TOWARD AN INTEGRATIVE THEORY OF BOARDS OF DIRECTORS: THE INTELLECTUAL CAPITAL OF THE BOARD

Gavin J. Nicholson

School of Business
University of Queensland
Brisbane, Australia
Tel: +61 7 3510 8111
Fax: +61 7 3510 8181
E-mail: g.nicholson@competitivedynamics.com.au

Geoffrey C. Kiel

School of Business
University of Queensland
Brisbane, Australia
Tel: +61 7 3365 6758
Fax: +61 7 3365 6988
E-mail: g.kiel@business.uq.edu.au

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Abstract

While recent process-based research into boards of directors has begun to outline how attributes of boards impact on their behavior and corporate performance, there is no unifying framework to assist academics and practitioners in understanding these important relationships. We propose a contingency model of corporate governance to address this concern. We argue that the intellectual capital (i.e. a combination of the board's human, social and structural capitals) determines how well it can carry out a set of roles that determine board effectiveness. We also argue that a corporation's board role set will be contingent on internal and external factors and discuss implications for practitioners and academics.

Keywords: intellectual capital, boards of directors, board roles

Significant headway has been made in recent research into boards of directors and how they affect corporate performance. In particular, recent process-based research has begun to outline how the various attributes of the board will impact on their behavior (e.g., Forbes & Milliken, 1999; Golden & Zajac, 2001; Westphal, 1999). As yet, though, there is no unifying framework that outlines how current research fits together. The objective of this paper is to address this gap by outlining a general framework of corporate governance that can be utilized by practitioners and academics. Our key thesis is that the governance of a company is best viewed from a dynamic, contingency framework whereby the various elements of a board's intellectual capital allow it to execute a series of board roles. This approach emphasizes the requirement to view a company's governance system holistically rather than as a series of separate roles or requirements.

Such a unifying framework is timely. A key element of science is the ability of the researcher to break down the question under review so as to appropriately control for the various confounding influences on the hypothesized relationships (e.g., Kuhn, 1996). This is particularly important in the social sciences where complex social systems are simplified to a few constructs (Crotty, 1998). The danger in such an approach is that there is a high probability that there will be a misspecification of the relationships under investigation, particularly when important factors or constructs are omitted from the models being developed (for instance, see Eisenhardt, 1989; Hendry, 2002) on common misspecifications of agency relationships).

We contend that corporate governance research is particularly susceptible to such dangers. The many and varied factors that potentially impact on a board's effectiveness can create such confounds that much research may, in fact, hide specific and measurable relationships due to the misspecification. Thus our current effort is to outline a unifying framework that identifies the key relationships evident in extant research.

The objective of this paper is to provide a comprehensive framework that moves beyond a unitary view of a board's role so as to identify the constructs that underlie the board's roles. Such a framework will aid researchers in understanding potential confounds in board-performance relationships (e.g., Westphal, 1999). It will also aid practitioners in developing an understanding of the factors they need to address when seeking to improve a company's corporate governance system. We specifically delimit the framework to Anglo systems of corporate governance but believe that similar principles would apply to most governance systems.

We commence the paper with an examination of the board's role set and highlight the contingent nature of this role set. We then introduce the concept of the intellectual capital of the board and develop propositions highlighting how the board's intellectual capital can influence the execution of this role set. We follow this by examining the vexed question of the board's influence on corporate performance before concluding with implications for practitioners and academics.

