Director Mobility:

The Role of Human and Social Capital

in Board Appointments

by

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ABSTRACT

This dissertation integrates research on boards of directors with human and social capital perspectives to examine board appointments. A director's appointment to a board is in part due to the belief that the individual can contribute critical resources and monitoring to the organization. The ability of a director to provide these resources and monitoring depends on his or her level of human and social capital. This dissertation more fully integrates human and social capital perspectives into our understanding of board appointment events.

From these theoretical underpinnings, a model is developed proposing that several human and social capital indicators, including educational level, expertise, director experience, and access to network structural holes, affect the likelihood of joining a new board, joining a prestigious board, and exiting a current board. I also consider a number of contextual- and individual-level variables that may potentially moderate the relationship between a director's human and social capital and director mobility.

Through this dissertation, I make a number of contributions to the literatures on boards, board appointments, and human and social capital. First, I offer a more comprehensive perspective of the board appointment process by developing an individual-level perspective of board appointments. Second, I contribute to a more comprehensive understanding of the market for corporate directors. Third, I focus on several salient dimensions of director mobility. Fourth,

I contribute to the growing literature on human and social capital at the board and director levels. Finally, I add to the growing literature on director selection.

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INTRODUCTION

Overview

Understanding the determinants of board composition has long been a central focus of corporate governance research (Finkelstein, Hambrick, & Cannella, 2009; Hermalin & Weisbach, 1988). This central focus on director selection derives from the critical functions that boards carry out for organizations (Hillman & Dalziel, 2003; Johnson, Ellstrand, & Daily, 1996; Zahra & Pearce, 1989). While a number of board functions are discussed, Hillman and Dalziel (2003) integrate and consolidate these into two distinct functions. First, building upon an agency theory perspective, boards of directors serve a monitoring function that helps ensure the alignment of management and shareholder interests (Fama, 1980; Fama & Jensen, 1983). Second, following the resource dependence perspective, boards of directors also provide a resource provision function (Pfeffer & Salancik, 1978). Those directors that are more capable of carrying out these distinction functions should be able to better affect board and overall organizational performance.

These critical board functions have led to a vast amount research considering how and why certain individuals are appointed to boards of directors. For example, research considers a variety of organizational and external changes that in part determine the types of directors that are selected to compose the board (Finkelstein et al., 2009; Zahra & Pearce, 1989). These include such organizational considerations as firm performance, strategy, and life cycle stage

(Pearce & Zahra, 1992; Zahra & Pearce, 1989). Similarly, research also considers a variety of external factors such as environmental uncertainty and changes in the external environment (e.g., industry regulation) that may affect director selection and board composition. This research offers a number of key insights into both the organizational- and environmental-level determinants of director selection and board composition.

While this extant research offers a number of key insights into understanding board composition, it has done so often neglecting the individual-level characteristics of the potential director. Research is only beginning to consider a variety of individual-level determinants that affect direct selection. These studies consider a variety of factors, such as director stigmatization (Gilson, 1990; Wiesenfeld, Wurthmann, & Hambrick, 2008), impression management skills (Westphal & Stern, 2006, 2007), and the ability to provide resources to the organization (Hillman, Shropshire, & Cannella, 2007).

However, even this individual-level research often fails to directly consider the role that human and social capital plays in determining director selection (for an exception see Lester, Hillman, Zardkoohi, & Cannella, 2008). A director's human and social capital directly relates to the individual's ability to carry out the board functions of monitoring and resource provision (Hillman & Dalziel, 2003), and in turn should determine whether an individual is initially appointed to a board of directors and, of interest here, join subsequent boards[1].

[1] Because of my focus on current corporate directors, I will examine appointments that follow the director's current board appointments. Therefore, in discussing the

Those directors with higher levels of human and social capital should be better able to provide monitoring and resources to the board and firm. Thus, those directors with higher levels of human and social capital should be more valuable in the market for corporate directors and should receive more board appointments. However, research is yet to formally articulate or empirically examine the underpinning of this critical relationship and the subsequent appointment consequences of director human and social capital.

The purpose of this dissertation is to delve into the individual-level determinants of why current corporate directors receive subsequent board appointments and to develop an individual-level theory of director mobility for current corporate directors. I also consider a number of individual and contextual variables that may influence the relationship between a director's human and social capital and director mobility. I address the following research questions:

> What is the relationship between director-level human and social capital and director mobility? And, what individual and contextual variables moderate the relationship between director human and social capital and director mobility?

Through these research questions, I offer a more comprehensive conceptualization of why certain directors are more likely to receive future board appointments while others do not.

I also move beyond solely examining the likelihood of subsequent appointments and delineate several important dimensions of the board

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board appointment process, I will refer to the appointments as subsequent board appointments.

appointment outcome. Prior research considering director selection often only focuses on the likelihood of receiving a new board appointment. However, this only captures one dimension of the appointment process. Other salient dimensions remain underdeveloped and under-theorized; yet, these dimensions inherently may be important in firm's ability to gain benefits from a director's appointments. Namely, I examine three dimensions: 1) the likelihood of joining a new board, 2) the likelihood of joining a prestigious board, and 3) the likelihood of exiting a current board.

Utilizing the human and social capital perspectives of job mobility (Becker, 1964; Coleman, 1991), I argue that a director's human and social capital should directly relate to his or her likelihood of joining a new board, with those directors with higher levels of human and social capital more likely to join new and more prestigious boards. Further following research on individual-level turnover using human and social capital (e.g., Dess & Shaw, 2001; Jovanovic, 1979), I argue that higher levels of human and social capital should also directly relate to a higher likelihood of director exit as these individuals have more opportunities for mobility. While this prediction may seem counterintuitive, it follows previous research on job mobility (e.g., Acemoglu & Pischke, 1998; 1999; Jovanovic, 1979) and reflects the complexity of examining mobility at the individual level (Dess & Shaw, 2001).

Contribution

Through this dissertation, I make a number of contributions to the corporate governance and board of directors literatures. First, through my theoretical model, I develop an individual-level perspective of the board appointment process by focusing on the human and social capital determinants of subsequent board appointments. While previous research offers a number of insights by focusing on the organizational, board, and environmental factors, these determinants are only partially able to explain why certain individuals are selected for board appointments because they do not provide information on the individual-level drivers from the potential director's perspective. By considering the individual-level characteristics of human and social capital, I contribute a complementary perspective of director selection that provides a more comprehensive understanding of director selection.

Second, I offer insights into the market for corporate directors both through my theoretical model and its empirical testing. The market for corporate directors has long been an important consideration in understanding current and potential directors' motivations for performing board functions and to understand the mechanism by which directors that do not perform these functions are punished (Fama, 1980). However, very little research moves beyond Fama's initial premise that directors who are unable to perform will face "settling up" or the inability to attain new appointments. Here, I consider how the market operates for potential directors in a more detailed fashion and examine what director characteristics are deemed valuable and rare in this market. By examining a director's level of human and social capital and its effects on subsequent

appointments, my model offer key insights into the valuation process that occurs within the market for corporate directors.

Third, as previously mentioned, I also further delineate and develop several salient dimensions of a director's board appointment. The first dimension, the likelihood of new board appointments, captures the probability that a director will receive subsequent board appointments. Research posits that directors with higher human and social capital should be more likely to receive board appointments (e.g., Jensen & Meckling, 1976; Lester et al., 2008); however, the direct relationship between a director's human and social capital and his or her likelihood of receiving future board appointments is yet to be explicitly tested. The second dimension, likelihood of joining more prestigious appointments, may offer new insights into a director's motivation to continue to garner high-status appoints relative to the individual's willingness to sit on lower status boards to contribute to the legitimacy needs of the firm. Finally, the likelihood of board exit is critical because it reflects another under-developed aspect of director mobility on the market for corporate directors. Director exit from a board may be because of a variety of reasons. For example, the firm may have been able to gain and appropriate the benefits of directors' human and social capital and no longer needs the director to physical sit on the firm's board. The firm may have also found a substitute for the director's human and social he or she provided to the board. Or, the director may have reached the board's mandatory retirement age set for all directors serving on the particular board. Conversely, rather than prompted by the firm, a director may voluntarily exit a board either in the desire to move

onto to a new board without becoming overboarded in the process, and thus, the individual exits one of his or her current board seats in order to enter a new board, or to simply end his or her tenure as a corporate director.

Fourth, I contribute to the growing body of research on the human and social capital of those in the upper echelons of organizations. In particular, through this dissertation, I offer a more dynamic perspective of the role of human and social capital in board appointments. An active stream of research examines the influence of directors' human and social capital on board and organizational performance. However, this research often focuses on the stock of director capital rather than the change in this capital that can occur over time or after specific events. In this vein, research considers director characteristics such as education level (Boivie, Jones, & Khanna, 2008; Westphal & Milton, 2000), previous corporate experience (Walters, Kroll, & Wright, 2008), and firm tenure (Rutherford & Buchholtz, 2007) that represent directors' human capital. Research also examines directors' network ties and the quality of these ties (Carpenter & Westphal, 2001; Stevenson & Radin, 2009), which represent their social capital. However, much of this research assumes that directors bring these different forms of director capital to a board without considering if and how the forms of capital change. In this study, I follow a sample of directors over a 10-year period and examine their changes in director experience and social capital. In this regard, this study captures a more dynamic perspective of how director's human and social capital may change over time. To further consider the dynamic change of human and social capital, I consider several individual-level and contextual variables,

including gender, a director's exit from a board in the previous period, director stigmatization from financial restatements, and the industry conditions in which the director serves to provide a more dynamic perspective of a director's human and social capital.

Finally, this dissertation adds to the growing literature on director selection. As Finkelstein and colleagues (2009) point out, relative to the research on CEO turnover and selection, fewer studies consider director turnover and selection. This is an important theoretical consideration missing from the literature on boards of directors. While research has developed a fairly well informed understanding of why certain individuals may be selected for the role of CEO at a particular firm, we have yet to delve into why certain individuals obtain board appointments.

Dissertation Outline

This dissertation is organized as follows. In chapter 2, I review the theoretical literature underpinning my research model and proposed hypotheses. I first examine the basic tenets of agency and resource dependence theories and describe the board functions of monitoring and resource provisioning. I then review the human and social capital literatures and how extant managerial and board research applies these concepts. Finally, I conclude this chapter by reviewing the board literature on board composition and director selection.

In Chapter 3, I develop a theoretical model of the relationship between a director's human and social capital and director mobility. In doing so, I delineate

several salient dimension of director selection and how human and social capital affects these different dimensions. Furthermore, I theorize the moderating effects of a number of individual and contextual variables on the relationship between human and social capital and director mobility.

In Chapter 4, I describe my methodological approach to test my theoretical model developed in Chapter 3. In particular, I describe my sampling technique, operational measures for my theoretical constructs, and the statistical analyses that I use to test the hypotheses.

Chapter 5 presents the results of the hypothesis testing of my research model. Finally, in Chapter 6, I provide a discussion of the empirical results, limitations, and future research directions from this study.

Chapter 2

LITERATURE REVIEW

In this chapter, I offer a review of the relevant theories underlying my theoretical model and hypothesized relationships discussed in chapter 3. In doing so, I first delineate the monitoring and resource provision functions. Then, I define human and social capital and review the research on human and social capital in the management and board literatures. Finally, I conclude by reviewing the literature on board composition and director selection.

Board Functions

Monitoring Function

The monitoring function refers to the responsibility of directors to monitor the actions of executives on behalf of shareholders. This function derives from agency theory, which is concerned with the relationship between principals and agents and focuses on how to minimize the agency costs associated with this relationship (Fama, 1980; Fama & Jensen, 1983; Jensen & Meckling, 1976, for a review see Dalton, Hitt, Certo, & Dalton, 2007). From this perspective, the organization is viewed as a nexus of contracts in which ownership and management are separate (Fama, 1980; Fama & Jensen, 1983). Agency problems occur when one or more persons (the principal(s)) engage another person (the agent) to perform a service on their behalf that involves delegating some decision-making authority to the agent (Fama, 1980) and information asymmetry. This relationship is problematic because, as Barney and Hesterly (1996: 125) point out,

"(1) the interests of principal and agent will typically diverge; (2) the principal cannot perfectly and costlessly monitor the actions of the agent; (2) and the principal cannot perfectly or costlessly monitor and acquire information available to or possessed by the agent." Because of these problems, a central tenet of agency theory is "that there is potential for mischief when the interests of owners and those of managers diverge" (Dalton et al., 2007: 2). This opportunity for potential mischief creates the agency problem and in turn agency costs.

Agency theory is concerned with minimizing the costs associated with principal-agent relationship and problems that arise from this separation of ownership and management. In doing so, agency theory suggests several governance mechanisms that might mitigate the agency problem and in turn affect corporate strategy. These governance mechanisms include the influence of ownership arrangements, boards of directors, managerial compensation arrangements, the market for managerial talent, and the market for corporate control (Dalton et al., 2007). However, these mechanisms are not costless. Agency costs accrue as the principals attempt to utilize these mechanisms to reduce agency problems (Eisenhardt, 1989a).

Boards of directors are one mechanism put in place to reduce the agency problem. The boards of directors serve a monitoring function that helps ensure the alignment of management and shareholder interests (Johnson et al., 1996; Zahra & Pearce, 1989). In carrying out this monitoring function, directors may engage in a variety of activities including: selecting, evaluating, and replacing executive management; serving the interest of shareholders; and assessing and monitoring

the firm's strategic direction and overall performance (Bacon & Brown, 1975; Monks & Minow, 2004; Vance, 1983).

Much of the research on boards of directors examines boards from the agency lens (Johnson et al., 1996; Zahra & Pearce, 1989). This research often focuses on the role of director/board independence from the executives of the firm and suggests that boards should be composed entirely or at least with a majority of independent directors. Agency theory suggests a positive relationship between board independence and firm performance; however, the results of studies examining the link between board independence and firm performance are mixed at best (Dalton, Daily, Ellstrand, & Johnson, 1998; Dalton, Daily, Johnson, & Ellstrand, 1999). Thus, while the board does serve as a critical governance mechanism to reduce the agency problem, other board functions may also be critically important.

Resource Provision Function

The board serves the resource provision function by providing a variety of resources to the firm. This function derives from resource dependence theory, which focuses on the relationship between organizations and their environments (Pfeffer & Salancik, 1978, for a review see Hillman, Withers & Collins, 2009). More specifically, this perspective posits that organizations depend on the external environment for scarce resources; however, these organizations attempt to acquire control over these resources or reduce other's power over the resources in order to minimize dependence on the external environment (Ulrich & Barney, 1984).

Organizations may utilize a variety of strategies to reduce this dependence (Pfeffer & Salancik, 1978). These include engaging in mergers and acquisitions, joining joint ventures and other interfirm relationships, utilizing political action, replacing current executives. Boards of directors also may be used as a dependence reducing mechanism either through cooptation or providing a number of resources to the firm. From this perspective, boards of directors are another mechanism to minimize dependence or gain control over resources (Pfeffer, 1972). The board provides several key resources to the organization and top management team. More specifically, boards provide (1) advice and counsel, (2) legitimacy, (3) channels for communicating information between external organizations and the firm, and (4) preferential access to commitments or support from important elements outside the firm (Hillman & Dalziel, 2003; Pfeffer & Salancik, 1978: 145, 161).

Considerable research examines the resource provision role of boards (Hillman et al., 2009; Johnson et al., 1996; Zahra & Pearce, 1989). Empirical research in this area, for the most part, supports the director's role in linking the focal firm to its environment and providing a number of important resources to the firm (e.g., Pfeffer, 1972, 1973; Provan, 1980). Additionally, research on board composition supports the notion that board composition is changed to adapt to environmental changes a focal firm may face (Hillman, Cannella, & Paetzold, 2000; Pfeffer, 1972; Pfeffer & Salancik, 1978).

Human and Social Capital Literatures

While interrelated and often empirically indistinguishable, human and social capital derive from different theoretical perspectives and build upon different theoretical bases (Coleman, 1988b, 1990). Human capital theory is rooted in economic theory and often applied in labor economics (Becker, 1964). Social capital, on the other hand, derives from sociology as it considers the relational aspects from social interaction (Coleman, 1990). While these forms of capital are not direct measures of ability, per se, they are highly correlated with an individual's ability and the outcomes of ability and, as such, are critical to understanding a director's ability to monitor and provide resources (Becker, 1964; Hillman & Dalziel, 2003). Each of these concepts is defined in turn.

Human Capital

Human capital refers to the skills, knowledge, expertise, and experiences held by an individual (Becker, 1964; Hogan & McPheters, 1980; Schultz, 1961). It is created "by changes in persons that bring about skills and capabilities that make them able to act in new ways" (Coleman, 1988b: S100). Becker (1964) originally conceptualized human capital as a resource within individuals inside of firms. These resources are modified by specific investments made by the individual and the firm (Wang & Barney, 2006).

Human capital investments are the "activities that influence future monetary and psychic income by increasing the resources in people" (Becker, 1964: 9). These types of investments improve skills, knowledge, or health, thereby increasing future monetary and psychic benefits. Investments in human capital include education, on-the-job training, and health care (Schultz, 1961: 8,

also see Becker, 1964). Speaking specifically about on-the-job training, Becker made a distinction between general and specific training. General training consists of the accumulation of knowledge from a broad range of loosely related knowledge domains not focused on a specific job or firm. Specific training encompasses the accumulation of knowledge from a narrow range of closely related knowledge domains focused exclusively on a specific a job and firm. Any activity or experience, whether formal or informal, wherein an individual can learn new skills and ways of thinking, and where such learning increases the individual's financial or psychic income is, by definition, an accumulation of human capital (Becker, 1964).

Much research in management and organizational studies focuses on the human capital possessed by individuals in the upper echelons of the organization, including boards of directors. Extending Becker's original delineation, Castanias and Helfat (1991) suggest that within the upper echelon, executives have varying levels of human capital as measured by general, industry-specific, and firm specific skills. In the case of corporate directors, general skills may include experience with executive succession, hostile takeovers, organizational crisis, or bankruptcy. Industry-specific expertise may include knowledge of key technologies, strategic opportunities, competitive dynamics, industry regulation, or relationships with key industry leaders. Firm-specific skills may include those pertaining to understanding company culture, navigating the political structure, converting firm resources into innovation, and managing the firm's key stakeholders. These forms of skills have different fundamental content and

different levels of transferability across various contexts (Castanias & Helfat, 1991, 2001). “General human capital is the most transferable and least unique, and firm-specific human capital is the least transferable and most unique. Industry-specific human capital, however, is both transferable and relevant to the organizations within a given industry” (Sirmon, Gove, & Hitt, 2008: 921).

Human capital at the executive level greatly affects a variety of outcomes. For example, research considers the role of human capital in determining executive compensation (Combs & Skill., 2003). From this perspective, Fisher and Govindarajan (1992) find that compensation of business unit managers positively relates to a measure of human capital—years of education. Harris and Helfat (1997) consider the role of human capital in determining differences in CEO compensation levels between internal and external successors. From this perspective, “external CEO successors may earn both a risk and a return premium relative to internal successors” (Harris & Helfat, 1997: 897). Following Castanias and Helfat (1991), the authors distinguish between firm- and non-firm-specific human capital and between industry-specific and general human capital. Their results indicate that external successors receive a premium in initial non-contingent compensation relative to internal successors.

Similarly, Finkelstein and Hambrick (1989) find that a CEO’s level of human capital, as measured by experience in general management, is positively related to bonus compensation; although it is unrelated to both total compensation and salaries. Additionally, boards of financially risky firms may offer new externally-hired CEOs golden parachutes, poison pills, and other antitakeover

provisions to compensate them for the risk of utilizing their general and firm-specific human capital in these firms (Evans & Hefner, 2009; Evans, Pyles, & Choo, 2009; Harris, 1990; Knoeber, 1986).

Social capital

Social capital represents the "the sum of actual and potential resources embedded within, available through, and derived from, the network of relationships possessed by that individual" (Nahapiet & Ghoshal, 1998: 243). Social capital "comes about through changes in the relations among persons that facilitate action." (Coleman, 1988b: S100). The social capital perspective represents the embedded nature of individuals and their knowledge bases (Granovetter, 1985). Social capital is similarly to human and other forms of capital. As Coleman (1990: 302) posits, "Like other forms of capital, social capital is productive, making possible the achievement of certain ends that would not be attainable in its absence." However, unlike human capital, social capital does not reside within the individual but rather is embedded in the relationships among and between individuals (Coleman, 1988b, 1990; Lin, 2001). From this perspective, an individual's network of relationships represents a key resource for the actors in the network. Social capital may take a variety of forms including obligations and expectations, information potential, norms and effective sanctions, etc. (Coleman, 1990). Any gain in interpersonal or relationship-building skills and trustworthiness that leads to more and deeper professional relationships is, by definition, an accumulation of social capital (Coleman, 1990).

Extending these concepts to management, research examines the role of social capital in a variety of contexts. In the board literature, research examines how social capital directly affects the board's access to resources (Kim, 2007; Kim & Cannella, 2008). Through relationships with members of the corporate elite at other firms (most commonly studied through board interlocks), directors may learn about strategic opportunities, practices, availability of resources, potential pitfalls, and penalties associated with various organizational, governance, and financial practices (Lorsch & MacIver, 1989; Mizruchi, 1996). They may enable the firm to gain access to critical financial resources (Mizruchi & Stearns, 1988). Social capital extends and augments a given director's resources.

