an appropriate strategy given an organization's limitations regarding resource availability and existing path dependencies, while the second considers management's capabilities to implement strategies that work in a competitive environment with other organizations and consider the needs and desires of other major firm stakeholders (Pfeffer & Salancik, 1978; Porter, 1980). Power is a key aspect of both of these functions, as management must possess the ability to develop and select the optimal performance-enhancing strategies in the presence of viable alternatives, and to overcome organizational resistance to change and inertia during strategy implementation (Pfeffer, 1994).

Corporate governance research has branched into two distinct subgroups regarding the study of CEO power in organizational contexts. The first examines the various dimensions and elements specific to the development of power within the CEO position, while the second focuses on specific elements of the CEO-BOD relationship that may contribute to differential power between the entities, and then examines the impact of this differential on performance. This section will focus on the first group of these studies, since the dimensionality research has led to the subsequent CEO power construct development that was the basis for this portion of the dissertation. The CEO-BOD power relationships are examined in greater detail in later sections.

Much of the research examining CEO power elements is based in the work of French and Raven (1959), who proposed that individuals' operating in social and organizational settings derive power from five distinct sources based on personal and situational attributes. These power sources include:

1. Legitimate power- Defined as the formal authority granted to individuals due to their position within the organization.
2. Reward power- Defined as the ability to bestow promotions, raises and intrinsic compensation and attention upon organizational members.

3. Coercive Power- Defined as the ability to assign and enforce punishments on organizational members.
4. Expert Power- Defined as differential skill and/or knowledge about important organizational functions and processes.
5. Referent Power- Defined as personal qualities of an individual that evoke respect and admiration from other organizational members.

Studies by Podsakoff and Schriesheim (1985), Hinkin and Schriesheim (1989), and Schriesheim, Hinkin, and Podsakoff (1991) worked on the development and refinement of scales designed to measure elements of French and Raven's (1959) power dimensions in organizational settings.

Subsequent research has sought to develop and define specific elements of positional power for managers in general, and for the CEO, in particular. Yukl and Falbe (1991) merge power and leadership research streams in an examination of the impact of different power sources on downward and lateral relations for organizational managers. The authors note a total of eight different power types sorted into two higher-level categories; legitimate, reward, coercive, and information powers were gained as a result of organizational positional power, while expert, persuasive, referent, and charisma powers are derived through personal power attributes of the individual managers.

From a similar perspective, Brass and Burkhardt (1993) test and support hypotheses that individuals derive organizational power through the interaction of structural power bases such as formal position and hierarchical level with individual political behaviors such as ingratiation, assertiveness, upward appeal, coalition formation, and rationality. Both Yukl and Falbe (1991) and Brass & Burkhardt (1993) emphasize that the various elements of individual power within organizations sort into higher-order categories based on the interaction and influence of individual and organizational-based attributes (Gove, Larraza & Boyd, 2000; Yukl, 1989).

Each of the aforementioned studies examined managerial power elements via individual-level, perceptual data collected from organizational members through survey designs. Finkelstein (1992) was the first research effort to validate a multi-dimensional, objective measure of TMT power within organizations. Finkelstein (1992) is important for consideration by corporate governance researchers since the validation of an objective power measure enables the longitudinal examination of power influences across a number of traditional corporate governance outcomes, including performance, executive succession, and executive compensation. In addition, a validated, objective power measure also empowers researchers to collect data from a large number of firms across industries, and avoid some of the biases associated with the use of perceptual data collected from individuals within organizations.

Based in the earlier managerial power research, Finkelstein (1992) proposes that the firm's TMT is the major power-holder in most organizations, and that TMT power is a multi-dimensional construct with specific traits that could be measured with archival data. Finkelstein (1992) utilizes prior organizational power and corporate governance theory to identify four main types of TMT power; those being structural, ownership, prestige, and expert powers.

Structural power is a specific type of power based on the formal organizational structure and hierarchical authority derived from positions and responsibilities within the organization, and is essentially equivalent to French and Raven's (1959) legitimate power construct (Finkelstein, 1992; French & Raven, 1959). Ownership power is based in agency theory, which

views shareholders as the relevant coalition of interest regarding control of the firm. While the BOD is viewed as the official body present within the firm to represent shareholder interests, research based in the ownership perspective note that increased CEO ownership affects CEO and BOD powers due to a decrease in the agency-based conflict of interest between firm management and firm shareholders, an increase in the ability of the CEO to influence BOD management and membership, and an increase in the discretion of the CEO to influence and determine firm strategy (Hambrick & Finkelstein, 1987; Finkelstein & Hambrick, 1996). The expert power construct is rooted in resource dependency theory, which proposes that one manner in which individuals operating in organizations derive power is based on the extent to which their knowledge and expertise contributes to firm performance and is valued within firm work processes and by organizational members (Pfeffer & Salancik, 1978). Finkelstein (1992) defines expertise "as the ability to deal with environmental dependencies" (p. 513), and notes that firm leaders such as the CEO and BOD build power when there is an alignment between the functional expertise and the needs of the organization. Finally, prestige power is a network-based power construct based in the concept that relationships developed in educational, social, and professional contexts can aid CEO and BOD members in addressing environmental uncertainty within their organizations (Allen, 1974; Useem, 1979). Contacts and relationships developed in outside contexts may provide firm leaders with access to information, knowledge, capital, and material resources not available in sources internal to the firm. As a result, firm members with the capabilities to develop and employ such connections to aid the firm may derive power according to the need for such resources by the organization (Pfeffer, 1981; Pfeffer & Salancik, 1978; Useem, 1979).

Several subsequent studies employed variations of Finkelstein's (1992) TMT power scale to examine elements of managerial power. Haleblian and Finkelstein (1993) utilized a derivative version of the scale for a variable labeled "CEO Dominance," with ten of the thirteen Finkelstein (1992) scale components comprising this variable. CEO dominance and TMT size are found to be significant predictors of firm performance, "in an environment that allows top managers high discretion in making strategic choices but is not significant in a low-discretion power environment" (Haleblian & Finkelstein, 1993: 844). This finding indicates that CEO power and discretion in strategic decision-making are complementary attributes.

A variation of the Finkelstein (1992) TMT power scale is also examined in Finkelstein and D'Aveni (1994), in a study exploring antecedent conditions leading to CEO duality in firms. A construct labeled "Informal CEO Power" is included in the research model and hypothesized to moderate the relationship between BOD vigilance and CEO duality. Informal CEO power is measured by utilizing seven of the thirteen measures validated in Finkelstein (1992), with only the ownership factor measures totally excluded. The study finds that higher informal CEO power tends to increase BOD vigilance, therefore decreasing the occurrence of CEO duality.

In addition, Daily and Johnson (1997) utilize parts of the Finkelstein (1992) power measure in their longitudinal examination of the relationship between CEO power and firm financial performance. In their CEO power measure, Daily and Johnson (1997) include eight of the thirteen composite measures tested in Finkelstein (1992), and use at least one measure from each of the four construct factors. With data collected from approximately 100 *Fortune 500* firms over a four-year period, the study "demonstrated that aspects of CEO power and financial performance are, in fact, interrelated…(where) performance was found to be both an antecedent

condition and outcome of CEO power" (Daily & Johnson, 1997: 97). However, the authors also state that "perhaps the most notable finding is that the dimensions of CEO power included in this study do not constitute constructs of the power dimensions suggested by Finkelstein (1992), nor do they constitute a single construct of CEO power" (Daily & Johnson, 1997: 112). While the authors note that their use of partial measures for some of the CEO power factors may have contributed to this finding, there still is concern expressed over the construct validity of the Finkelstein (1992) CEO power construct.

Many of the construct validity questions raised in Daily and Johnson (1997) are addressed by the work of Gove, Larraza, and Boyd (2000). These authors utilize the correlation matrix from Finkelstein (1992) to run additional analysis designed to address conceptual and methodological concerns with the initial study. The main premises driving this new study are that conceptually, significant correlations could be expected between the Finkelstein's (1992) power factors of structural, ownership, expert, and prestige powers. However, in his research, Finkelstein (1992) examines the factors as orthogonal dimensions. In addition, in their replication, Gove, Larraza, and Boyd (2000) propose that relationships between some of the measurement elements across factors are correlated, which can contribute to element and factor cross-loadings (for example, based on theoretical linkages, the authors hypothesize cross-loadings between the expert power factor and the compensation measure). In addition, several other cross-loadings between elements and across factors and elements are identified via post hoc analysis. The strongest finding emphasized by the authors is that the "practical implication of this finding is that subsequent applications of the power model should utilize the model in its entirety. The use of selected power dimensions, rather than the entire model, and failure to incorporate covariance into the model, may result in misleading associations and false conclusions of the effects of power" (Gove, Larraza & Boyd, 2000: 78).

Based on this goal and previous research findings, a major goal of this project was to test and validate the Finkelstein (1992) TMT power measure in a specialized examination of CEO power. While some adaptation of the measures were required due to this shift in focus from the TMT as a whole to the CEO specifically and the dual examination of CEO and BOD power elements, the validation of a CEO power measure makes an unique and important contribution to corporate governance research by facilitating the examination of power effects across industries and time.

BOD Power Literature Review and Measurement- The second part of this research project involved examining past studies on the topics of BOD control, vigilance, and power, with the ultimate goal being the development of an objective, comprehensive BOD power construct. Prior studies have researched vigilance and control from an agency theory perspective by examining BOD qualities that enable the board to effectively monitor and respond to managerial activities conducted in disregard for shareholder interests. Boyd (1994), Fama and Jensen (1983), and Conyon and Peck (1998) all note that the ability of the BOD to effectively control managerial activities as necessary is based in the assumptions that directors have sufficient incentive and can avoid or overcome CEO collusion and domination. In such cases, the power to act and respond is assumed as embedded within the monitoring and control processes. As a result, in this study, BOD control, vigilance, and power were viewed as functional equivalents

(although specific differences between control and power were incorporated into the measurement of the construct).

As is the case with CEO power, two research trends have emerged in the examination of BOD vigilance, control, and power. One research stream examining this construct has utilized survey designs measuring individuals' perceptions of BOD power within organizations (Finkelstein, 1988; Pearce & Zahra, 1992). The second stream has employed aspects with theoretical linkages to BOD power as a proxy measure for the construct (Boyd, 1994; Conyon & Peck, 1998). Theoretical elements of BOD vigilance that have been used as power proxies include CEO duality (Finkelstein & D'Aveni, 1994; Mallette & Fowler, 1992), insider vs. outsider BOD membership (Beatty & Zajac, 1994; Johnson, Hoskisson & Hitt, 1993), director ownership equity (Lambert, Larcker & Weigelt, 1993; Hoskisson, Johnson & Moesel, 1994), director compensation (Vance, 1983), and BOD tenure (D'Aveni & Kesner, 1993). These studies have yielded conflicting findings in relationship examinations across a number of dependent variables, most typically firm performance, executive succession, and CEO compensation. A variety of reasons have been noted for these conflicting findings in corporate governance literature reviews, including that of inconsistencies in BOD and performance construct operationalization and measurement (Daily, Johnson & Dalton, 1999; Eisenhardt; 1989, Johnson, Daily & Ellstrand, 1996; Zahra & Pearce, 1989).

A primary feature of the Boyd (1994) BOD control measure is that it represents an initial attempt at exploring the multi-dimensional nature of BOD control. However, when compared to the Finkelstein (1992) TMT power measure, questions arise about the number of dimensions considered in the measure. The five measures tested in Boyd (1994) conceptually sort into two factors similar to the categories employed in Finkelstein (1992), with CEO duality, ratio of insiders, and level of director compensation sorting into an structural power category, and board stock and institutional ownerships sorting into a ownership power category. However, Finkelstein and Hambrick (1996) note that each of the four power types identified in Finkelstein (1992) "appears to be operating among board members" (Finkelstein & Hambrick, 1996: 246). One goal of this research was to develop a comprehensive measure of BOD power by using theoretically-based proxies for BOD prestige and expert powers, since theory indicates that both influence BOD power relationships in organizational contexts (Finkelstein & Hambrick, 1996; Pfeffer & Salancik, 1978).

As mentioned in the Finkelstein (1992) review, much of the expert power research is rooted in resource dependency theory, which maintains that individuals derive and maintain power in organizations based on their abilities to provide the firm with resources such as knowledge, capital, technology, expertise, and other required inputs (Finkelstein & Hambrick, 1996; Pfeffer, 1972; Pfeffer & Salancik, 1978). BOD members serve as natural resource-providing outlets since most are connected into additional networks to which the firm may not have existing linkages, others are recruited on their boards based on their abilities to provide the firm with needed resources, and other BOD members are placed on boards to serve a monitoring function for entities with resource linkages to the organization (Hambrick & Pfeffer, 1996; Pfeffer & Salancik, 1978; Zald, 1969). In addition, BOD members may be recruited based on their expertise and knowledge in industries in which the firm currently operates, or industries that the firm may be entering via merger, acquisition, or expansion (Johnson, Hoskisson & Hitt, 1993; Pfeffer, 1972; Vance, 1983). Finally, BOD member expertise may be sought out and

utilized due to internal and external uncertainties created by circumstances such as turbulent operating environments, executive succession decisions, and decreased firm performance (Mintzberg, 1983; Pfeffer, 1972; Zald, 1969).

There is also support for the prestige power conceptualization in the corporate governance literature, again based in resource dependency theory. Research in this area is based in social network analysis, with a specific focus on the effects of board interlocks on a variety of organizational factors, including executive succession, BOD power, merger and acquisition activities, and firm performance (Mizruchi, 1996). Most of the interlock research is derived from social class theory, which details the emergence of a business elite that allows "business leaders to occupy several influential positions simultaneously so that they can more effectively promote their own and allied interests in both the economic and social spheres" (Koenig, Gogel & Sonquist, 1979: 177). The main premise driving this theory is that there are educational and social linkages fueling power-based relationships, and that these linkages are a primary determinant of resource acquisition and allocation, knowledge and information flows, capital exchanges, and reward distributions both within and across organizations (Allen, 1974; Finkelstein & Hambrick, 1996; Useem, 1979). In exchanges such as those described, directors gain prestige and power within the organization and their social network by facilitating interactions and supplying both entities with desired resources.

As mentioned earlier, most of the corporate governance studies up to this point have typically focused on the structural and ownership (primarily structural) elements of BOD power, with less emphasis being placed on the expertise and prestige aspects of BOD power. One explanation for these disparities is that most of the explicit elements of BOD power tend to be embedded within the structural and ownership power bases, whereas expertise and prestige powers tend to be more latent power bases that may require circumstances such as managerial cooperation, poor managerial and/or organizational performance, or strong BOD power to be engaged and utilized.

These differences in the impact of the power base dimensions on CEO and BOD powers are also relevant to the consideration of power as a zero or positive sum relationship. In general, the zero-sum elements of CEO and BOD powers tend to be reflected in the ownership and structural dimensions of power, where power shifts from one entity to another based on positions and relative ownership stakes held within the firm. Such a division of power based on bases from which the power is derived is consistent with prior power perspectives such as Mills (1959), Parsons (1951, 1956) and Bacharach and Lawler (1980). Bacharach and Lawler propose that the authority aspects of power such as ownership and structural power are zero-sum power elements, while influence aspects of power such as prestige and expertise are positive sum in nature, where an increase or change in the power of one individual or group does not necessarily impact or change the power of other individuals or groups (1980: 32).

Examples of both zero and positive sum power relationships are present in the corporate governance literature. For instance, in a power measure such as CEO duality, theory suggests that CEO power increases and BOD power decreases in firms where duality exists, due to an increased ability by the CEO to establish the strategic agenda of the firm, control information flows to the BOD, and co-opt BOD members to increased influence over BOD member selection and compensation (Finkelstein & D'Aveni, 1994; Lorsch, 1989). In addition, while power theories imply that possessing a formal background and expertise in a functional area that is

critical to the overall performance of the firm may provide a CEO or BOD member with increased power and influence within the firm, this power has little or no direct impact on the relative power of the opposing entity. An exception to this design exists with some aspects of prestige power, specifically relating to interlocks between CEO and BOD members. Since the governance literature suggests that as educational and service interlocks between the CEO and BOD members can influence director selection and co-optation, these interlock aspects of prestige power were also viewed as zero-sum power measures for the purposes of this examination.

In this study, the CEO and BOD measures were initially separated based on the nature of co-variance between the CEO and BOD power elements. For such measures where the relative state implies an exchange of power between the CEO and BOD (reflective of a zero-sum relationship), the measures were initially separated into a third variable labeled "CEO/BOD Interdependence". On the other hand, the positive-sum aspects were developed and included as independent measures of CEO and BOD powers, respectively. As mentioned earlier, this treatment is consistent with prior discourses on zero and positive sum power relationships within organizations (Bacharach & Lawler, 1980; Parsons, 1951, 1956; Pfeffer, 1981). Factor analyses on all of the CEO and BOD power measures, however, indicated that a separation of power measures into CEO Power (independent) and BOD Power (independent) was best supported by the study data.

Section 2.4: CEO Power, BOD Power, and Firm Performance

The CEO and BOD power data collected and analyzed in this study served as independent variables in a model designed to examine the relationships between CEO and BOD powers, and the impact of these relationships on organizational performance through power impacts on strategic change. In their book on executive leadership, Finkelstein and Hambrick (1996: 281) note the need for research that:

1. Develop a conceptualization of BOD – CEO power grounded in theory,
2. Use this grounding to identify appropriate dimensions for the construct(s),
3. Create a measurement methodology that adequately captures the multiple dimensions of BOD – CEO power.

This study emphasized each of these three points, with an overarching goal of employing CEO and BOD power measures longitudinally. The main impetus of including these variables as the study's main independent and dependent variables is primarily rooted in agency theory. As mentioned earlier, agency theory argues that a main function of the BOD is to monitor and control managerial behavior to ensure that the CEO acts in the best interest of firm shareholders, and that this ability is a primary determinant of organizational performance (Eisenhardt, 1989; Fama & Jensen, 1983). As a result, Finkelstein and Hambrick (1996) note that "the ability of boards to effectively monitor CEOs depends on board power, while the ability of CEOs to engage in activities that are not profit-maximizing depends on CEO power" (p. 224). While this research does not assume that all CEO-led activities in which there is disagreement between the CEO and BOD involve managerial self-interest as a motive, I do argue that examining this power relationships between the CEO and the BOD is essential to understanding leadership decisions

that influence firm performance. As a result, this study focused on reviewing past corporate governance research that has studied the relationships between CEO and BOD power and firm performance, developing a longitudinal research model that investigated the relationship between BOD and CEO power and its influence on firm performance, and utilized lagged regression techniques to test the proposed reciprocal relationship between firm-based power and firm performance (Finkelstein & Hambrick, 1996: 281).

While research has considered elements of BOD and CEO powers and firm performance, few have simultaneously evaluated the impact and interplay of CEO and BOD powers on firm performance. Pearce and Zahra (1991) collected survey data from CEOs, TMT, and BOD members regarding the power of its CEO and BOD. The study results showed that BOD power is the primary determinant of firm performance, as a 2 X 2 matrix of CEO and BOD powers found that the two highest performing groups both contained high BOD power firms. The main focus of this study was to extend Pearce and Zahra (1991) by utilizing archival power measures and a longitudinal research design. These modifications were employed to develop a dynamic corporate governance model designed to evaluate the contribution of strategic leadership to firm performance.

CHAPTER 3

DISSERTATION HYPOTHESES

Chapter 3 explores the theoretical perspectives and past research in corporate governance to develop study hypotheses between the model constructs. For each grouping of hypotheses, theoretical explanations and empirical results developed in prior research are offered for support and consideration.

Section 3.1: Dissertation Hypotheses

CEO Tenure-Based Hypotheses- Prior governance research examining CEO tenure and power has been grounded primarily in dominant coalition and managerial hegemony theories. From these theoretical perspectives, there are a variety of reasons for CEO power to grow as positional tenure increases. Both of these theories note that as CEO tenure increases over time, there is an improved likelihood that the CEO gains the ability to appoint TMT members to the BOD, direct and influence the selection process for outside BOD members, achieve CEO duality, and accrue additional ownership equity in the firm as part of compensation (Daily & Johnson, 1997; Finkelstein & Hambrick, 1996; Jensen & Meckling, 1976). These explicit manifestations of power influence organizational management mechanisms in a variety of ways.

As tenure increases, the CEO is increasingly likely to form a dominant coalition of TMT and BOD members to control firm decision-making and resource allocation processes (Bacharach & Lawler, 1980; Pfeffer, 1981; Pfeffer & Salancik, 1978). This CEO-led dominant coalition also limits the ability of firm members to propose and implement strategic plans inconsistent with the CEO's managerial style and vision. The development of one strong, dominant coalition within the firm is a primary driver of managerial hegemony theory, where the BOD is posited as a CEO tool with little ability to assert its control functions as designated by law and firm stockholders (Herman, 1981; Mace, 1971).

In addition to these explicit aspects of CEO power, managerial hegemony and dominant coalitions theories also provide explanations for implicit power influences through CEO tenure that impacts perceptions of CEO power by internal and external firm stakeholders. This perspective denotes that a strong element of leadership and power, beyond the legitimate power possessed by a CEO, is linked to perceptions of expertise and prestige-based powers by firm stakeholders. In other words, as CEO tenure increases, his/her role as leader of the firm's dominant coalition makes it increasingly likely that firm stakeholders will perceive and respond to a CEO as being powerful, beyond the actual power embedded in the position (Hambrick & Finkelstein, 1996; Pfeffer, 1981). There are several potential theoretical explanations for this effect. The first is based in dominant coalition and managerial hegemony theories, and explores the extension of halo effects to the CEO from strong corporate performance and reputation. Assuming positive linkages between CEO tenure with firm performance and reputation (Hill & Phan, 1991; Fombrun, 1981, 2001), the CEO, as the leader of the firm's dominant coalition and the primary leader of the organization, will tend to achieve greater individual reputation as the primary benefactor of firm performance and reputation increases over time. Such individual reputation effects associated with the CEO position may manifest themselves through implicit benefits such as increased perceptions of CEO expertise and honorarium from societal institutions. These implicit benefits can contribute, in turn, to increased explicit benefits such as

memberships on the BODs of other organizations, increased compensation, and additional power and responsibility within the organization. In such cases, increases in perceptions of power by firm stakeholders may contribute to the assignment of increased authority and power over time (Pfeffer, 1981).

Corporate governance research on CEO tenure and its effects on variables such as CEO power and organizational performance has yielded somewhat conflicting findings, yet some consensus can be reached regarding the impact of CEO tenure on various organizational activities (Allgood & Ferrell, 2000; Finkelstein & Hambrick, 1996). One of the primary linkages in corporate governance analysis deals with the relationship between CEO tenure and CEO power. Hambrick and Fukutomi (1991) propose that as CEO tenure increases, CEO power often increases as well. Such power growth occurs through activities such as the CEO developing internal and external networks capable of supplying the firm with needed information and resources, and gaining increased knowledge regarding job responsibilities and expectations (Finkelstein & Hambrick, 1996; Hambrick & Fukutomi, 1991; Miller, 1991). Therefore, it is proposed that:

Hypothesis 1: *There is a direct, positive relationship between CEO Tenure and CEO Power.*

An assumption inherent to this study was that there is a positive relationship between past performance of the firm and CEO tenure, such that superior performance relative to past firm, industry, and market benchmarks leads to increased CEO tenure, which in turn leads to increased CEO power (Allgood & Ferrell, 2000). This premise holds true for the population of interest in this study, where Fortune 1000 firms are being studied. However, for smaller, entrepreneurial firms, superior performance can actually lead to increased turnover, where firm success can contribute executive movement and turnover as CEOs move "upward" to Fortune 500-type firms. The next hypothesis examines the alternative to this assumption. In other words, how do decreases in firm performance impact the CEO tenure – power relationship? This study presumed that tenure mediates this relationship, such that the longer the tenure of the CEO, the longer firms will tolerate decreases in firm performance before changes in power distribution and leadership structure start to occur. This effect is hypothesized based on the "stickiness" aspects of power and leadership.