The Board Role Set: What Boards Do

The fundamental determinant of effective corporate governance is the set of roles or functions that are required of the board of directors. Since the ultimate aim of the board is to carry out and, ideally, excel at a series of roles for the benefit of the firm,[1] effective governance must grow out of a sophisticated understanding of how a board can add value to the firm. Corporate governance researchers have, as a general rule, concentrated on investigating a single board activity rather than an integrated set of board roles. Thus we have studies investigating the board's role in controlling the organization (Monks & Minow, 1995), providing advice to directors (Baysinger &

Butler, 1985, Kesner & Johnson, 1990; Westphal, 1999), assisting in development of corporate strategy (Judge & Zeithaml, 1992; McNulty & Pettigrew, 1999) and providing access to resources (Pfeffer, 1972, 1973; Pfeffer & Salancik, 1978). These studies have investigated both the direct effect of board attributes on firm performance (e.g., Dalton, Daily, Ellstrand, & Johnson, 1998) and indirect effects. Indirect effects have been studied by looking into specific board decisions and behaviors (such as adoption of poison pills (Brickley, Coles, & Terry, 1994: Coles & Hesterly, 2000) or paying greenmail (Kosnik, 1987)) rather than direct performance measures. Performance measures that have been studied have included both market based measures such as share price (Pearce & Zahra, 1991) or Tobin's *q* (Barnhart, Marr, & Rosenstein, 1994)) and historical or accounting based measures such as return on assets (ROA) (Cochran & Wood, 1984; Hoskisson, Johnson, & Moesel, 1994) or return on equity (ROE) (Baysinger & Butler, 1985).

The trend in these studies highlights that board roles have evolved over time. The historical view of boards as largely ceremonial bodies (Mace's (1971: 90) "ornaments on the corporate Christmas tree") has given way to an increasingly active body seen as ultimately responsible for corporate success (Cohan, 2002; Sonnenfeld, 2002). The basis of this activity (or role set) that boards need to execute to achieve effectiveness is, however, conceptualized in different ways by researchers (e.g., see Hung, 1998; Johnson, Daily, & Ellstrand, 1996; Lipton & Lorsch, 1992; Pettigrew, 1992; Zahra & Pearce, 1989).

While there are these differences in terminology and classification systems, governance review literature clearly identifies three key activities that a board needs to fulfill whether it is publicly listed, privately owned, not-for-profit or government controlled (Johnson et al., 1996; Zahra & Pearce, 1989). These three roles of the board are: (1) controlling the organization (including monitoring management, minimizing agency costs and establishing the strategic direction of the firm); (2) providing advice to management and (3) providing the firm, through personal and business contacts, access to resources (including access to finance, information and power).

The collective strength of these three roles determines the required capabilities of any board if it is to effectively govern the company that it leads. The nature and balance of these tasks will, however, vary from firm to firm and can also change as the company evolves (Johnson, 1997). The result is that all firms are not alike in terms of governance needs. In companies where there are alternative effective monitoring forces on the firm as outlined by those advocating a "substitution" effect for control of agency costs (for instance, a concentration of share ownership) (Dalton, Daily, Certo, & Roengpitya, forthcoming: 21), effective governance of a company will be more reliant on the board's ability to provide salient advice to management and access to limited resources such as information or key contacts (Pfeffer, 1972). But in industries where there is significant complexity and or rapid growth, the board will necessarily need to take a much stronger role in controlling the organization. Thus, effective governance is not a function of board capability per se, particularly with respect to a single role such as monitoring, but of the requisite mix of roles that a board needs to be able to deliver. Some very mundane companies such as regulated utilities may require highly specialized boards – such as those that possess key government contacts. Other more competitive industries may require a better-rounded set of roles to be effectively implemented (Pfeffer, 1972).

The three roles of the board determine effective governance because they influence the strategic direction of the company in different but complementary ways. For instance, providing access to resources (capital, power, unique production facilities) allows the firm to consider strategies that other firms may not have the ability to pursue. By contrast, when providing timely and valuable advice to management the board of directors can influence strategic initiatives through the generation of novel approaches (Westphal, 1999), but more likely as a result of rigorous testing and questioning to overcome possible management bias such as groupthink (Janis, 1982). Finally, the board does have the ultimate legal responsibility for the control of the organization and is empowered (subject to relevant legislation and constitutional requirements) to mandate the strategic direction of the company. The control role also has a significant impact through the monitoring function because this ensures that a management team is implementing an established strategy.