Director Human and Social Capital

Research in the board literature recognizes the value of director's skills, expertise, and experiences that they bring to board (Bacon & Brown, 1975; Lorsch & MacIver, 1989; Vance, 1983). In particular, Fama and Jensen (1983: 315) posit that "[t]he value of their [directors'] human capital depends primarily on their performance as internal decision managers in other organizations. They use their directorships to signal to internal and external markets for decision agents that (1) they are decision experts, (2) they understand the importance of diffuse and separate decision control, and (3) they can work with such decision control systems." Much of social capital research at the director level focuses on the density or cohesion of an individual's network and its impact on the individual's ability to increase his or her status in the network of corporate elites

(Davis, 1993; Useem, 1984). In turn, research utilizes director human and social capital to examine a variety of important firm and board outcomes. In this section, I review three particular outcomes: firm performance, board performance, and director selection.

Table 1 represents an overview of the research in stream.

Insert Table 1 about here

Firm Performance. As mentioned above, a director's ability to provide critical resources and carry out the other key functions of the position is predicated on the individual's cumulative human and social capital. Research examines director accumulation of human and social capital and the impact of a director's human and social capital on board and firm performance. In looking at specific outcomes, Walters, Kroll, and Wright (2008) find that board incentives and board-level human capital, as measured by acquisition target industry experience, along with moderate levels of CEO ownership positively influence shareholder returns derived from acquisitions announcements.

Kim (2007) examines the impact of outside director's social capital on firm valuation using a sample of publicly traded Korean firms. Outside director social capital represents the degree to which outside directors have linkages to the external environment. Kim finds strong support for the relationship between outside director social capital and firm value, while finding no significant

relationship between the proportion of outside directors and firm value, Tobin's Q.

Director Selection. In a study of professional directors—defined as an outside director who sits on many boards at the same time—Keys and Li (2005) find that after a takeover, professional directors are more likely to receive new board appoints than other "nonprofessional" directors. The authors suggest that this greater likelihood of new appointments is due in part to the professional directors' valuable and transferable general human capital that offset the information processing concerns and other costs that come along with holding multiple directorships. These professional directors with higher human capital also were associated with above-average performing takeover targets relative to those with lower human capital.

Kim and Cannella (2008) conceptually examine the role of social capital in new director selection and subsequent board performance. In developing their social capital perspective of director selection, they distinguish between internal social capital—ties within the focal organization and in particular within the board—and external social capital—ties external to the focal organization. They posit that both forms of social capital are positively related to director selection on a specific board; although, each represents different causal logics for the new director appointment. The authors suggest a number of contextual variables that may strength the relationship between director internal and external social capital and director selection.

Utilizing a resource dependence lens, Singh (2007) investigates the ethnic diversity on corporate boards in the FTSE 100. Ethnic minority directors were likely to hive high levels of human and social capital that allow them to provide a number of critical resources to the board and firm. Singh finds that companies with ethnic minority directors were significantly different from the FTSE 100 companies without any ethnic diversity on a variety of dimensions, including board size, proportion of outsiders, gender diversity, market capitalization, and transparency of new director appointments.

Similarly, Lester, Hillman, Zardkoohi, and Cannella (2008) examine the indistinguishable role that human and social capital plays in determining the appointment of former government officials as outside directors. These authors suggest that the breadth and depth of human and social capital directly affects the likelihood that a government official will be appointed as an outside director of a firm.

Board Performance. Nicholson, Alexander, and Kiel (2004) extend the resource dependence perspective of boards to define the social capital of boards. Utilizing social network analysis, the authors examine the structural social capital created from board interlocks within a national corporate governance system. Comparing the United States and Australian directorate networks, Nicholson and colleagues find that the Australian network is only marginally less compact and connected than the US network; although, at the director level the US network is larger and more connected than the Australian network.

Harris and Helfat (2007) suggest examining the board as a social network in-and-of itself. Building from the perspective that boards are groups (Finkelstein & Mooney, 2003), the authors apply social capital and network perspectives to board decision-making processes. From the perspective of the board as its own network, each director holds ties/relationships to the other directors on the board. This perspective complements previous research that examines the external ties of boards.

In a study using a multi-method approach of quantitative and qualitative analysis, Stevenson and Radin (2009) examine the comparative impact of human and social capital on director influence on a board. The authors find "that the social capital of board members in the form of ties to others on the board is a much stronger factor in gaining influence on the board as compared to the human capital of board members such as management experience or committee memberships or the social capital of members in terms of ties across boards" (Stevenson & Radin, 2009: 17-18). In this case, ties to other directors on the board, membership in cliques within the board, and prior relationships with other directors represent the greatest predictors of director influence.

Research recognizes the interdependence and interrelatedness of social and human capital (Coleman, 1988b). Social relationships are sources of information that individuals can accumulate in order to increase their own human capital. However, because of the interrelated nature of human and social capital, it is often difficult empirically to isolate the effect of one from the other (Coleman, 1988b, 1990). In the board literature, the empirical ambiguity led Hillman and

Dalziel (2003) to introduce the theoretical construct board capital to capture the combination of a board's collective human and social capital. The board capital conceptualization offers "a helpful way to conceive of the primary antecedent of the board's provision of resources to the firm" (Hillman & Dalziel, 2003: 387).

Recent research further develops the concept of board capital and suggests that it is composed of breadth and depth components (Haynes & Hillman, 2010). Board capital breadth captures "the portfolio of directors' functional, occupational, social, professional experiences and extra-industry ties and captures the heterogeneity of the directors' human and social capital;" whereas, board capital depth refers to "the embeddedness of directors in the firm's primary industry through interlocking directorships, managerial positions, or occupational experience in the primary industry of the firm, and is the sum of the directors' intra-industry human and social capital" (Haynes & Hillman, 2010: 1145). From this distinction, Haynes and Hillman (2010) find that the level of board capital breadth and depth directly affects organizational strategic change with board capital breadth leading to more strategic change while board capital depth leads to less strategic change. This relationship is also moderated by the level of CEO power in a firm.

With the concepts of human and social capital delineated, I now turn to reviewing the literature on board appointments and director selection.

Board Appointment and Composition Literatures

In order to perform the monitoring and resource provisioning functions, boards must be composed of individual directors who possess the necessary mix of human and social capital (Hillman & Dalziel, 2003; Nicholson & Kiel, 2004). Therefore, understanding the determinants of board composition and director selection has been a central area for board researchers (Finkelstein et al., 2009; Zahra & Pearce, 1989). Much of this research focuses on the affiliation of the director—whether the director appointed is a firm insider or outsider—but research is beginning to also consider human and social capital that each director brings to the board (Finkelstein et al., 2009). This research stream often focuses on the organizational-level determinants of changes to board while neglecting the individual-level characteristics that lead to director appointments (for exceptions, see Westphal & Stern, 2006, 2007; Westphal & Zajac, 1995). Extant research considers a variety of different determinants that may lead to board composition changes and new director selection. In the following section, I first review the director selection process and then discuss the research studies examining board appointments and director selection.

Director Selection Process

The board appointment process is the formal process by which directors are selected, nominated, and appointed to a board. "Legally, it is a multistep process, beginning when the incumbent directors search for potential nominees and ending when the shareholders elect those who are nominated by the directors or by the shareholders themselves" (Lorsch & MacIver, 1989: 20). In most cases in the U.S. and U.K., the candidates for the board appointment are nominated by a

nominating committee composed of completely or a majority of independent directors (Hoskisson, Castleton, & Withers, 2009; Monks & Minow, 2004); however, CEOs remain a major influence over the selection process (Lorsch & MacIver, 1989; Mace, 1971; Monks & Minow, 1996, 2004; Vance, 1983). Recently, some nominating committees have also employed the services of search firms to improve independence and expand the number of candidates that are considered (Monks & Minow, 2004). After the nominating committee selects the initial candidates, the entire board and CEO often interview them. Those individuals that are deemed most qualified and the best fit for the board are formally nominated and voted on by the shareholders of the firm (Chisholm, 1985; Johnson et al., 1996; Monks & Minow, 2004). Finally, the process culminates with the nominated candidate being "elected" onto the board often with no competition from other potential directors. While these candidates are often elected without any opposition, shareholders do have the option to withhold their votes (Hillman, Shropshire, Certo, Dalton, & Dalton, In press).

The formal process begins when there is a vacancy on or expansion of the board. Board vacancies may occur for a variety reasons, including director removal, retirement, resignation or death of an incumbent director (Austin, 1985; Bacon & Brown, 1975; Daily & Dalton, 2004). Board expansion may occur in response to a request of major shareholder to place someone on the board, after an acquisition or merger, or a variety of other organizational considerations, such as a desire to increase board depth and diversity of knowledge and experiences (Bacon & Brown, 1975; Vance, 1968). Much of the managerial research on board

focuses on these organizational considerations that lead to changes in board composition (Finkelstein et al., 2009; Johnson et al., 1996; Zahra & Pearce, 1989).

However, in making the selection decision, the personal attributes of the candidate and his or her fit with the rest of the board are major determinants of which candidates receive a nomination (Bacon & Brown, 1975; Bazerman & Schoorman, 1983; Mueller, 1974; Schlueter, 1985). As Mueller (1974: 68) suggest, "The quality of the men and women who make up the board determines its performance, assuming all structural aspects are in good order." The skills, experiences, expertise, and network ties of those individuals chosen to serve on the board directly affect its ability to carry out the board functions. As Chisholm (1985: 24.2) asks, "is not a board made up of a majority of qualified, competent, experienced, and independent individuals in a better position to perform the management selection and monitoring functions?" Invariably, the answer is "Yes." Therefore, in making the director selection decision, firms attempt to find candidates with the human and social capital necessary to enable the board to successfully monitor and provide resources to the firm (Hillman & Dalziel, 2003; Nicholson & Kiel, 2004). With the board appointment process described, I now turn to reviewing the board research that examines changes in board composition and director selection.

Organizational Determinants of Board Composition

While the selection process is a key determinant of board composition, most board research focuses on organizational and external changes that provide the impetus for board composition changes (Finkelstein et al., 2009). Board composition is traditionally measured along the dimensions of board size and director type (Zahra & Pearce, 1989). This research considers such factors as an organization's prior and current performance, its strategy, and the environment in which it competes (Pearce & Zahra, 1992; Zahra & Pearce, 1989). Research also examines other organizational factors, such as organizational life-cycle stage (Lynall, Golden, & Hillman, 2003; Zajac & Westphal, 1996) and the influence of the CEO (Hermalin & Weisbach, 1988; Westphal & Zajac, 1995).

Organizational Performance and Strategy. Research considers organizational performance as a key indicator of board composition change. For example, Hermalin and Weisbach (1988) and Weisbach (1988) find that poor organizational performance is positively related to increases in the proportion of independent directors on a board. Conversely, other research suggests that independent directors may be more likely to leave poor performing firms to protect their reputation (Fama, 1980; Finkelstein et al., 2009). Hambrick and D'Aveni (1992) present evidence that organizations facing bankruptcy are more likely to experience outside director exits as a part of a downward spiral of top team deterioration. Similarly, Daily and Dalton (1995) find supporting evidence of director turnover as firms approach bankruptcy and no evidence that the proportion of outsiders increase during bankruptcy. Pearce and Zahra (1992) also find that poor prior performance is negatively related to outsider representation on

the board. Arthuad-Day, Certo, Dalton, and Daily (2006) similarly find that directors of firms filing material financial restatements are 70 percent more likely to exit than those directors on firms not filing financial restatements.

Another important determinant of board composition is the firm's current strategy. For example, Pearce and Zahra (1992) find that board composition and size will be contingent upon the firm's current strategy. In this case, firms employing diversification strategies were more likely to have larger boards and higher proportion of independent directors. This research suggests that certain strategies require different knowledge and skills from directors, and as such, board composition may reflect the firm's strategies.

Environment. Several studies also consider the role of a firm's environment in determining board composition. Pfeffer (1972) examines the role of boards in serving as an instrument for coopting environmental interdependences by examining the size and composition of boards of directors of 80 randomly selected nonfinancial corporations. In particular, he finds that firms may manipulate the size of their boards to create more links to the environment. In terms of board composition, the results suggest that firms facing greater environmental pressures require a higher ratio of outsiders on the board. Pfeffer (1972: 226) posits, "that board size and composition are not random or independent factors, but are, rather, rational organizational responses to the conditions of the external environment." Pfeffer and Salancik (1978) further suggest that board composition can be manipulated to reduce uncertainty in the environment.

Provan (1980) provides evidence that firms that attract and co-opt powerful members of the community are able to use their boards to acquire critical resources from the environment. Similarly, Boeker and Goodstein (1991) provide evidence that the composition of the board can be modified to meet the demands of a changing environment. Daily and Schwenk (1996) suggest that outside resource dependence requirements are key factors along with other conditions in determining the governance structures that firms enact, whether it is a CEO or board dominant structure or more balanced governance structures. Mizruchi and Stearns (1988) find that increased dependence on financial institutions leads to appointments of directors from those institutions. At an institutional level, Sanders and Carpenter (1998) find that a firm's level of internationalization is positively related to both board size and, contrary to their expectations, the proportion of outsiders on a board suggesting that as firms become more internationalized, they face more complex environments that require larger boards and more outsiders.

Boyd (1990) directly examines the relationship between a firm's external environment and its board size and number of interlocks. Utilizing Dess and Beard's (1984) dimensions of environmental uncertainty, Boyd finds a negative relationship between competitive uncertainty and board size and a positive relationship between competitive uncertainty and number of interlocks on a board. His findings are important given the assumption that firms with higher uncertainty will have larger boards and his finds that these firms have smaller boards that are composed of more densely connected or "resource rich" directors.

Research also considers the impact of whether a firm's industry is regulated or deregulated on board composition. For example, Pfeffer and Salancik (1978: 168) propose: "Regulation, as a social process, should require organizations to be more concerned about their relationship with the external environment." In support of this proposition, Luoma and Goodstein (1999) find that within the context of highly regulated industries boards have higher proportions of directors who are non-shareholder stakeholders. Lang and Lockhart (1990) also find that after the deregulation of the airlines industry indirect interlocks between competitors increased as firms attempted to cope with the increase in competitive uncertainty and resource dependences. In this case, financial dependence was positively related to increases in the proportion of director interlocks with financial institutions. Hillman et al. (2000) utilize a taxonomy of director categories they developed to examine changes in board composition as firms undergo deregulation in the US airline industry. Hillman and colleagues find that under deregulation firms alter their board composition to meet the new resource dependence needs of the firm. In this case, directors with business experience, expertise in support functions, and relationships to the community are more likely to be appointed to the board after deregulation than during regulation.

Life Cycle Stage. Closely related to a firm's current strategy, the stage of development of the organization is also suggested to influence board composition. For example, with each stage of the life-cycle comes concomitant changes in the complexity of the firm (Dewar & Hage, 1978) and thus, Lynall and colleagues

(2003) argue that governance requirements will similarly change. Zahra and Pearce (1989: 298) agree noting "boards are expected to perform qualitatively different roles at various points in the cycle." In particular, Lynall and colleagues examine the role of boards during the different stages of the organizational life cycle. Building upon Quinn and Cameron's (1983) four-stage life cycle model, Lynall and colleagues examine the role of boards during the entrepreneurial stage, the collectivity stage, the formalization and control stage, and the structure elaboration and adaptation stage. They argue that different corporate governance perspectives (i.e., agency, resource dependence, social network, and institutional theories) will have differential applicability to board formation and success across the different stages of an organization's life cycle. This perspective, in turn, suggests that the board composition is affected by the stage of organizational development in which the board was initially formed as well as the relative power of the CEO and external financiers at the time of founding. Daily and Dalton (1993) find a significant negative relationship between firms with founders as CEOs and the number and proportion of independent outside directors. Providing further support, Fiegener, Brown, Dreux, and Dennis (2000) find that CEOs with greater ownership and family stakes have boards that are less independent.

CEO Influence. Research also considers the role the CEO plays in determining director selection and board composition. For example, Hermalin and Weisbach (1988) find that CEO succession greatly affects board composition. In particular, as a CEO draws closer to retirement, inside directors are more likely to be added to the board potentially to be groomed for the CEO position (Mace,

1971; Vance, 1983). However, after the CEO retires, those inside directors with shorter tenures are more likely to leave the board. Westphal and Zajac (1995) more directly examine the influence of CEOs on the selection of directors as they consider demographic similarity between CEOs and those directors selected. They find that CEOs with greater power relative to the board attempt to select directors with similar demographic characteristics to themselves in order to reinforce their relative power. Conversely, when boards have greater relative power, new directors are more likely to be demographically similar to the board.

Individual-Level Determinants of Board Appointments

While there is less research that examines director selection and exit (Finkelstein et al., 2009), a small but growing literature focuses more on the determinants of individual director appointments. For example, Gilson (1990) finds that directors serving on boards that enter bankruptcy are more likely to turnover at the focal board and less likely to obtain subsequent board appointments. Similarly, focusing on CEOs, Brickley, Linck, and Coles (1999) find that home firm performance prior to retirement is significantly related to continued home board service and subsequent board appointments two years after retirement. The retention of former CEOs on their own home board is mainly explained by stock returns, while subsequent outsider appointments for the former CEO are explained by previous accounting returns.

Westphal and Stern (2006; 2007) find the ingratiatory behavior may be another way that both top managers and directors receive additional appointments. Those top managers that use impression management tactics, in

this case ingratiation, toward their CEO are more likely to receive subsequent board appointments at other firms where their CEO serves and at boards connected to the CEO through his or her directorate network. These ingratiatory tactics may substitute to some degree for an individual's elite background or demographic majority status (Westphal & Stern, 2006). Similarly, Westphal and Stern (2007) examine the ingratiatory behavior that leads directors to receive future board appointments. These authors again find that these impression management tactics along with offering advice and counseling lead to future appointments for directors. Westphal and Stern find that those directors that engage in lower levels of monitoring and control also were more likely to receive future appointments. In both cases, minorities required higher levels of ingratiatory behavior to receive future appointments and were punished more for engaging in monitoring and control.

Research also considers the appointment of minorities and females to corporate boards. For example, Hillman, Shropshire, and Cannella (2007) examine the critical resources female directors may bring to a board, and apply RDT to identify organizational predictors of women on boards. From this perspective, they find that organizational size, industry type, and the extent to which a focal firm is linked to other firms with female directors significantly impact the likelihood of female representation on a corporate board. Furthermore, Hillman, Cannella, and Harris (2002) compare the attributes of female and minority directors with those of white male directors on boards in the *Fortune 1000*. They find that female and minority directors are more likely to come from

non-business background and hold advanced degrees than their white male counterparts. These directors also were more likely to join additional boards at a much faster rate than white male directors.

Summary

In this chapter, I have reviewed the literatures on board functions, human and social capital, and board composition and director selection. This review provides evidence of the interrelatedness of these distinct literatures as human and social capital enable directors to perform the board functions, and those directors that are better able to perform these board appointments are more likely to garner future board appointments. However, from the review of the board composition and director selection literatures, it is evident that more research is needed to formally understand the specific relationships between a director's human and social capital and future board appointments. In the next chapter, I delve into these relationships by building an individual-level model of director selection and mobility.

Chapter 3

THEORY AND HYPOTHESES

Building upon human and social capital perspectives along with the integrated agency and resource dependence perspectives of boards, in this chapter I develop an individual level model of director selection and mobility. In developing this individual-level perspective of board appointments, I distinguish between a number of specific dimensions of the director mobility outcome, including the likelihood of joining a new board, a prestigious board, exiting a current board. To understand the antecedents of these dimensions of director mobility, I focus on a number of indicators of human and social capital, including educational level, expertise, director experience, and access to network structural holes.

In this chapter, I delineate each of the abovementioned dimensions of director mobility and consider the role of human and social capital in predicting these dimensions. I then consider a number of individual- and contextual-variables the may moderate the relationship between the human and social capital indicators and director mobility. These include gender, a director's exit from current boards in the previous period, director stigmatization from financial restatements, and the industry conditions in which the director serves. *Figure 1* represents my overall research model of the proposed hypotheses in this dissertation.

Insert Figure 1 about here

Likelihood of Joining a New Board.

The likelihood of joining a new board captures the probability that a director will receive a future board appointment with another firm. A vacant director position may be due in part to "retirements, voluntary (or involuntary) exits, or board expansion" (Daily & Dalton, 2004: 8). When a board attempts to fill a vacant position on the board, a key driver of this decision is the potential appointee's ability to provide monitoring and other critical resources to the focal board. At the individual level, a director's ability to fulfill these board functions depends on his or her level of human and social capital (Hillman & Dalziel, 2003). Directors with higher levels of human capital, including educational level, expertise, and labor market experience (Hogan & McPheters, 1980; Shanahan & Tuma, 1994), should be more likely to receive new appointments relative to an individual with lower levels of human capital.

The educational component of human capital serves as a signal on the labor market for directors (Spence, 1973, 1974). A director's level of educational achievement and affiliation signals to potential firms that the individual has the intellectually ability necessary to perform monitoring and offer advice and counsel to the firm's management. A potential director may also offer prestige to the hiring firm through his or her educational affiliation (D'Aveni, 1990). This level of prestige may enable the director to provide the critical resource of

legitimacy to the hiring firm. In support of these relationships, Useem and Karabel (1986) find the educational background, in part, determine an individual's ability to obtain board appointments. Thus, directors with higher levels of education are more likely to receive subsequent board appointments. Therefore,

> *Hypothesis 1a: Directors with higher levels of education will be more likely to join a new board.*

A director's specific expertise should also directly affect his or her ability to join new boards. From resource dependence theory, each director does not provide the exact same resource to an organization. Rather, directors are brought on to provide a number of critical but different resources to a board (Hillman et al., 2000; Pfeffer, 1972). From this perspective, directors are heterogeneous with a variety of expertise that they can provide to a board (Kesner, 1988).