The "stickiness" elements of power refer to traits of power where once power is acquired and earned, it becomes increasingly difficult to remove or re-distribute over time (Bacharach & Lawler, 1980; Granovetter, 1985; Pearce, 1995; Pfeffer, 1981). Dominant coalition and managerial hegemony theories are both consistent with power "stickiness", as each implies that the greater the power of the CEO as the leader of the firm's dominant coalition, the more resistance that firm members will face in the development of an alternative coalition (Ocasio, 1994; Pearce, 1995). These "stickiness" aspects of power are pertinent developing an accurate representation of power relationships for a variety of reasons. First, the power inherent to the CEO position tends to accumulate as tenure increases, requiring a longer time of poor performance before shifts in the firm power structure can be initiated. In addition, the greater the CEO tenure and positive past performance, the longer time it takes for an alternative dominant coalition to emerge and assume power within the firm (Bacharach & Lawler, 1980; Pfeffer, 1981). Finally, as tenure increases, performance must lag for a longer time before BOD and firm members lose faith and trust in the dominant coalition leadership, and push for leadership

changes (Bacharach & Lawler, 1980; Pfeffer, 1981). This "stickiness effect" of power implies that the greater the CEO tenure and power, the longer the performance lag before power shifts occur within the firm. Therefore, the following hypothesis is proposed:

Hypothesis 2: *There is an indirect, lag relationship between Past Performance and CEO Power that is mediated by CEO Tenure.*

One relationship that has been theoretically and empirically investigated in the corporate governance literature involves the relationship between firm performance and the power of organizational leaders. Much of this examination has focused on the power – performance side of this relationship, assuming the performance – power aspect of the relationship to be logical and valid (Daily & Johnson, 1997; Finkelstein & Hambrick, 1996). Both agency and managerial hegemony theories provide explanations for aspects of the past performance – CEO power relationship.

From an agency theory perspective, the CEO serves as the primary agent for the firm. The agency problem deals with the establishment of monitoring and incentive programs to ensure that the CEO acts within the best interests of the firm principals, which in this example are represented by firm stockholders and the BOD (Agrawal & Knoeber, 1996; Denis, 2001; Jensen & Meckling, 1976; Shleifer & Vishny, 1997; Westphal & Zajac, 1998). As firm performance increases, agency theory predicts a corresponding decrease in monitoring behaviors, as well as an increase in the use of incentive designs to both reward and re-enforce past performance and encourage future performance-enhancing behaviors (Denis, 2001; Westphal & Zajac, 1998). In such cases, the CEO may be able to insist upon and receive increased control over monitoring mechanisms such as the BOD, as the past strong performance may lead to concessions by firm stockholders to ensure retention of the CEO. Each of these responses to strong past performance is indicative of contributing to increased power within the CEO position. Alternatively, agency theory suggests that a decrease in firm performance will lead to increased monitoring behaviors by firm stockholders and the BOD (Byrd, Parrino, & Pritsch, 1998; Denis, 2001). In addition, poor performance makes it less likely that the CEO will be able to achieve performance incentives often designed to increase CEO power and control within the firm (Westphal & Zajac, 2001).

Aspects of managerial hegemony theory are consistent with agency theory regarding predictions of the performance – power relationships within firms. From a managerial hegemony perspective, increased firm performance also increases the likelihood that the CEO will be able to co-opt BOD and TMT members that might otherwise form alternative coalitions designed to monitor and control CEO behaviors (Herman, 1981; Pfeffer, 1981). In addition, this increased likelihood of co-optation of BOD and TMT members also impacts the design of CEO incentive programs, as the BOD becomes increasingly likely to develop and propose packages with options favorable to the CEO once co-optation occurs (Agrawal & Knoeber, 1996; Westphal & Zajac, 1998). On the other hand, poor prior performance increases the likelihood that alternative dominant coalitions will emerge, and limits the CEO's power and ability to control the BOD and TMT members most likely to lead to such alternative coalitions.

In empirical studies examining the nature of the CEO power – firm performance relationship, Daily and Johnson (1997) is the lone study that tested for a reciprocal relationship

between CEO power and firm performance, noting that performance was found to be both an antecedent condition and outcome of CEO power" (p. 97). Aspects of this relationship are included in this research model, where past performance is an antecedent condition to CEO and BOD powers, as well as current performance. Since the CEO is viewed as the firm officer responsible for strategic decision-making and firm performance over time, the position-holder is linked to the performance of the firm (Finkelstein & Hambrick, 1996; Miller, 1991). Miller (1991) notes that a positive relationship is hypothesized between past firm performance and CEO power. In other words, the better firm performance, the more likely that the CEO will acquire the benefits of said performance through increased power.

The CEO is often able to realize increased power within the firm, industry, and general business environment through both zero-sum and positive-sum aspects of CEO power that are directly influenced by high levels of firm performance. The CEO, as the primary strategic leader of the firm, is likely to achieve increased power through perceptions of expertise and prestige as the firm achieves higher, consistent levels of performance and returns relative to industry and market competitors (Finkelstein, 1992; Finkelstein & Hambrick, 1996). The positive-sum aspects of CEO positional power may manifest itself in a variety of ways, such as invitations to serve on the board of directors for other high-performing organizations, increased linkages between the critical expertise of the CEO and the strategies engaged by the firm, and increased organizational positions held by the CEO (Finkelstein, 1992; Finkelstein & Hambrick, 1996; Mizruchi, 1996).

In addition, there are zero-sum aspects of CEO power that tend to be impacted by firm performance. Examples of zero-sum aspects of CEO power that theory and prior empirical research suggest are directly influenced by firm performance include CEO duality (Finkelstein & D'Aveni, 1994, Harrison et al., 1988; Westphal & Zajac, 1994), increased BOD co-optation (Daily et al., 1999; Daily & Schwenk, 1996; Finkelstein & Hambrick, 1996, Wade et al., 1990), and increased stock ownership via compensation (Finkelstein, 1992; Miller, Wiseman, & Gomez-Mejia, 2002). Due to the impact of such zero-sum power increases, as firm performance improves, the CEO tends to gain increased control over the BOD. As a result, it is proposed that:

Hypothesis 3A: *There is a direct, positive relationship between the firm's Past Performance and CEO Power.*

Hypothesis 3B: *There is an indirect relationship between the firm's Past Performance and BOD Power that is mediated by CEO Power.*

On the other hand, past performance is hypothesized to have negative effects on BOD power over time, due to some degree of co-variance in CEO and BOD powers. For example, agency theory suggests trade-offs between the power assumed by the CEO versus the BOD, and that firm performance serves as a primary determinant as to which entity assumes power during a specific point in time. Examples of such CEO – BOD power exchanges impacted by firm performance includes the extent to which the CEO is able to achieve CEO duality over time, actively elect new BOD members, and appoint inside directors to the BOD (Daily & Johnson, 1997; Finkelstein, 1992; Finkelstein & Hambrick, 1996; Pfeffer, 1972). Past corporate governance research also implies that while the BOD may not automatically benefit from strong firm performance, the BOD typically gains power during periods of poor performance, due to the

application of legal and fiduciary control responsibilities inherent to BOD representation of stockholder interests (Charan, 1998; Mace, 1971; Vance, 1983).

Hypothesis 4A: *There is a direct, negative relationship between the firm's Past Performance and BOD Power.*

Hypothesis 4B: *The relationship between the firm's Past Performance and BOD Power is mediated by CEO Power.*

CEO Power and Firm Performance- Most of the corporate governance research examining relationships between CEO power and firm performance have been atheoretical in nature, citing business world examples where increases in performance have been generated in conjunction with powerful leadership (Daily & Johnson, 1997). This research notes logical linkages between CEO power and performance, based on the idea that "CEOs' power is typically attributed to their legitimate authority, as well as the broad knowledge of the firms they serve and their strong impact on firms' strategic direction, structure, and internal processes" (Daily & Johnson, 1997: 97). Studies in this field have utilized variables such as executive leadership as the main independent variable of interest; however, in many of these cases, power to influence organizational processes and outcomes is assumed as a primary leadership component (Cannella & Monroe, 1997; Day & Lord, 1988; Thomas, 1988). These studies have typically treated executive leadership as a "black box," by accounting for higher level effects such as industry, firm-specific effects such as firm size and geographic location, and environmental economic aspects such as inflation and employment rates (Lieberson & O'Connor, 1972; Thomas, 1988). Once these primary performance effects are controlled for, additional variance explained is then attributed to executive leadership.

In addition to executive leadership theory, resource dependency theory offers insight into the CEO power – firm performance relationship. In this theory, the CEO and other organizational members acquire and retain power based upon their ability to supply the firm with the knowledge, capital, and other resources needed to navigate business environments (Pfeffer & Salancik, 1978). In addition, as the business environment becomes increasingly turbulent and complex, the ability to supply knowledge and resources required to thrive and prosper in such environments directly contributes to the power of such resource providers (D'Aveni, 1994; Pfeffer & Salancik, 1978). As the leader of the firm's dominant coalition, the CEO is in a unique position to identify resources needed by the firm, and to recruit coalition members with the ability to provide required resources.

Much of the corporate governance research has not directly examined the CEO power – firm performance relationship, but studied the relationship through potential mediators that have been theorized to impact firm performance, such as diversification and corporate acquisition activities, major organizational change efforts, new product development, and investment in resource acquisition activities (Day & Lord, 1988; Hambrick & Mason, 1984). The work of Hambrick and Finkelstein (1987), Finkelstein and Hambrick (1990), and Hambrick and Abrahamson (1995) maintains that the most logical mediator of the relationship between CEO power and performance is that of managerial discretion, where discretion is defined as a manager's latitude of action. Hambrick and Finkelstein (1987) propose that managerial

discretion is a function of three components; "(1) the degree to which the environment allows variety and change, (2) the degree to which the organization itself is amenable to an array of possible actions and empowers the chief executive to formulate and execute those actions, and (3) the degree to which the chief executive is able to envision or create multiple courses of action" (p. 379). While the relationship between power and performance is primarily mediated by the organizational level discretion function, each of the three discretion aspects are considered in the research model. The strongest assumption represented in this model is that the relationship between firm power and performance is mediated by managerial discretion, and that certain environmental and organizationally-based events can trigger shifts in discretion and power that influence organizational performance.

Strategic Choice as a Mediator of the CEO Power – Firm Performance Relationship- March and March (1977), Hambrick and Fukutomi (1991), Miller (1991), and Hambrick and Finkelstein (1996) each propose various means by which CEO tenure and power impacts firm strategic choice and performance. March and March (1977) argue that past findings indicating that managers and their decisions have little or no impact in organizational outcomes such as performance are impacted by the fact that firm CEOs are a homogeneous group with little variance as an independent variable. These findings have been supported by subsequent research. Whitehill (1991) finds that the CEOs of large firms tend to be graduates of elite universities, indicating that there are educational interlocking networks that contribute to commonalities in the pool of executives developed and hired by firms. An examination of the CEOs of *Fortune 500* firms by *Business Week* illustrated that a large majority of this population are white males between the ages of 50 and 65, most possessing elite college degrees and prior experience in large corporations (*Business Week, 1993*). Finkelstein & Hambrick (1996) notes that when "top executives (are) drawn from a very narrow pool and then subjected to long periods of common socialization, they likely will not exhibit much independence of thought and action" (p. 21). The similarity in these study findings indicate that a lack of variance in demographic qualities such as race, age, gender, and education contribute to population homogeneity that bound CEO decision-making and strategy formulation processes, as well as limiting subsequent strategic choices implemented by the firm.

In separate papers, Hambrick and Fukutomi (1991) and Miller (1991) offer similar explanations regarding the impact of CEO power and tenure on strategic choice and firm performance. Both Hambrick and Fukutomi (1991) and Miller (1991) argue that as CEO tenure and power increase, the CEO becomes increasingly committed to a single strategic paradigm, limited in the ability to access and employ varied information to examine and understand internal and external conditions, and less involved and interested in the tasks associated with the job's requirements. As a result, as tenure increases beyond the mid-point of the executive's career, there is an increased likelihood of poor performance associated with years of service due to increased reliance and application of past-employed solution to solve new problems, increased detachment from the strategic formulation and implementation processes, and a decreased likelihood of the existence of alternative dominant coalitions to offer alternative strategic choices for consideration (Finkelstein & Hambrick, 1996; Hambrick & Fukutomi, 1991; March & March, 1977; Miller, 1991; Wiseman & Gomez-Mejia, 1998).

While strategic choice measures are not examined in this dissertation due to data availability limitations and inflexibility in polynomial lag regression to missing data, it will be examined as a mediator to the CEO power – performance relationship in future research derived

from this study. In addition, the presence of strategic choice as a mediator of the CEO Power – Performance relationship would serve as a potential contributor to the presence of time lags across the relationship. Therefore, it is proposed that:

Hypothesis 5: *There is a significant relationship between CEO Power and Firm Performance.*

BOD Power and Firm Performance- While relatively few studies have examined the BOD power – firm performance relationship utilizing a comprehensive BOD power measure, more have studied the relationship between specific BOD power elements such as BOD structure, leadership, and composition and firm performance. The main reason for this focus on specific BOD power elements and performance is rooted in the heart of agency theory. Agency theory notes that the primary function of the BOD is to control managerial behavior that might run contrary to the best interests and desires of firm shareholders (Eisenhardt, 1989; Jensen & Meckling, 1976). In other words, firms should be managed in the fashion that maximizes stockholder interests and return on investments. As a result, if the BOD possesses the power and ability to control managerial behavior, such control should lead to higher firm performance and profitability over time, as measured and reflected by most accounting and market-based performance measures (Jensen & Meckling, 1976).

Resource dependency theory also addresses issues regarding the BOD power – firm performance relationship. As the operating environments for many businesses have become increasingly complex, governance theory suggests that the BOD members may be selected specifically for their abilities to aid in resource provision, strategy formulation, and strategy implementation (Pfeffer & Salancik, 1978; Priem & Cycyota, 2001). This use of BOD power allows the BOD to move beyond its control function, by actively pursuing the service and resource dependence roles of the BOD and its members as prescribed in Carpenter and Westphal (2001), Johnson, Daily, and Ellstrand (1996), and Davis and Thompson (1994). These theories and studies suggest that the roles that the BOD actively engages in are contingent on changes in the internal and external environments of the firm, with factors such as lower prior performance and environmental turbulence leading to increased BOD involvement.

Several literature reviews and meta-analyses have examined the relationship between BOD power components and firm performance, finding mixed results. In a literature review, Zahra and Pearce (1989) develop an integrative research model based on prior research. This model proposes that BOD elements such as composition, characteristics, structure, and process combine with BOD service, strategy and control roles to serve as antecedent conditions for firm performance (Zahra & Pearce, 1989).

Johnson, Daily, and Ellstrand (1996) offer an updated literature review, with a specific examination of studies investigating the relationship between director independence and firm performance. After reviewing these studies, the authors note that "there is little consistency in findings regarding the relationship between board composition and financial performance…(and that) these inconsistencies have led a number of researchers to re-examine the process by which boards may affect corporate performance" (Johnson et al., 1996: 421). The main result of these findings is that the researchers concluded "that under normal circumstance the board may not be an important determinant of firm performance" (Johnson et al., 1996: 421).

In a 1998 meta-analysis, Dalton, Daily, Ellstrand, and Johnson reviewed research focusing on the relationships between BOD composition and leadership structure with firm financial performance. In an examination of 54 studies of the relationship between board composition and firm performance and another 31 studies regarding the relationship between leadership structure and firm performance, the authors found that these studies "provide little evidence of systematic governance structure / financial performance relationships" (Dalton et al., 1998: 269).

Finally, in a 2000 meta-analysis, Rhoades, Rechner, and Sundaramurthy analyzed 37 studies that included variables with ratios of inside to outside directors and firm performance. The meta-analytic results found "that corporate board composition has a small positive relationship with financial performance," and that this relationship varies based upon the precise definition of insider and outsider director utilized in the studies (Rhoades et al., 2000: 85). Daily, Johnson, and Dalton (1999) reach a similar conclusion in a review of board composition research, emphasizing four measures of board composition; inside director proportion, outside director proportion, independent / interdependent director proportion, and affiliated director representations (p. 86). Daily and colleagues maintain that inconsistencies between construct definitions and measurement operationalization of these constructs have contributed to mixed research findings in board composition studies.

Several conclusions can be drawn from these reviews of the BOD power elements and their impact on firm performance. First, while many of these studies examine many of the measures included in the proposed BOD power measure, most have been employed as uni-dimensional representations of BOD leadership structure, composition, and processes. In addition, much of the research has utilized different operationalizations of the BOD and firm performance constructs, again contributing to inconsistencies in research findings. Finally, as proposed by Johnson et al. (1996) and Kesner and Johnson (1990), the research implies that there may be little correlation between BOD power elements and firm performance, under normal conditions and circumstances.

Strategic Choice as a Mediator of the BOD Power – Firm Performance Relationship- Current corporate governance research has started to examine the role of strategic choice as a mediator of the BOD power – firm performance relationship. Utilizing a sample from the hospital industry during a period of industry deregulation, Golden and Zajac (2001) found that environmental change produced both opportunity and uncertainty that increased BOD involvement within the firm strategic change processes. Under these conditions, BODs with the power and need to impact the strategies engaged by the firm lead to increased performance of the firm (Golden & Zajac, 2001). Westphal and Fredrickson (2001) propose a two-stage process by which corporate boards "1) conceive changes in corporate strategies that reflect the strategies of their own home companies, and 2) select new CEOs who have prior experience with similar strategies to facilitate implementation" (p. 1113). Their findings are consistent with the research model proposed here, in that the BODs are more likely to engage in strategy-shifting succession when the prior performance of the firm is poor relative to the past performance of the firm. These findings also suggest that under poor performance conditions, the BOD often serves as the primary strategic change guiding force within the firm (Golden & Zajac, 2001; Westphal & Fredrickson, 2001).

Each of the aforementioned studies indicate circumstances such as environmental uncertainty and poor performance generate situations where the powerful BODs tend to become more actively involved in firm decision-making processes in order to stabilize or improve firm performance. Again, while strategic choice measures were not examined in this dissertation due to data availability limitations and inflexibility in polynomial lag regression to missing data, as originally intended, it will be examined as a mediator to BOD power in future research derived from this study. Also, the presence of strategic choice as a mediator of the BOD power – performance relationship may contribute to time lags in the relationship. As a result, it is proposed that:

Hypothesis 6: *There is a significant relationship between BOD Power and Firm Performance.*

CHAPTER 4
RESEARCH DESIGN & METHODOLOGY

Chapter 4 details the dissertation research design and measurement and analysis processes. Section 4.1 describes the basic study design and research strategy, while Section 4.2 examines the specific measures for each of the dissertation constructs. Section 4.3 details the sampling and data collection techniques utilized in this project, as well as the empirical methods used to evaluate the study data.

Section 4.1: Study Design and Research Strategy

A primary purpose of this study was to examine shifts in power between the CEO and BOD over time. As a result, this study employed a longitudinal design with antecedent factors impacting power development in organizations, as well as modeling consequences of power that may impact organizational performance. Data for the study were collected from archival sources over a nine-year period, with data availability constraints limiting the ability to collect data over a longer time period.

Data for this study were collected from a population of *Fortune 500* firms. This population was selected for a variety of reasons. First, since nearly all of these firms are publicly owned and traded, there is a greater amount of information available pertinent to the measures of the study. This limited the amount of missing data for the firms included in the study sample. In addition, since the primary research question of interest dealt with examining shifts in power relationships between the CEO and BOD, data collected from *Fortune 500* firms generally included power shifts between the CEO and BOD.

Table 4.1: Dissertation Measures

CEO Tenure-	Tenure at the CEO position within the firm
Past Performance-	Return on Equity (ROE) Return on Assets (ROA) Market Value
CEO Power-	CEO Compensation (Structural) CEO Stock Owned (Ownership) # of Official Titles (Structural) CEO Related to Founder/Founder of the Firm (Ownership) CEO Duality (Structural) CEO Relatives as Sitting Members on the BOD (Ownership) Independents/Total BOD Members (Structural)
BOD Power-	Director Compensation (Structural) Stock Compensation Issued to BOD Members (Structural/Ownership) BOD Size (Structural) BOD Chair as Founder/Relative of Founder (Ownership/Prestige)

Table 4.1 (continued)

BOD Power-	BOD Members as Founder/Relative of Founder (Ownership/Prestige) BOD Gender Diversity (Structural) Number of CEOs Employed by the Firm (Structural)
Firm Performance-	Return on Equity (ROE) Return on Assets (ROA) Market Value
Control Variables-	Firm Size Firm Industry Categorizations (Two-digit SIC Code)
Sources of Data:	CRSP & Compustat Dun & Bradstreet's Reference of Corporate Management Dun & Bradstreet's Million Dollar Directory Execucomp Standard & Poor's Directory of Corporations Standard & Poor's Directory of Directors Standard & Poor's Register of Corporations, Directors, and Executives Ward's Directory of 50,000 Largest U.S. Corporations

Variables Partially Collected, Excluded from this Study Due to Unavailable/Incomplete Data

Overall Firm Tenure (CEO Tenure)
Overall CEO Tenure in the Focal Industry (CEO Tenure)
Jensen's Alpha (Performance Measure)
Insiders/Total BOD Members (dropped due to high correlation with Independence measure)
Compensation Chair Insider or Outsider (CEO/BOD Power)
Membership Chair Insider or Outsider (CEO/BOD Power)
Audit Chair Insider or Outsider (CEO/BOD Power)
Executive Chair Insider or Outsider (CEO/BOD Power)
CEO/BOD Educational Interlocks (CEO Power)
CEO/BOD Service Interlocks (CEO Power)
CEO Family Stock Owned/Total Outstanding (CEO Ownership Power)
TMT Centralization (CEO Structural Power)
Critical Expertise Power (CEO Expert Power)
Formal Experience/Functional vs. Support (CEO Expert Power)
# of Past Positions Within the Firm (CEO Expert Power)
# of BOD Positions Served (CEO Prestige or Resource Power)
Non-Profit Boards Served (CEO Prestige or Resource Power)
Average BOD Stock Ratings (CEO Prestige Power)
Elite Education (CEO/BOD Prestige or Resource Power)
Meetings/Meetings Legally Required (BOD Structural Power)
% of Stock Owned by Outside Directors (BOD Ownership Power)

Table 4.1 (continued)

# of Outsiders With At Least 5% Stock (BOD Ownership Power)
Additional BOD Service (BOD Prestige or Resource/Expert Power)
BOD Elite Education (BOD Prestige or Resource Power)
BOD Educational Interlocks (BOD Prestige Power)
BOD Service Interlocks (BOD Prestige Power)

Section 4.2: Study Variables & Measures

CEO Tenure- As mentioned in Chapter 3, the primary measure of tenure in this study was the number of years the executive spent in the CEO position for the focal firm of interest. This measure was consistent with tenure measures used in governance articles and studies by Finkelstein and Hambrick (1990), Hambrick and Fukutomi (1991), Hill and Phan (1991), Miller (1991), and Shen and Cannella (2002).