As a result, we would contend that:

P1a: Board effectiveness depends on the execution of a set of three board roles, namely controlling (and its subset of monitoring), providing advice/counsel and providing access to resources; and

P1b: Board effectiveness will be positively associated with firm performance.

The role set required of an individual board is, we contend, a function of three elements. These are the characteristics of the firm, the industry and the economy. This is because a particular board behavior that is advantageous for one corporation may prove "inappropriate or even detrimental in another" (Heracleous, 2001: 170).

The key determinants of these three elements are shown in figure 1. Economic and industry determinants are relatively stable, but can change over time as an economy and industry evolves (Porter, 1985). In contrast, firm characteristics can be subject to rapid and significant change. Any shift in these elements can change the overall and relative strength of role set a board needs to provide their firms. As a result, from a governance perspective the most important trends for a company to track are those that affect the role set of the board.

INSERT FIGURE 1 ABOUT HERE

If the three board roles and their structural determinants were solely a function of external characteristics, then effective governance would rest heavily on selecting the right directors and understanding these characteristics better than competitors. While these are essential tasks for any company, and are the essence of good governance in most organizations, a board is rarely captive to the human capital of its directors. This is because the nature of governance in any organization will change (Johnson, 1997). Indeed, many boards fail to make appropriate use of the skills and abilities of the directors that they already employ. For instance the Enron board contained a former Stanford dean and accounting professor, the former CEO of insurance company, the former CEO of an international bank, a hedge fund manager, an Asian financier and an economist, who was the former head of the US Commodities Futures Trading Commission. Despite the vast array of talent available, the board failed to provide advice or control the company because the processes and or board dynamics led to the situation where they did not understand the key financial risks facing the firm (Sonnenfeld, 2002).

Similarly, a firm through its own activities and strategies will shape the roles required of a board. For instance, as a company grows in complexity, the ability of the board to provide meaningful operational advice may diminish. Or if a company commences a foreign exchange hedging function, the monitoring and control role of the board may need to alter substantially to take in this area (for example, the AWA case in Australia (Baxt, 2002)). If a firm can through their lifecycle and strategy shape the roles required of the board it can then fundamentally affect the requirements of the board itself. Thus, the governance of successful companies will always need to be aligned with firm requirements.

In response to a change in the environment, companies often alter their governance practices. But changes in a company's governance structures and practices can be a double-edged sword, because just as a change in governance can bring about a positive impact and improvement, it can also destroy other governance outcomes. For instance, the introduction of greater board independence is thought to improve the monitoring and control function of the board (Fama & Jensen, 1983). However, it also appears that more independent directors may negatively impact on the board's ability to provide service or advice to the CEO (Westphal, 1999). Similarly, the board's ability to effect strategic change is related to its understanding of alternative strategic approaches – those in other industries (Westphal, 1999). This would, however, most likely lead to a less detailed understanding of the specific attributes of the firm currently being governed. Third, a director who can provide access to certain resources, particularly finance or power may find the need to exercise reciprocal favors to secure those resources. For instance, in financially troubled firms it is not unusual for the lending institution to require a seat on the board if they are to lend to the company in question (Richardson, 1987). This means that, while access to resources is improved, the ability to execute strategy may be constrained or the service role of the board inhibited.

Often firms make changes to their governance without considering the long-term consequences. They often see a short term gain (for instance maintaining the status quo or being able to inform institutional investors that they comply with "best practice"), but they fail to anticipate the impact of the governance change on other aspects of the firm's direction and control. The recent calls for increasing board independence is a case in point. While there is no systemic evidence that board independence improves monitoring of management or corporate performance (Dalton et al., 1998), recent regulatory and practitioner calls have re-emphasized the need for greater board independence (Sweeney & Vallario, 2002). Given recent failures in the monitoring function of the board, this appears to be a logical conclusion. But by advocating a single ideal standard for all boards, advocates may have failed to identify several unintended consequences of increased independence. For instance, independent board members are less likely to be used as a sounding board by the CEO (Westphal, 1999), they are less likely to possess firm and probably industry knowledge to bring to bear on organizational challenges (Castanias & Helfat, 1991; 2001). This in itself is likely to impact on their ability to be involved in the strategic decision making function of the board. Thus, while a short-term boost in share price may result from the announcement of a board structure change, the long-term implications for exercising all the functions of the board remain unclear.