By examining the unique resources that directors provide, Hillman and colleagues develop a taxonomy of director categories—insiders, business experts, support specialists, and community influentials. While their specific interest was in examining the different resources directors bring to a board, I use this taxonomy to examine directors' different expertise that they may provide to a board. In this regard, I focus on the three types of outside directors specified by Hillman and colleagues[2].

[2] I do not explicitly hypothesize a relationship between insiders and board appointments for several reasons. First, insiders are selected because of their specific knowledge of the current firm. Second, because of recent changes to legislation and stock exchange policies, many firms now only have one insider on the board—the CEO. This trend as dramatically decreased the proportion of insiders in the total population of corporate directors. Thus, while I recognize the

Business experts are current or retired executives of other for-profit firms and directors who serve on other large corporate boards (Hillman et al., 2000). These directors provide unique expertise and knowledge to a board from their experiences in decision-making in other firms. These individuals offer general knowledge in the strategy development and implementation akin to the general human capital reviewed earlier by Becker (1964).

The support specialists are technical professionals, such as lawyers, bankers, and public relations experts, who provide specific expertise in the firm's support activities (Baysinger & Zardkoohi, 1986; Fama & Jensen, 1983; Hillman et al., 2000). The technical expertise these support specialists possess is a highly valued dimension for directors to hold (Vance, 1968).

Finally, community influentials provide "experience and linkages relevant to the firm's environment beyond competitor firms and suppliers" (Hillman et al., 2000: 241). These individuals may be current and former government officials, university faculty, and leaders of social or community organizations. In this capacity, these directors provide direct links to the external environment for the firm (Pfeffer & Salancik, 1978). As Dill (1985: 55.9) suggests, "Directors have the responsibility of helping management balance community issues with more narrow economic calculations, whether in deciding how to handle the future of a particular factory or office or in deciding what stance the company should take about legislation that might restrict their freedom in handling plant closings." In this capacity, community influentials provide a

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importance of these directors, I do not explicitly examine their subsequent board appointments.

direct link to the community and may help management avoid potential missteps or conflicts with important constituencies and other community organizations.

While each of these directors brings a unique resource to a board, there are a number of reasons to suggest that business experts may be more likely to receive new appointments relative to support specialists and community influentials. First, business expertise is often a highly sought after commodity on the market for corporate directors (Alibrandi, 1985; Hermalin & Weisbach, 1988; Vance, 1968). "The experience sought most, and valued most highly by many chief executives in considering candidates, is that of successfully running a corporation" (Bacon & Brown, 1975: 31). Those individuals with executive experience have often developed expertise necessary to offer strategic advice and counsel to top managers. As Fich (2005: 1947) posits, "such unique managerial talent is sought by firms looking to appoint outside directors to their boards and recognized by investors as value enhancing."

Directors currently serving in the role of business expert for other boards are not only signaling their managerial expertise to the market but also signaling their ability to provide this expertise to other firms. Firms and boards look for those members that have the experience necessary to help their top executives make decisions for the organization (Hermalin & Weisbach, 1988). Similarly, a business expert's expertise represents tacit knowledge from the individual's previous experience making business decisions, and, as such, is not easily codified and absorbed by a board.

Conversely, the expertise that support specialists and community influentials bring to a board may be more easily replaced by a firm because of the tacit nature of their expertise relative to the general managerial expertise held by business experts. For example, Mizruchi, Stearns, and Marquis (2006) examine the decreasing proportion of bankers on corporate boards between 1973 and 1994, and suggest that this decline is in part due to the increasing prominence of chief financial officers. As the authors suggest:

> The increased prominence of the CFO meant that the CEO now had a financial specialist to consult on a regular basis. Bankers on the board as advisors were no longer as essential, which may account for their decline. Moreover, the financial tools available to the firm were becoming increasingly complex, and reliance on traditional sources of funding from banks and insurance companies declined (2006: 316).

In turn, this suggests that the support function and specialized technical expertise that bankers were providing in the past to organizations were easily appropriated by firms by absorbing this expertise in the form of financial experts within the firm. Therefore,

> *Hypothesis 1b: Directors with business expertise will be more likely to join a new board relative to directors with community or support specialist expertise.*

Directors with higher levels of labor market experience are more likely to join a new board. This labor market experience is the culmination of a director's experiences on current and previous boards. Directors with higher levels of experience may be also signal to potential boards their ability to provide

monitoring and number of critical resources. In particular, director experience may suggest to potential boards that the individual director has developed the information processing capacity and individual-level capabilities necessary to evaluate high level strategic decision making and provide useful strategic advice and counsel (Carpenter & Westphal, 2001). Serving on different boards also exposes directors to a variety of strategic knowledge and perspectives that may be utilized on subsequent boards (Lorsch & MacIver, 1989; Mace, 1971). As Carpenter and Westphal (2001: 640) indicate, "Such learning is particularly vivid because directors observe the decision-making process firsthand in their monitoring role, participate actively by giving advice to management, and then witness the consequences of those decisions." Directors with higher levels of experience as a director also may develop transferable competencies in monitoring and resource provisioning that other firms may benefit from. Thus, directors with more experience as a director often have more cumulative experience with the board roles and functions. Thus,

> *Hypothesis 1c: Directors with more director experience will be more likely to join a new board.*

Along with human capital, a director's level of social capital also influences the likelihood of joining a new board. In particular, a director's network position should greatly influence his or her likelihood of receiving subsequent board appointments. A director's level of social capital directly affects the individual's ability to provide critical resources to the firm (Kim, 2007; Kim & Cannella, 2008). In this regard, a director's network position offers firms legitimatizing signals that enable them to gain access to critical resources (Certo,

2003). Therefore, I focus on a director's network position, in particular, his or her access to structural holes (Burt, 1992). A structural hole represents a non-redundant tie between actors that provides "an opportunity to broker the flow of information between people and control the form of projects that bring together people from opposite sides of the hole" (Burt, 1997: 340).

Similarly, those directors that hold network positions that offer access to other unconnected firms and individuals are more likely to represent opportunities for firms to acquire linkages to new resources and external contingencies (Pfeffer & Salancik, 1978). In particular, the structural network position of director may offer firms direct access to critical resources (Mizruchi, 1996). The director's network position may allow the individual to serve as a conduit for information flow between the focal firm and other critical firms and resource providers (Haunschild, 1993).

Research also suggests that a director's level social capital may inherently provide opportunities for future board appointments (Useem, 1984; Westphal & Milton, 2000; Westphal & Stern, 2006, 2007; Westphal & Zajac, 1995). In describing the relationship between social capital and board appointment, Useem (1984: 51) provides:

> When managers holding outside directorships were asked to describe how at least one of the directorships was initiated, in more than three out of four instances they identified factors unrelated to trade or any other strictly business relation between the companies. Commonly, the man was already personally acquainted with the chairman or other directors on the board he

> was asked to join. Such contacts stemmed from a range of sources. Often, they had a prior business relationship—but not as a product of any dealing between the two companies. The individuals might have served together, for instance, on another corporate board, or perhaps on a business association task force.

From this perspective, a director's personal and professional relationships provide a web of connections to potential future board seats. A director's network position also may enable the individual to garner more positive attention for current board appointments, and thus increasing the opportunity for joining a new board (Davis, 1993). A director's access to structural holes not only offers hiring boards an indication of the director's ability to provide a number of critical resources to the firm but may serve as the means by which the director obtains the appointment. Therefore,

> *Hypothesis 1d: Directors with access to more structural holes will be more likely to join a new board.*

Joining a Prestigious Board

Research on board of directors considers the opportunity for more prestigious board appointments as a key motivator for individual directors (Lorsch & MacIver, 1989; Mace, 1971; Zajac, 1988). In examining directors' individual motives to serve on a board, Mace (1971: 109) finds that "Directors accept board memberships, not for income, but for the opportunity to learn how other companies operate and for the prestige value derived from an identification with other impressive names." From this perspective, directors often seek high-status

appointments to continually develop their human capital and garner more prestige and social status. Similarly, research finds that director that serve on superior performing firm are subsequently appointed to higher quality boards (Gupta, Otley, & Young, 2008).

A director's level of human capital should directly affect whether the director joins other prestigious boards. Directors with higher levels of human capital in the form of educational achievement and affiliation, business expertise, and labor market experience are more likely to obtain subsequent appointments at prestigious firms. Because of their unique stock of human capital, these directors are more likely to be highly valued on the market for corporate directors. This valuation, in turn, allows them to more discriminately choose which boards they serve on and provides the opportunity to place at more prestigious board seats.

A director's level of social capital should also affect whether a director obtains a more or less prestigious subsequent board appointment. Because of the value and rarity of the external connections and network information flows from their access to structural holes, these individuals are more likely to be pursued by higher prestige boards. The director's network positions may also afford them the network connection necessary to obtain higher status board appointments. Therefore,

> *Hypothesis 2a: Directors with higher levels of education will be more likely to join a more prestigious board.*
>
> *Hypothesis 2b: Directors with business expertise will be more likely to join a more prestigious board relative to directors with community or support specialist expertise.*

Hypothesis 2c: Directors with more director experience will be more likely to join a more prestigious board.

Hypothesis 2d: Directors with access to more structural holes will be more likely to join a more prestigious board.

The Likelihood of Exiting a Current Board

The likelihood of exiting a current board also represents a critical outcome in understanding the board appointment process. The likelihood of exiting a current board reflects the length of time the director remains on the subsequent board after his or her initial appointment. In this regard, exiting a current board may provide an indicator of the value of a director's human and social capital (Castanias & Helfat, 1991, 2001; Wang & Barney, 2006). However, this relationship between human and social capital and voluntary turnover is rather complex when viewed from the individual-level perspective (Dess & Shaw, 2001). From this perspective, a director with higher levels of human and social capital may be likely to exit a board because of his or her increased value on the labor market, in this case the market for corporate directors (Acemoglu & Pischke, 1998, 1999; Jovanovic, 1979). In this regard, directors with higher levels of human and social capital may simply be more likely to exit on board because their able to easily gain access to new board seats. Conversely, directors with lower levels of human and social capital or human and social capital that are easily substituted for on the market may be less likely to exit a current board because of their decreased prospects of obtaining new appointments[3].

[3] Because my level of analysis is at the individual level, I focus on a director's overall likelihood to exit a board and not a particular board, which would require a board- or firm-level of analysis. Similarly, a board- or firm-level focus may

As previously discussed, directors with higher human capital in the form of educational achievement and affiliation, business expertise, and director experience are more likely to be highly valued on the market for corporate directors and, thus, may have more opportunities for future appointments. In this regard, each of these different human capital dimensions provide signals to other potential boards of the value of the resources that these directors may bring to the hiring firm (Spence, 1974). In support of the role of education in influencing turnover intentions and actual turnover, Benson, Finegold, and Mohrman (2004) and Benson (2006) find that employees that are working on a degree while employed at a focal firm are more likely to exit that firm after obtaining the degree. Relatedly, Trevor (2001) posits and finds that as education serves as a signal to the job market it also increases an individual's ease of movement across different employers. In other words, education increases the mobility of an individual across a variety of employment contexts.

As abovementioned, a director's expertise may similarly increase the opportunities that a director has for board appointments. Taking this a step further, this increase in board opportunities also increases the likelihood that a director will exit a current board to pursue these other opportunities. In particular, directors with business expertise may be more likely to exit a current board, relative to support specialist and community influentials because of the high

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provide substantially different hypotheses. For example, from a firm level perspective, firms have a strong desire to keep directors with higher levels of human and social capital. In this regard, my test of the likelihood of exiting a current board is less a reflection of the tenure of a director on a particular board and more another overall indicator of director mobility on the market for corporate directors.

transferability of their business-related skills to other boards. In this regard, "because such skills increase an individual's potential value to external firms, human capital theory holds that general, transferable skills lead to an individual's relative ease of movement in the job market" (Trevor, 2001: 625). A community influential's expertise may be more firm-specific as this type of director is brought onto a board to meet firm specific needs to influence external constituents. Conversely, a support specialist's expertise may be less firm-specific, and thus, highly transferable, because of the occupation-based rather than firm-based training (Trevor, 2001). However, as previously discussed, this expertise on the market for corporate directors may be less unique relative to business expertise because of the number of substitute individuals possessing similar expertise and because of the easy codification of support specialist expertise. Thus, community influentials and support specialists may be less likely to exit a current board than business experts.

Finally, from the human capital perspective, director experience should influence the overall mobility of a director, and in turn, the likelihood of a director exits a current board. Previous research suggests that labor market experience is negatively related to job turnover because of the relationship between experience and age (e.g., Ghosh, 2007; Mincer & Jovanovic, 1981). This research, in turn, suggests that as labor market experience increases so to does the individual's desire to increase firm-specific investments of human capital. Furthermore, these firm-specific investments of human and social capital decrease an individual's overall mobility across employers (Becker, 1964; Wang & Barney, 2006). Thus,

labor market experience should decrease mobility and the likelihood of exiting a current board. However, research also proposes that professional employees, such as directors, may be less focused on firm-specific investments and thus less limited in their mobility. For example, Parsons (1972) suggest that professional employees are likely to be highly mobile employees. Parsons posits that "The proportion of professional workers […] has no obvious relationship with specific training, since such workers, although highly specialized, frequently have little firm-specific capital" (1133). Similarly, directors, as professional employees, may be less focused on developing firm-specific human and social capital as they sit on board and more focused on transferable skills they can bring back to their home firm or utilize on other boards. In support of this perspective, Lorsch and MacIver (1989: 28) find that the top personal benefits a director derives from board membership include (in order of most important): (1) "Opportunity to Learn," (2) "Seeing new businesses" and (3) "Establishing contacts to enhance other business relationships." In others, directors seek out board appointments that are more likely to provide them with transferable skills benefit their mobility as a director and as an executive. As such, for directors, who are specifically focused on developing transferable skills, increases in director experience may increase their overall mobility and, thus, increase their likelihood of exiting a current board.

Similarly, an individual's social capital should greatly influence his or her job potential mobility and actual movement (Dess & Shaw, 2001). In this particular context, a director's social capital also should greatly influence the

likelihood of exiting a current board. Directors that provide unique and valuable connections to and external information sources from the external environment should experience an increase in their value on the market for corporate directors because of their unique connections and information sources (Kim, 2007; Pfeffer & Salancik, 1978). Directors with greater access to structural holes may be more likely to easily garner new board appointments, and thus, experience an increased likelihood of exit on a current board because of these connections.

Therefore, I hypothesize that directors with higher levels of human and social capital are more likely to exit a current board relative to directors with lower levels of human and social capital. Thus,

> *Hypothesis 3a: Directors with higher levels of education will be more likely to exit a current board.*
>
> *Hypothesis 3b: Directors with business expertise will be more likely to exit a current board relative to directors with community or support specialist expertise.*
>
> *Hypothesis 3c: Directors with higher levels of director experience will be more likely to exit a current board.*
>
> *Hypothesis 3d: Directors with access to more structural holes will more likely to exit a current board.*

Moderators

To provide a more nuanced understanding of the relationships between human and social capital and the director mobility outcomes, I incorporate research from the human capital, social capital, and board literatures to propose several moderators to these relationships. I examine the individual-level variable gender and its importance to the proposed main effects. Research on director

selection considers gender as an important determinants of director selection (e.g., Hillman et al., 2002), and as such, may have a moderating impact on the relationship between human and social capital and director mobility. Research from the human and social capital theory perspectives also recognizes a number of factors that influence human and social capital in general (Coleman, 1988a; Moreh, 1973). These include previous mobility (Farber, 1994) and stigmatization (Lochner, 2004). I take each of these factors in turn and consider them in the context of corporate directors and how they moderate the human and social capital-board appointments relationship. Finally, I consider the environmental context in which a director serves. Environmental dynamism may directly affect a director's ability to utilize and maintain his or her human and social capital, and thus, may affect the director's ability to garner board appointments.

Gender

Gender represents an important potential moderating variable influencing the relationship between a director's human and social capital and director mobility. Gender has long been of interest to board and upper echelons research. This is partly due to the relatively lower proportion of females on corporate boards compared to their male counterpart (Daily, Certo, & Dalton, 1999). However, research also suggests that female directors often bring unique resources and expertise to the boardroom that may affect firm performance (Burke, 1997; Erhardt, Werbel, & Shrader, 2003; Hillman et al., 2007). In particular, using a resource dependence lens, Hillman and colleagues (2007) suggest that female directors may offer boards the ability to provide advice and

counsel, legitimacy, and communication, commitment, and other resources. These female directors do so by bringing diversity to the decision-making process through their unique experiences, beliefs, and perspectives. These female directors "bring different perspectives and concerns to the board room from those of white male directors, and the articulation of these perspectives and concerns is, in the main, welcomed" (Bacon & Brown, 1975: 43).

Hillman, Cannella, and Harris (2002) extend this logic further to suggest the female directors may experience different patterns in their directorships compared to their male counterparts. In particular, female director will be more likely to serve on multiple boards and are more likely to join subsequent boards at a much faster rate than white directors. This is due, in part, to a variety of reasons. First, by serving on boards, these female directors demonstrate managerial and business expertise that is often perceived as lacking in women because of their relative absence in executive suites. This signals to the market for corporate directors that these individuals are likely candidates for future board appointments. The attainment of current board seats provides status and visibility in the business community, which again females often lack relative to their male counterparts. Finally, female directors also demonstrate a level of community with other directors through successful service on corporate boards that may reduce any anxiety that come along with accepting the addition of a director who is different and somewhat unknown to existing directors (Hillman et al., 2002). Therefore, directors with higher levels of education, business expertise, director experience, and access to structural holes are more likely to receive new board

appointments when they are female. Furthermore, from their increased status and unique resources, these directors also are more likely to join prestigious boards relative to their past board appointments. Finally, because of their unique resources (Burke, 1997; Erhardt et al., 2003; Hillman et al., 2007), these directors may have more opportunities for new appointments, and, thus, female directors are more likely to experience exit from current and subsequent board appointments. Therefore,

> *Hypothesis 4: Gender will moderate the relationship between human and social capital and subsequent board appointments such that directors with higher levels of education, expertise, experience and access to structural holes that are female will be more likely to experience (a) an increased likelihood of joining a new board, (b) an increased likelihood of join a more prestigious board, and (c) a increased likelihood of exiting a current board.*

Previous Board Exit

In hypotheses 3a-d, I posit that directors with higher levels of human and social capital may be more employable to other boards and thus more likely to exit a current board. This further suggests that the previous departure from a board may likely influence an individual's ability to obtain new appointments and the likelihood of exiting a current board. In support of this perspective, at a more general level, human and social capital research suggest that prior job change influences future employee mobility (Farber, 1994). From this perspective, directors that have previously exited a board in the previous period may be more likely to enter a new board in the current period but may also be more likely to exit a current board as well. From hypotheses 3a-d, director exit may reflect a director's overall market mobility; however, if these individuals do not actually

join a new board or maintain other current boards after departing from a board in the previous period, there may be a loss of overall mobility. Thus, directors are incentivized to join new boards and maintain current boards when exiting a board in the previous period.

One factor leading to the likelihood of entering a new board after previously exiting a board in the prior period may be the desire to avoid underutilization of human and social capital, which would decrease the directors overall mobility on the market for corporate directors. Underutilization of human and social capital represents the "[u]nemployment, under-employment and non-participation in the labour force" that affects the value of an individual's level of human and social capital (Moreh, 1973: 279). Both human and social capital require active engagement and utilization to maintain their optimally-performing condition. However, when these forms of capital are not in use, they begin to deteriorate and decline. As Schultz (1961: 13) suggests, "human capital deteriorates when it is idle." Similarly, social capital requires the interaction with others to maintain it (Bourdieu, 1986; Nahapiet & Ghoshal, 1998). When this opportunity to interact is not available, social capital begins to deteriorate and decline. Thus, human and social capital are not unlike other forms of capital, such as physical capital—human and social capital increase when used (Bourdieu, 1986), and decrease when underutilized. Furthermore, the longer the period of underutilization, the more an individual experiences deterioration in both human and social capital.

Research in both human and social capital perspectives generally supports this conclusion. Within human capital theory, research examining deterioration of human capital recognizes that periods of underutilization of human capital, such as during periods of unemployment, negatively affects an individual's level of human capital (Blanchard & Summers, 1986; Moller, 1990; Moreh, 1973; Schultz, 1961). Moreh (1973: 279) suggests that "[u]nemployment, under-employment and non-participation in the labour force affect average earnings capacity for persons out of school, and they also affect the estimates of deterioration." Individuals experiencing unemployment are unable to maintain and develop their skills by working and utilizing the capital (Blanchard & Summers, 1986). Furthermore, research on social capital suggests that if individuals do not interact within their social networks the individuals' social capital may begin to decay (Coleman, 1990).

When an executive or director is not currently actively serving or takes a break from serving as a director for an extend period, the human capital the individual accumulated over his or her time as a director or executive may not be maintained and therefore may begin to diminish. To avoid this possibility, those directors that exit a board in the prior period may be much more likely to enter a current board in order to avoid the deterioration of human capital.

The social capital of the director also is negatively affected as the time between director appointments increases. During periods of non-participation in the director market, individuals lose the density of their social network, thus reducing their social capital. A director's network connections can begin to

deteriorate when a director is removed from the context in which these networks are developed (Lester et al., 2008). Lester and colleagues (2008) give the example of directors who were former government officials:

> "Many of those others the person is connected to are powerful individuals inside government, whose cooperation, coordination, and support are needed (Granovetter, 1973)—precisely the same others that make the former government official highly valuable as a prospective director. However, over time, those other powerful individuals retire, are replaced, or simply feel less obligated to respond to the former official. This process greatly depreciates the social capital that the government official accumulated while in office" (Lester et al., 2008: 1002).