Prior Organizational Performance- (Since the measures for each are the same, the prior organizational performance measures are discussed as part of the Current Firm Performance section).

CEO and BOD Powers- This study employed a design similar to that of Pearce and Zahra (1991), by considering the relationship between CEO and BOD powers in an effort to examine their effects on organizational performance. However, while Pearce and Zahra (1991) focused primarily on CEO/BOD dyadic pairings resulting from different CEO – BOD power groupings, this analysis evaluated such power groupings based on longitudinal changes in CEO/BOD power relationships, focusing on how the changes impact organizational performance. Based primarily on the research of Finkelstein (1992) and Boyd (1994), multi-dimensional measures of CEO and BOD powers were utilized and extended to test the research model. The measures for each of these constructs are listed as follows:

CEO Power- The measures for CEO power include:

1. *CEO Compensation*- This variable was comprised of the total cash compensation (salary, bonus, total value of restricted stock granted, net value of stock options exercised, long-term incentive payoffs, and all other miscellaneous annual compensation) of the CEO. Corporate governance research suggests that executive compensation differentials between executives indicates differences in the value of contributions and serves as an indication of formal power within the organization (Hambrick & D'Aveni, 1992; Pavlik, Scott, & Tiessen, 1993; Whistler, Meyer, Baum & Sorensen, 1967).
2. *Executive Shares*- Finkelstein (1992) defined this variable as "the percentage of a firms' shares owned by an executive", in this case the firm CEO (p. 513). This measure was representative of the extent of direct influence that the CEO has over BOD activities due to

dual involvement in managerial activities and BOD control functions as part of being a firm stockholder.

3. *Total Number of CEO Titles*- This variable included the number of official titles within the firm that the CEO possessed, as listed in the Execucomp database. As Finkelstein (1992) noted, this variable typically ranged from one to three, with additional titles including responsibilities such as Chair of the BOD, President and COO (Harrison, Torres & Kukalis, 1988).
4. *CEO as Founder or Relative of the Founder*- This variable was based in the concept that there is additional power embedded in the founding and leadership of a firm that may be transferred to relatives of the founder, due to interaction with and specific experience drawn from the act of founding a firm. The variable was coded one if the CEO was the firm founder or related to the firm founder. In Finkelstein (1992), this variable was also coded when the TMT member had the same last name as the founder, assuming that TMT members with the same surname were related, unless information contained in the proxy statements indicated other wise. Since the CEO tends to be the highest profile individual in most organizations, this study assumed that such a founder linkage will be publicized and exist as organizational knowledge. As a result, unless such publicized information existed, a founder-CEO relationship was not assumed.
5. *CEO Duality*- Discussed earlier in the Finkelstein (1992) CEO power measures section, CEO duality refers to the situation that exists when a firm's CEO also serves as the chair of its BOD. Past corporate governance research suggests that CEO duality has a negative relationship with BOD control, as an independent chair would be more likely to objectively evaluate management performance and enact punitive constraints if performance goals are not met or performance boundaries are exceeded (Finkelstein & Hambrick, 1996; Morck, Shleifer & Vishy, 1989; Weidenbaum, 1986). This variable was dummy coded zero if the duality condition was not present, and one if CEO duality existed within the firm.
6. *The Ratio of Independent BOD Members to Total BOD Membership*- The ratio of the number of BOD members not employed by the firm or related to the CEO to total BOD members. This variable was derived from research on director independence/interdependence, which argues that directors that are dependent on the CEO for their employment, BOD selection and membership are more likely to have past relationships and ties to the CEO, and are less likely to critically evaluate managerial performance (Boeker, 1992; Daily, Johnson & Dalton, 1999). Therefore, as the ratio of independent directors to total BOD members increase, CEO power was anticipated to decrease.
7. *CEO Relatives Serving on the BOD*- This measure was defined as a direct count of the number of sitting BOD members that are related to the CEO. Derived from the dominant coalition and managerial hegemony theories, it was proposed that a CEO that has relatives serving as BOD members are more likely to be able to co-opt and align BOD members with his/her strategy and vision of the firm (Herman, 1981; Kosnik, 1987; Pearce, 1995).

BOD Power- BOD power measures were comprised of various aspects of the BOD position and responsibilities. Listed below are composite measures of BOD power, primarily representing the structural and ownership dimensions of the BOD power construct. Measures of BOD power were derived from the BOD control measures in Boyd (1994), as well as other governance studies examining different aspects of BOD power (Finkelstein & Hambrick, 1996). As

mentioned earlier, most of the prior research has focused on structural elements of BOD power. This study represents an initial attempt to use archival data sources to develop a multi-dimensional BOD power construct. BOD power measure representations included:

1. *Level of Director Compensation*- Consistent with Boyd (1994), this variable was comprised of the sum of compensation components of annual retainers plus per-meeting fees. Additional compensation in the form of stock options was not considered as part of this measure, although BOD director stock compensation was included as a separate measure. Most corporate governance literature implies that since the CEO typically has influence in the BOD member selection and compensation processes, higher levels of compensation leads to lower BOD control (Baysinger & Hoskisson, 1990; Boyd, 1994; Kosnik, 1990). However, from a resource dependency perspective, one might argue that BOD member compensation might be linked to the types of information and knowledge, number of potential network contacts, capital, and other valued resources that members can supply to firms if needed (Pfeffer & Salancik, 1978). In such cases, BOD compensation is not linked to the control function, but to the BOD's ability to supply the firm with required resources in a timely manner. This measure was designed to tap compensation differences across BODs, as members of the same BOD are usually compensated at the same level (Finkelstein & Hambrick, 1996).
2. *Board Stock Ownership*- Again, consistent with Boyd (1994), this study measured Board Stock Ownership as the number of shares of common stock issued to independent BOD members for BOD service. The main theoretical principle reflected in this variable is derived from agency theory, where BOD control functions are assumed to be based on a representation of shareholder interests (Zald, 1969). In this case, the BOD member is also a shareholder, implying that as stock ownership increases, the BOD is more likely to act in alignment with shareholder interests, increasing BOD control.
3. *BOD Size*- The corporate governance literature offers conflicting perspectives regarding the effect of BOD size on power determinants such as contributions to decision-making and BOD efficiency. Zahra and Pearce (1989), in a review of BOD research, propose that "the relationship between board size and company performance is non-linear, representing an inverted-U" (p. 315). This conclusion is based on the argument that there is a threshold where the benefits of increasing BOD size is negated by increasing difficulties associated with reaching group consensus in decision-making (Hiner, 1967). Finkelstein and Hambrick (1996) use this perspective to imply that a negative relationship between BOD size and power, largely due to the negative influences of group size on decision-making. Finally, Pearce & Zahra (1992) find a significant, positive relationship between BOD size and firm performance in a study examining 119 *Fortune 500* firms. The authors employ a strategic contingency perspective to explain this finding, noting that firms operating in uncertain environments and/or high environmental needs might increase BOD size in efforts to resolve such uncertainties while insuring better performance. As a result of conflicting findings in prior studies, the precise nature of the BOD size – BOD power relationship was tested separately during data collection to establish the direction of the BOD size – BOD power relationship.
4. *Chairman of the BOD as the Firm Founder or Relative to the Founder (assuming a condition of no duality)*- This measure was coded one when the Chairman of the BOD was

also the firm founder or related to the firm founder, in situations where the Chairman was not also CEO. This situation occurs primarily in situations where a founder retires as CEO, but remains on the BOD as an advisor to a new CEO (Finkelstein & Hambrick, 1996). In such circumstances, the Chair assumes a primary role of monitoring and controlling CEO and TMT behavior as needed, and also has established information access and internal linkages regarding firm activities and behaviors. In addition, having a Chair that is related to firm founders also adds legitimacy and prestige to BOD activities and behaviors, as well as providing social capital for the BOD in firm resource acquisition and development.

5. *BOD Members as Founder or Relatives of the Firm Founder*- Similar to the preceding measure, this measure was calculated as a direct count of sitting BOD members that were either firm founders or relatives of the firm founder.
6. *BOD Gender Diversity*- This measure was calculated as a percentage of female BOD members to total BOD membership. Gender diversity was selected in this study as the diversity form most easily identified and accurately coded in the archival data. In cases where the director name made it hard to identify gender, company and Internet searches were performed to identify the specific gender of the director in question. All questionable cases were identified. Group and team theories suggests that diversified groups help add to the quality and quantity of viewpoints that a group will consider, and therefore produce better decisions as outputs (Belbin, 1981, Guzzo & Dickson, 1996). Therefore, group diversity should help contribute to better BOD performance, and increased BOD power.
7. *Number of CEOs Employed by the Firm Over the Study Time Span (1992-2000)*- The measure was included as a direct indication of the work on the BOD in its monitoring and control functions. A strong and active BOD is more likely monitor the strategic decision-making activities of the CEO & TMT, and engage in controlling activities including replacement, if management or firm performance lags (Boyd, 1994). As a result, this measure was conceptualized as a structural manifestation of BOD power.

Firm Past and Current Performance Measures- Following the lead of Venkatraman and Ramanujam (1986) and Daily and Johnson (1997), this study collected data on multiple performance measures in order to gather a multi-dimensional perspective on firm performance. As a result, both accounting and market-based performance measures were utilized in this study. The accounting-based performance measures tested in this model were return on assets (ROA) and return on equity (ROE).

ROA was defined as "a measure of return on total investment in the firm", and was calculated as (Barney, 2002):

$$\text{ROA} = \frac{\text{Profit after Taxes}}{\text{Total Assets}}$$

ROE was defined as "a measure of return on total equity investment in the firm", and was calculated as (Barney, 2002):

$$\text{ROE} = \frac{\text{Profit after Taxes}}{\text{Total Stockholder Equity}}$$

The market-based performance measure employed in this study was market value, which was calculated on an annual basis by multiplying the firm's end-of-year stock price times its shares of common stock outstanding. This variable has been utilized as a dependent variable in Economics and Finance literature streams.

Control Variables- Two primary control variables were included in the research model; those of firm size and firm industry categorizations. Based on prior research findings evaluating different firm size representations, the natural log of total assets was utilized as the control for firm size in this study (Daily, 1995; Daily, Johnson, Ellstrand, & Dalton, 1998; Hitt, Hoskisson, & Kim, 1997; Moulton & Thomas, 1993). In addition, data on the industry categorizations by two-digit SIC were collected and coded.

Section 4.3: Study Methodology and Analysis Techniques

Several different methodologies were used in different phases of this study. For CEO and BOD powers, a series of factor analyses were run to test the factor structure of the power measures. In the first of these examinations, the data was divided into yearly panels from 1992 to 2000, and separate factor analyses were run on the 14 CEO and BOD power measures included in the study. These analyses were used to see if there were consistent factor results over time, to determine if the measures separated into factors consistent with the conceptual design, and to determine the extent of variance between the annual panel data results and the comprehensive results.

In the second phase of analysis, factor analysis was used on the complete data set over the 1992 – 2000 time frame. The data were analyzed controlling for time-related auto-correlation across the years of the data. The resulting factor structure was then compared to the yearly panel results for consistency and stability in the results over time.

Finally, a third series of analyses was run based on the results of the earlier factor analyses results. The earlier results were used to divide the factors into CEO and BOD power constructs, and then subsequent factor analyses were used to ascertain the underlying dimensionality of the CEO and BOD power constructs.

The main research model was tested via polynomial lag regression, with past performance being modeled as a lag variable impacting CEO and BOD powers, as well as future performance. Such a design enabled a longitudinal examination of power relationships, while facilitating the testing of reciprocal power – performance effects.

Data for the polynomial lag regression portion of the study were collected for a random sample from the population of *Fortune 500* firms. The initial sample included 135 Fortune 500 firms in existence and viable over the time period of 1992-2000. The sample size dropped to 93 firms in the final sample, with firms excluded for missing data. This sample provided an overall sample size of N = 837 observations (93 companies X 9 years) for the testing of the polynomial lag regression model. To avoid potential losses of data during the course of the study, firms were sampled from the year 2000 backwards. Such a sampling technique helps limit the total number of firms that may fall out of the study due to activities such as firm dissolution and mergers and acquisitions. The overall sample size of 837 observations provides strong power for the empirical testing via polynomial lag regression, although some power is lost through the

use of mediated regression techniques to test Hypotheses H2, H3B, and H4B (Cohen, 1992; Murphy & Myors, 1998). These mediated relationships were tested via the disaggregation techniques prescribed in Baron & Kenny (1986).

CHAPTER 5

DISSERTATION STUDY RESULTS

The previous chapter described the study design and methodology applied in this dissertation for selecting the study sample, linking the methodology to the research questions for the study, matching the measures employed to the study constructs, and testing the strength and nature of the relationship between constructs. In Chapter 5, these study findings are discussed in a series of sections. The descriptive statistics for the study are displayed

Section 5.1 discusses the factor analysis findings of the dissertation in three stages. Stage 1 examines the results of the factor analysis conducted on the yearly panel data, looking for consistency and commonalities over time within the various power measures. Stage 2 analyzes the comprehensive factor analysis results for the longitudinal data, controls for and compares these results to conceptual expectations and the yearly panel results. Finally, Stage 3 utilizes the comprehensive results to create two power constructs, and studies the results of factor analyses exploring the underlying dimensionalities of these constructs. The complete data results from the factor analyses conducted in Stages 1 through 3 are listed in Appendix A.

Section 5.2 explores the polynomial lag regression results, based on the level of support for the eight study hypotheses. This analysis focuses on three primary issues, 1) Is the relationship between independent and dependent variable significant?, 2) Temporally, is the relationship linear, curvilinear, or cubic over time?, and 3) Temporally, is there an immediate effect of the independent on the dependent variable, or is the relationship lagged in effect over time?

Section 5.1 – Stage 1

Stage 1 Results- The factor analyses in Stages 1 and 2 were conducted on the 14 CEO and BOD power measures collected in the study. These measures were analyzed via exploratory factor analysis to determine the underlying factor structure of the power constructs (Hatcher, 1998). Exploratory factor analysis was selected in this study because of the preliminary nature of the study, especially in extending the examination of BOD power measures via archival data. The results from this stage are discussed in the following manner.

From 1992 to 2000, the results from each panel year were displayed and examined for major points emerging from the factor analysis. The panel data were analyzed with the SPSS 11.0 software program. The panel results were not specifically examined for loading consistency between measures and factors. The main purpose of the yearly results were to scan the results, explore common patterns and consistency in results over the 9 years of the sample, and compare the yearly results to the factor analysis of the comprehensive data examined in Stage 2. The structural rules employed in these analyses was to bold any factor loading above .4 as significant, while establishing a .6 threshold (Hatcher, 1998; Stevens, 1986) as a significance level for a primary factor loading. These practices are common standards in the evaluation of factors analysis results (Hatcher, 1998; Stevens, 1986).

The fourteen power measures analyzed in the series of factor analyses are BOD Size (BOD_Size), % of Independent BOD Member (Indep), CEO Duality (Duality), CEO as Founder or Relative of the Founder (CEO_Foun), CEO Relatives serving on the BOD (CEO_RBOD), BOD Chairman as Founder or Relative of the Founder (CHB_Foun), BOD Member as Founder of Relative of the Founder (BOD_MemF), the Number of CEO Titles (CEO_Tit), the Number of CEOs Employed During the Sample Time Frame (Num_CEOS), BOD Gender Diversity as a

Percentage (BOD_GenP), BOD Compensation (BOD_TC), Stock Issued for BOD Service (DIRSTK), CEO Total Compensation (TDC2), and CEO Stock Ownership (SHROWN).

Table 5.1: 1992 Factor Analysis Results

Rotated Component Matrix – 1992 Factor Analysis Results

Measures	Components					
	1	2	3	4	5	6
BOD SIZE	-.105	-.115	**.534**	.026	**.520**	.251
% OF INDEPENDENT BOD MEMBERS	**-.437**	.301	-.037	.063	.082	**.682**
CEO DUALITY	.130	**.784**	.001	-.044	.089	.041
CEO FOUNDER / FOUNDER RELATIVE	**.816**	.077	-.266	.081	-.085	.101
CEO RELATIVE ON BOD	**.870**	-.036	.008	-.061	.096	-.061
CHB FOUNDER / FOUNDER RELATIVE	.091	**-.836**	-.028	-.021	-.042	.097
BOD MEMBER FOUNDER	.188	-.378	**.519**	-.233	.025	.029
# OF CEO TITLES	-.046	**.432**	.061	-.287	**-.493**	.321
# OF CEOS	-.181	.080	**.710**	-.021	-.007	-.241
BOD GENDER DIVERSITY	.035	.247	.030	-.009	**.853**	.073
BOD TOTAL COMPENSATION	-.135	.179	**.638**	.389	.021	.153
DIRECTOR STOCK ISSUED	-.176	.171	.017	-.006	-.032	**-.756**
CEO TOTAL COMPENSATION	-.177	-.094	-.116	**.794**	.205	.001
CEO STOCK SHARES OWNED	.353	.057	.249	**.714**	-.197	.031

1992 Factor Analysis Results- The 1992 results sort into a six-factor output. The factor contributing to the most variance explained was the factor with % of Independent BOD Members, CEO as Founder or Relative of the Founder, and the Number of CEO Relatives Serving on the BOD. The CEO Compensation measures of CEO Total Compensation and CEO Stock Owned also loaded together in a single factor (Factor 4). Finally, the measures of BOD Size, % of Independent BOD Members, and the Number of CEO Titles cross-loaded on two factors, and the BOD Size, BOD Members as Founder or Relatives of Founders, and the BOD Gender Diversity measures had no factor loadings above the .6 threshold (Hatcher, 1998; Stevens, 1986).

Table 5.2: 1993 Factor Analysis Results

Rotated Component Matrix – 1993 Factor Analysis Results

Measures	Components					
	1	2	3	4	5	6
BOD SIZE	-.164	-.109	.128	**.711**	.291	.064
% OF INDEPENDENT BOD MEMBERS	**-.460**	.174	.096	.284	-.224	**.601**
CEO DUALITY	.120	**.791**	.018	.213	.045	-.023
CEO FOUNDER / FOUNDER RELATIVE	**.823**	.032	-.006	-.078	-.254	.112
CEO RELATIVE ON BOD	**.871**	-.122	.017	.075	.073	-.042
CHB FOUNDER / FOUNDER RELATIVE	.303	**-.781**	-.076	.031	.140	.036

Table 5.2 (continued)

BOD MEMBER FOUNDER	.129	-.304	-.021	.072	**.635**	.146
# OF CEO TITLES	-.002	**.414**	-.138	-.343	.296	**.607**
# OF CEOS	-.211	.146	.064	.071	**.696**	-.202
BOD GENDER DIVERSITY	.129	.322	-.009	**.763**	-.053	.028
BOD TOTAL COMPENSATION	-.141	.204	**.593**	.175	**.408**	.029
DIRECTOR STOCK ISSUED	-.139	.222	-.060	-.077	.051	**-.691**
CEO TOTAL COMPENSATION	-.160	-.098	**.765**	.141	-.069	.007
CEO STOCK SHARES OWNED	.310	.082	**.766**	-.135	-.003	.031

1993 Factor Analysis Results- The 1993 panel results also loaded into a six-factor output. Again, the factor contributing to the most variance explained is the factor with % of Independent BOD Members, CEO as Founder or Relative of the Founder, and the Number of CEO Relatives Serving on the BOD. The CEO Compensation measures of CEO Total Compensation and CEO Stock Owned loaded with the BOD Compensation measure in a single factor (Factor 3). Finally, the measures of % of Independent BOD Members, the Number of CEO Titles, BOD Compensation cross-loaded on two factors, and the highest BOD compensation loaded just below the .6 threshold (Hatcher, 1998; Stevens, 1986).

Tables 5.3 A & B: 1994 Factor Analysis Results

Rotated Component Matrix – 1994 Factor Analysis (5 Factor Unconstrained)

Measures	**Components**				
	1	2	3	4	5
BOD SIZE	-.116	**.605**	-.162	.178	.110
% OF INDEPENDENT BOD MEMBERS	**-.629**	.018	.117	-.076	**.420**
CEO DUALITY	.119	-.075	**.754**	-.085	-.207
CEO FOUNDER / FOUNDER RELATIVE	**.739**	-.294	.024	-.071	.259
CEO RELATIVE ON BOD	**.839**	.018	-.119	-.024	.094
CHB FOUNDER / FOUNDER RELATIVE	.362	.028	**-.741**	.072	.105
BOD MEMBER FOUNDER	.242	**.589**	.089	-.170	-.125
# OF CEO TITLES	-.184	-.058	.149	**-.637**	.210
# OF CEOS	-.180	**.735**	.049	-.106	-.110
BOD GENDER DIVERSITY	-.034	.196	**.491**	.115	.275
BOD TOTAL COMPENSATION	-.126	**.501**	.300	.340	.242
DIRECTOR STOCK ISSUED	-.134	.068	.150	.045	**-.744**
CEO TOTAL COMPENSATION	-.196	-.091	.033	**.764**	.083
CEO STOCK SHARES OWNED	.396	.091	.289	**.427**	.338

Rotated Component Matrix – 1994 Factor Analysis (6 Factor Forced)

Measures	**Components**					
	1	2	3	4	5	6
BOD SIZE	-.194	.231	-.205	**.585**	-.165	-.080
% OF INDEPENDENT BOD MEMBERS	**-.636**	.173	.053	-.061	.119	-.391

Table 5.3 B (continued)

CEO DUALITY	.078	-.005	**.848**	.085	-.006	.048
CEO FOUNDER / FOUNDER RELATIVE	**.774**	-.004	.014	-.228	.094	-.250
CEO RELATIVE ON BOD	**.837**	.003	-.116	.101	.030	-.083
CHB FOUNDER / FOUNDER RELATIVE	.368	-.203	**-.703**	.094	-.098	-.105
BOD MEMBER FOUNDER	.120	-.045	.206	**.812**	.041	-.028
# OF CEO TITLES	-.140	.066	.048	-.211	**.734**	-.065
# OF CEOS	-.198	**.484**	-.178	**.402**	.294	**.409**
BOD GENDER DIVERSITY	-.043	**.487**	.332	.036	.014	-.142
BOD TOTAL COMPENSATION	-.121	**.773**	-.010	.112	-.080	.089
DIRECTOR STOCK ISSUED	-.098	-.024	.117	-.097	-.003	**.844**
CEO TOTAL COMPENSATION	-.187	.244	-.025	-.165	**-.718**	-.069
CEO STOCK SHARES OWNED	**.417**	**.565**	.082	-.107	-.246	-.142

1994 Factor Analysis Results- The 1994 panel results differ from the others in that 1994 delivered a five-factor output, employing the eigenvalue greater than one cut-off for considering the loading as significant. The five-factor output is shown in Table 5.3. Since each of the other annual factor analysis resulted in a six-factor matrix, a six-factor output was forced with the 1994 data and is displayed in Table 5.4.

In the five-factor output, the factor contributing to the most variance explained was again the % of Independent BOD Members, CEO as Founder or Relative of the Founder, and the Number of CEO Relatives Serving on the BOD. The CEO Compensation measures of CEO Total Compensation and CEO Stock Owned loaded with the Number of CEO Titles measure in a single factor (Factor 4). Finally, the measures of % of Independent BOD Members cross-loaded on two factors, while the BOD Member as Founder or Relative of the Founder, BOD Gender Diversity, BOD Compensation, and CEO Stock Ownership measures had no factor loadings above the .6 threshold (Hatcher, 1998; Stevens, 1986).