What is unfortunate, in a governance sense, is that we have not investigated the traits of leading organizations. Normally, a leader's actions have a disproportionate impact on the business environment. This is because many in the business community will seek to integrate any lessons that can be ascertained from the leader's actions (Porter, 1985). In the area of governance, however, we appear to be devoid of fresh ideas and approaches and are drawn back to either motherhood principles such as integrity or unsubstantiated popular notions of board independence. Instead we seek to highlight that a board's role set will vary and that board attributes will likewise need to match this role set. As such we propose that:

> **P2: External and internal contingencies moderate the relationship between board role execution and board effectiveness.**

As figure 1 highlights, this requires a contingency approach where various elements of a firm's operating environment may impact on governance requirements. In any particular firm, not all elements will be equally important and the particular elements that are important may vary. Each firm is unique and it will have its own idiosyncratic governance requirements. The governance framework we develop allows a board to see through the complexity that it faces and identify those factors that are critical to success in its circumstances, as well as identify those innovations that may lead to improved governance and profitability. The framework itself, however, does not reduce the need for fresh approaches and thoughtful action in governance – it is not a "tick the box solution". Quite the opposite, it highlights the complexity of the task facing each board and guides directors' attention to finding new ways to govern the companies that they control better. The framework aims to improve the chances of desirable corporate governance interventions. It is a holistic tool that focuses boards on how their governance system as a whole operates.

The Intellectual Capital of the Board

The second central question that researchers face in investigating governance effectiveness is a board's relative ability to carry out the role set required of it. The match between the board's attributes and the role set required of it will determine the effectiveness of a company's governance. A firm that can provide a fit between the skills, abilities and competencies of the board, its governance system and the roles required of the board may well be able to provide effective governance even it does not meet normative guidelines for best practice. Similarly, a board that concentrates on addressing normative guidelines without taking its operating environment (and so required role set) into account may well, despite its best intentions, provide ineffective governance.

The first fundamental basis of assessing the ability of the board to match its role set lies in analyzing its intellectual capital. By intellectual capital we are utilizing a concept of emerging interest for research scholars (e.g., see Bassi & Van Buren, 1999; Bontis, 1999; Brooking, 1997; Keenan & Aggestam, 2001; Petrash, 1996; Roos, Roos, Dragonetti, & Edvinsson, 1997; Stewart, 1997; 2001; Sveiby, 1997). In particular, we have adapted Stewart's (1997) terminology to conceptualize the intellectual capital of the board as *"The intellectual resources such as knowledge, information, experience, relationships, routines, and procedures that a board can employ to create value".*

This definition provides a wide variety of board attributes that impact on effective governance. These attributes all fall within one of three sub-domains, namely human capital, social capital and structural capital.

Human Capital: The Knowledge, Skills and Experience Present on the Board

Human capital has, along with physical capital, been seen as one of the "key resources for the firm that facilitate productive and economic activity" (Nahapiet & Ghoshal, 1998: 245). In the management context, human capital has been variously described as the "innate and learned abilities, expertise, and knowledge" of actors

(Castanias & Helfat, 2001: 662) and the "tacit knowledge embedded in the minds of managers" (Bontis, 1999: 443). Human capital is often viewed as the basis for all intellectual capital, as the raw intelligence of members is exogenous to the board (Bassi & Van Buren, 1999) and so forms the basis of the capacity for directors to act.