When directors do not have the opportunity to utilize their skills, expertise, and abilities, and their network connections, their human and social capital begins to deteriorate. However, those directors with higher levels of human and social capital may be more likely to enter a board after exiting one in the previous period to avoid such deterioration of their skills. In this regard, directors with higher levels of education, business expertise, director experience, and access to structural holes are more likely to receive new board appointments when they exit a board in the previous period. Relatedly, directors previously departing from a current board may be less likely to exit a current board because exiting multiple boards in subsequent time periods may indicate that director is experiencing deterioration in his or her human and social capital. To avoid this perception,

these directors may attempt to maintain indicators of human and social capital by maintaining any current appointments. Therefore,

> *Hypothesis 5: A director's departure from a board will moderate the relationship between human and social capital and subsequent board appointments such that directors with higher levels of education, expertise, experience and access to structural holes who exit a board in the previous period will be more likely to experience (a) an increased likelihood of joining a new board, (b) an increased likelihood of join a more prestigious board, and (c) an decreased likelihood of exiting another board.*

Director Stigmatization

Director stigmatization, in the form of being associated with a financial restatement on a board in which an individual currently serves, may also influence the relationship between human and social capital and subsequent board appointments. "Stigmatization is the social process by which a person with an offending attribute […] is denigrated" (Wiesenfeld et al., 2008: 232). The process may involve a social sanction or otherwise a reduction in the prestige, legitimacy, or credibility of an individual because the individual violated some sort of social norm or generally accepted principle of morality. The violation damages the offender's trustworthiness, and reduces others' willingness to trade, confide, or share with the offender. This stigma may derive from a director occupying a board seat or executive position in a firm that is experiencing organizational crisis, such as poor performance or failure (D'Aveni, 1990; Wiesenfeld et al., 2008) or corporate scandal (Arthaud-Day et al., 2006). Stigmatized directors experience damage to their personal reputations and a reduction in their opportunities to join future boards (Fama, 1980; Wiesenfeld et al., 2008). Thus, stigma leads to a diminished impact of human and social capital on important

board appointment outcomes. This reduction in human and social capital reduces the individual's opportunities to utilize or maintain their human capital.

In the case of corporate directors, researchers examine the stigmatization of individual directors from the concept of the market for "settling up" (Fama, 1980; Wiesenfeld et al., 2008). This market for "settling up" leads directors to ensure the firm's performance remains strong and that no ethical violations occur under their watch so they do not receive future sanctions in the form of reduced opportunity to serve on other boards due to poor performance in the director role (Zajac & Westphal, 1996).

As a director experiences stigmatization, such as the association with a financial restatement on a current board in which he or she serves, the individual's ability to garner new board seats from his or her human and social capital may diminish. Stigmatized directors receive a reduction in value of the human and social capital on the market for corporate directors and are less likely to be appointed as directors for other firms in the future. Similarly, the stigmatization reduces a director's ability to acquire resources for a focal firm, and as such, reduces the value of his or her human and social capital. Similarly, the stigma event may signal to the market for corporate directors that the stigmatized director has diminished human and social capital needed to perform his or her director duties. Therefore, directors experiencing stigma from a financial restatement on a current board in which they serve are less likely to be appointed to subsequent boards.

In particular, if these stigmatized directors do receive subsequent appointments, they are less likely to be more prestigious appointments. From this perspective, the market of corporate directors serves as a governance mechanism to punish those directors who have not carried out their board functions on their focal firms (Fama, 1980). Therefore, any subsequent appointments will be less likely to be more prestigious appointment in order to "settle up" the director's poor performance in averting the event that lead to the restatement in the focal firm.

Finally, because of the diminished impact of the human and social capital derived from the stigmatization these individuals may be more likely to exit a current board appointment. Again, these board appointments will often be structural downgrades for the stigmatized directors. Thus, these stigmatized directors are more likely to experience subsequent board appointments. Therefore,

> *Hypothesis 6: A financial restatement on a current board will moderate the relationship between human and social capital and subsequent board appointments such that directors with higher levels of education, business expertise, director experience and access to structural holes will be more likely to experience (a) a decreased likelihood of joining a new board, (b) a decreased likelihood of join a more prestigious board, and (c) an increased likelihood of exiting a current board.*

Environmental Dynamism

Finally, the environmental conditions in which the director serves may also have a profound effect on the individual's subsequent appointments. Research suggests that firms experiencing higher levels of environmental dynamism are more likely to benefit from the monitoring and resources provided by its directors (Boyd, 1990; Burt, 1983; Chatterjee & Harrison, 2001; Pfeffer,

1972). However, those directors that provide such resources to these firms in dynamic environments may be less likely to use their human and social capital to obtain new appointments.

Environmental dynamism is the degree of change, and the corresponding uncertainty and instability in the environment as a result (Dess & Beard, 1984; Sharfman & Dean, 1991; Thompson, 1967). Industries lower in environmental dynamism consist of environments where change is usually linear and predictable, the market boundaries and industry structures are fairly stable, and the firms, competitors, and customers are well known and all have an ample amount of knowledge about the marketplace (Eisenhardt & Martin, 2000). Conversely, industries higher in environmental dynamism are typified by high rates of nonlinear and often unpredictable change and relative instability in market boundaries and industry structures, and the firms, competitors, and customers are not well established and little is known about the marketplace (Eisenhardt, 1989b; Eisenhardt & Martin, 2000). In these environments, change is rapid and unpredictable.

The value of directors' human and social capital in obtaining future board appointments is influenced by environmental turbulence, especially at high levels. Human capital, such as skills, expertise, and experience, is especially valuable when they can be transferred and applied in different situations (Sturman, Walsh, & Cheramie, 2008). Thus, directors with high levels of human capital are successful at applying previously accumulated knowledge and skills to the focal firm. However, those directors in more complex environments may experience

less benefit from the human capital because of the constraint the environment places on its use. In this case, directors serving on boards in more complex environments may be less likely to seek out and join new boards because of the time and commitment serving on a board in a dynamic environment requires. In support of this perspective, Lorsch and MacIver (1989) find that a "lack of time" was the top reason for declining an offer to join a board. In this regard, these directors may be attempting to avoid becoming overboarded (e.g., Core, Holthausen, & Larcker, 1999; Fich & Shivdasani, 2006; Harris & Shimizu, 2004).

The impact of social capital on board appointments is also affected by environmental turbulence. Highly dynamic environments create an increase in uncertainty and volatility. Investment patterns may shift, firm boundaries may be adjusted, and assignments may change for personnel. If executives are held responsible or scapegoated for performance failures associated with environmental conditions, executive turnover may increase. Similarly, more turbulent environments may increase the change in network relationships. Thus, individual relationships are likely to be affected and, in turn, affect the director's ability to obtain benefits from their structural position in the network.

Because of the demands of serving on boards in dynamic environments, directors with higher levels of education, expertise, experience and access to structural holes may be less likely to obtain new appointments or may be willing to turn down these appointments because of the commitment to their current board appointments. Furthermore, because of the industry turbulence and the rapid change that follows, these directors may experience less duration at current

and subsequent board seats, and thus may be more likely to exit a current board seat. Highly turbulent environments also may change such that the directors human and social are less valuable to the organization. The environmental conditions may be sufficiently turbulent enough to significantly alter the business practices and significantly alter the resource dependence relationships for the firm. In this case, the director's human and social capital may not match the firm's current industry environment, and thus, may increase a director's likelihood of exiting a board in more dynamic environments. Thus,

> *Hypothesis 7: A director's average dynamism from his/her other current board seats will moderate the relationship between human and social capital and subsequent board appointments such that directors with higher levels of education, business expertise, director experience and access to structural holes that serve in more dynamic environments will be more likely to experience (a) a decreased likelihood of joining a new board, (b) a decreased likelihood of join a more prestigious board, and (c) an increased likelihood of exiting a current board.*

Summary

In this chapter, I have delineated several dimensions of director mobility that may be important to director's ability to perform the board functions. In particular, I have suggested three dimensions of director mobility—the likelihood of joining a new board, a more prestigious board, and finally, exiting a current board. In addition, I have integrated human and social capital perspectives to hypothesize individual-level determinants of subsequent board appointments. I also have argued that a variety of individual and contextual variables conspire to influence the relationship between a director's level of human and social capital and subsequent board appointments. With my theory and hypotheses laid out, I

now turn my attention in the next chapter to discuss my methodology for examining and testing the proposed hypotheses.

Chapter 4

METHODOLOGY

This chapter reviews my sample and methodological approach for testing the hypotheses in Chapter 3. It is divided into three sections. First, I discuss my sample. Second, I discuss the operationalization of the constructs from my theoretical model. Finally, I discuss the statistical analyses used to test the proposed hypotheses.

Sample

My sample is drawn from the population of corporate directors residing on boards in the *S&P 500* during 1996. I used a random sampling technique to capture directors currently serving on at least one S&P 500 board in the IRRC *Director* database. I focused on independent directors who had no previous or current employment link to the current board. To test my hypotheses, I collected data on 750 independent directors from 1996-2006. I gathered director-level data from several sources, including *BoardEx*, IRRC *Director* database, the *Who's Who Directory of Corporate America*, and company proxy statements. Firm- and industry-level data were collected from Compustat and the CRSP database. However, because of missing data on either individual-level information or current and subsequent board appointments, my final sample consisted of 736 directors. While I followed these directors from 1996-2006, the first possible event (either entry onto a new or exit off of current board) occurred in 1997, thus my analysis included 7360 individual-time observations.

Measures

Dependent Variables

Likelihood of Joining a New Board. The *likelihood of joining a new board* captures the probability of receiving subsequent board appointments. The variable is measured as 1 when a director joins another U.S. public corporation as an outside director, and 0 otherwise.

Joining a Prestigious Board. The *likelihood of joining a prestigious board* captures the structural position of the subsequent board appointment relatively to the director's previous appointments. To measure this construct, I examine whether the new appointment is currently listed on the Fortune 100 or not.

Likelihood of Exiting a Current Board. The *likelihood of exiting a current board* captures the probability a director leaves a current board position. The variable is measured as 1 if a director exits any of the individual's current corporate directorships in the current time period and 0 otherwise.

Independent Variables

Educational Level. The educational-level component of human capital is measured with two indicators—*Advanced Degree* and *Educational Prestige*. The variable *advanced degree* captures whether the individual obtained an advanced degree with directors coded as 1 if they had earned a doctoral-level degree in any field (e.g., Doctor of Philosophy (Ph.D.), Doctor of Jurisprudence (J.D.), or a Medical Doctorate (M.D.)) and 0 if they had not. To capture *educational prestige*, I follow D'Aveni (1990) and Finkelstein's (1992) measure of *educational prestige* by coding directors as 1 if they had attend an elite undergraduate institution and 0

otherwise, and 1 if they have attended an elite graduate program in business, economics, or law (See Appendix I for Finkelstein's list of elite educational institutions).

Director Expertise. To measure a director's expertise, I utilize Hillman and colleagues' (2000) delineation of director categories, which examines the unique resources, and in turn the type of expertise, that an individual director brings to a board or organization. Hillman and colleagues delineate four director categories—insiders, business experts, support specialists, and community influentials. *Business experts* are those individuals that provide decision-making and control, sounding boards, information sharing, and legitimacy. Directors that are current CEOs, former CEOs, and professional directors are classified as business experts. *Support specialists* are technical professionals that provide information sharing, access to resources, and legitimacy. Directors with backgrounds in accounting, banking, law, and public affairs/marketing are classified as support specialist. *Community influentials* are directors that may provide social perspectives, connections to powerful and political relationships, other stakeholders, and legitimacy. Individuals who serve as politicians, academics, social organization leaders or other non-classified directors are classified as community influentials. Each director in my sample is coded into one of these categories representing the dominant experience in the individual's career based on information provided by BoardEx. To test the reliability of this coding, I also used the IRRC director database to categorize a director's resource dependence roles based on his or her occupational title. IRRC provided a

director's primary job title and other employment title along with his or her primary employer name. The IRRC director database only has this information available for certain years; however, I was able to use the time window 1998 to 2001 to examine over 700 director's primary employment titles and their primary employers. Using this data, a director was coded a *business expert* if his or her primary employment title was executive (including CEO, COO, CFO, President, Vice-President, etc.) and his or her primary employer was not a financial, insurance, or real estate firm. A director was coded a *community influential* if his or her primary title included professor, university administrator, educational consultant, editor, private physician, government official, or politician. Finally, a director was coded as a *support specialist* if his or primary employment title include consultant, bank executive, lawyer, venture capitalist and their primary employer included accounting, consulting, and law firms. I then compared my original director categorizations from BoardEx with those coded from the IRRC database. This comparison resulted in an 88% match between the coding from the directors biographical information from BoardEx and their primary employment titles provided in the IRRC database. Then, each of those 89 directors not matched was re-examined using a third source (e.g., *Who's Who Directory of Corporate America,* firm's proxy statements, and online executive biographies from *Fortune* and *BusinessWeek*) to determine which categorization best represented the individual's cumulative experience.

Director Experience. To capture director experience, I examine a director's number of previous directorships and overall number of years serving

as a director. *Cumulative number of directorships* is measured as the lagged number of current board appointments at director has at time t-1. N*umber of years serving as a director* is measured as the lagged total number of years an individual has served as a director on corporate board at time *t*-1. To capture this measure, I took a director's first year of service on the individual's first corporate board as the beginning time and subtracted that year by year *t*-1 of the current year *t*.

Access to Structural Holes. Social Capital is measured using the individual director's network position, in particular the individual's access to structural holes. To capture this dimension of social capital, I measured a director's network position in network of corporate directors in the S&P 1500 from the Riskmetrics IRRC director database. To capture this network position measure, I follow Burt's (2000) network perspective of social capital and use the network of all directors in the *S&P 1500* as the population network of interest for each year from 1996 to 2006. In particular, to measure a director's access to structural holes (Burt, 1992), I use Burt's effective size indicator of structural holes. A director's access to structural holes, using the network effective size indicator, provides a measure of "the number of alters, weighted by strength of tie, that an ego is directly connected to, minus a 'redundancy' factor (Borgatti, Jones, & Everett, 1998: 31; see also Burt, 1992). This measure was then lagged for each director.

Moderating Variables

Gender. Gender was coded 1 for female and 0 for male directors. I verify the gender of directors using BoardEx and biographic information from the *Who's Who Directory of Corporate America*.

Previous Board Exit. To capture a measure of a director's previous board mobility, I measure a director's exit from a board in the previous period. The variable is coded as 1 if a director exits any of the individual's corporate directorships in the previous time period (*t*-1) and 0 otherwise.

Financial Restatement. Director stigma captures a director serving at a firm that has engaged in fraudulent statements and financial misrepresentation either as an employee or director. The operationalization of this construct has mainly focused on financial statement fraud utilizing financial restatements as a proxy for the fraudulent behavior (e.g., O'Connor, Priem, Coombs, & Gilley, 2006). I employ a binary variable to indicate whether a firm that the individual director sits on the board of or works for has restated their financial reports. In this case, *financial restatement* is a lagged dummy that equals one for a director that serves on a firm that had to restate financial reports, and zero otherwise. I test multiple-time period lags (e.g., t-1, t-2, etc.) to examine the more immediate and residual effects of director stigma on the human and social capital-director mobility relationships.

Environmental Dynamism. Environmental dynamism is the degree of change and the corresponding uncertainty and turbulence in the environment as a result (Dess & Beard, 1984; Sharfman & Dean, 1991; Thompson, 1967). To measure dynamism, I used the log-transformation of net sales for each firm in

each four-digit SIC code for a series of five-year panels (Boyd, 1995; Keats & Hitt, 1988). Then, the actual dynamism measure derived from the exponentiated standard errors of the betas from the regress equation regressing net sales on the previous five years.

Control Variables

I also control for firm-level factors of their current appointments that, while not hypothesized, may potential affect the hypothesized relationships. Board conditions may be a major influence oven an individual's likelihood of receiving new board appointments (Fama, 1980; Fich, 2005; Hermalin & Weisbach, 1988). In particular, I control for a director's current boards' firm size and performance. Individuals that serve on larger firms may be seen as having more experience in making critical decision or possess critical links to other resources. I measure firm size as the logged number of employees. Similarly, directors at higher performing firms may be more likely to receive subsequent appointments because of the connection to the higher performing firms. I use two indicators of firm performance—return on assets (ROA) and Market-to-Book ratio, a common indicator of Tobin's Q. ROA was calculated as net income divided by total assets. The market-to-book ratio was calculated as the market value of shares divided by book value of shares (Coles, Daniel, & Naveen, 2008). In each case, I use a director's largest board seat in terms of performance and size to provide the lagged firm size, ROA, Market-to-Book indicators[4]. When different boards represented the largest and best performing boards, I used the

[4] Firm size and performance were also averaged across a director's boards; however, the results were unchanged.

values for the higher performing board. While my independent variables derive from individual-level characteristics, I also control for director age. Director age has been shown to affect the likelihood and type of subsequent appointments a director receives (Zajac & Westphal, 1996) and in some cases, boards have a mandatory retirement age. Therefore, I control for director age coded in years.

Analysis

To test my main effect hypotheses, I use event history analysis (Allison, 1984) because my central focus is on specific events—board appointments. As Yamaguchi (1991: 1) indicates, "Event history analysis is concerned with the patterns and correlates of the occurrences of events." These events are qualitative discrete changes in state that proceeds a time internal of nonoccurrence (Yamaguchi, 1991). Event history analysis assumes that there are a collective group of units moving along a finite set of states (or events) in which these states can occur at any point in time and are influenced by time-dependent factors (Blossfeld, Golsch, & Rohwer, 2007; Blossfeld & Rohwer, 1997; Coleman, 1981). In particular, event history analysis is concerned with the amount of time that must pass before a specific change in state or event occurs (Poole, Van de Ven, Dooley, & Holmes, 2000). This analytic technique models hazard rates (Allison, 1984). "The hazard rate (or hazard function), h(t), expresses the instantaneous risk of having the event at time *t, given that the event did not occur before time t.* The hazard function h(t) is also defined as the ratio of the unconditional instantaneous probability of having the event f(t) divided by the survival probability (or survivor function) S(t), which is the probability of not

having the event prior to time *t.* " (Yamaguchi, 1991: 9-10). Because my main interest in these variables is determining the likelihood or rate of occurring events, this method is most appropriate. However, because of the multi-episodic nature of my data, I use a variant of the Cox proportional hazard approach to event history. I use the Anderson-Gill Counting Process model to correct for multiple events across a group of individuals (For a review of this method, see Ezell, Land, & Cohen, 2003).

I also follow previous research (Puranam, Singh, & Zollo, 2006; Sinha & Noble, 2008), by examining an accelerated failure-time model (c.f., Allison, 1997; Yamaguchi, 1992) to supplement my hypotheses on the likelihood of joining a new board. Just as its name suggests, an accelerated failure-time model captures the acceleration or deceleration of time as a result of an event occurring. These models are distinct from the Cox proportional hazard models. As Yamaguchi provides (1992: 284), "Unlike proportional hazards models, accelerated failure-time models assume that high/low hazard rates result solely from acceleration/ deceleration in the timing of the event."

In this regard, an accelerated failure-time model provides a unique interpretation of the event occurrence. The coefficients from this model represent time ratios, which represent the log of time until an event occurs. An accelerated failure-time model is very similar in form to ordinary linear regression, where the model takes the form: $\log T_i = \beta_0 + \beta_1 x_{i1} + \cdots + \beta_k x_{ik} + \sigma\varepsilon_i$ and ε_i represents a random error term and $\beta_1, \ldots, \beta_k$ and σ are parameters to be estimated (Allison, 1997). A distribution is then specified for this model. I follow Hillman and

colleagues' (2002) approach and utilize an exponential distribution. This model allows for an interpretation of the coefficient that reflects a change in the log T_i, or in other words, the acceleration or deceleration of time. From this interpretation, every change in x_i represents an increase (or decrease) in the rate at which an event occurs (Sinha & Noble, 2008).

Chapter 5

RESULTS

Means and correlations appear in Table 2. The means and standard deviations are within expectations. To examine whether multicollinearity was a concern, I computed variance inflation factors (VIFs) for each of my models. Using ordinary least squares regression for each model, all VIFs were well below the guideline of 10 (c.f., Chatterjee & Price, 1991).

Insert Table 2 about here

The coefficients in each in the following tables represent either hazard ratios for the entry and exit hypotheses or time ratios for the supplementary tests. Hazard ratios represent the increase in likelihood of an event's occurrence with a one-unit increase in the independent variable. From this interpretation, a hazard ratio of 1 indicates no effect. Hazard ratios that are greater than one indicate a positive relationship (every unit increase in the independent variables increases the likelihood that the event will occur) and hazard ratios of less than 1 indicate negative relationships (every unit increase in the independent variables decreases the likelihood that the event will occur). Time ratios represent the log of time until an event occurs, and, thus, smaller time ratios would indicate faster rates of an event occurring. In this regard, a time ratios that are less than 1 indicate positive relationships (every unit increase in the independent variables increases the rate at which the event will occur), and time ratios greater than 1 indicate a negative

relationships (every unit increase in the independent variables decreases the rate a which the event will occur).