In the six-factor output, the factor contributing to the most variance explained is again the % of Independent BOD Members, CEO as Founder or Relative of the Founder, and the Number of CEO Relatives Serving on the BOD, with a secondary cross-loading on CEO Stock Ownership. The CEO Compensation measures split, with CEO Total Compensation loading with the Number of CEO Titles measure in a single factor (Factor 5), while CEO Stock Ownership loaded on multiple, separate factors. The measures of Number of CEOs Employed over the Sample triple-loaded, and the CEO Stock Ownership measure double-loaded. Finally, the BOD Size, BOD Gender Diversity, Number of CEOs Employed over the Sample Time Frame, and the CEO Stock Ownership measures each had no factor loadings above the .6 threshold (Hatcher, 1998; Stevens, 1986).

Table 5.4 – 1995 Factor Analysis Results

Rotated Component Matrix – 1995 Factor Analysis Results

Measures	Components					
	1	2	3	4	5	6
BOD SIZE	-.093	-.157	**.804**	-.127	.069	-.095
% OF INDEPENDENT BOD MEMBERS	**-.569**	.217	.313	.051	-.380	-.112
CEO DUALITY	.044	**.783**	.245	-.026	-.045	-.177
CEO FOUNDER / FOUNDER RELATIVE	**.814**	.016	-.124	.088	-.173	-.171
CEO RELATIVE ON BOD	**.825**	-.081	.032	-.022	.078	-.058
CHB FOUNDER / FOUNDER RELATIVE	.155	**-.785**	.138	-.155	-.055	-.185
BOD MEMBER FOUNDER	.090	.126	.185	-.010	**.798**	-.006
# OF CEO TITLES	-.172	**.439**	-.163	**-.440**	.141	-.026
# OF CEOS	-.216	.004	.298	.065	.392	**.595**
BOD GENDER DIVERSITY	.147	.331	.377	.005	**-.450**	.291
BOD TOTAL COMPENSATION	-.094	.243	**.573**	.213	.122	.176
DIRECTOR STOCK ISSUED	-.054	-.008	-.077	-.098	-.145	**.791**
CEO TOTAL COMPENSATION	-.328	.038	-.133	**.722**	-.067	-.001
CEO STOCK SHARES OWNED	.345	.111	.102	**.685**	.126	-.115

1995 Factor Analysis Results- In the 1995 panel data, the factor analysis output again yielded a six-factor result. The factor contributing to the most variance explained is again the % of Independent BOD Members, CEO as Founder or Relative of the Founder, and the Number of CEO Relatives Serving on the BOD. The CEO Compensation measures also held together, with CEO Total Compensation loading with CEO Stock Ownership and the Number of CEO Titles measures in a single factor (Factor 5). The measure, Number of CEOs Titles, also double-loaded, while the % of Independent BOD Members, Number of CEO Titles, BOD Gender Diversity, and CEO Total Compensation measures had no factor loadings above the .6 threshold (Hatcher, 1998; Stevens, 1986).

Table 5.5 – 1996 Factor Analysis Results

Rotated Component Matrix – 1996 Factor Analysis Results

Measures	Components					
	1	2	3	4	5	6
BOD SIZE	-.096	-.128	-.178	.042	**.803**	-.224
% OF INDEPENDENT BOD MEMBERS	**-.526**	.284	.075	**-.421**	.313	.187
CEO DUALITY	.062	**.819**	.000	-.244	.080	.108
CEO FOUNDER / FOUNDER RELATIVE	**.846**	.047	.055	-.129	-.131	-.144
CEO RELATIVE ON BOD	**.881**	-.102	-.050	-.024	.056	.037
CHB FOUNDER / FOUNDER RELATIVE	.258	**-.788**	.019	-.179	.137	.017
BOD MEMBER FOUNDER	-.003	-.042	-.053	**.785**	-.034	.008
# OF CEO TITLES	-.060	.193	-.006	-.074	-.085	**.690**
# OF CEOS	-.223	.050	.196	**.575**	.386	.213
BOD GENDER DIVERSITY	.130	.358	.347	-.056	**.433**	.333

Table 5.5 (continued)

BOD TOTAL COMPENSATION	-.183	.207	**.496**	.105	.374	-.371
DIRECTOR STOCK ISSUED	-.088	-.076	-.117	.152	-.022	**.600**
CEO TOTAL COMPENSATION	-.211	-.364	**.742**	-.206	-.004	.096
CEO STOCK SHARES OWNED	.200	.146	**.687**	.144	-.187	-.215

1996 Factor Analysis Results- In the 1996 panel data, the factor analysis yielded a six-factor output. The factor contributing to the most variance explained was again the grouping of the % of Independent BOD Members, CEO as Founder or Relative of the Founder, and the Number of CEO Relatives Serving on the BOD measures. The CEO Compensation measures also loaded together, with CEO Total Compensation and CEO Stock Ownership loading with BOD Total Compensation in a single factor (Factor 3). Only the measure of the % of Independent BOD Members double-loaded. Finally, consistent with the 1995 results, the % of Independent BOD Members, Number of CEO Titles, BOD Gender Diversity, and CEO Total Compensation measures had no factor loadings above the .6 threshold (Hatcher, 1998; Stevens, 1986).

Table 5.6 – 1997 Factor Analysis Results

Rotated Component Matrix – 1997 Factor Analysis Results

Measures	Components					
	1	2	3	4	5	6
BOD SIZE	-.165	-.030	.010	**.720**	.330	.146
% OF INDEPENDENT BOD MEMBERS	**-.475**	.006	**.630**	.094	.108	.209
CEO DUALITY	-.041	-.215	**.561**	**-.555**	.341	-.021
CEO FOUNDER / FOUNDER RELATIVE	**.856**	.138	-.026	-.142	.080	-.063
CEO RELATIVE ON BOD	**.875**	-.069	-.061	.186	-.034	.102
CHB FOUNDER / FOUNDER RELATIVE	**.483**	.001	-.068	**.655**	-.220	-.220
BOD MEMBER FOUNDER	-.134	-.173	**-.749**	-.015	.068	.230
# OF CEO TITLES	-.085	-.165	**.516**	-.128	-.235	.130
# OF CEOS	-.343	.021	-.243	.221	.033	**.528**
BOD GENDER DIVERSITY	.135	.084	.101	-.069	-.023	**.822**
BOD TOTAL COMPENSATION	-.163	.159	-.039	.019	**.726**	.269
DIRECTOR STOCK ISSUED	-.187	-.014	.096	-.045	**-.693**	.329
CEO TOTAL COMPENSATION	-.063	**.853**	.080	.200	.086	.145
CEO STOCK SHARES OWNED	.115	**.888**	-.100	-.163	.064	-.031

1997 Factor Analysis Results- In the 1997 panel data, the factor analysis again yielded a six-factor output. The factor contributing to the most variance explained was again the % of Independent BOD Members, CEO as Founder or Relative of the Founder, and the Number of CEO Relatives Serving on the BOD measures, with the Chairman of the BOD as Founder or Relative of the Founder measure also cross-loading on this factor. The CEO Compensation measures also sorted together, with CEO Total Compensation and CEO Stock Ownership loading as the single factor (Factor 2). The measures of the % of Independent BOD Members, CEO Duality, and Chairman of the BOD as Founder or Relative of the Founder all double-

loaded. Finally, CEO Duality, Number of CEO Titles, and the Number of CEOs Employed over the Sample Time Frame measures each had no factor loadings above the .6 threshold (Hatcher, 1998; Stevens, 1986).

Table 5.7 – 1998 Factor Analysis Results

Rotated Component Matrix – 1998 Factor Analysis Results

Measures	Components					
	1	2	3	4	5	6
BOD SIZE	.021	.106	**-.418**	**.674**	.012	-.017
% OF INDEPENDENT BOD MEMBERS	-.395	**-.446**	**-.401**	.089	.117	.141
CEO DUALITY	-.328	**-.570**	.236	.010	.348	-.153
CEO FOUNDER / FOUNDER RELATIVE	**.672**	-.138	**.513**	-.074	.014	-.093
CEO RELATIVE ON BOD	**.896**	-.051	.105	-.010	.116	-.046
CHB FOUNDER / FOUNDER RELATIVE	**.785**	-.036	-.255	-.019	-.250	.075
BOD MEMBER FOUNDER	-.083	**.645**	.037	.063	-.054	-.055
# OF CEO TITLES	-.034	-.054	-.081	.085	**.843**	-.025
# OF CEOS	-.177	**.637**	-.153	.011	.183	.034
BOD GENDER DIVERSITY	.061	.283	.163	-.039	.232	**.698**
BOD TOTAL COMPENSATION	-.096	.028	.106	**.849**	.090	.116
DIRECTOR STOCK ISSUED	-.044	.135	-.278	**-.448**	**.431**	.187
CEO TOTAL COMPENSATION	-.100	-.287	-.015	.104	-.210	**.730**
CEO STOCK SHARES OWNED	-.008	-.082	**.769**	.006	-.099	.155

1998 Factor Analysis Results- The 1998 panel data again yielded a six-factor output. The factor contributing to the most variance explained differs somewhat from the previous panel findings. The CEO as Founder or Relative of the Founder and the Number of CEO Relatives Serving on the BOD again loaded together on the primary factor, but with the Chairman of the BOD as Founder or Relative of Founder measure instead of the % of Independent BOD Members measure. The CEO Compensation measures also split, with CEO Total Compensation loading with the BOD Gender Diversity measure (Factor 6). The BOD Compensation measures loaded together (BOD Compensation and Stock Granted to BOD Members for Service) with BOD Size. The measures of BOD Size, the % of Independent BOD Members, CEO as Founder or Relative of Founder, and Stock Granted to BOD Members for Service all double-loaded. Finally, CEO Duality, the % of Independent BOD Members, and the Stock Granted to BOD Members for Service measures each had no factor loadings above the .6 threshold (Hatcher, 1998; Stevens, 1986).

Table 5.8 – 1999 Factor Analysis Results

Rotated Component Matrix – 1999 Factor Analysis Results

Measures	Components					
	1	2	3	4	5	6
BOD SIZE	.036	-.111	-.113	**.786**	-.050	.342
% OF INDEPENDENT BOD MEMBERS	**-.506**	-.180	-.043	.116	-.282	.238
CEO DUALITY	-.287	.125	**.671**	-.041	-.347	-.133

Table 5.8 (continued)

CEO FOUNDER / FOUNDER RELATIVE	**.726**	.333	.063	-.115	-.167	-.201
CEO RELATIVE ON BOD	**.885**	-.067	.027	.038	-.121	-.008
CHB FOUNDER / FOUNDER RELATIVE	**.719**	-.119	-.310	-.007	-.032	.069
BOD MEMBER FOUNDER	.114	-.037	**.526**	.049	**.431**	.299
# OF CEO TITLES	-.006	-.119	**.782**	-.037	.060	.054
# OF CEOS	-.072	-.245	.145	-.034	**.674**	.078
BOD GENDER DIVERSITY	-.110	.229	-.200	.065	**.602**	-.078
BOD TOTAL COMPENSATION	-.152	.105	.067	**.788**	.093	-.370
DIRECTOR STOCK ISSUED	-.172	.025	.075	.002	.045	**.865**
CEO TOTAL COMPENSATION	-.003	**.947**	-.057	-.006	-.032	.053
CEO STOCK SHARES OWNED	.096	**.934**	-.010	-.008	.005	-.058

1999 Factor Analysis Results- The 1999 panel data again yielded a six-factor solution. The factor contributing to the most variance was consistent with prior findings. The % of Independent BOD members, CEO as Founder or Relative of the Founder, the Number of CEO Relatives Serving on the BOD, and the Chairman of the BOD as Founder or Relative of Founder measures all loaded together on the primary factor. The CEO Compensation measures also returned to loading together, with CEO Total Compensation and CEO Stock Owned loading as the second strongest factor. The BOD Gender Diversity measure double-loaded, while the % of Independent BOD Members and the BOD Members as Founder or Relatives of Founder measures each had no factor loadings above the .6 threshold (Hatcher, 1998; Stevens, 1986).

Table 5.9 – 2000 Factor Analysis Results

Rotated Component Matrix – 2000 Factor Analysis Results

Measures	**Components**					
	1	2	3	4	5	6
BOD SIZE	-.024	.100	**.693**	-.008	.005	.103
% OF INDEPENDENT BOD MEMBERS	**-.418**	-.164	.116	**.475**	.168	**-.422**
CEO DUALITY	-.257	.197	-.329	**.514**	**-.414**	.021
CEO FOUNDER / FOUNDER RELATIVE	**.739**	**.418**	-.161	.089	-.058	.005
CEO RELATIVE ON BOD	**.880**	-.040	-.074	-.010	-.143	.084
CHB FOUNDER / FOUNDER RELATIVE	**.732**	-.108	.083	-.197	.023	-.139
BOD MEMBER FOUNDER	-.030	-.050	.128	.097	-.015	**.807**
# OF CEO TITLES	-.033	-.098	-.144	**.759**	-.060	.153
# OF CEOS	-.089	-.212	-.028	.067	**.622**	**.495**
BOD GENDER DIVERSITY	-.148	.082	-.111	-.086	**.723**	-.109
BOD TOTAL COMPENSATION	-.128	.104	**.677**	-.230	-.148	.015
DIRECTOR STOCK ISSUED	-.320	-.077	**-.425**	-.380	-.339	.260
CEO TOTAL COMPENSATION	.010	**.817**	.226	-.046	-.057	-.116
CEO STOCK SHARES OWNED	.040	**.901**	.037	-.040	.030	.022

2000 Factor Analysis Results- The 2000 panel data also yielded a six-factor output. Again, the factor contributing to the most variance explained is consistent with prior findings. The % of Independent BOD members, CEO as Founder or Relative of the Founder, the Number of CEO Relatives Serving on the BOD, and the Chairman of the BOD as Founder or Relative of Founder all loaded together as the primary factor. The CEO Compensation measures also returned to loading together as the second strongest factor (with the CEO as Founder or Relative of the Founder double-loading as a secondary measure). The % of Independent BOD Members measure triple-loaded, while the CEO Duality, CEO as Founder or Relative of the Founder, and Numbers of CEOs Employed During the Sample Time Frame measures all had factor loadings below the .6 threshold (Hatcher, 1998; Stevens, 1986).

Section 5.1 – Stage 2

In Stage 2, the Factor Analysis results from the Comprehensive data were analyzed. The comprehensive data examined in the factor analysis consists of the 14 power variables collected for the study over the years 1992 to 2000. The data were analyzed in the software program AMOS 4.0, and adjusted to control for the effects of auto-correlation across the panel data. The results are displayed below.

Table 5.10 – Comprehensive Factor Analysis Results

Rotated Component Matrix – Comprehensive Factor Analysis Model

Measures	Components					
	1	2	3	4	5	6
BOD SIZE	-.091	-.092	-.218	**.696**	.079	.044
% OF INDEPENDENT BOD MEMBERS	**-.520**	-.057	.232	.266	-.348	.090
CEO DUALITY	.075	-.001	**.799**	.066	-.170	.008
CEO FOUNDER / FOUNDER RELATIVE	**.832**	.159	.027	-.086	-.192	-.062
CEO RELATIVE ON BOD	**.886**	-.090	-.111	-.001	.017	.026
CHB FOUNDER / FOUNDER RELATIVE	.315	-.089	**-.705**	-.046	-.033	-.130
BOD MEMBER FOUNDER	.064	.007	.010	.033	**.807**	-.102
# OF CEO TITLES	-.038	-.130	**.553**	-.172	.132	-.041
# OF CEOS	-.193	-.112	.016	.238	**.599**	.243
BOD GENDER DIVERSITY	.104	.075	.115	.386	-.090	**.682**
BOD TOTAL COMPENSATION	-.092	.185	.114	**.707**	.112	-.064
DIRECTOR STOCK ISSUED	-.160	-.015	-.029	-.314	.106	**.750**
CEO TOTAL COMPENSATION	-.045	**.881**	-.074	.078	-.072	.065
CEO STOCK SHARES OWNED	.114	**.900**	.010	.005	.005	-.027

Results from the Comprehensive Factor Analysis- Consistent with the findings from eight of the nine years of panel results, the comprehensive factor analysis also produced a six-factor output. Factor 1 consists of the measures % of Independent BOD Members, CEO as a Founder or Relative of a Founder, and CEO Relatives on the BOD. These three measures loaded together as

the primary factor in eight of the nine years of panel data analysis, and are labeled as the "CEO Control" factor. Factor 2 contains the measures of CEO Total Compensation and CEO Stock Shares Owned. These measures also loaded together in eight of the nine years of panel data, and are labeled as the "CEO Compensation" factor. The third factor is comprised of the measures CEO Duality, Chairman of the BOD as Founder or Relative of the Founder, and the Number of CEO Titles. A combination of these three measures loaded together in eight of the nine years of the panel data, and the factor is tentatively labeled as "Firm Leadership Structure."

Factor 4 consists of the measures of BOD Size and BOD Compensation. These measures loaded together in five of the nine years of panel data, including the last three. The factor is labeled "BOD Structural Compensation." Factor 5 contains the measures BOD Members as Founder or Relatives of the Founder and Number of CEOs Employed over the Sample Time Frame. These measures loaded together in some combination of measures in seven of the nine years of panel data analysis. This factor is labeled as a "BOD Control" factor. Factor 6 is comprised of the BOD Gender Diversity and Stock Granted for BOD Service. Interestingly enough, these measures do not load together in any of the prior panel analyses. This factor is tentatively labeled as "BOD Structural Ownership."

Emerging Trends from the Comprehensive Factor Analysis- Several significant trends emerge from analysis of the factor analyses results. Perhaps the most important is to note that the factor structure tends to nearly directly approximate the conceptual variable – measure relationship in the study structural design. Factors 1, 2, and 3 contain all of the measures conceptualized as CEO power proxies, while Factors 4, 5 and 6 contain six of the seven measures conceptualized as BOD power proxies. The exception is the BOD Chairman as a Founder or Relative of the Founder, which loads with CEO Duality and the Number of CEO Titles.

The second important trend to note regards the lack of cross-loadings in the comprehensive factor structure. Each of the fourteen measures loaded cleanly into one factor, with no significant loadings on secondary factors. In addition, only the % of Independent BOD Member and Number of CEO Title measures loaded below the .6 threshold for significant primary factor loadings (Hatcher, 1998; Stevens, 1986).

Finally, one of the theoretical conceptualizations of this study involved testing to see if there would be statistically significant distinctions between zero-sum measures (those such as CEO Duality and % of Independent BOD members where an increase or decrease in the level of CEO power has a direct impact on BOD power, and vice versa) and positive-sum measures (those such as CEO Compensation and Number of CEO Titles where an increase in either CEO or BOD power does not produce a direct change on the other). The findings from the study do not support this perspective, as none of the factor analyses results indicates these zero and positive-sum measures load together or have disparate impacts. As a result, the conceptualization of a variable labeled "CEO/BOD Interdependence" containing the zero-sum CEO and BOD power measures was not supported and was dropped from this study.

Based on these findings, the following standards were employed in Stage 3 of the factor analyses. The seven CEO power measures from Factors 1, 2, and 3 were conceptualized as CEO power proxies, and analyzed for underlying dimensionalities in the first factor analysis. The six BOD power measures from Factors 4, 5, and 6 were sorted into a second factor analysis with the BOD Chair as Founder or Relative of the Founder measure from Factor 3, and subsequently analyzed for underlying dimensionalities as well.

Section 5.1 – Stage 3

Stage 3 consists of the factor analysis results for the CEO and BOD power variables. Each variable has seven representative measures of CEO and BOD powers, respectively. The primary goal of this series of analyses was to gain a better understanding of the underlying dimensionality of the CEO and BOD power constructs, as well as to examine the extent to which the resulting factors differed from the Stage 2 factor outputs.

Table 5.11 – Comprehensive CEO Power Factor Analysis Results

Rotated Component Matrix – CEO Power Factor Analysis

Measures	Components		
	1	2	3
% OF INDEPENDENT BOD MEMBERS	**-.602**	.052	.382
CEO DUALITY	.008	.053	**.769**
CEO FOUNDER / FOUNDER RELATIVE	**.847**	.191	.102
CEO RELATIVES ON BOD	**.876**	-.065	.008
# OF CEO TITLES	-.051	-.118	**.729**
CEO TOTAL COMPENSATION	-.062	**.902**	-.044
CEO SHARES OWNED	.119	**.897**	-.018

CEO Power Variable Factor Analysis Results- The results from the CEO Power Analysis were extremely consistent with both the panel data outputs and the comprehensive data analysis findings. The CEO power factor analysis produced a three-factor output matrix associated with CEO power. As in the comprehensive analysis results, Factor 1 consisted of the measures % of Independent BOD Members, CEO as a Founder or Relative of a Founder, and CEO Relatives on the BOD. These three measures also loaded together as the primary factor in eight of the nine years of panel data analysis, and are still labeled as the "CEO Control" factor.

Again consistent with the comprehensive analysis results, Factor 2 contains the measures of CEO Total Compensation and CEO Stock Shares Owned. These measures also loaded together in eight of the nine years of panel data, and are still labeled as the "CEO Compensation" factor.

Finally, the third factor was comprised of the measures CEO Duality and the Number of CEO Titles. A combination of these two measures loaded together in seven of the nine years of the panel data, and the factor was re-labeled as "CEO Job Structure".

The outputs for the CEO Power variable also represent a very clean factor loading structure. None of the measures cross-loaded across factors, and each of the primary factor loadings exceeded the .6 threshold (Hatcher, 1998; Stevens, 1986).

Table 5.12 – Comprehensive BOD Power Factor Analysis Results

Rotated Component Matrix – BOD Power Factor Analysis

Measures	Components		
	1	2	3
BOD SIZE	-.063	**.642**	.348
CHB FOUNDER / FOUNDER RELATIVE	**-.729**	.073	.066
BOD MEMBER FOUNDER	-.248	.030	**.738**
BOD GENDER DIVERSITY	**.607**	.153	.061
DIRECTOR STOCK ISSUED	.371	**-.518**	.390
BOD TOTAL COMPENSATION	.349	**.734**	.022
# OF CEOS	.281	.148	**.640**

BOD Power Variable Factor Analysis Results- The BOD power factor analysis was consistent with the comprehensive analysis in producing a three-factor output matrix associated with BOD power. In contrast to the CEO Power variable factor analysis results, the BOD Power factor analysis results varied from the annual panel and comprehensive factor analysis results. The primary factor output in the BOD power factor analysis is comprised of the Chairman of the BOD as Founder or Relative of the Founder and the BOD Gender Diversity measures. These measures loaded together only once in the nine years of panel analysis, and did not load together in the comprehensive factor analysis. In that analysis, BOD Gender Diversity loaded with Stock Issued for BOD Service, while the Chairman of the BOD as Founder or Relative of the Founder loaded with the CEO Power measures of CEO Duality and Number of CEO Titles. However, both the Chair as Founder or Relative of the Founder and BOD Gender Diversity measures represent structural aspects of BOD design. As a result, this factor was labeled "BOD Structure".

For the second factor, BOD Size loaded with the BOD reward proxies of BOD Compensation and Stock Granted for Director Service. Combinations of these measures loaded together in six of the nine panel years, with all three loading together twice. The comprehensive model results were similar to these, with BOD Size and BOD Compensation loading together while Stock Granted for Director Service loaded with BOD Gender Diversity. The resulting factor was labeled "BOD Structural Compensation".