Most boards face a myriad of tasks and a common concern echoed in the normative literature relates to a board's composition reflecting its human capital needs (Charan, 1998; Conger, Lawler, & Finegold, 2001). While the presence of human capital is not equivalent to the effective use of that capital, the ability of the board to provide advice to management and, arguably, to monitor management "depends on their expertise and ability to fully comprehend a firm's business situation" (Castanias & Helfat, 2001: 673). Thus, we would anticipate that a board's composition would determine its human capital and lead to different board actions/activities and outcomes.

Although human capital appears to be an important resource of the board, there is relatively little direct empirical investigation of the effect of board human capital on firm performance. Instead, studies have tended to apply human capital theory (Becker, 1964) to the CEO (Castanias & Helfat, 1991; 2001; Finkelstein & Hambrick, 1996) and top management teams (Harvey, 2000; Hitt, Hoskisson, Harrison, & Summers, 1994). While there is a significant overlap between boards and TMTs, we would agree that the relatively unique group attributes of a board of directors (e.g., see Forbes & Milliken (1999) for an overview of these traits) together with the unique nature of board tasks warrants focused treatment separate from that of management. This view is reinforced by one of the few studies into board "knowledge structures" where, applying a socio-cognitive approach, Carpenter and

Westphal (2001) found that differences in prior board experiences were correlated with differences in director involvement in strategy decision-making.

Human capital also has the potential advantage of differentiating a firm. Since skill differentials between directors "both in the types of skills that individuals possess, and the degree of skillfulness" (Castanias & Helfat, 1991: 160), there is a distinct heterogeneity in the skills set of the peak decision-making body of the corporation. In his classic work on the resource-based view of the firm, Barney (1991) argued that imperfect mobility and heterogeneity are key sources for competitive advantage and rent generation. Thus boards, through their unique combination of skills, are a potential source of advantage for the firms they govern.

Prior research into the human capital of managers has focused on a nested series of constructs comprising generic, related-industry, industry-specific and firm-specific skills (Castanias & Helfat, 2001). This traditional managerial focused definition can be expanded to include functional knowledge and skills (including human resources, marketing, finance and business) and areas relevant to a firm's interaction with its environment, such as law (Forbes & Milliken, 1999). We would also include a level of board-specific skills that seeks to directly measure the skill set of the directors related to a board. We propose that:

P3: The human capital of the board (i.e. the board's knowledge, skills and abilities) enables the board to carry out the series of roles required of it.

Social Capital: Facilitating Instrumental Action

In addition to the knowledge, skills and abilities of directors, our model is concerned with the social ties that directors bring to an organization. The broad nature of the construct has lead to statements such as that of Narayan and Pritchett

(1999: 871) who comment: "Social capital, while not all things to all people, is many things to many people" and has meant that its validity has been questioned (e.g., Baron & Hannon, 1994; Fine, 1999). Adler and Kwon (2002) argue, however, that social capital is indeed a valid construct and it relates to the elements of social structure that form a resource for social action (Baker, 1990; Burt 1992; Coleman, 1990). We define social capital as (adapted from Leenders & Gabbay, 1999: 3):

> *The implicit and tangible set of resources available to assist a corporate player in goal attainment by virtue of all relevant social relationships available to members of the organization.*

Over the past several years, a range of scholars including sociologists, political scientists and economists have begun to use the concept of social capital to investigate a broad array of questions (Adler & Kwon, 2002). This is because the breadth of the concept applies to numerous elements of social and organizational life. For instance, studies have focused on the individual (e.g., Lin & Dumin, 1986, Burt, 1997; Gabbay & Zuckerman, 1998; Seibert, Kraimer & Liden, 2001), groups and business units (e.g., Rosenthal, 1996), inter-unit resource exchange (Tsai & Ghoshal, 1998), the firm (e.g., Baker, 1990), as well as inter-firm learning (Kraatz, 1998).