Main Effect Hypotheses

Likelihood of Joining a New Board

Models 1 and 2 of Table 3 present the results of the hypothesis test for the likelihood of joining a new board. The dependent variable is the likelihood of joining a new board, and control variables include director age, the director's best performing board (Max ROA and Max Market-to-Book) and the largest firm size (Max Firm Size). Of these control variables, Director Age (hr=0.951; p<.001) and largest firm size (hr=1.332; p<.01) were significant; whereas, the performance indicators, Max ROA (hr=1.087; n.s.) and Max Market-to-Book (hr=0.998; n.s.) were insignificant. Interpreting the significant hazard ratios indicates that each unit change in Director Age decreases the likelihood of joining a board by 4.9% (1.000 – 0.951=.049) and each unit change in firm size increases the likelihood of joining a board by 32.2% for every unit change in firm size (1.322-1.000=.322).

Hypothesis 1a predicted that higher levels of education will lead to a higher likelihood of joining a new board. However, the coefficients in Model 2 for Advanced Degree (hr=0.94; n.s.) and Educational Prestige (hr=1.104; n.s.) were insignificant. Thus, there was no support for the impact of educational level on the likelihood of joining a new board.

Hypothesis 1b predicted that directors who are business experts are more likely to join a new board compared to community influentials or support

specialists. In support of hypothesis 1b, the coefficient for business expert is greater than 1 and significant (hr=1.426; p<.05). Interpreting the hazard ratio, we can see that outside directors that are business experts are 42.6% more likely than community influentials to join a new board (1.426-1.000=.426). To test the difference between business experts and support specialists, I reran model 3 but with support specialists rather than community influentials excluded (or as the comparable group). In these results, the coefficient for business expert was again greater than 1 and significant (hr=1.289; p<.1) suggesting that business experts are 28.9% more likely to join a new board than support specialists. Therefore, I find support for the impact of business expertise on the likelihood of joining a new board.

Hypothesis 1c suggests that directors with higher director experience will be more likely to join a new board. The coefficient for Director Experience is less than 1 and non-significant (hr=0.987; n.s.). Furthermore, the lagged cumulative number of appointments is less than 1 and significant (hr=0.787; p<.001). This result suggests that for each unit change in a director's cumulative number directorships, his or she is 22.3% less likely to join a new board (1.000-0.787=.223). However, this relationship is in the opposite direction from the proposed hypothesis. Thus, results taken together, these results suggest that there is no association between director experience and the likelihood of join a new board.

Hypothesis 1d hypothesizes that directors with access to more structural holes will be more likely to join a new board. The coefficient for a director's

lagged effective network size is greater than 1 and significant (hr=1.051; p<.001). Interpreting the hazard ratio, for every unit change in network effective size, an outside director is 5.2% more likely to join a board (1.051-1.000=.051). Thus, I find support for Hypothesis 1d.

Insert Table 3 about here

Supplementary analysis of joining a new board

Models 3 and 4 in Table 3 present the results of the hypotheses tests for the rate of joining a new board. As previously mentioned, the coefficients for the hypotheses regarding this supplementary analysis represent time ratios. Here again, the control variables entered into the first step included individual-level factor, director age, and the director's board with the largest Market-to-Book ratio, ROA, and Firm Size. In this particular model, Director Age (tr=1.059; p<.001) and Max Firm Size (tr=0.753; p<.001) were significant; whereas, the performance indicators, Max ROA (tr=0.825; n.s.) and Max Market-to-Book (hr=0.753; n.s.) were insignificant. Interpreting the significant time ratios indicate that each unit change in Director Age increases the time between joining a new board by 5.9% (1.059-1.000=.059) and each unit change in firm size decreases the time between appointments by 17.5% (1.000-0.825=.175). Thus, as directors age, they are less likely to garner appointments at a faster rate; however, those directors sitting on the boards of larger firms do receive appointments at a faster rate than those directors that sit on the boards of smaller firms.

Hypothesis 1a predicted that higher levels of education increase the rate at which a director joins a new board. Here again, the coefficient for Advanced Degree (tr=1.057; n.s.) and Educational Prestige (tr=0.901; n.s.) were insignificant. Thus, there was no support for the impact of educational level on a director's rate of joining a new board.

In support of hypothesis 1b, the coefficient for business expert is greater than 1 and significant (tr=0.724; p<.05). In this case, business experts obtain new appointments at a 27.6% faster rate than community influentials (1.000-0.724=.276). Again, to test the difference between business experts and support specialists, I reran model 4 with support specialists as the comparison group. The coefficient for business expert is less than 1 and significant (tr=0.793; p<.10). In this case, business experts obtain new appointments at a 20.7% faster than community influentials (1.000-0.793=.207). Therefore, I find support for the impact of business expertise on the rate of joining a new board.

The coefficient for director experience (tr=1.016; p<.10) and cumulative number of directorships (tr=1.271; p<.001) is greater than 1 and significant albeit marginally significant for director experience. Interpreting these time ratios suggest that for every unit change in director experience and the cumulative number of directors, directors join new appointments at 1.6% and 27.1% slower time periods, respectively. However, these results are in the opposite direction of the hypothesized relationship meaning that the greater an individual's experience as a director, the slower they are to join other boards; thus, these results provide no support for hypothesis 1c.

Finally, the coefficient for a director's lagged effective network size is less than 1 and significant (tr=0.952; p<.001). Interpreting the time ratio, for every unit change in network effective size, an outside director joins a new board at a 4.8% faster rate (1.000-0.952=.048). Thus, the coefficient for effective network size is in the proposed direction and significant offering support for hypothesis 1d.

Joining a Prestigious Board

Hypotheses 2a-d consider the relationship between human and social capital indicators and the likelihood of joining a *Fortune 100* firm. The results of these hypotheses are presented in Models 5 and 6 in Table 3. The coefficients for these hypotheses are hazard rates. Here again, the control variables, Director Age (hr=0.948; p<.001) and max firm size (hr=1.456; p<.001); however, Max Market-to-Book (hr=1.001; n.s.) and Max ROA (hr=4.252; n.s.) were insignificant. Interpreting the significant hazard ratios indicates that each unit change in Director Age decreases the likelihood of joining a *Fortune 100* board by 5.2% (1.000 – 0.948=.052) and each unit change in firm size increases the likelihood of joining a *Fortune 100* board by 45.6% for every unit change in firm size (1.456-1.000=.456).

Hypothesis 2a predicted that a director with higher levels of education has an increased likelihood of joining a new *Fortune 100* board. Much like the likelihood of joining any board, the coefficient in Model 6 for Advanced Degree (hr=0.887; n.s.) and Educational Prestige (hr=1.292; n.s.) were insignificant.

Thus, there was no support for the impact of educational level on the likelihood of joining a new *Fortune 100* board.

Hypothesis 2b suggests that business experts are more likely than community influentials or support specialists to join a new *Fortune 100* board. The coefficient for business expert is greater than 1 (hr=1.197; n.s.); however, the coefficient for this hazard rate is insignificant. Thus, I fail to find support for Hypothesis 2b.

Hypothesis 2c suggests that an individual with higher director experience will be more likely to join a *Fortune 100* board. The coefficient for Director Experience is greater than 1, but it is non-significant (hr=1.002; n.s.). The lagged cumulative number of appointments is less than 1 and significant (hr=0.782; p<.001); however, the direction of the coefficient is in the opposite direction of the hypothesize relationship. Therefore, I find no support for the relationship director experience and the likelihood of join a new *Fortune 100* board.

Hypothesis 2d hypothesizes that directors with more access to structural holes will be more likely to join a *Fortune 100* board. The coefficient for a director's lagged effective network size is greater than 1 and significant (hr=1.047; p<.001). In this case, for every unit change in network effective size, a director is 4.7% more likely to join a *Fortune 100* board (1.047-1.000=.047) than those directors with less access to structural holes.

Likelihood of Exiting a Current Board

Hypotheses 3a-d examine the relationship between human and social capital and director exit. Models 7 and 8 in Table 3 provide the evidence on these

hypotheses. In terms of control variables, Director Age (hr=1.044; p<.001) and Max Firm Size (hr=1.561; p<.001) are positive and significant. For these variables, an increase in Director Age relates to a 4.4% in the likelihood of exiting a board in that particular year. Similarly, a unit change in a director's max firm size relates to a 56.1% in the likelihood of exiting a focal board. Max ROA (hr=2.171; n.s.) and Max Market-to-Book (hr=1.000; n.s.) are insignificant in Model 7.

Hypothesis 3a predicted that a director with higher levels of education has an increased likelihood of exiting a current board. The coefficients in Model 8 for Advanced Degree (hr=1.009; n.s.) is in the predicted direction while Educational Prestige (hr=0.990; n.s.) is not; however, neither of these coefficients are significant. Thus, I find no support for Hypothesis 3a.

Hypothesis 3b suggests that business experts are more likely than community influentials or support specialists to exit a current board. The coefficient for business expert is greater than 1 as predicted (hr=1.019; n.s.) but insignificant. Business experts are no less likely to exit a board than a support specialist or community influential. Thus, these results offer no support for Hypothesis 3b.

Hypothesis 3c proposes that directors with higher director experience will be more likely to exit a current board. The coefficient for Director Experience is less than 1, but it is non-significant (hr=0.998; n.s.). The lagged cumulative number of appointments is greater than 1 and significant (hr=1.208; p<.001). Interpreting this hazard ratio suggests that for every unit change in the cumulative

number of directorships, a director is 20.8% more likely to exit a board. Therefore, I find partial support for the relationship between director experience and the likelihood of exiting a board.

Hypothesis 3d suggests that directors with more access to structural holes will be more likely to exit a current board. The coefficient for a director's lagged effective network size is greater than 1 and significant (hr=1.010; p<.001) suggesting that for each unit change in a director's effective network size, a director is 1% more likely to exit a current board. Therefore, I find support for hypothesis 3d.

Moderating Hypotheses

To test the moderating hypotheses 4-7, I regressed the dependent variable of interest on the independent and moderator variables in Table 3. After this step, the dependent variable was regressed on the cross-product terms between the moderators and the main independent variables (i.e., Advanced Degree, Educational Prestige, Business Expert, Community Influential, Director Experience, Cumulative Directorships, and Effective Network Size). Each of the continuous variables were mean-centered to reduce the possibility of multicollinearity (Aguinis & Gottfredson, 2010). Each of the moderating variables also is included in all models to provide the most conservative test of the moderating effects. These results are reported in the Tables 4 through 7.

Gender

Hypotheses 4a-c propose a positive moderating effect of gender on the relationship between human and social capital and subsequent board

appointments and exit. Specifically, Hypothesis 4a suggests that director with higher levels of education, expertise, director experience, and access to structural holes that are also female are more likely to join new boards than their male counterparts. The main effects for this hypothesis are reported in Model 2 in Table 3. The moderator variable, Gender, is insignificant (hr=0.822; n.s.) in the presence of the independent variables and the other moderating variables. The tests of the interactions are reported in Models 9 in Table 4. The interaction term Gender × Director Experience is greater than one and significant (hr=1.073; $p<.05$) suggesting that directors with higher levels of director experience that are female are 7.3% more likely to join a new board (1.073-1.000=.073). The interaction term Gender × Cumulative Directorships is also significant but in the opposite direction of the proposed relationship (hr=0.718; $p<.05$). Finally, the interaction terms for Gender × Advanced Degree (hr=0.892; n.s.), Gender × Educational Prestige (hr=1.576; n.s.), Gender × Business Expert (hr=0.985; n.s.), Gender × Support Specialist (hr=1.046; n.s.), and Gender × Effective Network Size (hr=1.016; n.s.) are insignificant. Additionally, the model chi-square including only these interaction terms in Model 9 is insignificant (Wald Chi-Square = 9.36; n.s.). Overall, the results provide no support for hypothesis 4a.

Insert Table 4 about here

I next reexamine hypothesis 4a utilizing an accelerated failure-time model. The main effects for this hypothesis are reported in Model 4 in Table 3. The

coefficients for this analysis are time ratios. The moderator variable, Gender, is insignificant (tr=1.230; n.s.) in the presence of the independent variables and the other moderating variables. The test of the interactions is reported in Model 10 in Table 4. The interaction term Gender × Director Experience is less than one and significant (tr=0.938; p<.05) suggesting that directors with higher levels of director experience that are female join new boards at 7.3% faster rate than their male counterparts with similar levels of director experience (1.073-1.000=073). The product-term The Gender × Cumulative Directorships is significant at the 0.1 level but in the opposite direction of the proposed relationship (tr=1.349; p<.10). Finally, the cross-product terms for Gender × Advanced Degree (tr=1.0890; n.s.), Gender × Educational Prestige (tr=0.661; n.s.), Gender × Business Expert (tr=1.068; n.s.), Gender × Support Specialists (tr=0.950; n.s.), and Gender × Effective Network Size (tr=0.986; n.s.), are insignificant. The model the model chi-square including only these interaction terms in model 10 is insignificant (Wald Chi-Square = 8.890; n.s.). From this analysis, I also find no support for hypothesis 4a.

Hypothesis 4b suggests that female directors that are business experts with higher levels of educational and director experience and greater access to structural holes are more likely to join a new *Fortune 100* board relative to male directors. The main effects for this hypothesis are reported in Model 6 in Table 3. The moderator variable, Gender, is marginally significant (hr=0.608; p<.10.) in the presence of the independent variables and the other moderating variables. This coefficient suggests that female directors are 39.2% less likely to join a *Fortune*

100 board relative to their male counterparts. The test of the interactions is reported in Model 11 in Table 4. The interaction term Gender × Educational Prestige is greater than one and significant at the 0.1 level (hr=3.349; p<.1) suggest that female directors that attained a prestigious educational institution are 3.45 times more likely to join a new *Fortune 100 board* than their male counterparts. The interaction term Gender × Cumulative Directorships is significant at the 0.1 level but less than one (hr=0.636; p<.1) and thus not in the hypothesized direction. Finally, the cross-product terms for Gender × Advanced Degree (hr=0.953; n.s.), Gender × Business Expert (hr=0.919; n.s.), Gender × Support Specialists (hr=0.936; n.s.), Gender × Director Experience (hr=1.082; n.s.) and Gender × Effective Network Size (hr=1.030; n.s.) are insignificant. Furthermore, the model the model chi-square including only these interaction terms in Model 11 is insignificant (Wald Chi-Square = 6.95; n.s.). Overall, the results provide no support for hypothesis 4b.

Hypothesis 4c proposes that directors with higher levels of the human and social capital components that are female are more likely to exit a current board seat relative to male directors. The main effects for this hypothesis are reported in Model 8 in Table 3. The moderator variable, Gender, is insignificant (hr=1.114; n.s.) in the presence of the independent variables and the other moderating variables. The test of the interactions is reported in Model 12 in Table 4. In this case none of the interaction terms are significant and the model the model chi-square including only these interaction terms in Model 12 is also insignificant (Wald Chi-Square = 9.71; n.s.). Thus, I find no support for hypothesis 4c.

Previous Board Exit

Hypotheses 5a-c propose a positive moderating effect for previous board departures on the relationship between human and social capital and the likelihood of joining a new board and exiting a current board. Hypothesis 5a proposes that a director's previous departure from a current board will positively moderate the relationship between director education, expertise, experience and access to structural holes and subsequent board appointments such that directors departing from a previous board will be more likely to join a new board. The main effects for this hypothesis are reported in Model 2 in Table 3. The moderator variable, Previous Board Departure, is significant (hr=2.196; p<.001) in the presence of the independent variables and the other moderating variables. This coefficient is greater than one suggesting that directors departing a current board seat at time t-1 are 2.2 times more likely to join a new board at time t. The tests of the interactions are reported in Models 13 in Table 5. The cross-product terms for Departure × Advanced Degree (hr=1.157; n.s.), Departure × Educational Prestige (hr=1.230; n.s.), Departure × Business Expert (hr=0.718; n.s.), Departure × Support Specialists (hr=0.630; n.s.), Departure × Director Experience (hr=1.014; n.s.), Departure × Cumulative Directorships (hr=0.969; n.s.), and Departure × Effective Network Size (hr=0.991; n.s.) are all insignificant. Overall, the model chi-square including only these interaction terms in Model 13 is insignificant (Wald Chi-Square = 9.84; n.s.) suggesting that a director's departure from a previous board does not affect the relationship between human and social capital and likelihood of joining a new board. Thus, I find no support for hypothesis 5a.

Insert Table 5 about here

To further analyze Hypothesis 5a, I examine this hypothesis using an accelerated failure-time model. The coefficients for this supplemental analysis are time ratios. The main effects for this hypothesis are reported in Model 4 in Table 3. The moderator variable, Previous Board Departure, is significant (tr=0.475; p<.001) in the presence of the independent variables and the other moderating variables. This result suggests that directors departing a current board in the previous period join new boards at a 52.5% faster rate than directors not departing a current board in the previous period (1.000-0.475=.525). The test of the interactions is reported in Model 14 in Table 5. The cross-product terms for Departure × Advanced Degree (tr=0.875; n.s.), Departure × Educational Prestige (tr=0.839; n.s.), Departure × Business Expert (tr=1.379; n.s.), Departure × Support Specialists (tr=1.590; n.s.), Departure × Director Experience (tr=0.988; n.s.), Departure × Cumulative Directorships (tr=1.005; n.s.), and Departure × Effective Network Size (tr=1.012; n.s.), are all insignificant. The model chi-square including only these interaction terms in Model 14 is insignificant (Wald Chi-Square = 11.16; p<.1) providing no support for the moderating role of departing a board in the previous period. Taken together, these results further provide no support for hypothesis 5a.

Hypothesis 5b suggests that directors with higher levels of education, business expertise, director experience, and access to structural holes will be more

likely to join a new *Fortune 100* board in the current period when they depart from a board in the previous period. The main effects for this hypothesis are reported in Model 6 in Table 3. The moderator variable, Departure, is significant (hr=2.926; p<.001) in the presence of the independent variables and the other moderating variables suggesting that directors departing a current board seat in the previous time period are 2.9 times more likely to join a *Fortune 100* board in the current time period. The test of the interactions is reported in Model 15 in Table 5. The interaction term Departure × Business Expert is less than one and significant (hr=0.379; p<.05) suggesting that business experts who depart from a board in the previous period are less likely to join a *Fortune 100* board than community influentials who similarly depart from a board in the previous period. The interaction term Departure × Support Specialists is also significant and less than one (hr=0.344; p<.05) suggesting that, similar to business experts, support specialists who depart from a current board in the previous period are less likely to join a *Fortune 100* board than community influentials. However, both of these coefficients are in the opposite direction of the predicted hypotheses. The interaction terms for Departure × Advanced Degree (hr=1.050; n.s.), Departure × Educational Prestige (hr=1.234; n.s.), Departure × Director Experience (hr=1.000; n.s.), Departure × Cumulative Directorships (hr=0.921; n.s.), and Departure × Effective Network Size (hr=0.990; n.s.), are all insignificant. The model chi-square including only these interaction terms in Model 15 is significant (Wald Chi-Square = 16.09; p<.05). However, again, the significant coefficients are in the

opposite direction of the proposed moderating relationship. Therefore, I find no support for Hypothesis 5b.

Hypothesis 5c proposes that a director with higher levels of the human and social capital will be less likely to exit a current board when departing from another board in the previous period. The main effects for this hypothesis are reported in Model 8 in Table 3. The moderator variable, Departure, is significant and less than (hr=0.641; p<.001) in the presence of the independent variables and the other moderating variables. This suggests that a director exiting a board in the previous period is 35.9% less likely to exit a board in the current period. The test of the interactions is reported in Model 16 in Table 5. The interaction terms for Departure × Advanced Degree (hr=1.206; n.s.), Departure × Educational Prestige (hr=1.162; n.s.), Departure × Business Expert (hr=1.179; n.s.), Departure × Support Specialists (hr=0.803; n.s.), Departure × Director Experience (hr=1.012; n.s.), Departure × Cumulative Directorships (hr=0.985; n.s.), and Departure × Network Size (hr=1.007) are all insignificant. The model chi-square including only these interaction terms in Model 16 is insignificant (Wald Chi-Square = 9.25; n.s.). Thus, I find no support for hypothesis 5c.

Financial Restatement

Hypothesis 6a proposes that a director with higher levels of education, business expertise, director experience, and access to structural holes will be less likely to join a new board when the directors is sitting on a board experiencing a restatement in periods *t, t-1,* and *t*-2. The main effects for this hypothesis are reported in Model 2 in Table 3. The moderator variable, Restatement, is

insignificant (hr=1.140; n.s.) in the presence of the independent variables and the other moderating variables. The tests of the interactions are reported in Models 17 in Table 6. The interaction term Restatement × Educational Prestige is less than one and significant at the 0.1 level (hr=0.589; p<.1) suggesting that directors who attained a prestigious educational institution are 41.1% less likely to join a new board when sitting on a board that experienced a restatement in the previous periods (1.000-0.589=.411). Similarly, the interaction term for Restatement × Effective Network Size is less than one and significant (hr=0.977; p<.05). The interpretation of this interaction term's hazard rate suggests that for every unit change in a director's effective network size decrease the likelihood of joining a new board by 2.3% when the director is currently sitting on a board that experienced a restatement in the previous periods (1.000-0.9770=.023). The interaction terms for Restatement × Advanced Degree (hr=1.742; n.s.), Restatement × Business Expert (hr=0.907; n.s.), Restatement × Support Specialists (hr=0.794; n.s.), Restatement × Director Experience (hr=1.015; n.s.), and Restatement × Cumulative Directorships (hr=1.039; n.s.) are insignificant. Overall, the model chi-square including only these interaction terms in Model 17 is significant (Wald Chi-Square = 13.99; p<.10). Thus, I find partial support for hypothesis 6a.