In the third factor, the measures of BOD Member as Founder or Relative of the Founder and the Numbers of CEOs over the Sample Time Frame loaded together. These findings were consistent with prior results, where the two measures loaded together in seven of the nine panel analyses, as well as in the comprehensive data outputs. The resulting factor was labeled "BOD Control".

The results for the BOD power factor analysis also yielded clean outputs. None of the measures double-loaded, and only the Stock Granted for Director Service measure had a primary factor loading below the .6 standard threshold (Hatcher, 1998; Stevens, 1986).

Section 5.2 - *Polynomial Lag Regression Testing and Results*

The hypotheses were tested via polynomial lag regression analysis utilizing the SAS 9.0 software program. The descriptive statistics of measure means, standard deviations, and

correlations are listed in Table 5.13 below. To run the analysis for hypotheses testing, the following steps were followed. First, all of the variables analyzed in the study were standardized, with the exception of the industry categorization control variable. The study variables were standardized to place the study measures on similar scales of magnitude to enable easier interpretation of effects. Standardization also facilitates the summing of measures to create composite variables.

To test the study hypotheses, composite variable were created for CEO power, BOD power, and performance utilizing standardized measures in the following formulas:

zCEO_Power = (zIndep + zCEO_Foun + zCEO_RBOD + zTDC2 + zSHROWN + zDuality + zCEO_Tit)

zBOD_Power = (zCHB_Foun + zBOD_Size + zDIRSTK + zBOD_MemF + zNum_CEOS + zBOD_TC + zBOD_GenP)

zPerf = (zROEPER + zMKTVAL + zROA)

For each portion of the analysis, the focal independent and dependent variables of interest were entered into the polynomial lag regression analysis, along with the control variables for firm size (represented as the natural log of total assets) and industry categorization (listed as two-digit SIC codes). The following information is reported as outputs of polynomial lag regression: the relationship R-squared, the basic shape of the distributed effects over the five-year span (immediate, linear, quadratic, or cubic), and the significance of the annual effects distributed over each year (are the immediate and distributed effects significant each year?). The polynomial regression analysis parameters were established to test for up to a five-year distribution of independent variable effects. The obtained results indicated that the five-year maximum lag estimation was sufficiently long. In addition, the polynomial lag regression analysis parameters were set to control for one year of autocorrelation in the study data, as first-order autocorrelation was strongly apparent, as is common in annual longitudinal data.

Hypothesis 1: The initial study hypothesis proposed a positive relationship between CEO tenure and CEO power. This hypothesis is supported by the study results. The overall regression R^2 is .0941, and the CEO tenure T-value is highly significant at time zero ($t=8.34$, $p<.0001$), time 2 ($t=-2.28.$, $p<.05$) and time 4 ($t=2.57$, $p<.05$). The T-value estimates of the shape of the tenure – power relationship are also highly significant at the linear ($t=-4.34$, $p<.0001$), quadratic ($t=4.81$, $p<.0001$), and cubic ($t=-4.22$, $p<.0001$) levels, although the plotted shape of the curve suggests a curvilinear form offers the best fit. The results of the analysis are summarized in Tables 5.14 and 5.15 below.

Table 5.13 – Descriptive Statistics for Dissertation Measures

Variable	Mean	Stan. Dev.	BOD_SIZE	INDEP	DUALITY	CEO_FOUN	CEO_RBOD	CHB_FOUN	BOD_MEMF	CEO_TIT	NUM_CEOS	BOD_GENP	CEO_TEN	BOD_TC	DIRSTK	ROEPER	N_LOG_AS	ROA	MKTVAL	EMPL	TDC2	SHROWN
BOD_SIZE	11.54	3.054	1																			
INDEP	.7721	.1288	.145**	1																		
DUALITY	.82	.379	-.040	.151**	1																	
CEO_FOUN	.12	.327	-.161**	-.286**	.040	1																
CEO_RBOD	.19	.674	-.038	-.363**	-.056	.622**	1															
CHB_FOUN	.04	.198	.092**	-.212**	-.416**	.201**	.346**	1														
BOD_MEMF	.11	.432	.103**	-.128**	-.075*	-.093**	.057	.033	1													
CEO_TIT	2.33	.526	-.094**	.168**	.206**	-.061	-.033	-.129**	.017	1												
NUM_CEOS	1.86	.751	.138**	.027	-.093**	-.229**	-.135**	-.107**	.175**	.042	1											
BOD_GENP	.0924	.0746	.080*	.122**	.064	-.033	-.004	-.129**	-.025	-.036	.114**	1										
CEO_TEN	8.281	7.20	-.118**	-.153**	.259**	.413**	.255**	-.080*	-.023	-.105**	-.420**	.015	1									
BOD_TC	33.67	13.03	.252**	.105**	.028	-.123**	-.101**	-.149**	.026	-.035	.149**	.134**	-.106**	1								
DIRSTK	.2988	.7133	.004	.040	.009	-.135**	-.069*	-.086*	.003	.057	.073*	.088*	-.122**	-.080*	1							
ROEPER	14.15	37.86	.076*	.074*	-.059	.037	-.024	.006	.038	-.045	.041	.039	.008	.017	-.202**	1						
N_LOG_AS	8.455	1.20	.445**	.183**	.019	-.019	-.002	-.019	-.029	-.047	.094**	.153**	-.018	.323**	.003	.032	1					
ROA	5.640	6.288	-.028	-.008	-.010	.047	-.042	-.010	.019	-.084*	.088*	.024	.036	.051	-.131**	.546**	-.114**	1				
MKTVAL	10882.1	20272.8	.097**	.040	.003	.041	-.021	-.066	-.049	-.110**	.095**	.187**	.075*	.309**	.043	.157**	.455**	.354**	1			
EMPL	27.65	27.41	.145**	.163**	.045	-.157**	-.144**	-.146**	-.064	-.016	.071*	.217**	-.021	.260**	.048	.021	.504**	-.031	.294**	1		
TDC2	5633.2	14424.9	.030	.053	-.011	.078*	-.050	.016	-.048	-.092**	-.078*	.106**	.115**	.149**	.010	.083*	.198**	.201**	.476**	.069*	1	
SHROWN	3484.3	206001	-.026	-.081*	.004	.233**	.016	-.025	-.013	-.067	-.093**	.060	.147**	.107**	-.052	.060	.100**	.094**	.291**	.003	.642**	1

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

Table 5.14 – Relationship Shape Estimates
Relationship Tested: CEO Tenure → CEO Power

Variable	Estimate	Standard Error	T-Value	Pr > t
Intercept	-.4432	.4315	-1.03	.3047
Natural Log of Assets	.5526	.1304	4.24****	<.0001
SIC Industry Code	.0113	.0095	1.18	.2373
CEO Tenure (1st Order)	-.4635	.1068	-4.34****	<.0001
CEO Tenure (2nd Order)	.5347	.1111	4.81****	<.0001
CEO Tenure (3rd Order)	-.5091	.1206	-4.22****	<.0001

* = p<.10, ** = p<.05, *** = p<.01, **** = p<.001

Table 5.15 – Estimate of Lag Distribution of IV
Relationship Tested: CEO Tenure → CEO Power

Variable	Estimate	Standard Error	T-Value	Pr > t
CEO Tenure at t(0)	.9256	.1110	8.34****	<.0001
CEO Tenure at t(1)	.0094	.0809	.12	.9071
CEO Tenure at t(2)	-.1625	.0712	-2.28**	.0227
CEO Tenure at t(3)	.0302	.0711	.43	.6704
CEO Tenure at t(4)	.2083	.0809	2.57**	.0102
CEO Tenure at t(5)	-.0078	.1106	-.07	.9437

* = p<.10, ** = p<.05, *** = p<.01, **** = p<.001
Relationship R^2 = .0941

Hypothesis 2: Hypothesis 2 proposes an indirect relationship between prior organizational performance and CEO power that is mediated by CEO Tenure. Testing of mediated relationships in this study is conducted according to the four-step process outlined in Baron and Kenny (1986). Step 1 tests for significance between the independent and dependent variables. Step 2 tests for significance in the independent variable – mediator relationship. Step 3 tests for significance between the mediator and the dependent variable. Finally, Step 4 calls for the testing of the independent variable – dependent variable linkage, while controlling for the

mediator. Step 3 and 4 are conducted simultaneously, and full mediation is verified if the first three steps yield significant outputs, and the independent variable – dependent variable linkage is insignificant when the mediator is controlled. If the first three steps are significant, but the fourth yields a significant independent variable – dependent variable linkage when controlling for the mediator, then partial mediation is indicated.

For Hypothesis 2, Step 1 tests for significance of a direct relationship between prior organizational performance and CEO power. This relationship is also the direct linkage represented in Hypothesis 3A, and this hypothesized linkage is supported. The overall regression R^2 is .0374. The performance T-values is significant at Time 0 (t=3.39, p<.001) and Time 1 (t=3.47, p<.001), indicating the presence of a lag effect of performance on CEO power. The T-value estimate of the shape of the prior performance – CEO power relationship is also significant at the linear level (t= -2.26, p<.05). The results of the analysis are summarized in Tables 5.16 and 5.17 below.

Table 5.16 – Relationship Shape Estimates
Relationship Tested: Prior Organizational Performance → CEO Power

Variable	Estimate	Standard Error	T-Value	Pr > t
Intercept	.2129	.5122	.42	.6778
Natural Log of Assets	.1903	.1631	1.17	.2437
SIC Industry Code	-.0096	.0111	-.87	.3851
Performance (1st Order)	-.1244	.0550	-2.26**	.0239
Performance (2nd Order)	.0892	.0517	1.72*	.0852
Performance (3rd Order)	.0755	.0469	1.61	.1085

* = p<.10, ** = p<.05, *** = p<.01

Table 5.17 – Estimate of Lag Distribution between IV and DV
Relationship Tested: Prior Organizational Performance → CEO Power

Variable	Estimate	Standard Error	T-Value	Pr > t
Performance at t(0)	.1652	.0488	3.39****	.0008
Performance at t(1)	.1446	.0416	3.47****	.0006
Performance at t(2)	.0688	.0373	1.84*	.0659
Performance at t(3)	-.0060	.0373	-.16	.8722

Table 5.17 (continued)

Performance at t(4)	-.0234	.0416	-.56	.5732
Performance at t(5)	.0727	.0487	1.49	.1360

* = p<.10, ** = p<.05, *** = p<.01, **** = p<.001
Relationship R^2 = .0374

Hypothesis 2, Step 2- Step 2 tests for significance in the relationship between the independent variable and the mediator, in this case past performance and CEO Tenure. This relationship yields a small regression R^2 of .0142, and the past performance – CEO tenure linkage is insignificant across the five-year period examined in this study. The relationship shape estimates are also non-significant. As a result of non-significance in Step 2, Hypothesis 2 is rejected. These Step 2 results are displayed in Tables 5.18 and 5.19 below.

Table 5.18 – Relationship Shape Estimates
Relationship Tested: Prior Organizational Performance → CEO Tenure

Variable	**Estimate**	**Standard Error**	**T-Value**	**Pr > t**
Intercept	-.0921	.1538	-.60	.5494
Natural Log of Assets	-.1153	.0415	-2.78***	.0056
SIC Industry Code	.0024	.0031	.76	.4474
Performance (1st Order)	-.0018	.0140	-.13	.8977
Performance (2nd Order)	-.0136	.0125	-1.09	.2762
Performance (3rd Order)	.0106	.0111	.96	.3382

* = p<.10, ** = p<.05, *** = p<.01

Table 5.19 – Estimate of Lag Distribution between IV and Mediator
Relationship Tested: Prior Organizational Performance → CEO Tenure

Variable	**Estimate**	**Standard Error**	**T-Value**	**Pr > t**
Performance at t(0)	-.0057	.0123	-.46	.6441
Performance at t(1)	.0123	.0108	1.13	.2580
Performance at t(2)	.0139	.0100	1.39	.1652
Performance at t(3)	.0072	.0100	.72	.4745

Table 5.19 (continued)

Performance at t(4)	-.00008	.0108	-.01	.9938
Performance at t(5)	.00007	.0121	.01	.9953

* = p<.10, ** = p<.05, *** = p<.01, **** = p<.001
Relationship R^2 = .0142

Hypothesis 3A- Hypothesis 3A is supported. The hypothesis results are discussed and displayed in the Hypothesis 2 – Step 1 results above.

Hypothesis 3B- Hypothesis 3B tests the indirect relationship between prior organizational performance and BOD power that is mediated by CEO power. Again, the Baron and Kenny (1986) four-step process was used to examine whether Hypothesis 3B was supported. Step 1 tests the prior performance – BOD power relationship, while Step 2 examines with the prior performance – CEO power linkage tested in Hypothesis 3A. Steps 3 and 4 are tested simultaneously, where the CEO power – BOD power is tested for significance, and the prior performance – BOD power relationship is examined controlling for CEO power. The step results are reported as follows:

Hypothesis 3B, Step 1- An analysis of the prior performance – BOD power showed that this relationship is not significant. The regression R^2 is .0038, and the prior performance T-values are not significant over time or shape. Due to the rejection of the Step 1 relationship, Hypothesis 3B is rejected as well. The analysis results are displayed below in Tables 5.20 and 5.21.

Table 5.20 – Relationship Shape Estimates
Relationship Tested: Prior Organizational Performance → BOD Power

Variable	**Estimate**	**Standard Error**	**T-Value**	**Pr > t**
Intercept	-.2007	.4763	-.42	.6736
Natural Log of Assets	-.0195	.1343	-.15	.8847
SIC Industry Code	.0030	.0094	.32	.7514
Performance (1^{st} Order)	-.0617	.0439	-1.40	.1609
Performance (2^{nd} Order)	-.0088	.0401	-.22	.8264
Performance (3^{rd} Order)	.0060	.0360	.17	.8667

* = p<.10, ** = p<.05, *** = p<.01

Table 5.21 – Estimate of Lag Distribution between IV and DV
Relationship Tested: Prior Organizational Performance → BOD Power

Variable	Estimate	Standard Error	T-Value	Pr > |t|
Performance at t(0)	.0250	.0390	.64	.5216
Performance at t(1)	.0215	.0349	.62	.5383
Performance at t(2)	.0083	.0320	.26	.7963
Performance at t(3)	-.0101	.0319	-.32	.7515
Performance at t(4)	-.0291	.0346	-.84	.4007
Performance at t(5)	.0442	.0388	-1.14	.2552

* = p<.10, ** = p<.05, *** = p<.01, **** = p<.001
Relationship R^2 = .0038

Hypothesis 4A- The results for Hypothesis 4A are displayed above, as the relationship is tested in Step 1 of Hypothesis 3B. Hypothesis 4A is not supported.

Hypothesis 4B- Hypothesis 4B examines the indirect relationship between prior performance and CEO power that is mediated by BOD power. Again, the Baron and Kenny (1986) four-step process is employed to examine whether mediation is significant in Hypothesis 4B. Step 1 examines the prior performance – CEO power relationship, while Step 2 examines the prior performance – BOD power relationship. While the Step 1 linkage is tested and supported in Hypothesis 3A, Step 2 is tested and rejected in the Step 1 testing for Hypothesis 3B. Therefore, Hypothesis 4B is rejected as well.

Hypothesis 5- Hypothesis 5 tests for the significance of a direct relationship between CEO power and organizational performance. This hypothesis is supported by the study results. The regression R^2 for this relationship is .0227. The CEO power T-value is significant at Time 0 ($t=3.12$, $p<.01$), indicating the lack of a time lag between CEO power and organizational performance. The T-value estimates for the CEO power – organizational performance relationship shape offers support for a 1st order, linear effect ($t= -2.25$, $p<.05$), as well as some support for a 2nd order, quadratic effect over time ($t=1.69$, $p<.10$). The results are displayed in Tables 5.22 and 5.23 below.

Table 5.22 – Relationship Shape Estimates
Relationship Tested: CEO Power → Organizational Performance

Variable	Estimate	Standard Error	T-Value	Pr > |t|
Intercept	.4460	.3628	1.23	.2194
Natural Log of Assets	-.1861	.1278	-1.46	.1459
SIC Industry Code	-.0100	.0083	-1.20	.2293
CEO Power (1st Order)	-.0746	.0332	-2.25**	.0250
CEO Power (2nd Order)	.0568	.0335	1.69*	.0906
CEO Power (3rd Order)	-.0422	.0347	-1.22	.2246

* = p<.10, ** = p<.05, *** = p<.01

Table 5.23 – Estimate of Lag Distribution between IV and DV
Relationship Tested: CEO Power → Organizational Performance

Variable	Estimate	Standard Error	T-Value	Pr > |t|
CEO Power at t(0)	.1032	.0331	3.12***	.0019
CEO Power at t(1)	.0104	.0240	.43	.6659
CEO Power at t(2)	-.0166	.0213	-.78	.4353
CEO Power at t(3)	-.0093	.0213	-.43	.6638
CEO Power at t(4)	.0009	.0240	.04	.9685
CEO Power at t(5)	-.0174	.0331	-.53	.5990

* = p<.10, ** = p<.05, *** = p<.01, **** = p<.001
Relationship R^2 = .0227

Hypothesis 6- Hypothesis 6 tests for a significance of a direct relationship between BOD power and organizational performance. This hypothesis is supported by the study results. The regression R^2 for this relationship is .0209. The BOD power T-value is significant at Time 1 (t=2.13, p<.05) and Time 2 (t=1.91, p<.10), indicating the presence of a time lag effect between BOD power and organizational performance. The T-value estimates for the BOD power – organizational performance relationship shape shows a lack of linear, quadratic or cubic form over time. The results are displayed in Tables 5.24 and 5.25 below.

Table 5.24 – Relationship Shape Estimates
Relationship Tested: BOD Power → Organizational Performance

Variable	Estimate	Standard Error	T-Value	Pr > |t|
Intercept	.5979	.3638	1.64	.1008
Natural Log of Assets	-.1953	.1280	-1.53	.1275
SIC Industry Code	-.0138	.0083	-1.66*	.0977
BOD Power (1st Order)	-.0235	.0440	-.53	.5936
BOD Power (2nd Order)	-.0050	.0468	-.11	.9149
BOD Power (3rd Order)	.0507	.0498	1.02	.3097

* = p<.10, ** = p<.05, *** = p<.01

Table 5.25 – Estimate of Lag Distribution between IV and DV
Relationship Tested: BOD Power → Organizational Performance

Variable	Estimate	Standard Error	T-Value	Pr > |t|
BOD Power at t(0)	.0257	.0437	.59	.5566
BOD Power at t(1)	.0687	.0323	2.13**	.0336
BOD Power at t(2)	.0534	.0280	1.91*	.0573
BOD Power at t(3)	.0176	.0283	.62	.5346
BOD Power at t(4)	-.0010	.0325	-.03	.9752
BOD Power at t(5)	.0354	.0438	.81	.4185

* = p<.10, ** = p<.05, *** = p<.01, **** = p<.001
Relationship R^2 = .0209

Section 5.3 – Summary of Hypotheses Results

Hypothesis 1: There is a direct, positive relationship between CEO Tenure and CEO Power, supported, the largest effect is positive at Time=0, then display a curvilinear distribution over the next four years.
Hypothesis 2: There is an indirect, lag relationship between Past Performance and CEO Power that is mediated by CEO Tenure, not supported

Hypothesis 3A: There is a direct, positive relationship between the firm's Past Performance and CEO Power, supported. The effects appear distributed, but decline linearly for two years.
Hypothesis 3B: There is an indirect relationship between the firm's Past Performance and BOD Power that is mediated by CEO Power, not supported.
Hypothesis 4A: There is a direct, negative relationship between the firm's Past Performance and BOD Power, not supported.
Hypothesis 4B: The relationship between the firm's Past Performance and CEO Power is mediated by BOD Power, not supported.
Hypothesis 5: There is a significant relationship between CEO Power and Firm Performance, supported. The effects of CEO Power on firm performance appear distributed linearly with time, but are clearly most pronounced in the current year.
Hypothesis 6: There is a significant relationship between BOD Power and Firm Performance, supported. The effects of BOD power on firm performance also appear distributed over at least a two-year period, although the shape of the distributed effects is unclear.

Section 5.4 – Post Hoc Analysis

Post hoc analysis was conducted on the dissertation to explore aspects of the project not included in the dissertation design. In Part One of the post hoc extension, cross-sectional, structural equation modeling analysis was conducted utilizing the LISREL 8.30 software program. This analysis was performed on the study data from the years of 1993, 1996, and 2000, with a primary goal of examining whether the polynomial lag regression findings reported in Section 5.2 were consistent with LISREL path analysis results. However, the LISREL results displayed inconsistencies over time, and were discounted due to low statistical power (calculated at 24.8%) and a small sample size (N=93) for the study. Additional LISREL analysis will be explored in future research as additional study data is collected.

In Part Two of the post hoc analysis, the research model was re-examined with the Strategic Choice construct added back to the model. Two measures were collected as proxies for Strategic Choice, Advertising Intensity and Research and Development (R&D) Intensity. These measures are calculated as the ratio of advertising or R&D expenditures to total sales, and have been used in prior studies to estimate the extent to which firms and managers utilize discretion in decision-making and resource allocation processes (Finkelstein & Hambrick, 1990; Kerr & Kren, 1992; Kumar, 1984). These measures were dropped from the initial analysis due to missing data, but included in the post hoc analysis for the firms where data was available. Out of the 93 firms included in the dissertation study, R&D Intensity data was available for 51 firms, Advertising Intensity data was available for 19 firms, and both Advertising and R&D Intensity data was available for 12 firms. Due to concerns of low statistical power, the subsequent analysis employs R&D Intensity as the measure of Strategic Choice.

In the original dissertation research design, Strategic Choice was modeled as a mediating variable between CEO and BOD Powers and Organizational Performance. The post hoc model, hypotheses and results are displayed below.

Hypothesis 7- Hypothesis 7 proposes that there is an indirect, lag relationship between CEO Power and Organizational Performance that is mediated by Strategic Choice. To test for mediation in this relationship, the four-step process discussed in Baron and Kenny (1986) is employed. Step 1 examines the significance of the relationship between independent and

dependent variables, in this case CEO Power and Organizational Performance. Similar to the results reported in Hypothesis 5 for the full 93 firm sample, the CEO Power – Organizational Performance linkage for the 51 firm sub-sample is also significant. The regression R^2 for the relationship is .062. The CEO Power T-values is significant at Time 0 (t=2.03, p<.05), indicating an immediate time relationship between CEO Power and Performance. The T-value estimates of the shape of the CEO Power – Organizational Performance relationship are non-significant at the linear, quadratic, and cubic levels. The results of this analysis are summarized in Tables 5.26 and 5.27 below.