Since a necessary (but not sufficient) condition of social capital is a link between individuals, these empirical investigations highlight the fact that social capital exists at several different levels in an organization. Thus, because social structures exist within groups, between groups and between the organization and the external environment, the social capital of the board will lie at three levels: intra-board relationships, board-management relationships (particularly between the board and the CEO and management) and extra-organizational relationships.

In addition to the location of the source of social capital, the construct itself is multi-dimensional (Nahapiet & Ghoshal, 1998; Adler & Kwon, 2002). This is because social capital is dependent on the individual "tie" or connection and the nature of that tie (e.g., see Granovetter's (1992) discussion of relational and structural embeddedness). Thus, any valid social capital measure must look to two items. The first is the network ties between actors (Scott, 1991) and configuration of these linkages (Krackhardt, 1992), while the second is the nature of these ties. Nahapiet and Ghoshal (1998: 244) see the "key facets" of these ties as being "trust and trustworthiness, norms and sanctions, obligations and expectations and identity and identification".

To summarize, the social capital of the board lies in three levels; at the intra-board level it can be characterized as a "bonding" form of social capital between directors, at the extra-organizational level it forms a "bridging" type of social capital between the board and external organizations and at the board-management level it has elements of both "bridging" and "bonding" social capital (Adler & Kwon, 2002: 19). Further, at each level of social capital, it is necessary to identify the multidimensional nature of the social capital, that is to say the physical tie and network structure and also the character of that tie.

Since social capital enables the use of resources through a tie at three levels, we have three propositions: The first deals with extra-organizational social capital whereby the board can co-opt external resources for use by the organization. This would directly impact the access to resources role and provide responses such as information for the remaining role set. Thus we propose that:

P4: Extra-organizational board social capital facilitates the execution of board roles.

However, unlike extra organizational social capital, both intra-board and board-management social capital are concerned with the use of resources within the company. Rather than directly affecting the execution of the role set, intra-board social capital will moderate the relationship between board human capital and board roles. It is the nature and structure of the social ties that will impact on how well the board uses individual director human capital. Thus,

P5: Intra-board social capital moderates the relationship between human capital and board roles.

Similarly, board-management social capital relates to the use of the board's human capital by the management team and we would expect that:

P6: Board-management social capital moderates the relationship between human capital and board roles.

Board Structural Capital: The Value of Routines

In addition to board attributes captured by the two constructs of human and social capital, we note that the board's internal processes differ between corporations (Pearce and Zahra, 1991). This is because a board's routines, policies and procedures are, in effect, a set of codified knowledge that has an ability to build competitive advantage (Bontis, 1999). This codified knowledge, both explicit and tacit, has been conceptualized as structural capital (e.g., Bontis, 1998: 65; Edvinsson & Sullivan, 1996: 19; Saint-Onge, 1996: 20; Stewart, 1997: 74). It is the board's structural capital, its routines, processes, procedures and policies that facilitate the board's use of its human and social capital.

While the constructs of human capital and social capital are rooted in the attributes of the individual (Castanias & Helfat, 2001), structural capital is a function of the group, in this case the board. Board structural capital refers to the corporate governance routines of an organization (adapted from Bontis 1999: 447). According to the Oxford Thesaurus "routine" is a synonym for "procedure, practice, pattern, regime ... schedule, method, system, order, ways, customs, habits". As Bontis (1999: 447) notes, the "construct deals with the mechanisms and structures of the organization" that can "turn individual know-how into group property". Thus, in the case of a board, the term "routines" can encapsulate the shared knowledge of the group, both tacit and explicit (see Bontis, 1999; Edvinsson & Sullivan, 1996; Saint-Onge, 1996; Stewart, 1997) that acts to facilitate the functioning of the board.