Insert Table 6 about here

To further examine Hypothesis 6a, I use an accelerated failure-time model to examine whether a director with higher levels of education, business expertise, director experience, and access to structural holes join a new boards at a slower rate when the directors is sitting on a board experiencing a restatement in periods *t*, *t-1*, and *t*-2. The coefficients for this analysis test are time ratios. The main effects for this hypothesis are reported in Model 4 in Table 3. The moderator variable, Restatement, is insignificant (tr=0.906; n.s.) in the presence of the independent variables and the other moderating variables. The interaction term Restatement × Educational Prestige is greater than one and significant (tr=1.781; p<.05) suggesting that directors who attained a prestigious educational institution join new boards at a 78.1% slower rate when sitting on a board that experienced a restatement in the previous periods (1.781-1.000=.817). The interaction term for Restatement × Effective Network Size is greater than one and significant (tr=1.017; p<.10). The interpretation of this interaction term's hazard rate suggests that for every unit change in a director's effective network size decrease the rate of joining a new board by 1.7% when the director is currently sitting on a board that experienced a restatement in the previous periods (1.017-1.000=.017). The interaction terms for Restatement × Advanced Degree (tr=0.606; n.s.), Restatement × Business Expert (tr=1.204; n.s.), Restatement × Support Specialist (tr=1.432; n.s.), Restatement × Director Experience (tr=0.991; n.s.), and

Restatement × Cumulative Directorships (tr=0.995; n.s.). Overall, the model chi-square including only these interaction terms in Model 18 is significant (Wald Chi-Square = 12.80; p<.05). Thus, I again find some support for hypothesis 6a using the accelerated failure-time model.

Hypothesis 6b suggests that directors that are business experts with higher levels of education and director experience and greater access to structural holes will be likely to join a new *Fortune 100* board in the current period when sitting on a board experiencing a restatement in periods *t*, *t-1*, and *t*-2. The main effects for this hypothesis are reported in Model 6 in Table 3. The moderator variable, Restatement, is insignificant (hr=0.964; n.s.) in the presence of the independent variables and the other moderating variables. The test of the interactions is reported in Model 19 in Table 6. Similar to the likelihood to join any new board, the interaction term Restatement × Educational Prestige is less than one and significant (hr=0.344; p<.05) suggesting that directors who attained a prestigious educational institution are 65.6% less likely to join a new *Fortune 100* board when sitting on a board that experienced a restatement in the previous periods (1.000-0.344=.656). The interaction term for Restatement × Effective Network Size also is less than one and significant (hr=0.936; p<.001) suggesting that every unit change in a director's effective network size corresponds to a 6.4% decrease in likelihood of joining a *Fortune 100* board when the director is currently sitting on a board that experienced a restatement in the previous periods (1.000-0.936=.064). The interaction terms for Restatement × Advanced Degree (hr=1.670; n.s.), Restatement × Business Expert (hr=1.062; n.s.), Restatement ×

Support Specialist (hr=0.641; n.s.), Restatement × Director Experience (hr=1.017; n.s.), and Restatement × Cumulative Directorships (hr=1.315; n.s.) are insignificant. Overall, the model chi-square including only these interaction terms in Model 19 is significant (Wald Chi-Square = 18.27; p<.05). Thus, I find partial support for hypothesis 6b.

Hypothesis 6c hypothesizes that a director with higher levels of the human and social capital are more likely to exit a current board when sitting on a board experiencing a restatement in periods *t*, *t-1*, and *t*-2. The main effects for this hypothesis are reported in Model 8 in Table 3. The moderator variable, Restatement, is insignificant (hr=1.090; n.s.) in the presence of the independent variables and the other moderating variables. The test of the interactions is reported in Model 20 in Table 6. For this particular hypothesis, only the interaction term for Restatement × Educational Prestige is greater than one and significant (hr=1.430; p<.05). This significant coefficient suggests that directors who attained a prestigious educational institution are 43.0% more likely to exit a current board when sitting on a board that experienced a restatement in the previous periods (1.430-1.000=.430). The interaction terms for Restatement × Advanced Degree (hr=0.947; n.s.), Restatement × Business Expert (hr=0.746; n.s.), Restatement × Support Specialist (hr=1.053; n.s.), Restatement × Director Experience (hr=0.986; n.s.), Restatement × Cumulative Directorships (hr=0.967; n.s.), and Restatement × Network Size (hr=0.994; n.s.) are insignificant. Overall, the model chi-square including only these interaction terms in Model 20 is

significant (Wald Chi-Square = 15.91; p<.05). Therefore, I find partial support for hypothesis 6c.

Environmental Dynamism

Hypothesis 7a proposes that a director with higher levels of education, business expertise, director experience, and access to structural holes will be less likely to join a new board when the directors is sitting on other boards that face, on average, more dynamic environments. The main effects for this hypothesis are reported in Model 2 in Table 3. The moderator variable, Average Dynamism, is significant (hr=0.483; p<.01) in the presence of the independent variables and the other moderating variables. The coefficient for Average Dynamism suggests that directors sitting on boards with higher levels of environmental dynamism are 51.7% less likely to join a new board (1.000-0.483=.517).

The tests of the interactions are reported in Models 21 in Table 7. The interaction term Average Dynamism × Educational Prestige (hr=1.914.; p<.1) and Avg. Dynamism × Director Experience (hr=1.054; p<.1) are significant at the 0.1 level of significance but their hazard ratio values are greater than one. Thus, the coefficients for these interactions are in the opposite direction of the proposed relationship. Conversely, the interaction terms for Average Dynamism × Cumulative Directorships (hr=0.679; p<.05) and Average Dynamism × Effective Network Size (hr=0.931; p<.001) are less than one and significant. For cumulative number of directorship, the interpretation of interaction term's hazard rate suggests that for every unit increase in the cumulative number of directorships decrease the likelihood of joining a new board by 32.1% when the

director is currently sitting on boards facing higher levels of environmental dynamism (1.000-0.679=.321). For network size, the interpretation of this interaction term's hazard rate suggests that for every unit increase in a director's effective network size the likelihood of joining a new board decreases by 6.9% when the director is currently sitting on boards facing higher levels of environmental dynamism (1.000-0.931=.069). The interaction terms for Average Dynamism × Advanced Degree (hr=1.072; n.s.), Average Dynamism × Business Expert (hr=1.577; n.s.), and Average Dynamism × Support Specialist (hr=0.812; n.s.) are insignificant. Overall, the model chi-square including only these interaction terms in Model 21 is significant (Wald Chi-Square = 19.78; $p<.01$). Thus, I find partial support for Hypothesis 7a.

Insert Table 7 about here

To further analyze Hypothesis 7a, I examine this hypothesis using an accelerated failure-time model. The coefficients for this analysis are time ratios. The main effects for this hypothesis are reported in Model 4 in Table 3. The moderator variable, Average Dynamism, is significant (tr=1.910; $p<.05$) in the presence of the independent variables and the other moderating variables. This result suggests that directors sitting on boards with higher levels of environmental dynamism join new boards at a 91% slower rate than directors not departing a current board in the previous period (1.910-1.000=.910).

The tests of the interactions are reported in Models 22 in Table 7. Here again, the interaction term Average Dynamism × Educational Prestige (tr=0.530; p<.1) and Avg. Dynamism × Director Experience (tr=0.954; p<.1) are significant but their time ratio values are less than one. Thus, the coefficients for these interactions are in the opposite direction of the proposed relationship. The interaction term for Average Dynamism × Cumulative Directorships (tr=1.415; p<.05) is greater than one and significant suggesting that every additional cumulative board appointment the rate of joining a new board decreases by 41.5% when the director is currently sitting on boards facing higher levels of environmental dynamism (1.415-1.000=.415). Similarly, the Average Dynamism × Effective Network Size (tr=1.077; p<.001) is less than one and significant suggesting that every unit increase in a director's effective network size corresponds to a decrease in the rate of joining a new board by 7.7% when the director is currently sitting on boards facing higher levels of environmental dynamism (1.077-1.000=.077). The interaction terms for Average Dynamism × Advanced Degree (tr=0.924; n.s.), Average Dynamism × Business Expert (tr=0.613; n.s.), and Average Dynamism × Support Specialist (tr=1.157; n.s.) are insignificant. Overall, the model chi-square including only these interaction terms in Model 22 is significant (Wald Chi-Square = 22.87; p<.001). Thus, I find partial support for Hypothesis 7b.

Hypothesis 7b proposes that a director with higher levels of education, business expertise, director experience, and access to structural holes will be less likely to join a new *Fortune 100* board in the current period when the average

environmental dynamism of his or her current boards is higher. The main effects for this hypothesis are reported in Model 6 in Table 3. The moderator variable, Average Dynamism, is significant (hr=0.380; p<.05) in the presence of the independent variables and the other moderating variables. This coefficient's value suggests that directors sitting on boards with higher levels of environmental dynamism are 62.0% less likely to join a join a *Fortune 100* board (1.000-0.380=.620).

The test of the interactions is reported in Model 23 in Table 7. The interaction term for Average Dynamism × Effective Network Size (hr=0.915; p<.001) significant and less than one suggesting that for every unit increase in a director's effective network size decrease the likelihood of joining a *Fortune 100* board by 8.5% when the director is currently sitting on boards facing higher levels of environmental dynamism (1.000-0. 915=.085). The interaction terms for Average Dynamism × Advanced Degree (hr=0.952; n.s.), Average Dynamism × Educational Prestige (hr=2.841; n.s.), Average Dynamism × Business Expert (hr=1.667; n.s.), Average Dynamism × Support Specialist (hr=0.348; n.s.), Average Dynamism × Director Experience (hr=1.063; n.s.), and Average Dynamism × Cumulative Directorships (hr=1.047; n.s.) are insignificant. The model chi-square including only these interaction terms in Model 23 is significant (Wald Chi-Square = 15.09; p<.05). Thus, I find partial support for Hypothesis 7b.

Hypothesis 7c hypothesizes that a director with higher levels of education, business expertise, director experience, and access to structural holes will be more likely to exit a current board when the directors is sitting on other boards that

face, on average, more dynamic environments. The main effects for this hypothesis are reported in Model 8 in Table 3. The moderator variable, Average Dynamism, is significant (hr=23.281; p<.001) in the presence of the independent variables and the other moderating variables suggesting that directors sitting on boards with higher levels of environmental dynamism are 22.28 times more likely to exit a current board (23.281 -1.000=22.281).

The test of the interactions is reported in Model 24 in Table 7. For this particular hypothesis, the interaction terms for Average Dynamism × Cumulative Directorships (hr=0.709; p<.01) and Average Dynamism × Effective Network Size (hr=0.860; p<.01) are significant but their hazard ratio values are less than one. Thus, the coefficients for these interactions are in the opposite direction of the proposed relationship. The coefficient for the interaction term Average Dynamism × Advanced Degree (hr=9.953; p<.1) is in the proposed direction but is only significant at a 0.1 level of significance. The interaction terms for Average Dynamism × Educational Prestige (hr=1.170; n.s.), Average Dynamism × Business Expert (hr=0.356; n.s.), Average Dynamism × Support Specialist (hr=0.787; n.s.), and Average Dynamism × Director Experience (hr=1.039; n.s.) are insignificant. Overall, the model chi-square including only these interaction terms in Model 24 is significant (Wald Chi-Square = 20.26; p<.01); however, because the interaction term for Avg. Dynamism × Adv. Degree is only significant at a 0.1 level, I find little support for Hypothesis 7c.

Chapter 6

DISCUSSION

In this study, I examined several dimensions of the director mobility outcome that may be important to director's ability to perform the board functions. In particular, I have suggested three dimensions of director mobility—likelihood of joining a new board, the prestige of the appointment, and the likelihood of exiting a current board. In addition, I have integrated human and social capital perspectives to hypothesize individual-level determinants of director mobility. In this chapter, I interpret the findings from my empirical testing of these hypotheses. I conclude with a discussion of the limitations of this study and offer guidelines for future research on director selection.

Discussion of Results

Control Variables

In testing my proposed research model, I have included four control variables—one director level variable, director age, and three firm-level characteristics of the boards a director currently sit upon, including Firm Size (measured as the log of the number employees), Market-to-Book, and ROA. For the firm-level variables, I used the board with the largest firm size, Market-to-Book, and ROA values[5]. These control variables were chosen for the potential impact on a director's ability to obtain subsequent board appointments. However,

[5] Analyses were also ran with average Firm Size, Market-to-Book, and ROA, and the results were not significantly different from the maximum values for each director.

in my analysis, only director age and firm size were consistently related to the outcomes of interest—likelihood of joining a new board, a *Fortune 100* board, and exiting from a current board.

Director age may represent a number of factors that lead to a decrease in the likelihood of joining new boards, including *Fortune 100* boards, and an increase in the likelihood of departing from a current board. In particular, director age is positively correlated with the likelihood that an individual will be retiring from the corporate world, in which case he or she will not be taking on any further board seats and retiring from any current positions. Relatedly, director age and its relationship to these board outcomes may reflect the mandatory retirement of some corporate boards for their directors. In recent decades, there has been an increasing tendency for firms to adopt mandatory retirement ages for directors on the board (Lipton & Lorsch, 1992). These types of corporate governance policies are intend to ensure good corporate governance and intensify vigilance from corporate directors (Lipton & Lorsch, 1992). In this instance, the mandatory retirement policies may be reflected in the significant impact director age has on director mobility.

Similarly, director age may reflect the deterioration of the human and social capital of a potential director (Lester et al., 2008). Lester and colleagues suggest that directors, in their case former government officials, experience deterioration in their human and social capital over time. At a more general level, Schultz (1961: 13) provides that “human capital, like other forms of reproducible capital, depreciates, becomes obsolete, and entails maintenance.” In this case,

increased age may represent "all factors that reduce earning capacity with the passage of time such as obsolescence of acquired training, forgetfulness and decline of psycho-physiological powers as well as increased preference for leisure in old age" (Moreh, 1973: 279).

The findings related to firm size are not surprising given the signal that serving on a board of large firm sends. However, I find little support for the impact of firm performance. This non-finding is surprising given past research that considers board performance and outside director appointments. For example, Gupta and colleagues (2008) finds evidence of a meritocracy view of the market for outside directorships in which executives from superior performing firms are rewarded with higher quality board seats. Ferris and colleagues (2003) also find the past performance of firms for which a director serves directly relates to the subsequent number of directorships he or she possesses.

The non-finding also may reflect the time lag between firm performance and the response from the market for corporate directors. For example, Yermack (2004) finds that company performance impacts an outside director's subsequent attainment of new outside appointments. In this case, the Yermack suggest, "that the market for directors' services takes time to assess and assimilate the monitoring ability of newly appointed directors" (2004: 2303). Therefore, the performance effects of Market-to-Book and ROA from a director's appointments may take more than one time period to affect a director's likelihood of joining new, and possibly more prestigious, boards.

Main Effect Hypotheses

My main effect hypotheses offer an examination of several human and social capital indicators—educational level, business expertise, director experience, and access to structural holes—and their relationship to the likelihood of joining a new board, a *Fortune 100* board, and exiting a current board. Event history analysis was used to test these hypotheses. Table 8 offers a summary of the results from the testing of my hypotheses.

Insert Table 8 about here

Educational level was consistently insignificant in each of the models examining its main effect on the board appointment outcomes of interest. This non-finding is surprising given the connection between educational affiliation and attainment and the investment in human capital that it represents (Schultz, 1961; Becker, 1964). Furthermore, a positive relationship between educational affiliation and attainment and board appointments was expected because of the signal that educational affiliation and attainment can send to a market. In this regard, education serves as a signal of intellectual ability on the labor market for directors (Spence, 1973, 1974). Additionally, education also carries status, and as such, a potential director may provide prestige to the hiring firm through his or her educational affiliation (D'Aveni, 1990).

However, despite these factors, education may not be a factor in this particular sample because of my focus on individuals that are currently directors

and their mobility. These results may have been different if the focus was on how individuals receive their very first outside appointment on a board. In this case, a director's educational affiliation and attainment may be a critical signal that does enable them to obtain the first appointment; however, after the individual has gained access to the market for corporate directors, the role of educational affiliation and attainment may substantially decline.

While I find little support for the impact of educational affiliation and attainment on director mobility, my results provide consistent evidence for the impact of business expertise in predicting the likelihood of a director joining a new board. In this regard, these results support previous research which suggests that expertise in the management of other for-profit businesses is a highly sought after commodity on the market for corporate directors (Alibrandi, 1985; Hermalin & Weisbach, 1988; Vance, 1968).

These results are, in general, in line with Fahlenbrach Low, and Stulz's (2010) findings that CEOs are more likely to sit on prestigious boards of large established firms. However, I did not find that directors that are business experts are more likely join *Fortune 100* boards. This non-result may be, in part, due to the fact that the business expert category of directors included both current and former executives. Examining only those directors currently serving as active executives may have provided markedly different results in terms of the relationship between business expertise and the attainment of more prestigious appointments. Similarly, my results did not indicate that business experts are any less likely to exit a current board. However, this finding, and my other finds in

terms of director exit, may speak to the high level of mobility a director experiences as he or she moves on and off of boards fairly frequently.

My analysis also suggests no significant impact of director experience, measured as years serving as a corporate director and the cumulative number of directorships, on the board appointment outcomes. Research suggests that experience serving on other corporate boards may provide a critical signal to a director's ability to perform his or her board duties. The years of experience and the cumulative number of different experiences expose directors to a variety of strategic knowledge and perspectives (Lorsch & MacIver, 1989; Mace, 1971). In this regard, previous experience serving on a board and the cumulative number of appointments may indicate that the potential director has the individual-level capabilities necessary to evaluate strategic decision making and provide advice and counsel to the executives of the firm (Carpenter & Westphal, 2001). Similarly, Davis' (1993) finds that directors sitting on more boards are more likely to be selected for subsequent appointments.

One particular reason for the non-finding of director experience may be due to its relationship with director age (Mincer & Jovanovic, 1981). Director experience may be similarly reflective of a director's current career stage with those individuals with higher levels of director experience preparing to retire and taking on less board seats and exiting any current seats. In this instance, director experience may in fact reflect a curvilinear or diminishing returns relationship in which director experience leads to a higher likelihood of appointments to a certain degree at which point the impact of director experience begins to decline.

Relatedly, the non-finding of cumulative number of board appointments may suggest that it is not simply the accumulation of directorships that matter, but rather ties that these board seats constitute. Thus, rather than finding a significant relationship between cumulative number of directorship and the board appointment outcomes, I find that access to structural holes is an important factor in director selection and overall mobility.

In support of this perspective, the indicator for access to structural holes, Effective Network Size, provides fairly consistent results across the dependent variables of interest. As previously suggested, a director's social capital directly affects his or her ability to provide access to critical resources to the board (Kim, 2007; Kim & Cannella, 2008) and represents opportunities for firms to create linkages to new resources and external contingencies (Pfeffer & Salancik, 1978). Thus, those individuals that have greater access to structural holes should be more likely to join new boards.

However, greater access to structural holes not only makes the individual more attractive on the market but may also inherently provide opportunities for future board appointments (Useem, 1984; Westphal & Milton, 2000). For example, from the hiring-board perspective, Bazerman and Schoorman (1983: 212) suggest that "the cost of an optimal search often will lead to making the choice within the bounds of existing social networks." In this regard, the directors with higher levels of social capital, in this case greater access to structural holes, may be more likely to join new boards and join more prestigious boards.

While in this study I examined a director access to structural holes as an indicators of social capital, previous research also considers network centrality to be a major indicator of social capital (Borgatti et al., 1998). For example, Davis (1993) posits and finds that network centrality is major driver of the number of boards a director joins. From this perspective, those directors that hold centralized network positions (i.e., "they have the most ties to other actors in the network" (Wasserman & Faust, 1994: 178) are more likely to represent opportunities for firms to acquire linkages to new resources and external contingencies (Pfeffer & Salancik, 1978). Network centrality is also a form of social capital that provides "abundant access to the information that flows through the network" (Davis, 1991: 592). Furthermore, network centrality from director interlocks may be seen as a resource itself for a firm as "greater centrality in interlock networks implies a greater capacity to coordinate actions and define situations" (Mariolois & Jones, 1982: 573). Following this logic, I reran my analysis using a logged eigenvector measure of centrality rather than the access to structural holes indicator (Bonacich, 1972). The eigenvector measure of centrality captures the degree to which an individual is connected to other well-connected individuals (Borgatti, 2005; Borgatti et al., 1998). My results for this indicator closely mirrored the results obtained from the access to structural holes measure with the centrality measure positively relating to each of my director mobility variables.

Moderating Hypotheses

While the specific focus of this study is on the impact of human and social capital indicators on a number of director mobility outcomes, I also considered a

number of individual and contextual-variables that may moderate these main-effect relationships. In particular, I examined the moderating effect of gender, exiting a current board seat in the previous time period, sitting on a board that experienced a restatement, and the environmental dynamism the director faces at his or her current boards appointments.

In hypothesis 4, I suggest that directors with higher levels of education, business expertise, director experience, and access to structural holes who are female should be more likely to join new boards and more likely to join *Fortune 100* boards. These directors should also be less likely to exit a current board. These hypotheses build upon the research that suggests female directors provide a number of unique resources to a board (Hillman et al., 2007; Terjesen, Sealy, & Singh, 2009). Additionally, research on female representation suggests that female directors often hold advanced degrees, a strong business track record, and possess specialized knowledge and information (Burke, 1997b; Burke & Leblanc, 2008; Peterson & Philpot, 2007). Thus, I hypothesized that the impact of human and social capital on board selection would be higher for female directors.