Table 5.26 – Relationship Shape Estimates
Relationship Tested: CEO Power → Organizational Performance

Variable	Estimate	Standard Error	T-Value	Pr > |t|
Intercept	.5798	.4793	1.21	.2271
Natural Log of Assets	.5479	.1405	3.90***	.0001
SIC Industry Code	-.0164	.0127	-1.29	.1962
CEO Power (1st Order)	-.0251	.0346	-.73	.4680
CEO Power (2nd Order)	.0470	.0360	1.31	.1921
CEO Power (3rd Order)	-.0210	.0383	-.55	.5833

* = p<.10, ** = p<.05, *** = p<.01

Table 5.27 – Estimate of Lag Distribution between IV and DV
Relationship Tested: CEO Power → Organizational Performance

Variable	Estimate	Standard Error	T-Value	Pr > |t|
CEO Power at t(0)	.0729	.0359	2.03**	.0428
CEO Power at t(1)	.0173	.0255	.68	.4973
CEO Power at t(2)	.0006	.0226	.03	.9781
CEO Power at t(3)	.0071	.0225	.32	.7512
CEO Power at t(4)	.0212	.0254	.83	.4051
CEO Power at t(5)	.0272	.0355	.77	.4441

* = p<.10, ** = p<.05, *** = p<.01, **** = p<.001
Relationship R^2 = .0620

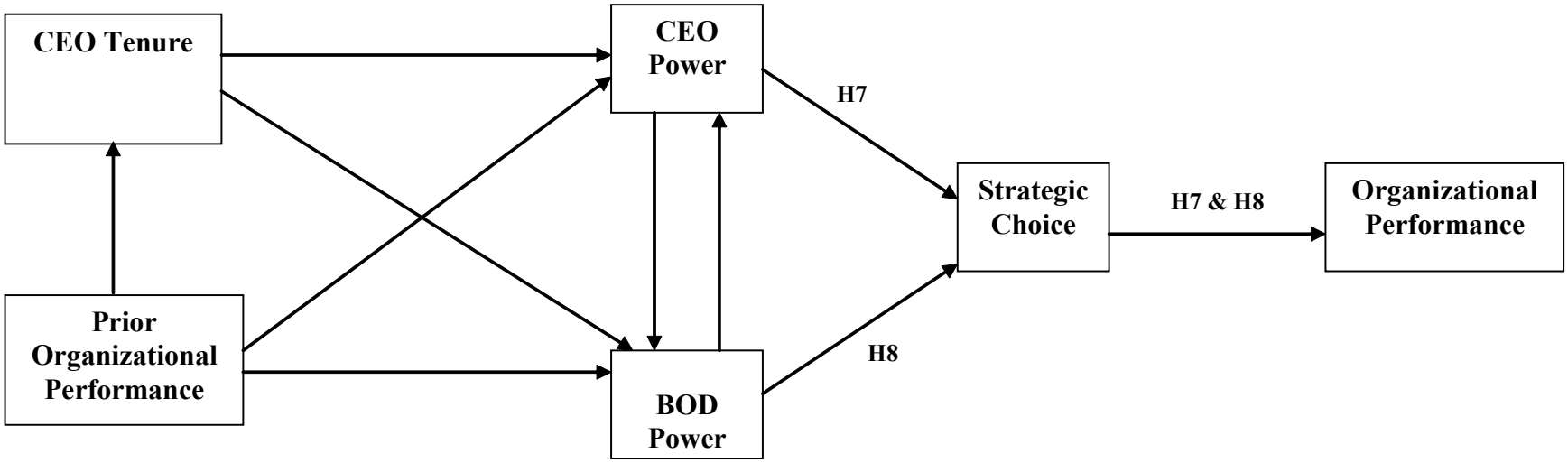


*Figure 5.1: A Firm Power – Performance Model**

Hypothesis 7: There is an indirect relationship between CEO Power and Organizational Performance that is mediated by Strategic Choice.

Hypothesis 8: There is an indirect relationship between BOD Power and Organizational Performance that is mediated by Strategic Choice.

Hypothesis 7, Step 2- As outlined in Baron and Kenny (1986), Step 2 test for significance inn the relationship between the independent variable and mediator, which in this hypothesis is the CEO Power – Strategic Choice linkage. This hypothesized linkage is also supported. The overall regression R^2 is .0192. The CEO Power T-value is significant at Time 0 (t=-1.99, p<.05), indicating a direct, negative effect between CEO Power and R&D Intensity. The T-value estimate of the shape of the CEO Power – R&D Intensity relationship is non-significant at the linear, quadratic, and cubic levels. The results of the analysis are summarized in Tables 5.28 and 5.29 below.

Table 5.28 – Relationship Shape Estimates
Relationship Tested: CEO Power → R&D Intensity

Variable	Estimate	Standard Error	T-Value	Pr > |t|
Intercept	-.1272	.2272	-.56	.5757
Natural Log of Assets	.1127	.0489	2.30**	.0217
SIC Industry Code	.0035	.0049	.71	.4792
CEO Power (1st Order)	.0144	.0111	1.30	.1947
CEO Power (2nd Order)	-.0076	.0102	-.74	.4572
CEO Power (3rd Order)	.0108	.0101	1.07	.2858

* = p<.10, ** = p<.05, *** = p<.01

Table 5.29 – Estimate of Lag Distribution between IV and Mediator
Relationship Tested: CEO Power → R&D Intensity

Variable	Estimate	Standard Error	T-Value	Pr > |t|
CEO Power at t(0)	-.0212	.0111	-1.99**	.0469
CEO Power at t(1)	-.0032	.0089	-.36	.7202
CEO Power at t(2)	.0003	.0084	.04	.9721
CEO Power at t(3)	-.0003	.0084	-.32	.7464
CEO Power at t(4)	-.0042	.0089	-.47	.6400
CEO Power at t(5)	.0040	.0110	.36	.7187

* = p<.10, ** = p<.05, *** = p<.01, **** = p<.001
Relationship R^2 = .0192

Hypothesis 7, Step 3- Step 3 of the testing examines the relationship between mediator and dependent variable, which in this case are Strategic Choice and Organizational Performance, respectively. This hypothesized linkage is also supported. The overall regression R^2 is .0764. The results support an anticipated time lag between R&D Intensity and Firm Performance, where R&D Intensity T-values are significant at Time 1 (t=2.44, p<.05) and Time 2 (t=2.72, p<.01). The T-values for the relationship shape indicates the lack of significant effects over time at the linear, quadratic, and cubic levels. The results are displayed in Tables 5.30 and 5.31 below.

Table 5.30 – Relationship Shape Estimates
Relationship Tested: R&D Intensity → Organizational Performance

Variable	Estimate	Standard Error	T-Value	Pr > |t|
Intercept	05373	.4667	1.15	.2502
Natural Log of Assets	.5293	.1383	3.83***	.0001
SIC Industry Code	-.0152	.0124	-1.23	.2198
R&D Intensity (1st Order)	-.1403	.1459	-.96	.3369
R&D Intensity (2nd Order)	-.2273	.1803	-1.26	.2082
R&D Intensity (3rd Order)	.2128	.1805	1.18	.2391

* = p<.10, ** = p<.05, *** = p<.01

Table 5.31 – Estimate of Lag Distribution between Mediator and DV
Relationship Tested: R&D Intensity → Organizational Performance

Variable	Estimate	Standard Error	T-Value	Pr > |t|
R&D Intensity at t(0)	-.0269	.1527	-.18	.8601
R&D Intensity at t(1)	.2786	.1143	2.44**	.0151
R&D Intensity at t(2)	.2719	.0998	2.72***	.0067
R&D Intensity at t(3)	.1115	.0998	1.12	.2648
R&D Intensity at t(4)	-.0440	.1143	-.39	.7003
R&D Intensity at t(5)	-.0360	.1523	-.24	.8132

* = p<.10, ** = p<.05, *** = p<.01, **** = p<.001
Relationship R^2 = .0764

Hypothesis 7, Step 4- As developed in Baron and Kenny (1986), Step 4 for Hypothesis 7 tests for partial or full mediation of the CEO Power – Firm Performance relationship, with R&D Intensity moderating the relationship. If the moderated CEO Power – Firm Performance relationship is significant, the partial mediation is indicated. If the moderated CEO Power – Firm Performance relationship is non-significant, then a fully mediated relationship is indicated. The regression R^2 is .0950, and the Step 4 results are indicative of a partially mediated relationship. While controlling for Strategic Choice, the CEO Power – Firm Performance relationship is significant at Time 0 ($t=2.08$, $p<.05$). As a result, Hypothesis 7 is supported, as testing supports partial mediation of the CEO Power – Firm Performance relationship by Strategic Choice.

Hypothesis 8- Hypothesis 6 proposes that the relationship between BOD Power and Organizational Performance is mediated by Strategic Choice. As applied earlier, the Baron and Kenny (1986) four-step process is applied to test for mediated effects. Step 1 examines the linkages between independent and dependent variables, in this hypothesis BOD Power and Organizational Performance. The regression R^2 is .0911. Similarly to the full sample results, the Step 1 results on the 51 firm sub-sample supports a significant relationship between BOD Power and Performance at Time 0 ($t=-4.42$, $p<.0001$), as well as a lag relationship at Time 2 ($t=2.02$, $p<.05$) . However, the sign switches indicate that as BOD Power decreases, Firm Performance increases at time 0, while the inverse holds true at Time 2. The results also demonstrate significant relationships between BOD Power and Firm Performance over time at the linear ($t=3.21$, $p<.01$), curvilinear ($t=-2.28$, $p<.05$), and cubic ($t=2.82$, $p<.01$) levels. The full findings are displayed in Tables 5.32 and 5.33 below.

Table 5.32 – Relationship Shape Estimates
Relationship Tested: BOD Power → Organizational Performance

Variable	Estimate	Standard Error	T-Value	Pr > |t|
Intercept	.7747	.4989	1.55	.1212
Natural Log of Assets	.8685	.1588	5.47***	<.0001
SIC Industry Code	-.0218	.0131	-1.66*	.0967
BOD Power (1st Order)	.1541	.0479	3.21***	.0014
BOD Power (2nd Order)	-.1171	.0513	-2.28**	.0230
BOD Power (3rd Order)	.1496	.0531	2.82***	.0051

* = p<.10, ** = p<.05, *** = p<.01

Table 5.33 – Estimate of Lag Distribution between IV and DV
Relationship Tested: BOD Power → Organizational Performance

Variable	Estimate	Standard Error	T-Value	Pr > |t|
BOD Power at t(0)	-.2296	.0520	-4.42***	<.0001
BOD Power at t(1)	.0176	.0339	.52	.6043
BOD Power at t(2)	.0593	.0293	2.02**	.0437
BOD Power at t(3)	.0069	.0293	.24	.8125
BOD Power at t(4)	-.0280	.0336	-.83	.4051
BOD Power at t(5)	.0660	.0460	1.43	.1521

* = p<.10, ** = p<.05, *** = p<.01, **** = p<.001
Relationship R^2 = .0911

Hypothesis 8, Step 2- Step 2 of Hypothesis 8 examines the relationship between independent variable and mediator, in this case BOD Power and Strategic Choice. The overall regression R^2 is .0131. The results indicate that there is the BOD Power – Strategic Choice relationship is non-significant over time. The results also show non-significant shape effects at the linear, curvilinear, and cubic levels. As a result, Hypothesis 8 is rejected. These findings are summarized in Tables 5.34 and 5.35 below.

Table 5.34 – Relationship Shape Estimates
Relationship Tested: BOD Power → R&D Intensity

Variable	Estimate	Standard Error	T-Value	Pr > |t|
Intercept	.0762	.1515	.50	.6152
Natural Log of Assets	.1106	.0541	2.05**	.0414
SIC Industry Code	-.0021	.0041	-.50	.6139
BOD Power (1st Order)	.0155	.0173	.90	.3694
BOD Power (2nd Order)	.0010	.0254	.04	.9688
BOD Power (3rd Order)	.0295	.0331	.89	.3726

* = p<.10, ** = p<.05, *** = p<.01

Table 5.35 – Estimate of Lag Distribution between IV and DV
Relationship Tested: BOD Power → R&D Intensity

Variable	Estimate	Standard Error	T-Value	Pr > |t|
BOD Power at t(0)	-.0233	.0243	-.96	.3364
BOD Power at t(1)	.0061	.0172	.36	.7227
BOD Power at t(2)	.0029	.0143	.20	.8400
BOD Power at t(3)	-.0110	.0143	-.77	.4421
BOD Power at t(4)	-.0136	.0171	-.79	.4295
BOD Power at t(5)	.0171	.0231	.74	.4571

* = p<.10, ** = p<.05, *** = p<.01, **** = p<.001
Relationship R^2 = .0131

CHAPTER SIX

DISCUSSION

The results of the hypotheses testes were reported in the previous chapter. Support was found for the reciprocal relationship between CEO power and firm performance and the effects of BOD power on firm performance. Some of these effects were also found distributed over time. Limited support was found for other hypothesized relationships. In this chapter, the significance of these results for theory, practice and future research will be discussed. A future research agenda is also presented.

Section 6.1 – Dissertation Study Results Discussion and Conclusions

This dissertation offers several findings that provide insight into the nature of governance power relationships within organizations. Perhaps the most important deals with the examination of the reciprocal nature of power – performance relationships within organizations. Consistent with the findings of Daily and Johnson (1997), the dissertation findings indicate that performance serves as both a significant predictor and outcome of CEO power. This cycling effect supports the managerial hegemony governance perspective, enabling effective CEOs to build and maintain strong power positions within organizations, and to influence organizational structural components to support their power positions.

The findings also indicate that performance has a differential impact on BOD power. The dissertation findings indicate that while BOD power does have a positive effect on firm performance, the BOD does not receive any increased power effects as performance improves. Again, this result tends to support the managerial hegemony perspectives of governance, where the CEO is the primary beneficiary of firm performance.

The study results also indicate limited evidence of time lags in governance relationships. Specifically, the results show that there is a one to two year lag effect associated with the BOD power – performance relationship. This finding is primarily consistent with Agency theory and its assumptions that the BOD monitors and controls management behavior, including replacing the CEO if performance falls or managerial behaviors are inconsistent with stockholder interests. In such times where the BOD is likely to activate and assume power (and display structural manifestations of said power changes), the impact of enacted changes are anticipated to display lag effects.

In addition, both significant direct and temporal lag effects impact the Prior Organizational Performance – CEO Power relationship, such that CEOs receive both direct and lagged benefits of superior performance. As a result, CEOs earn “benefit of the doubt” effects, such that downturns in current performance are mitigated by power boosts achieved through past performance impacts. This finding implies that the high-performing CEO’s power base may be insulated against short-term performance downturns within organizations.

The post hoc analysis also illustrates a significant relationship between CEO Power and Organizational Performance that is partially mediated by Strategic Choice. This finding has several interesting implications on future corporate governance research. First, it takes a step towards filling in the “black box” between power and performance, by indicating that the

strategic choices and options managers face ultimately impact both firm performance and future power. In addition, this study employs R&D Intensity as the primary proxy for Strategic Choice in the post-hoc analysis. As the study sample size expands, additional measures such as Advertising Intensity, Diversification Intensity, and Capital Intensity will be added to develop a more comprehensive Strategic Choice variable. This future research should help explore the true nature of potential mediators and moderators between firm power and performance.

Finally, I am encouraged that many of the main model linkages in the study are supported, especially given the limitations associated with the study's data analysis techniques and data availability. I feel confident that the study's predictive accuracy will improve over time, as the study variables are refined.

Section 6.2 – Dissertation Study Limitations

There are several significant limitations to this study, which impact the interpretation and application of the study findings. The most important limitations deal with the trade-offs associated with the use of polynomial lag regression as the study's primary data analysis technique. Polynomial lag regression enabled two important features of the dissertation study design, in that it allows for the modeling of independent variable – dependent variable effects over time, and it examines the nature of the shape of these relationships over time as well. Since the primary focus of this study is to examine how power relationships shift over time and impact firm performance, the technique was selected as the best approach to explore the study hypotheses and research questions.

However, the use of polynomial lag regression techniques also influences study trade-offs. Polynomial lag regression is not robust to missing data. As a result, several constructs and measures were excluded from the study due to an inability to find and replace missing data from other archival sources. Specifically, the strategic choice variable that was included in the original conceptual model was excluded because of extensive missing data in the Research and Development Expenditures, Advertising Expenditures, Patents, and Entropy measures. The exclusion of these measures from this study prevented the exploration of strategic choice as a mediator of the CEO power and BOD power to performance relationships, respectively. A primary goal of related future research will be to increase the sample size of the study while concurrently addressing missing data issues, so this power – performance "black box" linkage can be examined in greater detail in subsequent studies.

Other study variables impacted by data constraints are the CEO and BOD power constructs. As mentioned in the study design, both CEO and BOD powers have been conceptualized as multi-dimensional constructs consisting of structural, ownership, prestige, and expertise dimensions (Finkelstein, 1992; Finkelstein & Hambrick, 1996). Again, due to data availability and scope constraints, the measures employed in this study primarily serve as structural and ownership proxies of power. As a result, the power variables, as structured in this study, tend to represent the higher-level control-based aspects of power. Future data collection will focus on expanding the scope of these variables by including measures of the higher-level influence-based aspects of firm power.

A third potential limitation of this study deals with the method of calculation of the composite variables in the study, especially the CEO and BOD power composites. These variables were created in an additive manner, summing the standardized scores of the firms for each of the seven CEO and BOD power measures, to create a composite annual CEO and BOD power score for each firm for each study year. These measures were merged in a linear pattern, with each measure having an equal impact of the composite measure. However, the factor analysis results imply that the measures may have differential impact on both CEO and BOD power, respectively. For future research, an alternative method of calculating weighed composite variables based on the factor variance explained and measure factor loadings. In addition, the measures will be explored for differential impact for each factor dimension, in attempts to ascertain if the underlying dimensions of power and performance are differentially impacted by the model relationships.

Finally, the study is limited by the extent to which CEO and BOD power constructs can be explored only through the use of archival power measures. While the use of archival data facilitates the longitudinal examination of power relationships, it also limits the nature of power proxies that can be utilized in a study. As the initial findings show, one limitation of the study design is that structural and ownership dimensions of power are more available and amenable to archival study than "softer" dimensions of power such as prestige and expert power. In addition, it is difficult to quantify and measure the role and impact of personality traits possessed by CEOs and BOD members in power development. Examples of individual personality traits that might impact organizational power include charisma and transformational leadership (Agle & Sonnefeld, 1994; Bass, 1985; Conger, 1990; House, Spangler & Woycke, 1991), need for achievement (Kets de Vries & Miller, 1984; Miller & Droege, 1986), tolerance or aversion to risk and ambiguity (Gupta & Govindarajan, 1984; Kets de Vries & Miller, 1984; Wally & Baum, 1994), and locus of control (Hambrick & Finkelstein, 1987; Miller, Kets de Vries & Toulouse, 1982; Miller & Toulouse, 1986). However, these traits have typically been measured via survey and anecdotal evidence rather than any attempt to qualify such traits over time. In addition, there is some question regarding the relative stability of traits such as need for achievement and relative tolerance of risk over time and life span of a corporate executive such as a CEO. Finally, while there is strong evidence regarding the contribution of personality traits to the development of leader power bases, most of the power measures employed in this study examine the outcome manifestations of organizational power. As a result, it is believed that these measures capture the effects of personality traits on organizational power, even if the traits are not directly measured.

Section 6.3 - Future Research from the Dissertation

In addition to the primary study described as the dissertation project, there are several additional related projects to be conducted with the dissertation data and conceptual foundations. The goal of this process is to develop a stream of research links around the ideas of power circulation in corporate governance relationship. The present plan is to produce two conceptual projects from the dissertation while continuing data collection based on the dissertation, and then working on empirical outputs based on modeled ideas and topics.

The two conceptual projects are focused on the main concepts of the dissertation. The first is a contingency theory piece based on the ideas of power circulation in organizational

power processes. The primary assumption of this work is that no one theory of governance in isolation can be used to understand and explain firm governance relationships. Instead, firms cycle through shifts in their governance and power structures based on the nature of their internal processes and resources, as well as needs to adapt to shifting environmental conditions and requirements. As a result, it is proposed the firms may cycle between agency, managerial hegemony, and resource dependency perspectives of governance over time, based on changes in internal and external resources and requirements. Potential targets identified for such a paper include the *Academy of Management Review* and the *Journal of Management*.

The second conceptual project is specifically targeted for a special issue of *Academy of Management Review* on "Corruption in Organizations". The project explores governance theories from a power perspective, specifically noting how power relationships are established to protect against corruption and illegal behaviors within governance systems. The paper identifies breakdowns in these protection systems for each theory, and discusses how governance systems can be modified to protect firms from leadership corruption. Keys to engaging protection against corruption involves understanding which of the primary governance theories is the firm operating under at the time, and then enacting protections based upon the structure of this governance paradigm.

As mentioned earlier, while the conceptual projects are developed, there is a parallel plan to continue with data collection on the dissertation measures and variables. This collection focuses on expanding the size of the study sample by collecting data on the approximately 350 firms excluded from the original dissertation project due to scope and data availability limitations. I also hope to expand the study by identifying and integrating additional archival data into the study sample, and by adding new years of data to the sample as the data becomes available. Finally, the number of measures and constructs included in the dissertation analysis was limited due to a lack of robustness to missing data in polynomial lag regression analysis. Specifically, there is an intent to add and re-instate the Strategic Choice measures as mediators of the firm power – performance relationship, as well as adding and expanding the need for multi-dimensional measures of CEO tenure, CEO power, and BOD power.

Once these data expansion needs are addressed, there are several research projects I hope to move from this study into publication. The first deals with the polynomial lag regression project examined in this dissertation. Another, which is discussed in detail in this section, deals with developing a longitudinal replication and expansion of the Pearce and Zahra (1991) study on CEO and BOD power relationships.

Pearce and Zahra (1991) focused on a 2 x 2 matrix of dyadic pairings of low and high CEO and BOD power relationships. Pearce and Zahra (1991) found that high BOD power served as the primary determinant of firm performance over time. A replication would examine if this finding holds consistent over time, or if the findings are an artifact created by factors driving the power shifts within the firm. In addition, a longitudinal study could help identify patterns of power circulation within firms, focusing on both the antecedent and consequences of power shifts within firms. The study would also examine the conditions under which the dyadic power pairings exist. The Pearce and Zahra (1991) are discussed and extended below:

Cluster 1, Low CEO and BOD powers [categorized as Caretaker Boards in Pearce and Zahra (1991) typology]- Firms in this cluster lack consistent power in both of their main strategic

leadership factions. Pearce and Zahra (1991) imply that such power distributions may occur through "organizational stagnation or because of a shift in power distribution among the CEO and other key executives" (p. 136). As a result, this group is hypothesized to be the lowest performing of the anticipated emerging power combinations, due to a lack of strong leadership in the firm's main managerial and control entities. Theory suggests that firms in this group may be more likely to be identified as potential acquisition targets, participants in mature or dying industries, and firms in danger of entering into or emerging from bankruptcy proceedings or other financially endangered situations.

Cluster 2, Low CEO and High BOD powers [categorized as Proactive Boards in the Pearce and Zahra (1991) typology- This power configuration is often viewed as a product of increased social, environmental, and legal activism by firm stakeholders during the late 1980's and 1990's, leading to increased assumption of BOD monitoring and control responsibilities (Kesner & Johnson, 1990; Pearce & Zahra, 1991). Proactive BODs are viewed as consisting primarily of outside members, in order to increase director objectivity through the lowering of obligation and day-to-day dependence on firm management for financial viability. Other theoretical and practical explanations for the proactive power configuration include situations where changes in CEO and TMT leadership have been recently made, where environmental dependency on external resources is especially strong, and where environmental dynamism and uncertainty is especially high (D'Aveni, 1994; Pfeffer & Salancik, 1978). While Pearce and Zahra's research findings indicated that the Proactive categorization is a higher performing grouping than the Statutory grouping discussed below, this researcher proposes that a lack of strong strategic leadership and power in the CEO role will lead to lower performance for the Proactive grouping.