Recognition of the potential importance of structural capital to board effectiveness has a long, if not explicit history (e.g., Vance, 1983; Mace, 1971; Lorsch & MacIver, 1989). In particular, significant research effort has focused on the impact of committees (e.g., Klein, 1998), most notably the audit committee (Klein, 2002), remuneration committee (Conyon & Peck, 1998) and nominating committee (Vafeas, 1999) with findings that there is a link between the presence of board committees and board effectiveness. Additionally, several other key elements of board structural capital have been examined. For instance, the board agenda has been shown to focus the work of the board (Inglis & Weaver, 2000) and that operating performance of a corporation improves following years of abnormal board activity (Vafeas, 1999). Finally, the decision making style of the board has been linked to corporate performance (e.g., Peace & Zahra, 1991).

The academic investigation of the structural capital of boards is supplemented by normative interest in the topic. The emergence of "codes of best practice" drawn up by institutional investors (e.g., the California Public Employees' Retirement System (CalPERS)), national regulatory authorities (e.g., Australian Securities and Investments Commission; Securities and Exchange Commission), stock market regulations (e.g., the requirement for an audit committee under New York Stock Exchange listing rules) and global institutional guidelines (e.g., the OECD Principles of Corporate Governance (OECD, 1999)) highlight the importance placed on attributes of the board by practitioners. Likewise, advice from governance handbooks stresses the importance of policies, procedures and processes (e.g., Charan, 1998; Lorsch & MacIver, 1989; Conger, Lawler, & Finegold, 2001).

Board structural capital appears to work as an enabler of the human capital possessed by the board – a point we return to later. For this reason, we note that researchers can operationalize the construct in two ways. First, as a generalized construct applying to all board routines, researchers could operationalize structural capital by asking board members to gauge, using Likert-type scales, the board's assessment of its structural capital. Such items could include statements such as the following: "Board processes support the work of the board" and "Board policies inhibit the work of the board" (reverse coded). Second, where a particular element of structural capital is theoretically important for the relationship to be studied (for instance, if the one preserve of an audit committee is seen as important to the monitoring role of the board) then the researcher may instead concentrate on operationalizing that aspect of structural capital just as human capital researchers concentrate on a specific element of human capital, for example, functional background (e.g., Ocasio & Kim, 1999; Pelled, Eisenhardt, & Xin, 1999; Westphal & Milton, 2000). Since the purpose of this paper is to outline an integrative model, not present a thesis on the nature and dimensions of board structural capital, we would point out that the inclusion of this construct highlights an important consideration for researchers in the field. In particular we propose that:

P7: Structural capital moderates the relationship between human capital and board role execution.

The complete model is outlined in figure 2.

INSERT FIGURE 2 ABOUT HERE

Conclusion

Since the board is the company's ultimate decision-making body, it is important that we develop an understanding of how this group may in fact impact on corporate performance. The problem is that despite over 20 years of research, the area is "still in its infancy" (Pettigrew, 1992). This is highlighted by Stiles and Taylor (2001: 7) who note that there is a "dearth of strong descriptive data on how boards of directors perceive their role and in what respects they can influence the performance of the firm."

Our objective in this paper was to outline a theoretical framework that draws together existing research to help us understand how a board's skills, resources and attributes allow it to undertake its roles. We contend that this is an important step in understanding the hitherto elusive links between corporate performance and boards of directors. The contingency basis and intellectual capital taxonomy provided by this framework can assist researchers seeking to understand this important relationship.

From a research perspective, the framework we outline has several important implications. First, it highlights the important contingent factors that need to be addressed or controlled in any robust governance study. For instance, are firm, industry and economic characteristics common across the sample under study? If not, can the researcher justify that we can expect a similar role set (and effect on performance)? Second, it highlights several possible interactions in board characteristics that require similar treatment. If a researcher is interested in board independence, for example, does the study control for or explain any likely impact of associated characteristics (such as less advice giving (Westphal, 1999))? Third, it also highlights the important implication of possible interaction effects between management effectiveness and corporate performance.