However, each of the models examining the impact of gender offers evidence that there is neither a direct nor a moderating effect of gender on the board appointment outcomes. These results may be more in line with recent work on director selection focused on the ingratiatory practices that lead to board appointments. For example, Westphal and Stern (2006; 2007) find the ingratiatory behavior may be another way that directors receive new appointments. Those top managers that use impression management tactics, in this case ingratiation,

toward their CEO are more likely to receive subsequent board appointments at other firms where their CEO serves and at boards connected to the CEO through his or her directorate network. These ingratiatory tactics may substitute to some degree for an individual's elite background or demographic majority status (Westphal & Stern, 2006). However, minorities required greatly levels of ingratiatory behavior to receive future appointments and were punished more for engaging in monitoring and control. Following this logic, female directors may be required to possess even higher levels of human and social capital in order to obtain new appointments. Thus, the moderating effect of gender on human and social capital and board appointment outcomes may be non-existence or masked by the fact that these individuals require higher levels to meet a "minimum threshold" to obtain subsequent appointments relative to their male counterparts.

Hypothesis 5 proposes that a director's previous exit from a current board will positively moderate the relationship between director education, expertise, experience and access to structural holes and subsequent board appointments**.** In this regard, the main effect of a director's exit in the previous period did, in fact, increase the likelihood of joining a new board. This finding may suggest that directors are cognizant of the perceived under-utilization of human and social capital on the market for corporate directors and thus may attempt to quickly acquire new appointments when exiting a current appointment. Conversely, the exit from one board may "free up" the director to serve on other boards. Thus, exiting a current board may actually increase a director's overall board mobility.

Similarly, because of the secondary-nature of my data, a number of unexplored factors may influence the decision to exit a board that may have little to do with the director's overall stock of human and social capital and his or her attractiveness as a candidate for a board appointment. In any regard, the positive relationship between a director's previous exit from a board and the likelihood of joining a new board, again, may suggest that directors may be extremely mobile on the market for corporate directors. In examining the moderating effect of a director's previous departures, business experts seem to benefit the least from exiting a current board seat. Here again, because their expertise is tied up in their experiences in decision-making in other firms and boards the departure from a current board position may send a stronger signal to market relative to a support specialist or community influential who departures from a similar board.

For hypothesis 6, I examined the moderating impact of sitting a board that has experienced a restatement on the relationship between human and social capital and director mobility. Previous research suggests that directors serving on boards that experience ethical violations, including restatements, are likely to experience sanctions on the market for corporate directors (Arthaud-Day et al., 2006; Srinivasan, 2005). However, as indicated in Table 3, the main effect of sitting a board that has experienced a restatement and the board appointment outcomes is negligible in this study. In examining the moderating effect of this variable, the restatement indicator only moderated the relationship between educational prestige and the board appointment outcomes. One possible explanation for this non-finding of the moderating impact of a restatement event

may be that directors experience only limited sanctions across their different board seats.

An alternative explanation for these non-findings may due in part to the relative infrequency of reported fraudulent behavior and financial reporting fraud. In this case, previous studies have examined the consequence of restatements using a matched-sample approach that enables the researchers to control for the low relative frequency of restatements. Additionally, previous studies have taken the firm or board as their level of analysis. In this case, it may be easier to examine the sanctions that are exposed on a director at the specific firm experiencing the restatement rather than focusing on the overall impact a restatement has on the mobility of an individual director.

Finally, hypothesis 7 suggests that a director with higher levels of education, business expertise, director experience, and access to structural holes is less likely to join new boards when the director is currently sitting on boards facing greater levels of environmental dynamism. Overall, the results partially support this perspective. These findings may suggest that directors currently sitting on boards in more dynamic environments face greater demands from these boards and as such avoid becoming overboarded (e.g., Core et al., 1999; Fich & Shivdasani, 2006; Harris & Shimizu, 2004).

Limitations

As with all research, my findings are subject to several potential limitations that must be considering when interpreting my results. In particular, in

considering these results, the sampling frame is an important factor to consider. This sample consisted of directors currently serving on S&P 500 boards. This sampling frame was chosen impart to examine and compare a variety of different directors (e.g., directors with business expertise relative to those that possess support specialist expertise) rather than focusing specifically on business executives that enter and exit the market for corporate directors. However, the results may have been considerably different with a sampling frame of potential directors who were not currently sitting on corporate board.

Second, because of the focus on corporate boards in the U.S., the findings from this study may not be generalized to directors serving exclusively on private and non-profit board or boards outside of the U.S. In particular, the selection criteria and overall market for different types of directors may be significantly different from corporate directors. In related point, director selection in other countries may not match the institutional forces and governance procedures that dictate the selection process in the U.S., and, thus, the results of this study may not be generalizable to markets for corporate directors outside in other countries.

Third, because of my reliance on secondary data, this study does not hypothesize or examine any of the micro-process that underlies a director's willingness and motivation to accept a board appointment. As suggested below in the future research section, examining why directors accept board seats remains an underdeveloped area of the director selection research. Through my methodological approach, however, this study captures only those instances in which a director has accepted a board appointment. Thus, this test of director

mobility does not reflect a director's underlying motivations for selecting one board appointment over another or simply declining a board appointment outright. Furthermore, Westphal and Stern's (e.g., Stern & Westphal, 2010; Westphal & Stern, 2006, 2007) recent work on ingratiatory behavior and subsequent director appointments suggests that impression management tactics may be a key driver in obtain subsequent board appointments. However, to gauge this sort of micro process, research utilizing primary data is essential. Thus, these findings suggest that a multi-method approach combining primary and secondary research is necessary to fully examine the director selection process and the resulting board appointment outcome.

Fourth, while this study offers one of the few attempts to examine the individual-determinants of director mobility, the firm-level factors of the selecting board is critical to more fully understanding the complex process of director selection. This study only captures one part of what is in reality a two-side matching problem in which firms attempt to match with potential directors to produce the board appointment outcome.

Finally, while the BoardEx database represents a unique source to examine the underlying dimensions of human and social capital, there is the possibility of missing or incomplete data for any particular director. I have attempted to alleviate this concern by checking the information provided by BoardEx with other sources including proxy statements, online executive biographers, and information on corporate websites.

Future Research Directions

The theorizing and results of this study suggest a number of promising avenues for future research. First, this study has attempted to offer a number of insights into the antecedents to an individual to joining a new board. However, this study is unable to answer one of the fundamental questions—Why do certain individuals accept board appointments? As Finkelstein and Colleagues (2009: 253) suggest, "the process of being offered, and accepting, a board appointment is still not well understood." This question is vitally important because, as Bacon and Brown (1975: 56) suggest, "to serve as an outside director is to play a game that is not worth the candle." And, yet individuals are still willing to step up and serve in a capacity that can be professionally demanding and time consuming and subjects the individual to potential legal costs of not fulfilling shareholder obligations.

In their study of boards of directors, Lorsch and MacIver (1989) delve into the questions of why individuals refuse and accept board appointments (See also Bacon & Brown, 1975). The authors report the following reasons (in order of importance) for declining an offer to join a board: (1) "Lack of time;" (2) "Meeting conflicts," (3) "Conflict of interest," (4) "Could not play useful role," (5) "No interest in firm's industry," (6) "Uncertainty about firm's future," and (7) "Personal liability." The authors also provide anecdotal evidence of director rationale for turning declining an offer. As one director indicated, "you have so little time that you really can't take on more than two if you want to do the job properly" (24). Another director provided, "When I evaluate an offer to join a

board, first I determine whether…there is a conflict of interest. Next I have to find out whether there will be a conflict of days" (25).

Similarly, Lorsch and MacIver report that directors accept offers to join boards because of: (1) "Quality of top management," (2) "Opportunity to learn," (3) "Challenge as director," (4) "Prestige of the firm," (5) "Potential growth of the firm," (6) "Opportunity to work with board members," (7) "Personal prestige," (8) "Compensation," (9) "Major stock ownership." In support of this perspective, one director states, "Serving on a board is a way to see how somebody else is doing the same thing you're doing. I usually look at the company to see if they are a strong, growing firm, but I also look at the senior people to see if they're interesting and if they'll be involved in interesting problems" (27).

Despite Lorsch and MacIver's earlier findings, research on director selection has yet to develop theoretical and empirical support for an individual's motivation to serve as an outside director or why certain individuals are more or less likely to accept an invitation to join a board. Thus, attempting to address this fundamental question may offer a number of new directions for future research. For example, how do potential directors cognitively evaluate a board appointment opportunity? What individual-level motives provide the impetus for accepting a board seat? How do an individual's career motives influence his or her willingness to serve on corporate board? Does sitting on a board have the desired effect on the career? What drives a director's willingness to sit on less established boards (e.g., boards of IPOs)? How do firms use incentives to entice individuals to serve on their boards?

Second, future research may look to examining the director selection process as a two-sided matching problem that includes considerations of the supply and demand sides operating on the market for corporate directors. As previously mentioned, this study focuses specifically on the individual-level drivers of subsequent board appointments; however, the selection and appoint of director selection occurs when the needs of a firm and desires of the potential director align. In other words, a match occurs when a firm has a need for a potential director and a director that fulfills those needs sees that the benefits of serving on the board outweigh the costs. Because of the inherent difficulties of empirically capturing the complexities of a two-sided matching process, previous research has often focused either on the supply or demand characteristics of the process while neglecting the other. Future research must take into consideration the dual-sided nature of this matching problem and consider the supply and demand conditions simultaneously. This type of endeavor will require the employment of more sophisticated theorizing and methodological approaches to represent the selection process.

Third, future research may focus on director exit as a specific board outcome. While this study attempts to examine director exit as a major mobility outcome, few studies have considered director turnover and exit as a main outcome of interest. This lack of research on director exit and turnover is surprising given the impact that it can have on important board outcomes. As a director steps down, the board may be losing valuable human and social capital that directly influenced board performance.

This lack of research also is surprising given the related literature on executive turnover and exit (Finkelstein et al., 2009; Kesner & Sebora, 1994). In this regard, upper echelons researchers have developed a fairly well informed understanding of both the antecedents and consequences of executive turnover. However, relative to the executive turnover literature, board researchers have yet to delve into similar questions to the same degree. Thus, understanding why a director decides to exit a board, how the board prepares and plans for this event, and how the turnover affects board performance are questions that remain unanswered in the literature.

Fourth, research may begin considering the impact of different governance mechanisms on the director selection process. Boards of directors represent only one of several governance mechanisms in place to serve the interest of shareholder (Jensen & Meckling, 1976; Shleifer & Vishny, 1997). While governance research recognizes a number of different governance mechanisms, including ownership concentration, executive leadership structure, and the market for corporate control, director selection research often considers the selection process outside of the influence of these other governance mechanisms. However, research suggests that these different governance mechanisms may interact in ways that may complement (Kosnik, 1987; Tosi, Katz, & Gomez-Mejia, 1997) or substitute (Beatty & Zajac, 1994; Rediker & Seth, 1995) for one another. In either case, the other governance mechanisms currently in place may directly influence the director selection process and, in turn, who is selected to serve on board. This interaction of different governance mechanisms suggests that research considering

director selection should consider how other governance influence the director selection process.

Finally, another possible extension may be to simultaneously consider current top management team and board members when examining director selection. In this regard, the director selection choice may be based on how the potential director's skills, knowledge, and other resources complement those of executives of the top management team, and not just the other members of the board. In this case, do the backgrounds of the top management team members influence who is selected to the board? Do top management team homogeneity and heterogeneity reflect similarly on the composition of the board of directors? How might top management team behavioral integration (Hambrick, 1994) influence the type of individuals selected for a board?

Conclusion

This study focused on the mobility of current directors as they enter and exit different boards. Using human and social capital theories, I develop individual-level predictions on the likelihood of joining a new board, a prestigious board, and exiting a current board. From this study, I have attempted to offer a complementary perspective of the director selection process by developing an individual-level perspective of board appointments.

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Figure 1

Research model

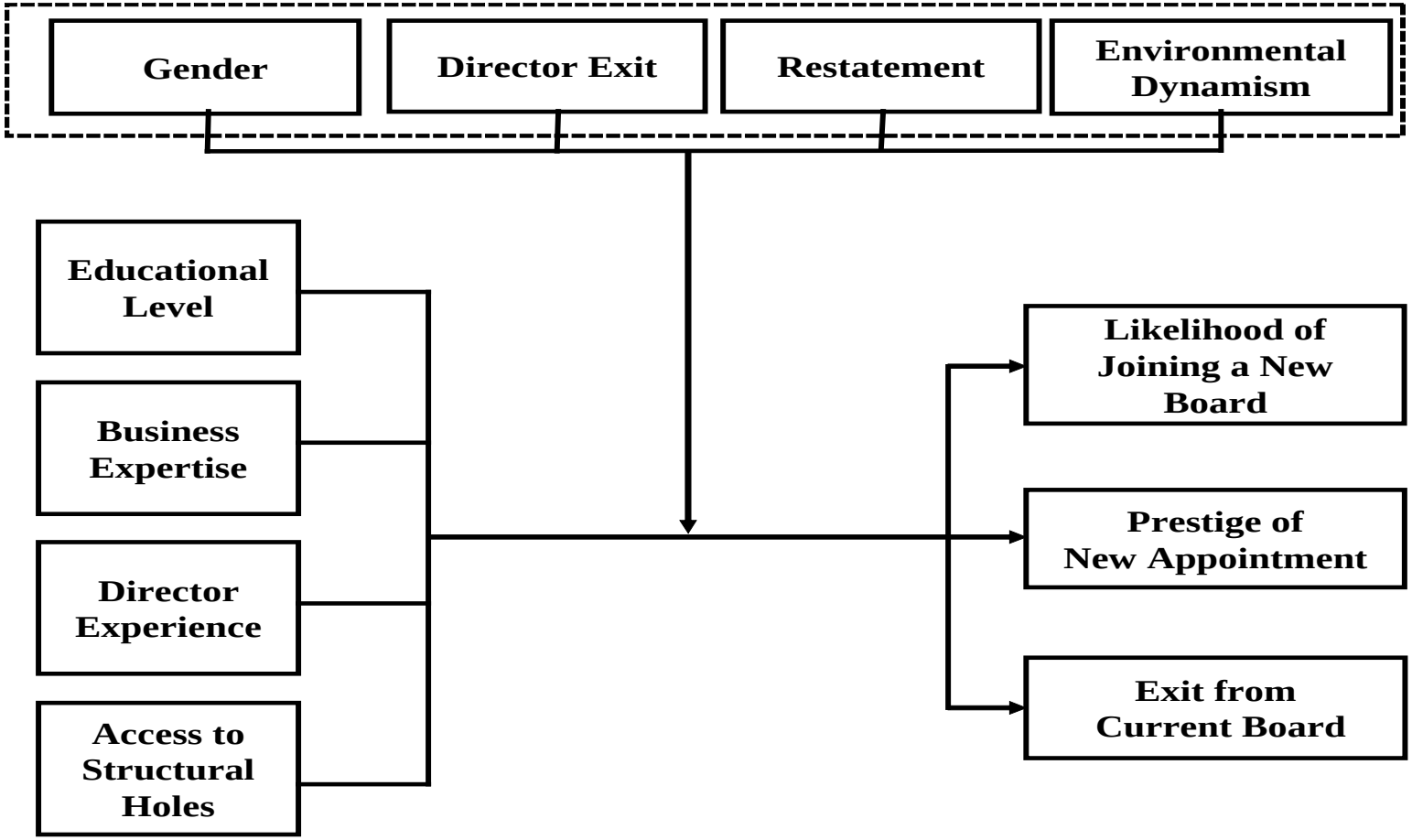

Table 1

Research on Human and Social Capital in the Board Literature

Study	*Human or Social Capital*	*Conceptual /Empirical*	*Perspective of Human and Social Capital*	*Measure of Human and Social Capital*
Walters, Kroll, and Wright (2008)	Human Capital	Empirical	Examine the relationship between director incentives of board-level human capital on acquiring firm shareholders' returns in the context of CEO ownership.	Human capital is measured through their measure of *Outside board member target industry experience*, which captures "the number of outside directors who served as a manager or board member of a firm in the same industry as the acquisition target […] within five years prior to the focal acquisition announcement date" (265).
Kim (2007)	Social Capital	Empirical	Examines the relationship between outside director's social capital and firm value.	Social capital of outside directors is measured as "the degree to which outside board members have outside contacts within an institutional environment" (1170).
Keys and Li (2005)	Human Capital	Empirical	Examine the relationship between professional director's human capital and the probability of receiving a new appointment after their firm is acquired.	Do not directly measure human capital. Suggest that professional directors have more transferable human capital.

Table 1 (Continued)

Study	*Human or Social Capital*	*Conceptual /Empirical*	*Perspective of Human and Social Capital*	*Measure of Human and Social Capital*
Kim and Cannella (2008)	Social Capital	Conceptual	Examine the role of social capital in new director selection, board composition, and board effectiveness	Conceptually, the authors suggest that director social capital can be divided into internal and external social capital.
Singh (2007)	Human and Social Capital	Empirical	Considers the human and social capital of ethnic minority directors, and the resources these directors bring to a firm.	Human capital is measured as directorship type (insider/outsider), tenure, and experience. Social capital is measured as the reported ties to other sources of influence.
Lester et al. (2008)	Human and Social Capital	Empirical	Examine the role of depth, breadth, and deterioration of human and social in determining the likelihood of former government officials receiving board appointments.	Human and social capital were measure simultaneously. Human and social capital depth is measured as tenure in government services. Human and social capital breadth is measured based on the job complexity and prestige of an individual's last gov. position.

Table 1 (Continued)

Study	*Human or Social Capital*	*Conceptual /Empirical*	*Perspective of Human and Social Capital*	*Measure of Human and Social Capital*
Nicholson et al (2004)	Social Capital	Empirical	Examine a board's social capital created from interlocking directorates	Social capital is measured using network measures. In particular, the authors use the distance between participants in the network.
Harris and Helfat (2007)	Social Capital	Conceptual	At the board-level, consider the social network within the board itself.	Conceptually suggests that the ties between individual directors within a board should be considered.
Stevenson and Radin (2009)	Social Capital	Empirical	Examine the role of social ties in determining director influence on a focal board.	Directors were asked "How often do you talk to these people [other directors] about business issues outside of board settings?" (26).
Hillman & Dalziel (2003)	Human and Social Capital	Conceptual	Posit that board-level human and social capital (i.e. Board Capital) affects a board's ability to perform monitoring and resource board provision functions.	Conceptualize board capital as the combination of "human capital (experience, expertise, reputation) and relational capital (network of ties to other firms and external contingencies)" (383).
Haynes and Hillman (2010)	Human and Social Capital	Empirical	Examines how board capital breadth and depth affect strategic change.	Board capital breadth is measured using a heterogeneity index. Board capital depth is measured as the linkages to and expertise in industry.