Cluster 3, High CEO and Low BOD powers [categorized as Statutory Boards in the Pearce and Zahra (1991) typology- The grouping is representative of managerial hegemony theory, which defines BOD roles in corporate operations as minimal and ceremonial (Herman, 1981; Kosnik, 1987; Zahra & Pearce, 1989). Since statutory board "directors are principally chosen and retained through the influence of the CEO, the board often pays little attention to defining its roles and responsibilities" (Pearce & Zahra, 1991, p. 136). As a result, statutory BOD validation of CEO and TMT activities often "falsely adds an appearance of legitimacy to executives' actions" (Pearce & Zahra, 1991, p. 137). By definition, statutory boards are representative of BODs where the BOD membership lacks power and ability to carry out their monitoring and control duties, limiting their overall effectiveness. As a result, statutory boards are restricted in their ability to contribute to organizational performance. However, it is hypothesized that statutory boards will have a greater contribution to performance than proactive boards, again contrary to the Pearce and Zahra (1991) findings.

Clusters 4 and 5- High CEO and BOD powers [categorized as Participatory boards in the Pearce and Zahra (1991) typology- Pearce and Zahra (1991) describe the participatory board as representative of situations where an equal balance of strong power exists between the CEO and BOD, necessitating negotiation and compromise as essential tools for effective management and governance. Participatory boards are typically comprised of outside membership, where "differences of opinion are resolved by a vote, with a majority vote prevailing" (Vance, 1983, p. 9). For the purposes of this examination, the participatory board grouping is sub-divided into two high CEO and BOD power grouping, each with distinct styles and outcomes.

The Conflicting Board is similar to the Proactive board in both initiating factors and design, except there is also a strong CEO present within the organization, leading to further dissention and rancor between the firm's governing bodies. In this context, conflicting boards are often a product of large institutional stockholder blocks such as investment groups, pension and mutual funds which have engaged in increasingly proactive monitoring and control activities with powerful CEOs, in order to protect investor interests (Charan, 1998). In addition, many such large private and institutional investors have increasingly sought out and fought for BOD member representation, primarily to ensure that the CEO and TMT are acting in the best interest of their investor group. As a result of increased monitoring and control activities, conflicting boards are anticipated to have wider variance in its performance outcomes. Some dissensus in decision-making activities may actually serve to improve organizational performance, however too much animosity and rancor between the CEO and BOD may contribute to gridlock and political actions between parties, to the ultimate detriment of firm performance.

The Cooperative Board, on the other hand, is representative of a high CEO and BOD combination that is more in line with Pearce and Zahra's (1991) description of the participatory board. The cooperative board features a CEO and BOD that work in collaboration to achieve strategic objectives of the firm. BOD members are selected for service based upon their specific abilities to contribute to the strategic direction of the firm. For example, one director might be enlisted based on his/her knowledge of a complementary industry to be entered via merger and acquisition, while another might be selected based upon his/her ability to access and acquire essential firm resources. In such a design, the ultimate goal is to assemble a BOD that spans boundaries to meet the major environmental needs of the firm, with the CEO setting the strategic direction of the firm with BOD assistance and support (Charan, 1998). Cooperative boards are anticipated to contain larger numbers of dependent directors, and are also anticipated to contribute to the highest performance of the CEO – BOD power groupings. This hypothesis is also consistent with the individual level discretion function presented in Hambrick and Finkelstein (1987), as the active interplay and interaction between CEO and BOD proposed in the cooperative board design should aid the CEO "to envision or create multiple courses of action" (p. 379). Content analysis of firm Annual Reports and news reports filed in the *Lexis-Nexis* database will be utilized to distinguish between conflicting and cooperative boards in the high CEO and BOD power groupings.

Another post-dissertation project will examine the relationship between trigger events and power circulation within organizations. Such a project will examine various organizational trigger events, focusing on differences in governance and control mechanisms engaged to manage the internal and external change triggers. This project could provide insight into relative consistencies and inconsistencies in governance responses to change, as well as examining how those responses impact firm power relationships and organizational performance.

Finally, there are several projects that I would like to work on merging the governance ideas developed in this study with relevant complimentary areas. Examples of such projects include examining whether power and/or performance as a the best predictor of CEO Compensation, modeling CEO versus BOD Power as a predictor of CEO successor choice, examining the role of governance structure in merger and acquisition integration choices and performance, and exploring the role of governance structure in learning organization explorations.

APPENDIX – FACTOR ANALYSIS RESULTS

Total Variance Explained – 1992 Factor Analysis Results

Factor	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2.263	16.166	16.166	2.263	16.166	16.166	1.929	13.778	13.778
2	1.917	13.695	29.861	1.917	13.695	29.861	1.894	13.532	27.310
3	1.644	11.743	41.604	1.644	11.743	41.604	1.621	11.576	38.886
4	1.310	9.357	50.961	1.310	9.357	50.961	1.447	10.332	49.218
5	1.266	9.039	60.000	1.266	9.039	60.000	1.357	9.690	58.908
6	1.163	8.305	68.305	1.163	8.305	68.305	1.316	9.397	68.305
7	.861	6.152	74.458						
8	.806	5.757	80.214						
9	.636	4.544	84.758						
10	.587	4.193	88.952						
11	.557	3.979	92.931						
12	.394	2.815	95.745						
13	.332	2.373	98.118						
14	.263	1.882	100.000						

Extraction Method: Principal Component Analysis.

Unrotated Component Matrix -1992 Factor Analysis Results

	Component					
	1	2	3	4	5	6
BOD_SIZE	.448	.461	.252	.064	.395	-.081
INDEP	.598	-.269	-.009	-.445	.283	.223
DUALITY	.254	-.626	.361	.214	.035	-.094
CEO_FOUN	-.656	-.256	.500	-.048	.107	.087
CEO_RBOD	-.633	-.010	.519	.231	.225	-.043
CHB_FOUN	-.415	.620	-.247	-.248	.157	.128
BOD_MEMF	-.091	.482	-.003	.352	.322	.187
CEO_TIT	.135	-.541	-.141	.160	.148	.493
NUM_CEOS	.409	.308	.034	.563	-.090	.116
BOD_GENP	.325	.018	.409	-.063	.361	-.624
BOD_TC	.538	.253	.375	.159	-.109	.319
DIRSTK	.033	-.040	-.178	.428	-.525	-.374
TDC2	.210	.275	.336	-.512	-.471	-.099
SHROWN	-.063	.171	.629	-.056	-.410	.374

Extraction Method: Principal Component Analysis.
6 components extracted.

Rotated Component Matrix – 1992 Factor Analysis Results

	Component					
	1	2	3	4	5	6
BOD_SIZE	-.105	-.115	**.534**	.026	**.520**	.251
INDEP	**-.437**	.301	-.037	.063	.082	**.682**
DUALITY	.130	**.784**	.001	-.044	.089	.041
CEO_FOUN	**.816**	.077	-.266	.081	-.085	.101
CEO_RBOD	**.870**	-.036	.008	-.061	.096	-.061
CHB_FOUN	.091	**-.836**	-.028	-.021	-.042	.097
BOD_MEMF	.188	-.378	**.519**	-.233	.025	.029
CEO_TIT	-.046	**.432**	.061	-.287	**-.493**	.321
NUM_CEOS	-.181	.080	**.710**	-.021	-.007	-.241
BOD_GENP	.035	.247	.030	-.009	**.853**	.073
BOD_TC	-.135	.179	**.638**	.389	.021	.153
DIRSTK	-.176	.171	.017	-.006	-.032	**-.756**
TDC2	-.177	-.094	-.116	**.794**	.205	.001
SHROWN	.353	.057	.249	**.714**	-.197	.031

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.
Rotation converged in 9 iterations.

Component Transformation Matrix – 1992 Factor Analysis Results

Component	1	2	3	4	5	6
1	-.717	.411	.426	.148	.260	.215
2	-.067	-.796	.477	.242	.249	-.113
3	.620	.342	.239	.549	.339	.155
4	.216	.255	.624	-.439	-.137	-.535
5	.210	-.101	.131	-.638	.379	.615
6	.074	-.064	.356	.134	-.770	.502

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.

Total Variance Explained – 1993 Factor Analysis Results

Factor	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2.441	17.437	17.437	2.441	17.437	17.437	2.019	14.419	14.419
2	1.769	12.637	30.074	1.769	12.637	30.074	1.790	12.782	27.201
3	1.634	11.669	41.743	1.634	11.669	41.743	1.582	11.297	38.498
4	1.283	9.163	50.906	1.283	9.163	50.906	1.428	10.203	48.700
5	1.219	8.704	59.610	1.219	8.704	59.610	1.378	9.845	58.546
6	1.143	8.161	67.771	1.143	8.161	67.771	1.292	9.226	67.771
7	.953	6.806	74.578						
8	.780	5.575	80.152						
9	.610	4.358	84.511						
10	.533	3.809	88.320						
11	.521	3.719	92.039						
12	.451	3.224	95.263						
13	.368	2.626	97.889						
14	.296	2.111	100.000						

Extraction Method: Principal Component Analysis.

Unrotated Component Matrix – 1993 Factor Analysis Results

	Component					
	1	2	3	4	5	6
BOD_SIZE	.408	.435	-.238	-.071	.388	-.286
INDEP	.555	-.135	.113	-.617	.047	-.142
DUALITY	.409	-.003	.621	.287	.215	.073
CEO_FOUN	-.624	.216	.563	-.059	.075	.000
CEO_RBOD	-.628	.467	.320	.115	.240	.037
CHB_FOUN	-.591	.307	-.472	-.200	.133	-.070
BOD_MEMF	-.085	.366	-.383	-.042	.353	.353
CEO_TIT	.177	-.216	.276	-.307	.207	.687
NUM_CEOS	.381	.206	-.309	.382	.204	.361
BOD_GENP	.334	.269	.342	.050	.459	-.438
BOD_TC	.513	.524	-.011	.069	-.129	.225
DIRSTK	.104	-.160	-.069	.696	-.154	-.095
TDC2	.311	.512	-.037	-.153	-.494	-.130
SHROWN	-.004	.587	.307	-.034	-.485	.181

Extraction Method: Principal Component Analysis.
6 components extracted.

Rotated Component Matrix – 1993 Factor Analysis Results

	Component					
	1	2	3	4	5	6
BOD_SIZE	-.164	-.109	.128	**.711**	.291	.064
INDEP	**-.460**	.174	.096	.284	-.224	**.601**
DUALITY	.120	**.791**	.018	.213	.045	-.023
CEO_FOUN	**.823**	.032	-.006	-.078	-.254	.112
CEO_RBOD	**.871**	-.122	.017	.075	.073	-.042
CHB_FOUN	.303	**-.781**	-.076	.031	.140	.036
BOD_MEMF	.129	-.304	-.021	.072	**.635**	.146
CEO_TIT	-.002	**.414**	-.138	-.343	.296	**.607**
NUM_CEOS	-.211	.146	.064	.071	**.696**	-.202
BOD_GENP	.129	.322	-.009	**.763**	-.053	.028
BOD_TC	-.141	.204	**.593**	.175	**.408**	.029
DIRSTK	-.139	.222	-.060	-.077	.051	**-.691**
TDC2	-.160	-.098	**.765**	.141	-.069	.007
SHROWN	.310	.082	**.766**	-.135	-.003	.031

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.
Rotation converged in 9 iterations.

Component Transformation Matrix – 1993 Factor Analysis Results

Component	1	2	3	4	5	6
1	-.696	.513	.279	.352	.197	.105
2	.427	-.214	.690	.404	.365	-.001
3	.509	.729	.111	.021	-.400	.191
4	.116	.316	-.096	-.038	.269	-.896
5	.231	.090	-.650	.537	.417	.233
6	.089	.225	.053	-.650	.650	.308

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.

Total Variance Explained – 1994 Factor Analysis Results (5 Factor Unconstrained)

Factor	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2.450	17.497	17.497	2.450	17.497	17.497	2.160	15.426	15.426
2	1.698	12.132	29.629	1.698	12.132	29.629	1.659	11.849	27.275
3	1.482	10.582	40.211	1.482	10.582	40.211	1.642	11.730	39.006
4	1.351	9.651	49.862	1.351	9.651	49.862	1.398	9.985	48.990
5	1.078	7.700	57.562	1.078	7.700	57.562	1.200	8.572	57.562
6	.994	7.100	64.662						
7	.970	6.928	71.590						
8	.859	6.139	77.728						
9	.724	5.173	82.902						
10	.620	4.428	87.330						
11	.563	4.023	91.353						
12	.460	3.288	94.641						
13	.443	3.164	97.805						
14	.307	2.195	100.000						

Extraction Method: Principal Component Analysis.

Unrotated Component Matrix – 1994 Factor Analysis Results (5 Factor Unconstrained)

	Component				
	1	2	3	4	5
BOD_SIZE	.269	.406	-.433	.133	.088
INDEP	.535	-.119	-.016	-.321	.434
DUALITY	.181	.080	.723	.212	-.177
CEO_FOUN	-.741	.167	.315	.014	.168
CEO_RBOD	-.741	.327	.074	.253	.042
CHB_FOUN	-.584	.046	-.591	-.024	.058
BOD_MEMF	.071	.325	-.088	.581	.034
CEO_TIT	.147	-.371	.209	.220	.508
NUM_CEOS	.463	.276	-.281	.474	.062
BOD_GENP	.279	.380	.337	-.040	.179
BOD_TC	.412	.594	-.005	-.040	.085
DIRSTK	.260	-.185	.046	.299	-.638
TDC2	.160	.347	-.079	-.616	-.326
SHROWN	-.190	.637	.253	-.194	.036

Extraction Method: Principal Component Analysis.
5 components extracted.

Rotated Component Matrix – 1994 Factor Analysis Results (5 Factor Unconstrained)

	Component				
	1	2	3	4	5
BOD_SIZE	-.116	**.605**	-.162	.178	.110
INDEP	**-.629**	.018	.117	-.076	**.420**
DUALITY	.119	-.075	**.754**	-.085	-.207
CEO_FOUN	**.739**	-.294	.024	-.071	.259
CEO_RBOD	**.839**	.018	-.119	-.024	.094
CHB_FOUN	.362	.028	**-.741**	.072	.105
BOD_MEMF	.242	**.589**	.089	-.170	-.125
CEO_TIT	-.184	-.058	.149	**-.637**	.210
NUM_CEOS	-.180	**.735**	.049	-.106	-.110
BOD_GENP	-.034	.196	**.491**	.115	.275
BOD_TC	-.126	**.501**	.300	.340	.242
DIRSTK	-.134	.068	.150	.045	**-.744**
TDC2	-.196	-.091	.033	**.764**	.083
SHROWN	.396	.091	.289	**.427**	.338

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.
Rotation converged in 11 iterations.

Component Transformation Matrix – 1994 Factor Analysis Results (5 Factor Unconstrained)

Component	1	2	3	4	5
1	-.826	.395	.392	.037	-.083
2	.395	.586	.254	.579	.317
3	.214	-.404	.878	-.138	.030
4	.334	.568	.098	-.611	-.428
5	-.068	.121	-.038	-.520	.842

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.

Total Variance Explained – 1994 Factor Analysis Results (6 Factor Forced)

Factor	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2.450	17.497	17.497	2.450	17.497	17.497	2.191	15.650	15.650
2	1.698	12.132	29.629	1.698	12.132	29.629	1.580	11.286	26.935
3	1.482	10.582	40.211	1.482	10.582	40.211	1.479	10.565	37.501
4	1.351	9.651	49.862	1.351	9.651	49.862	1.353	9.661	47.162
5	1.078	7.700	57.562	1.078	7.700	57.562	1.271	9.079	56.240
6	.994	7.100	64.662	.994	7.100	64.662	1.179	8.422	64.662
7	.970	6.928	71.590						
8	.859	6.139	77.728						
9	.724	5.173	82.902						
10	.620	4.428	87.330						
11	.563	4.023	91.353						
12	.460	3.288	94.641						
13	.443	3.164	97.805						
14	.307	2.195	100.000						

Extraction Method: Principal Component Analysis.

Unrotated Component Matrix – 1994 Factor Analysis Results (6 Factor Forced)

	Component					
	1	2	3	4	5	6
BOD_SIZE	.269	.406	-.433	.133	.088	-.244
INDEP	.535	-.119	-.016	-.321	.434	-.124
DUALITY	.181	.080	.723	.212	-.177	-.311
CEO_FOUN	-.741	.167	.315	.014	.168	.129
CEO_RBOD	-.741	.327	.074	.253	.042	.066
CHB_FOUN	-.584	.046	-.591	-.024	.058	.057
BOD_MEMF	.071	.325	-.088	.581	.034	-.513
CEO_TIT	.147	-.371	.209	.220	.508	.323
NUM_CEOS	.463	.276	-.281	.474	.062	.350
BOD_GENP	.279	.380	.337	-.040	.179	.042
BOD_TC	.412	.594	-.005	-.040	.085	.329
DIRSTK	.260	-.185	.046	.299	-.638	.380
TDC2	.160	.347	-.079	-.616	-.326	-.074
SHROWN	-.190	.637	.253	-.194	.036	.217

Extraction Method: Principal Component Analysis.
6 components extracted.

Rotated Component Matrix – 1994 Factor Analysis Results (6 Factor Forced)

	Component					
	1	2	3	4	5	6
BOD_SIZE	-.194	.231	-.205	**.585**	-.165	-.080
INDEP	**-.636**	.173	.053	-.061	.119	-.391
DUALITY	.078	-.005	**.848**	.085	-.006	.048
CEO_FOUN	**.774**	-.004	.014	-.228	.094	-.250
CEO_RBOD	**.837**	.003	-.116	.101	.030	-.083
CHB_FOUN	.368	-.203	**-.703**	.094	-.098	-.105
BOD_MEMF	.120	-.045	.206	**.812**	.041	-.028
CEO_TIT	-.140	.066	.048	-.211	**.734**	-.065
NUM_CEOS	-.198	**.484**	-.178	**.402**	.294	**.409**
BOD_GENP	-.043	**.487**	.332	.036	.014	-.142
BOD_TC	-.121	**.773**	-.010	.112	-.080	.089
DIRSTK	-.098	-.024	.117	-.097	-.003	**.844**
TDC2	-.187	.244	-.025	-.165	**-.718**	-.069
SHROWN	**.417**	**.565**	.082	-.107	-.246	-.142

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.
Rotation converged in 15 iterations.

Component Transformation Matrix – 1994 Factor Analysis Results (6 Factor Forced)

Component	1	2	3	4	5	6
1	-.852	.361	.266	.170	.054	.203
2	.347	.737	.030	.399	-.404	-.117
3	.241	.120	.874	-.369	.150	-.077
4	.270	-.089	.141	.621	.567	.437
5	-.074	.236	-.160	.051	.617	-.728
6	.128	.499	-.346	-.536	.330	.467

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.

Total Variance Explained – 1995 Factor Analysis Results

Factor	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2.432	17.373	17.373	2.432	17.373	17.373	2.046	14.618	14.618
2	1.664	11.884	29.257	1.664	11.884	29.257	1.699	12.137	26.755
3	1.443	10.304	39.561	1.443	10.304	39.561	1.493	10.668	37.422
4	1.260	8.998	48.559	1.260	8.998	48.559	1.295	9.252	46.674
5	1.159	8.278	56.837	1.159	8.278	56.837	1.259	8.996	55.670
6	1.065	7.610	64.447	1.065	7.610	64.447	1.229	8.777	64.447
7	.904	6.458	70.905						
8	.833	5.948	76.854						
9	.775	5.533	82.387						
10	.674	4.811	87.198						
11	.566	4.043	91.242						
12	.522	3.732	94.973						
13	.380	2.716	97.690						
14	.323	2.310	100.000						

Extraction Method: Principal Component Analysis.

Unrotated Component Matrix – 1995 Factor Analysis Results

	Component					
	1	2	3	4	5	6
BOD_SIZE	.255	.133	.566	.075	.520	-.172
INDEP	.618	-.053	-.229	.204	.366	-.130
DUALITY	.345	.639	-.278	-.248	.115	-.174
CEO_FOUN	-.711	.409	-.159	-.041	.126	.175
CEO_RBOD	-.678	.394	.169	-.147	.077	.163
CHB_FOUN	-.472	-.427	.387	.179	.356	-.073
BOD_MEMF	.037	.306	.538	-.197	-.418	-.312
CEO_TIT	.253	.010	-.196	-.555	-.121	-.194
NUM_CEOS	.444	.020	.535	-.027	-.282	.287
BOD_GENP	.260	.352	-.110	-.050	.399	.442
BOD_TC	.434	.405	.318	.143	.099	.064
DIRSTK	.248	-.196	.077	-.173	-.140	.714
TDC2	.230	.042	-.232	.670	-.309	.011
SHROWN	-.210	.555	.028	.496	-.203	.018

Extraction Method: Principal Component Analysis.
6 components extracted.

Rotated Component Matrix – 1995 Factor Analysis Results

	Component					
	1	2	3	4	5	6
BOD_SIZE	-.093	-.157	**.804**	-.127	.069	-.095
INDEP	**-.569**	.217	.313	.051	-.380	-.112
DUALITY	.044	**.783**	.245	-.026	-.045	-.177
CEO_FOUN	**.814**	.016	-.124	.088	-.173	-.171
CEO_RBOD	**.825**	-.081	.032	-.022	.078	-.058
CHB_FOUN	.155	**-.785**	.138	-.155	-.055	-.185
BOD_MEMF	.090	.126	.185	-.010	**.798**	-.006
CEO_TIT	-.172	**.439**	-.163	**-.440**	.141	-.026
NUM_CEOS	-.216	.004	.298	.065	.392	**.595**
BOD_GENP	.147	.331	.377	.005	**-.450**	.291
BOD_TC	-.094	.243	**.573**	.213	.122	.176
DIRSTK	-.054	-.008	-.077	-.098	-.145	**.791**
TDC2	-.328	.038	-.133	**.722**	-.067	-.001
SHROWN	.345	.111	.102	**.685**	.126	-.115

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.
Rotation converged in 7 iterations.

Component Transformation Matrix – 1995 Factor Analysis Results

Component	1	2	3	4	5	6
1	-.770	.441	.353	.010	-.016	.298
2	.518	.662	.386	.342	.135	-.102
3	.095	-.456	.591	-.089	.600	.255
4	-.189	-.365	.136	.869	-.190	-.149
5	.088	-.156	.598	-.330	-.653	-.275
6	.295	-.052	-.038	.109	-.398	.859

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.

Total Variance Explained – 1996 Factor Analysis Results

Factor	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2.453	17.520	17.520	2.453	17.520	17.520	2.045	14.608	14.608
2	1.722	12.299	29.819	1.722	12.299	29.819	1.774	12.668	27.276
3	1.601	11.438	41.257	1.601	11.438	41.257	1.486	10.618	37.894
4	1.291	9.220	50.478	1.291	9.220	50.478	1.341	9.576	47.470
5	1.161	8.296	58.774	1.161	8.296	58.774	1.308	9.345	56.816
6	1.031	7.362	66.136	1.031	7.362	66.136	1.305	9.320	66.136
7	.929	6.639	72.775						
8	.785	5.609	78.384						
9	.758	5.414	83.798						
10	.588	4.197	87.995						
11	.579	4.132	92.128						
12	.436	3.113	95.241						
13	.376	2.689	97.930						
14	.290	2.070	100.000						

Extraction Method: Principal Component Analysis.