Table 2

Means and Correlations

	Mean	S.D.	1	2	3	4	5
1. Board Entry	0.06	0.23	1				
2. Fortune 100 Entry	0.02	0.14	0.61***	1			
3. Board Exit	0.14	0.35	0.08***	0.04***	1		
4. Director Age	64.32	7.81	-0.13***	-0.08***	0.05***	1	
5. Max ROA	4.74	11.94	0.03*	0.03***	0.06***	-0.08***	1
6. Max Market-to-Book	0.05	0.07	0.05***	0.05***	0.11***	-0.13***	0.30***
7. Max Firm Size	2.90	1.82	0.12***	0.09***	0.25***	-0.21***	0.23***
8. Advanced Degree	0.31	0.46	-0.01	-0.01	-0.00	0.01	0.00
9. Educational Prestige	0.52	0.50	0.00	0.01	0.02	-0.00	0.04***
10. Business Expert	0.57	0.49	0.04***	0.02†	0.01	-0.02†	-0.00
11. Community Influential	0.22	0.41	-0.02†	-0.00	0.01	-0.01	0.00
12. Support Specialist	0.21	0.41	-0.03*	-0.02†	-0.02	0.03*	0.00
13. Director Experience	14.40	7.67	-0.09***	-0.04***	0.04***	0.52***	-0.02
14. Cumul. Directorships	2.26	1.56	0.06***	0.05***	0.25***	0.17***	0.17***
15. Effective Network Size	12.50	13.93	0.21***	0.14***	0.25***	-0.14***	0.21***
16. Gender	0.12	0.33	-0.00	-0.01	0.01	-0.17***	0.04***
17. Previous Board Exit	0.14	0.35	0.08***	0.08***	0.04***	0.09***	0.06***
18. Restatement	0.10	0.30	0.02†	0.01	0.12***	0.01	0.04***
19. Avg. Dynamism	0.00	0.41	0.07***	0.05***	0.20***	-0.28***	0.20***

Table 2 (Continued)

	6	7	8	9	10	11	12
6. Max Market-to-Book	1						
7. Max Firm Size	0.44***	1					
8. Advanced Degree	-0.02	0.02†	1				
9. Educational Prestige	0.07***	0.06***	0.03*	1			
10. Business Expert	0.01	-0.01	-0.33***	-0.06***	1		
11. Community Influential	0.01	0.02	0.34***	0.00	-0.61***	1	
12. Support Specialist	-0.02†	-0.01	0.05***	0.07***	-0.60***	-0.27***	1
13. Director Experience	-0.07***	-0.13***	0.02	0.07***	-0.11***	0.00	0.13***
14. Cumul. Directorships	0.25***	0.39***	0.01	0.07***	-0.01	0.03*	-0.02†
15. Effective Network Size	0.36***	0.55***	-0.01	0.04***	0.03*	0.02†	-0.06***
16. Gender	0.04***	0.06***	0.09***	-0.03*	-0.18***	0.20***	0.01
17. Previous Board Exit	0.11***	0.25***	-0.00	0.01	0.01	-0.00	-0.01
18. Restatement	0.08***	0.23***	-0.01	0.00	-0.02	0.01	0.02
19. Avg. Dynamism	0.40***	0.80***	0.00	0.05***	-0.02†	-0.01	0.04***

Table 2 (Continued)

		13		14		15		16		17		18	
13.	Director Experience	1											
14.	Cumul. Directorships	0.24	***	1									
15.	Effective Network Size	-0.07	***	0.56	***	1							
16.	Gender	-0.07	***	0.08	***	0.02		1					
17.	Previous Board Exit	0.07	***	0.27	***	0.16	***	0.01		1			
18.	Restatement	0.06	***	0.25	***	0.18	***	0.02		0.07	***	1	
19.	Avg. Dynamism	-0.19	***	0.18	***	0.38	***	0.05	***	0.20	***	0.17	***

N=7360; † p<.10; * p<.05; ** p<.01; *** p<.001

Table 3

Event History Analysis: Main effects

	Model 1			Model 2			Model 3			Model 4		
	Haz. Ratio	Robust Std. Err.		Haz. Ratio	Robust Std. Err.		Time Ratio	Robust Std. Err.		Time Ratio	Robust Std. Err.	
Director Age	0.951	0.01	***	0.943	0.01	***	1.059	0.01	***	1.059	0.01	***
Max ROA	1.087	0.83		0.401	0.21	†	0.825	0.63		2.700	1.44	†
Max Market-to-Book	0.998	0.00		0.996	0.00		1.000	0.00		1.001	0.00	
Max Firm Size	1.322	0.05	***	1.225	0.07	***	0.753	0.03	***	0.819	0.04	***
Advanced Degree				0.940	0.12					1.057	0.13	
Educational Prestige				1.104	0.12					0.901	0.09	
Business Expert				1.426	0.25	*				0.724	0.12	*
Support Specialist				1.127	0.22					0.896	0.17	
Director Experience				0.987	0.01					1.016	0.01	†
Cumulative Directorships				0.787	0.04	***				1.271	0.06	***
Effective Network Size				1.051	0.01	***				0.952	0.00	***
Gender				0.822	0.13					1.230	0.19	
Previous Board Exit				2.196	0.27	***				0.475	0.05	***
Restatement				1.140	0.18					0.906	0.13	
Avg. Dynamism				0.483	0.13	**				1.910	0.48	*
Model Pseudo Log-Likelihood		-2592.51			-2488.28			1592.31			1697.63	
Model Chi-Square		105.58	***		361.76	***		164.96	***		475.23	***
Wald Chi-Square		105.58	***		192.94	***		164.96	***		230.05	***

Table 3 (Continued)

	Model 5			Model 6			Model 7			Model 8		
	Haz. Ratio	Robust Std. Err.		Haz. Ratio	Robust Std. Err.		Haz. Ratio	Robust Std. Err.		Haz. Ratio	Robust Std. Err.	
Director Age	0.948	0.01	***	0.932	0.01	***	1.044	0.01	***	1.049	0.01	***
Max ROA	4.252	4.95		1.249	1.63		2.171	1.33		0.465	0.21	†
Max Market-to-Book	1.001	0.00		1.001	0.00		1.000	0.00		0.998	0.00	
Max Firm Size	1.456	0.10	***	1.371	0.13	**	1.561	0.03	***	1.143	0.03	***
Advanced Degree				0.887	0.18					1.009	0.07	
Educational Prestige				1.292	0.22					0.990	0.06	
Business Expert				1.197	0.31					1.019	0.09	
Support Specialist				0.968	0.28					0.902	0.09	
Director Experience				1.002	0.01					0.999	0.00	
Cumulative Directorships				0.782	0.07	**				1.208	0.03	***
Effective Network Size				1.047	0.01	***				1.010	0.00	***
Gender				0.608	0.18	†				1.114	0.11	
Previous Board Exit				2.926	0.61	***				0.641	0.05	***
Restatement				0.964	0.25					1.090	0.10	
Avg. Dynamism				0.380	0.18	*				23.281	10.79	***
Model Pseudo Log-Likelihood		-1000.89			-955.82			-6559.66			-6403.01	
Model Chi-Square		64.45	***		241.38	***		520.04	***		444.66	***
Wald Chi-Square		64.45	***		108.36	***		520.04	***		220.36	***

† p<.10; * p<.05; ** p<.01; *** p<.001

Table 4

Event History Analysis Moderator: Gender

	Model 9			Model 10			Model 11			Model 12		
	Haz. Ratio	Robust Std. Err.		Time Ratio	Robust Std. Err.		Haz. Ratio	Robust Std. Err.		Haz. Ratio	Robust Std. Err.	
Director Age	0.942	0.01	***	1.060	0.01	***	0.930	0.01	***	1.049	0.01	***
Max ROA	0.415	0.22		2.584	1.41	†	1.290	1.72		0.476	0.22	
Max Market-to-Book	0.997	0.00		1.001	0.00		1.001	0.00		0.998	0.00	
Max Firm Size	1.221	0.07	**	0.821	0.04	***	1.371	0.13	**	1.138	0.03	***
Advanced Degree	0.943	0.13		1.057	0.14		0.893	0.19		0.977	0.07	
Educational Prestige	1.060	0.12		0.937	0.10		1.173	0.21		0.969	0.07	
Business Expert	1.462	0.27	*	0.702	0.12	*	1.221	0.33		0.964	0.09	
Support Specialist	1.162	0.24		0.866	0.17		0.970	0.29		0.854	0.09	
Director Experience	0.982	0.01	†	1.021	0.01	*	0.999	0.01		0.998	0.01	
Cumulative Directorships	0.808	0.05	***	1.242	0.07	***	0.803	0.07	*	1.207	0.03	***
Effective Network Size	1.050	0.01	***	0.953	0.00	***	1.045	0.01	***	1.009	0.00	***
Gender	0.818	0.54		1.222	0.76		0.346	0.40		0.963	0.20	
Previous Board Exit	2.168	0.27	***	0.481	0.05	***	2.859	0.61	***	0.638	0.05	***
Restatement	1.140	0.19		0.902	0.13		0.982	0.26		1.090	0.10	
Avg. Dynamism	0.479	0.13	**	1.928	0.49	**	0.376	0.18	*	23.717	10.94	***
Gender X Adv. Degree	0.892	0.34		1.089	0.40		0.953	0.65		1.206	0.22	
Gender X Edu. Prestige	1.576	0.50		0.661	0.20		3.349	2.36	†	1.162	0.23	
Gender X Bus. Expert	0.985	0.57		1.068	0.59		0.919	0.74		1.179	0.25	

Table 4 (Continued)

	Model 9			Model 10			Model 11			Model 12		
	Haz. Ratio	Robust Std. Err.		Time Ratio	Robust Std. Err.		Haz. Ratio	Robust Std. Err.		Haz. Ratio	Robust Std. Err.	
Gender X Support Specialist	1.046	0.53		0.950	0.46		0.936	0.69		0.803	0.16	
Gender X Director Exp.	1.073	0.03	**	0.938	0.02	*	1.082	0.06		1.012	0.02	
Gender X Cumul. Dir.	0.718	0.11	*	1.349	0.21	†	0.636	0.16	†	0.985	0.07	
Gender X Network Size	1.016	0.01		0.986	0.01		1.030	0.02		1.007	0.01	
Model Pseudo Log-Likelihood	-2483.90			1701.31			-952.28			-6400.08		
Model Chi-Square	370.16		***	474.12		***	263.03		***	548.22		***
Wald Chi-Square	9.36			8.890			6.95			9.71		

Note: The continuous variables composing the interaction term are mean-centered. † p<.10; * p<.05; ** p<.01; *** p<.001

Table 5

Event History Analysis Moderator: Previous Board Exit

	Model 13			Model 14			Model 15			Model 16		
	Haz. Ratio	Robust Std. Err.		Time Ratio	Robust Std. Err.		Haz. Ratio	Robust Std. Err.		Haz. Ratio	Robust Std. Err.	
Director Age	0.942	0.01	***	1.061	0.01	***	0.930	0.01	***	1.049	0.01	***
Max ROA	0.428	0.24		2.545	1.43	†	1.679	2.26		0.476	0.22	
Max Market-to-Book	0.997	0.00		1.001	0.00		1.001	0.00		0.998	0.00	
Max Firm Size	1.214	0.07	**	0.825	0.04	***	1.358	0.13	**	1.138	0.03	***
Advanced Degree	0.907	0.14		1.087	0.16		0.881	0.22		0.977	0.07	
Educational Prestige	1.030	0.12		0.958	0.11		1.180	0.23		0.969	0.07	
Business Expert	1.411	0.26	†	0.735	0.13	†	1.198	0.31		0.964	0.09	
Support Specialist	1.054	0.22		0.962	0.19		0.764	0.22		0.854	0.09	
Director Experience	0.982	0.01	†	1.020	0.01	*	1.002	0.01		0.998	0.01	
Cumulative Directorships	0.800	0.05	***	1.260	0.07	***	0.812	0.08	*	1.207	0.03	***
Effective Network Size	1.055	0.01	***	0.948	0.00	***	1.051	0.01	***	1.009	0.00	***
Gender	0.814	0.13		1.248	0.19		0.600	0.18	†	0.963	0.20	
Previous Board Exit	3.145	1.10	**	0.322	0.10	***	7.576	3.39	***	0.638	0.05	***
Restatement	1.145	0.19		0.900	0.13		0.962	0.25		1.090	0.10	
Avg. Dynamism	0.453	0.12	**	2.041	0.52	**	0.340	0.16	*	23.717	10.94	***
Exit X Adv. Degree	1.157	0.29		0.875	0.20		1.050	0.45		1.206	0.22	
Exit X Edu. Prestige	1.230	0.28		0.839	0.17		1.234	0.46		1.162	0.23	

Table 5 (Continued)

	Model 13			Model 14			Model 15			Model 16		
	Haz. Ratio	Robust Std. Err.		Time Ratio	Robust Std. Err.		Haz. Ratio	Robust Std. Err.		Haz. Ratio	Robust Std. Err.	
Exit X Bus. Expert	0.718	0.24		1.397	0.42		0.379	0.16	*	1.179	0.25	
Exit X Support Specialist	0.630	0.23		1.590	0.53		0.344	0.17	*	0.803	0.16	
Exit X Director Exp.	1.014	0.02		0.988	0.02		1.000	0.03		1.012	0.02	
Exit X Cumul. Dir.	0.969	0.09		1.005	0.08		0.921	0.13		0.985	0.07	
Exit X Network Size	0.991	0.01		1.012	0.01		0.990	0.01		1.007	0.01	
Model Pseudo Log-Likelihood		-2484.08			1701.68			-950.78			-6398.32	
Model Chi-Square		389.03	***		508.71	***		248.85	***		456.54	***
Wald Chi-Square		9.84			11.160			16.09	*		9.25	

Note: The continuous variables composing the interaction term are mean-centered. † p<.10; * p<.05; ** p<.01; *** p<.001

Table 6

Event History Analysis Moderator: Restatement

	Model 17			Model 18			Model 19			Model 20		
	Haz. Ratio	Robust Std. Err.		Time Ratio	Robust Std. Err.		Haz. Ratio	Robust Std. Err.		Haz. Ratio	Robust Std. Err.	
Director Age	0.942	0.01	***	1.060	0.01	***	0.931	0.01	***	1.049	0.01	***
Max ROA	0.404	0.21	†	2.680	1.44	†	1.315	1.69		0.482	0.22	
Max Market-to-Book	0.996	0.00		1.001	0.00		1.001	0.00		0.999	0.00	
Max Firm Size	1.228	0.07	***	0.815	0.04	***	1.366	0.13	**	1.147	0.03	***
Advanced Degree	0.892	0.12		1.113	0.14		0.865	0.18		1.021	0.08	
Educational Prestige	1.176	0.13		0.841	0.09		1.459	0.26	*	0.918	0.06	
Business Expert	1.366	0.24	†	0.756	0.12	†	1.076	0.27		1.067	0.10	
Support Specialist	1.070	0.22		0.952	0.18		0.882	0.25		0.917	0.10	
Director Experience	0.986	0.01		1.016	0.01	†	1.002	0.01		1.003	0.01	
Cumulative Directorships	0.778	0.04	***	1.278	0.07	***	0.741	0.06	***	1.220	0.03	***
Effective Network Size	1.054	0.01	***	0.950	0.00	***	1.056	0.01	***	1.011	0.00	***
Gender	0.815	0.13		1.235	0.19		0.599	0.18	†	1.085	0.11	
Previous Board Exit	2.228	0.27	***	0.468	0.05	***	3.078	0.63	***	0.639	0.05	***
Restatement	1.887	0.71	†	0.511	0.18	†	2.460	1.29	†	1.250	0.31	
Avg. Dynamism	0.456	0.12	**	2.020	0.51	**	0.344	0.16	*	22.92	10.60	***
Restate X Adv. Degree	1.742	0.62		0.606	0.20		1.670	0.90		0.947	0.18	

Table 6 (Continued)

	Model 17			Model 18			Model 19			Model 20		
	Haz. Ratio	Robust Std. Err.		Time Ratio	Robust Std. Err.		Haz. Ratio	Robust Std. Err.		Haz. Ratio	Robust Std. Err.	
Restate X Edu. Prestige	0.589	0.18	†	1.781	0.50	*	0.366	0.19	*	1.430	0.24	*
Restate X Bus. Expert	0.907	0.37		1.204	0.46		1.162	0.68		0.746	0.19	
Restate X Support Specialist	0.794	0.39		1.432	0.65		0.641	0.51		1.053	0.29	
Restate X Director Exp.	1.015	0.02		0.991	0.02		1.017	0.03		0.986	0.01	
Restate X Cumul. Dir.	1.039	0.12		0.995	0.11		1.315	0.26		0.967	0.06	
Restate X Network Size	0.977	0.01	*	1.017	0.01	†	0.936	0.02	***	0.994	0.01	
Model Pseudo Log-Likelihood		-2483.23			1701.96			-947.13			-6396.00	
Model Chi-Square		377.33	***		509.26	***		278.44	***		498.82	***
Wald Chi-Square		13.99	†		12.80	†		18.27	*		15.91	*

Note: The continuous variables composing the interaction term are mean-centered. † p<.10; * p<.05; ** p<.01; *** p<.001

Table 7

Event History Analysis Moderator: Environmental Dynamism

	Model 21			Model 22			Model 23			Model 24		
	Haz. Ratio	Robust Std. Err.		Time Ratio	Robust Std. Err.		Haz. Ratio	Robust Std. Err.		Haz. Ratio	Robust Std. Err.	
Director Age	0.942	0.01	***	1.059	0.01	***	0.931	0.01	***	1.050	0.01	***
Max ROA	0.417	0.22		2.614	1.41	†	1.291	1.71		0.497	0.23	
Max Market-to-Book	0.997	0.00		1.001	0.00		1.001	0.00		0.998	0.00	
Max Firm Size	1.228	0.07	***	0.816	0.04	***	1.372	0.13	**	1.135	0.03	***
Advanced Degree	0.942	0.13		1.058	0.14		0.921	0.19		0.617	0.16	†
Educational Prestige	1.011	0.12		0.981	0.11		1.099	0.21		0.973	0.20	
Business Expert	1.306	0.23		0.788	0.13		0.951	0.25		1.181	0.18	
Support Specialist	1.093	0.23		0.917	0.18		0.849	0.27		0.891	0.12	
Director Experience	0.978	0.01	*	1.024	0.01	*	0.992	0.01		0.992	0.01	
Cumulative Directorships	0.846	0.05	**	1.183	0.06	**	0.790	0.07	*	1.302	0.04	***
Effective Network Size	1.067	0.01	***	0.938	0.00	***	1.065	0.01	***	1.042	0.01	***
Gender	0.817	0.13		1.227	0.19		0.610	0.18	†	1.076	0.11	
Previous Board Exit	2.213	0.27	***	0.472	0.05	***	2.898	0.61	***	0.632	0.05	***
Restatement	1.138	0.19		0.903	0.13		0.940	0.24		1.086	0.10	
Avg. Dynamism	0.113	0.08	**	8.303	5.34	**	0.165	0.21		16.392	15.22	**
Avg. Dyn. X Adv. Degree	1.072	0.43		0.924	0.36		0.952	0.62		9.953	12.11	†

Table 7 (Continued)

	Model 21			Model 22			Model 23			Model 24		
	Haz. Ratio	Robust Std. Err.		Time Ratio	Robust Std. Err.		Haz. Ratio	Robust Std. Err.		Haz. Ratio	Robust Std. Err.	
Avg. Dyn. X Edu. Prestige	1.914	0.70	†	0.530	0.18	†	2.841	1.85		1.170	1.09	
Avg. Dyn. X Bus. Expert	1.577	0.94		0.613	0.35		1.667	1.86		0.356	0.24	
Avg. Dyn. X Support Specialist	0.812	0.55		1.157	0.75		0.348	0.43		0.787	0.52	
Avg. Dyn. X Director Exp.	1.054	0.03	†	0.954	0.02	†	1.063	0.06		1.039	0.05	
Avg. Dyn. X Cumul. Dir.	0.679	0.11	*	1.415	0.23	*	1.047	0.30		0.709	0.10	*
Avg. Dyn. X Network Size	0.931	0.02	***	1.077	0.02	***	0.915	0.03	*	0.860	0.04	**
Model Pseudo Log-Likelihood		-2479.26			1706.66			-950.55			-6391.04	
Model Chi-Square		405.85	***		515.97	***		258.74	***		506.34	***
Wald Chi-Square		19.780	**		22.87	**		15.09	*		20.26	**

Note: The continuous variables composing the interaction term are mean-centered. † p<.10; * p<.05; ** p<.01; *** p<.001

Table 8

Summary of Results

Hypothesis	*Results*
Hypothesis 1a: Directors with higher levels of education will be more likely to join a new board.	Not Supported
Hypothesis 1b: Directors with business expertise will be more likely to join a new board relative to directors with community or support specialist expertise.	Supported
Hypothesis 1c: Directors with more director experience will be more likely to join a new board.	Not Supported
Hypothesis 1d: Directors with access to more structural holes will be more likely to join a new board.	Supported
Hypothesis 2a: Directors with higher levels of education will be more likely to join a more prestigious board.	Not Supported
Hypothesis 2b: Directors with business expertise will be more likely to join a more prestigious board relative to directors with community or support specialist expertise.	Not Supported
Hypothesis 2c: Directors with more director experience will be more likely to join a more prestigious board.	Not Supported
Hypothesis 2d: Directors with access to more structural holes will be more likely to join a more prestigious board.	Supported
Hypothesis 3a: Directors with higher levels of education will be more likely to exit a current board.	Not Supported
Hypothesis 3b: Directors with business expertise will be more likely to exit a current board relative to directors with community or support specialist expertise.	Not Supported
Hypothesis 3c: Directors with higher levels of director experience will be more likely to exit a current board.	Not Supported

Table 8 (Continued)

Hypothesis	*Results*
Hypothesis 3d: Directors with access to more structural holes will more likely to exit a current board.	Not Supported
Hypothesis 4: Gender will moderate the relationship between human and social capital and subsequent board appointments such that directors with higher levels of education, expertise, experience and access to structural holes that are female will be more likely to experience (a) an increased likelihood of joining a new board, (b) an increased likelihood of join a more prestigious board, and (c) an increased likelihood of exiting a current board.	Not Supported
Hypothesis 5: A director's departure from a board will moderate the relationship between human and social capital and subsequent board appointments such that directors with higher levels of education, expertise, experience and access to structural holes who exit a board in the previous period will be more likely to experience (a) an increased likelihood of joining a new board, (b) an increased likelihood of join a more prestigious board, and (c) a decreased likelihood of exiting another board.	Not Supported
Hypothesis 6: A financial restatement on a current board will moderate the relationship between human and social capital and subsequent board appointments such that directors with higher levels of education, business expertise, director experience and access to structural holes will be more likely to experience (a) a decreased likelihood of joining a new board, (b) a decreased likelihood of join a more prestigious board, and (c) an increased likelihood of exiting a current board.	Support for 6a-c for Educational Prestige and 6a-b for Effective Network Size
Hypothesis 7: A director's average dynamism from his/her other current board seats will moderate the relationship between human and social capital and subsequent board appointments such that directors with higher levels of education, business expertise, director experience and access to structural holes that serve in more dynamic environments will be more likely to experience (a) a decreased likelihood of joining a new board, (b) a decreased likelihood of join a more prestigious board, and (c) an increased likelihood of exiting a current board.	Supported for 7a-b for Effective Network Size, 7a for Cumulative Directorship, and 7c for Advanced Degree

APPENDIX A

ELITE EDUCATIONAL INSTITUTIONS

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Amherst College	Princeton University
Brown University	Stanford University
Carleton College	Swarthmore College
Columbia University	United States Military Academy
Cornell University	United States Naval Academy
Dartmouth College	University of California, Berkeley
Grinnell College	University of California, Los Angeles
Harvard University	University of Chicago
Haverford College	University of Michigan
Johns Hopkins University	University of Pennsylvania
Massachusetts Institute of Technology	Wellesley College
New York University	Wesleyan University
Northwestern University	Williams College
Oberlin College	Yale University
Pomona College	

[a] Adapted from Finkelstein (1992)