Unrotated Component Matrix – 1996 Factor Analysis Results

	Component					
	1	2	3	4	5	6
BOD_SIZE	.209	-.363	.114	.108	-.654	.354
INDEP	.695	.134	-.009	-.372	-.158	.095
DUALITY	.369	.755	.115	.085	-.157	-.026
CEO_FOUN	-.705	.414	.287	.070	-.055	.130
CEO_RBOD	-.712	.287	.145	.149	-.083	.395
CHB_FOUN	-.502	-.464	-.006	-.362	-.024	.374
BOD_MEMF	-.030	-.310	-.099	.688	.202	-.051
CEO_TIT	.258	.336	-.330	-.055	.372	.315
NUM_CEOS	.412	-.307	.080	.492	.145	.286
BOD_GENP	.340	.312	.313	.094	.043	.495
BOD_TC	.363	-.158	.647	.121	-.137	-.055
DIRSTK	.143	.008	-.419	.075	.320	.327
TDC2	.145	-.320	.458	-.463	.458	.146
SHROWN	-.084	.078	.667	.116	.375	-.153

Extraction Method: Principal Component Analysis.
6 components extracted.

Rotated Component Matrix – 1996 Factor Analysis Results

	Component					
	1	2	3	4	5	6
BOD_SIZE	-.096	-.128	-.178	.042	**.803**	-.224
INDEP	**-.526**	.284	.075	**-.421**	.313	.187
DUALITY	.062	**.819**	.000	-.244	.080	.108
CEO_FOUN	**.846**	.047	.055	-.129	-.131	-.144
CEO_RBOD	**.881**	-.102	-.050	-.024	.056	.037
CHB_FOUN	.258	**-.788**	.019	-.179	.137	.017
BOD_MEMF	-.003	-.042	-.053	**.785**	-.034	.008
CEO_TIT	-.060	.193	-.006	-.074	-.085	**.690**
NUM_CEOS	-.223	.050	.196	**.575**	.386	.213
BOD_GENP	.130	.358	.347	-.056	**.433**	.333
BOD_TC	-.183	.207	**.496**	.105	.374	-.371
DIRSTK	-.088	-.076	-.117	.152	-.022	**.600**
TDC2	-.211	-.364	**.742**	-.206	-.004	.096
SHROWN	.200	.146	**.687**	.144	-.187	-.215

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.
Rotation converged in 10 iterations.

Component Transformation Matrix – 1996 Factor Analysis

Component	1	2	3	4	5	6
1	-.777	.449	.169	.007	.339	.225
2	.404	.771	-.073	-.367	-.211	.241
3	.230	.146	.804	-.049	.243	-.468
4	.219	.346	-.137	.892	.126	-.047
5	-.056	-.124	.540	.256	-.588	.528
6	.359	-.219	.102	-.046	.648	.625

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.

Total Variance Explained – 1997 Factor Analysis Results

Factor	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2.580	18.430	18.430	2.580	18.430	18.430	2.227	15.905	15.905
2	1.985	14.177	32.608	1.985	14.177	32.608	1.677	11.981	27.886
3	1.675	11.967	44.575	1.675	11.967	44.575	1.645	11.747	39.633
4	1.287	9.192	53.766	1.287	9.192	53.766	1.458	10.414	50.047
5	1.126	8.043	61.809	1.126	8.043	61.809	1.374	9.817	59.864
6	1.083	7.739	69.548	1.083	7.739	69.548	1.356	9.684	69.548
7	.872	6.232	75.780						
8	.753	5.380	81.160						
9	.688	4.915	86.076						
10	.549	3.924	90.000						
11	.513	3.667	93.667						
12	.371	2.649	96.316						
13	.319	2.276	98.592						
14	.197	1.408	100.000						

Extraction Method: Principal Component Analysis.

Unrotated Component Matrix – 1997 Factor Analysis Results

	Component					
	1	2	3	4	5	6
BOD_SIZE	-.072	.491	-.250	-.097	.594	.073
INDEP	-.688	-.009	.173	.173	.390	.020
DUALITY	-.428	-.514	.455	-.261	.035	.252
CEO_FOUN	.723	-.174	.380	-.013	-.035	.290
CEO_RBOD	.765	-.110	.052	.135	.167	.418
CHB_FOUN	.658	.064	-.234	.208	.460	-.133
BOD_MEMF	.077	.357	-.495	-.244	-.446	.172
CEO_TIT	-.324	-.380	.087	.324	.141	.088
NUM_CEOS	-.294	.501	-.301	.139	-.076	.230
BOD_GENP	-.153	.234	.107	.421	-.113	.661
BOD_TC	-.258	.470	.254	-.436	.107	.316
DIRSTK	-.212	-.112	-.235	.687	-.220	-.034
TDC2	.015	.639	.522	.278	.067	-.210
SHROWN	.211	.462	.653	.131	-.276	-.254

Extraction Method: Principal Component Analysis.
6 components extracted.

Rotated Component Matrix – 1997 Factor Analysis Results

	Component					
	1	2	3	4	5	6
BOD_SIZE	-.165	-.030	.010	**.720**	.330	.146
INDEP	**-.475**	.006	**.630**	.094	.108	.209
DUALITY	-.041	-.215	**.561**	**-.555**	.341	-.021
CEO_FOUN	**.856**	.138	-.026	-.142	.080	-.063
CEO_RBOD	**.875**	-.069	-.061	.186	-.034	.102
CHB_FOUN	**.483**	.001	-.068	**.655**	-.220	-.220
BOD_MEMF	-.134	-.173	**-.749**	-.015	.068	.230
CEO_TIT	-.085	-.165	**.516**	-.128	-.235	.130
NUM_CEOS	-.343	.021	-.243	.221	.033	**.528**
BOD_GENP	.135	.084	.101	-.069	-.023	**.822**
BOD_TC	-.163	.159	-.039	.019	**.726**	.269
DIRSTK	-.187	-.014	.096	-.045	**-.693**	.329
TDC2	-.063	**.853**	.080	.200	.086	.145
SHROWN	.115	**.888**	-.100	-.163	.064	-.031

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.
Rotation converged in 10 iterations.

Component Transformation Matrix – 1997 Factor Analysis Results

Component	1	2	3	4	5	6
1	.839	.125	-.381	.213	-.119	-.274
2	-.236	.575	-.437	.448	.297	.365
3	.250	.658	.483	-.405	.322	-.062
4	.082	.272	.304	.166	-.786	.425
5	.089	-.146	.579	.739	.263	-.140
6	.403	-.354	.048	-.127	.326	.766

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.

Total Variance Explained – 1998 Factor Analysis Results

Factor	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2.470	17.643	17.643	2.470	17.643	17.643	2.199	15.706	15.706
2	1.686	12.042	29.685	1.686	12.042	29.685	1.570	11.213	26.919
3	1.432	10.229	39.914	1.432	10.229	39.914	1.469	10.493	37.413
4	1.264	9.027	48.941	1.264	9.027	48.941	1.414	10.102	47.515
5	1.138	8.125	57.066	1.138	8.125	57.066	1.260	9.000	56.515
6	1.080	7.718	64.784	1.080	7.718	64.784	1.158	8.269	64.784
7	.906	6.470	71.254						
8	.831	5.934	77.188						
9	.784	5.597	82.785						
10	.689	4.924	87.709						
11	.635	4.537	92.246						
12	.492	3.516	95.763						
13	.384	2.739	98.502						
14	.210	1.498	100.000						

Extraction Method: Principal Component Analysis.

Unrotated Component Matrix – 1998 Factor Analysis Results

	Component					
	1	2	3	4	5	6
BOD_SIZE	-.265	.368	.580	-.269	.131	.098
INDEP	-.546	-.274	.107	-.295	.098	-.274
DUALITY	-.275	-.679	-.085	-.135	.098	.247
CEO_FOUN	.793	-.225	-.002	.036	.143	.218
CEO_RBOD	.801	.083	.040	-.271	.320	.082
CHB_FOUN	.655	.255	.194	-.328	.095	-.321
BOD_MEMF	-.056	.529	-.065	.303	-.123	.201
CEO_TIT	-.277	-.048	-.261	-.276	.602	.379
NUM_CEOS	-.261	.572	-.197	.190	.065	.146
BOD_GENP	.011	.165	-.091	.494	.575	-.208
BOD_TC	-.240	.057	.704	.126	.268	.345
DIRSTK	-.171	.157	-.564	-.114	.315	-.186
TDC2	-.117	-.235	.317	.301	.291	-.579
SHROWN	.282	-.416	.055	.580	.020	.199

Extraction Method: Principal Component Analysis.
6 components extracted.

Rotated Component Matrix – 1998 Factor Analysis Results

	Component					
	1	2	3	4	5	6
BOD_SIZE	.021	.106	**-.418**	**.674**	.012	-.017
INDEP	-.395	**-.446**	**-.401**	.089	.117	.141
DUALITY	-.328	**-.570**	.236	.010	.348	-.153
CEO_FOUN	**.672**	-.138	**.513**	-.074	.014	-.093
CEO_RBOD	**.896**	-.051	.105	-.010	.116	-.046
CHB_FOUN	**.785**	-.036	-.255	-.019	-.250	.075
BOD_MEMF	-.083	**.645**	.037	.063	-.054	-.055
CEO_TIT	-.034	-.054	-.081	.085	**.843**	-.025
NUM_CEOS	-.177	**.637**	-.153	.011	.183	.034
BOD_GENP	.061	.283	.163	-.039	.232	**.698**
BOD_TC	-.096	.028	.106	**.849**	.090	.116
DIRSTK	-.044	.135	-.278	**-.448**	**.431**	.187
TDC2	-.100	-.287	-.015	.104	-.210	**.730**
SHROWN	-.008	-.082	**.769**	.006	-.099	.155

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.
Rotation converged in 8 iterations.

Component Transformation Matrix – 1998 Factor Analysis Results

Component	1	2	3	4	5	6
1	.877	-.002	.361	-.193	-.242	-.075
2	.203	.857	-.455	.124	-.050	.002
3	.107	-.194	-.034	.877	-.405	.131
4	-.302	.416	.668	-.025	-.232	.485
5	.294	-.060	-.005	.194	.720	.595
6	-.037	.228	.463	.374	.451	-.623

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.

Total Variance Explained – 1999 Factor Analysis Results

Factor	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2.616	18.685	18.685	2.616	18.685	18.685	2.259	16.136	16.136
2	1.983	14.164	32.848	1.983	14.164	32.848	2.098	14.987	31.124
3	1.517	10.834	43.683	1.517	10.834	43.683	1.529	10.919	42.043
4	1.304	9.314	52.996	1.304	9.314	52.996	1.278	9.127	51.171
5	1.162	8.298	61.294	1.162	8.298	61.294	1.264	9.026	60.197
6	1.078	7.701	68.995	1.078	7.701	68.995	1.232	8.798	68.995
7	.874	6.240	75.235						
8	.842	6.015	81.250						
9	.763	5.449	86.699						
10	.590	4.216	90.914						
11	.544	3.887	94.801						
12	.403	2.876	97.678						
13	.211	1.504	99.182						
14	.115	.818	100.000						

Extraction Method: Principal Component Analysis.

Unrotated Component Matrix – 1999 Factor Results

	Component					
	1	2	3	4	5	6
BOD_SIZE	-.180	-.119	-.471	.236	.491	.445
INDEP	-.504	.108	-.172	-.264	-.047	.269
DUALITY	-.244	.374	.551	-.309	.289	.070
CEO_FOUN	.794	-.079	.257	-.011	.138	.047
CEO_RBOD	.648	-.513	.178	.091	.224	.175
CHB_FOUN	.557	-.528	-.120	.100	-.022	.141
BOD_MEMF	-.204	-.062	.423	.570	.130	.056
CEO_TIT	-.281	.004	.675	.132	.285	.018
NUM_CEOS	-.320	-.182	.087	.535	-.085	-.334
BOD_GENP	.015	.206	-.255	.477	-.122	-.357
BOD_TC	-.101	.247	-.373	.087	.742	-.192
DIRSTK	-.362	.038	.040	.368	-.292	.656
TDC2	.481	.774	-.035	.175	-.091	.183
SHROWN	.561	.726	.020	.185	-.022	.087

Extraction Method: Principal Component Analysis.
6 components extracted.

Rotated Component Matrix – 1999 Factor Analysis Results

	Component					
	1	2	3	4	5	6
BOD_SIZE	.036	-.111	-.113	**.786**	-.050	.342
INDEP	**-.506**	-.180	-.043	.116	-.282	.238
DUALITY	-.287	.125	**.671**	-.041	-.347	-.133
CEO_FOUN	**.726**	.333	.063	-.115	-.167	-.201
CEO_RBOD	**.885**	-.067	.027	.038	-.121	-.008
CHB_FOUN	**.719**	-.119	-.310	-.007	-.032	.069
BOD_MEMF	.114	-.037	**.526**	.049	**.431**	.299
CEO_TIT	-.006	-.119	**.782**	-.037	.060	.054
NUM_CEOS	-.072	-.245	.145	-.034	**.674**	.078
BOD_GENP	-.110	.229	-.200	.065	**.602**	-.078
BOD_TC	-.152	.105	.067	**.788**	.093	-.370
DIRSTK	-.172	.025	.075	.002	.045	**.865**
TDC2	-.003	**.947**	-.057	-.006	-.032	.053
SHROWN	.096	**.934**	-.010	-.008	.005	-.058

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.
Rotation converged in 10 iterations.

Component Transformation Matrix – 1999 Factor Analysis Results

Component	1	2	3	4	5	6
1	.764	.504	-.256	-.128	-.131	-.253
2	-.530	.828	.139	.049	-.042	-.096
3	.190	.008	.845	-.496	-.055	.015
4	.222	.199	.118	.210	.827	.410
5	.180	-.051	.430	.807	-.138	-.332
6	.134	.134	.038	.201	-.524	.805

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.

Total Variance Explained – 2000 Factor Analysis Results

Factor	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2.517	17.977	17.977	2.517	17.977	17.977	2.249	16.064	16.064
2	1.844	13.170	31.147	1.844	13.170	31.147	1.823	13.022	29.086
3	1.593	11.381	42.528	1.593	11.381	42.528	1.381	9.867	38.953
4	1.197	8.551	51.079	1.197	8.551	51.079	1.335	9.537	48.490
5	1.130	8.075	59.153	1.130	8.075	59.153	1.277	9.119	57.609
6	1.014	7.243	66.396	1.014	7.243	66.396	1.230	8.787	66.396
7	.928	6.631	73.027						
8	.864	6.172	79.199						
9	.731	5.218	84.417						
10	.717	5.121	89.538						
11	.527	3.762	93.300						
12	.436	3.117	96.417						
13	.291	2.080	98.497						
14	.210	1.503	100.000						

Extraction Method: Principal Component Analysis.

Unrotated Component Matrix – 2000 Factor Analysis Results

	Component					
	1	2	3	4	5	6
BOD_SIZE	.101	.357	-.393	.105	.061	.441
INDEP	-.529	.214	.131	-.496	.057	.236
DUALITY	-.226	.124	.743	.137	.029	.108
CEO_FOUN	.771	-.138	.283	-.055	.246	-.033
CEO_RBOD	.719	-.510	.074	-.010	.050	.156
CHB_FOUN	.619	-.367	-.192	-.213	-.078	.084
BOD_MEMF	-.105	-.155	-.135	.673	.370	.196
CEO_TIT	-.281	-.173	.492	-.027	.381	.371
NUM_CEOS	-.319	-.264	-.381	.137	.580	-.131
BOD_GENP	-.182	.079	-.302	-.340	.390	-.429
BOD_TC	.100	.440	-.418	.162	-.204	.338
DIRSTK	-.215	-.111	.147	.492	-.365	-.400
TDC2	.440	.708	.124	.038	.141	-.080
SHROWN	.457	.636	.199	.125	.295	-.248

Extraction Method: Principal Component Analysis.
6 components extracted.

Rotated Component Matrix – 2000 Factor Analysis Results

	Component					
	1	2	3	4	5	6
BOD_SIZE	-.024	.100	**.693**	-.008	.005	.103
INDEP	**-.418**	-.164	.116	**.475**	.168	**-.422**
DUALITY	-.257	.197	-.329	**.514**	**-.414**	.021
CEO_FOUN	**.739**	**.418**	-.161	.089	-.058	.005
CEO_RBOD	**.880**	-.040	-.074	-.010	-.143	.084
CHB_FOUN	**.732**	-.108	.083	-.197	.023	-.139
BOD_MEMF	-.030	-.050	.128	.097	-.015	**.807**
CEO_TIT	-.033	-.098	-.144	**.759**	-.060	.153
NUM_CEOS	-.089	-.212	-.028	.067	**.622**	**.495**
BOD_GENP	-.148	.082	-.111	-.086	**.723**	-.109
BOD_TC	-.128	.104	**.677**	-.230	-.148	.015
DIRSTK	-.320	-.077	**-.425**	-.380	-.339	.260
TDC2	.010	**.817**	.226	-.046	-.057	-.116
SHROWN	.040	**.901**	.037	-.040	.030	.022

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.
Rotation converged in 11 iterations.

Component Transformation Matrix – 2000 Factor Analysis Results

Component	1	2	3	4	5	6
1	.825	.462	.115	-.254	-.156	-.061
2	-.496	.716	.430	-.033	-.046	-.230
3	-.012	.290	-.579	.563	-.496	-.134
4	-.158	.128	.000	-.231	-.415	.856
5	.141	.312	-.015	.510	.658	.436
6	.166	-.275	.683	.552	-.350	.051

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.

Total Variance Explained – Comprehensive Factor Analysis (Autocorrelation Controlled)

Factor	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2.346	16.755	16.755	2.346	16.755	16.755	1.964	14.029	14.029
2	1.792	12.801	29.555	1.792	12.801	29.555	1.710	12.216	26.245
3	1.581	11.292	40.847	1.581	11.292	40.847	1.588	11.345	37.590
4	1.195	8.534	49.381	1.195	8.534	49.381	1.410	10.071	47.661
5	1.108	7.914	57.295	1.108	7.914	57.295	1.259	8.990	56.650
6	1.048	7.484	64.779	1.048	7.484	64.779	1.138	8.129	64.779
7	.944	6.744	71.523						
8	.845	6.037	77.560						
9	.783	5.593	83.153						
10	.679	4.850	88.003						
11	.581	4.154	92.156						
12	.475	3.390	95.546						
13	.346	2.473	98.019						
14	.277	1.981	100.000						

Extraction Method: Principal Component Analysis.

Unrotated Component Matrix – Comprehensive Factor Analysis Model

	Component					
	1	2	3	4	5	6
BOD_SIZE	.215	.093	.547	.206	-.386	.107
INDEP	.597	.124	-.135	-.166	-.300	.145
DUALITY	.279	.148	-.624	.406	-.119	-.092
CEO_FOUN	-.745	.168	-.260	.313	-.101	.089
CEO_RBOD	-.749	-.082	-.027	.456	-.069	.158
CHB_FOUN	-.583	-.179	.412	-.233	-.116	.121
BOD_MEMF	.006	-.147	.391	.367	.405	-.440
CEO_TIT	.233	-.138	-.411	.250	.146	-.216
NUM_CEOS	.354	-.123	.432	.328	.296	-.055
BOD_GENP	.207	.287	.084	.386	.031	.607
BOD_TC	.297	.373	.336	.324	-.334	-.124
DIRSTK	.204	-.066	-.029	-.031	.592	.547
TDC2	-.088	.844	.086	-.184	.188	-.052
SHROWN	-.221	.828	.004	-.079	.234	-.174

Extraction Method: Principal Component Analysis.
6 components extracted.

Rotated Component Matrix – Comprehensive Factor Analysis Model

	Component					
	1	2	3	4	5	6
BOD_SIZE	-.091	-.092	-.218	**.696**	.079	.044
INDEP	**-.520**	-.057	.232	.266	-.348	.090
DUALITY	.075	-.001	**.799**	.066	-.170	.008
CEO_FOUN	**.832**	.159	.027	-.086	-.192	-.062
CEO_RBOD	**.886**	-.090	-.111	-.001	.017	.026
CHB_FOUN	.315	-.089	**-.705**	-.046	-.033	-.130
BOD_MEMF	.064	.007	.010	.033	**.807**	-.102
CEO_TIT	-.038	-.130	**.553**	-.172	.132	-.041
NUM_CEOS	-.193	-.112	.016	.238	**.599**	.243
BOD_GENP	.104	.075	.115	.386	-.090	**.682**
BOD_TC	-.092	.185	.114	**.707**	.112	-.064
DIRSTK	-.160	-.015	-.029	-.314	.106	**.750**
TDC2	-.045	**.881**	-.074	.078	-.072	.065
SHROWN	.114	**.900**	.010	.005	.005	-.027

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.
Rotation converged in 6 iterations.

Component Transformation Matrix – Comprehensive Factor Analysis Model

Component	1	2	3	4	5	6
1	-.815	-.142	.418	.290	.086	.221
2	.016	.918	.117	.311	-.193	.096
3	-.127	.024	-.707	.493	.489	.045
4	.548	-.160	.507	.444	.416	.218
5	-.070	.282	.029	-.612	.586	.444
6	.115	-.177	-.234	.070	-.447	.834

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.

Total Variance Explained – CEO Power Factor Analysis

Factor	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	1.981	28.300	28.300	1.981	28.300	28.300	1.869	26.699	26.699
2	1.614	23.051	51.351	1.614	23.051	51.351	1.679	23.989	50.688
3	1.235	17.644	68.995	1.235	17.644	68.995	1.281	18.307	68.995
4	.791	11.301	80.296						
5	.696	9.946	90.242						
6	.391	5.586	95.828						
7	.292	4.172	100.000						

Extraction Method: Principal Component Analysis.

Unrotated Component Matrix – CEO Power Factor Analysis

	Component		
	1	2	3
INDEP	-.596	.324	.227
DUALITY	-.161	.080	.750
CEO_FOUN	.793	-.188	.317
CEO_RBOD	.732	-.436	.216
CEO_TIT	-.275	-.050	.685
TDC2	.343	.838	.002
SHROWN	.492	.757	.070

Extraction Method: Principal Component Analysis.
3 components extracted.

Rotated Component Matrix – CEO Power Factor Analysis

	Component		
	1	2	3
INDEP	**-.602**	.052	.382
DUALITY	.008	.053	**.769**
CEO_FOUN	**.847**	.191	.102
CEO_RBOD	**.876**	-.065	.008
CEO_TIT	-.051	-.118	**.729**
TDC2	-.062	**.902**	-.044
SHROWN	.119	**.897**	-.018

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.
Rotation converged in 4 iterations.

Total Variance Explained – BOD Power Factor Analysis

Factor	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	1.524	21.775	21.775	1.524	21.775	21.775	1.304	18.622	18.622
2	1.204	17.198	38.973	1.204	17.198	38.973	1.269	18.136	36.758
3	1.081	15.440	54.413	1.081	15.440	54.413	1.236	17.655	54.413
4	.961	13.722	68.135						
5	.833	11.903	80.038						
6	.762	10.889	90.927						
7	.635	9.073	100.000						

Extraction Method: Principal Component Analysis.

Unrotated Component Matrix – BOD Power Factor Analysis

	Component		
	1	2	3
BOD_SIZE	.545	.475	-.120
CHB_FOUN	-.330	.649	.104
BOD_MEMF	.301	.415	.586
BOD_GENP	.468	-.399	-.130
DIRSTK	.126	-.464	.572
BOD_TC	.645	.099	-.484
NUM_CEOS	.614	.019	.365

Extraction Method: Principal Component Analysis.
3 components extracted.

Rotated Component Matrix – BOD Power Factor Analysis

	Component		
	1	2	3
BOD_SIZE	-.063	**.642**	.348
CHB_FOUN	**-.729**	.073	.066
BOD_MEMF	-.248	.030	**.738**
BOD_GENP	**.607**	.153	.061
DIRSTK	.371	**-.518**	.390
BOD_TC	.349	**.734**	.022
NUM_CEOS	.281	.148	**.640**

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.
Rotation converged in 5 iterations.

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