While the model provides measurement and analysis challenges, it also lays open several interesting alternatives for further investigation. For instance, with the framework as outlined, researchers may look to isolate specific contingency conditions, such as regulated industries (Pettigrew, 1992), to investigate a particular role of interest. Alternatively, it is possible to examine the link between a specific element of intellectual capital, such as human capital, and trace its impact onto a specific board role(s). It also reminds the researcher of the importance of examining the often-neglected social processes at work in any group.

From a practitioner's perspective, clarifying the various attributes of the board that lead to effective board performance has the potential to improve performance significantly. The model can form the basis for understanding the specific corporate governance needs of a particular company and assist boards and their advisors to recruit appropriately skilled individuals. It can also act as a basis for self-assessment and ongoing development of existing board members.

From a public policy angle, future research based on the intellectual capital framework has the potential to inform high profile governance debates, such as the role of, and need for, independent directors.

The intellectual capital framework is an important step in the corporate governance research agenda. It complements recent advances in process-orientated research into corporate governance and allows for an elaboration of recent research into organizational demography manifested at several organizational levels. Just as importantly, we believe it provides practitioners and their advisors with a research-based, holistic framework aimed at improving governance performance for the benefit of all.

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Figure 1: Contingency factors impacting on board role requirements

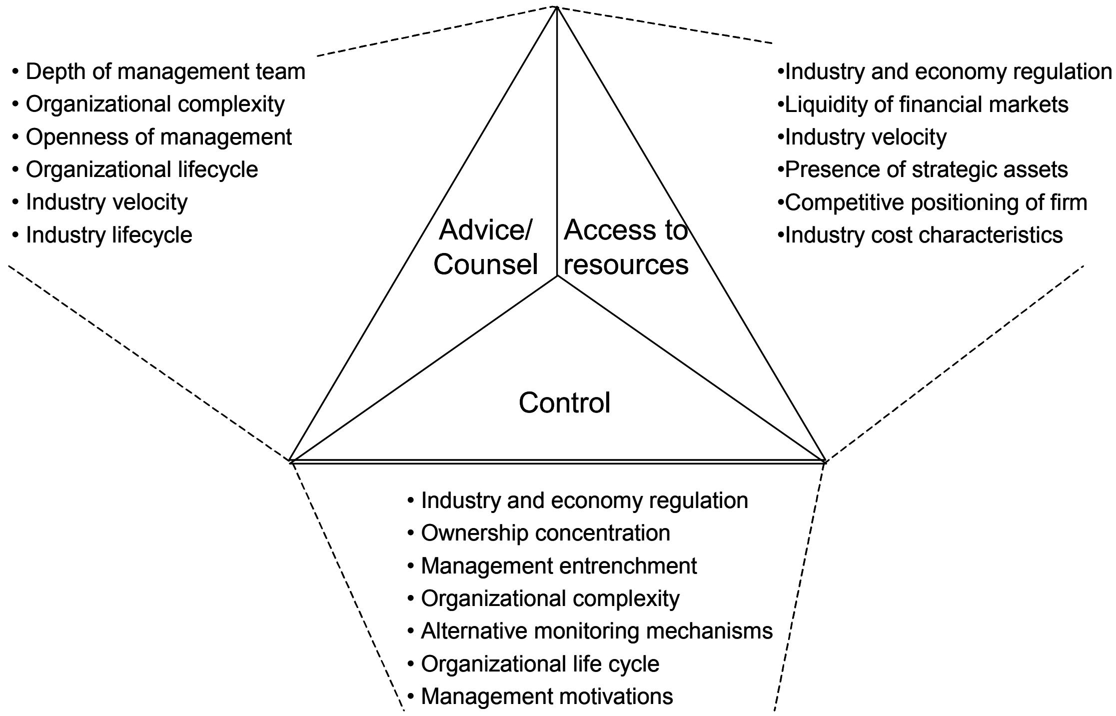
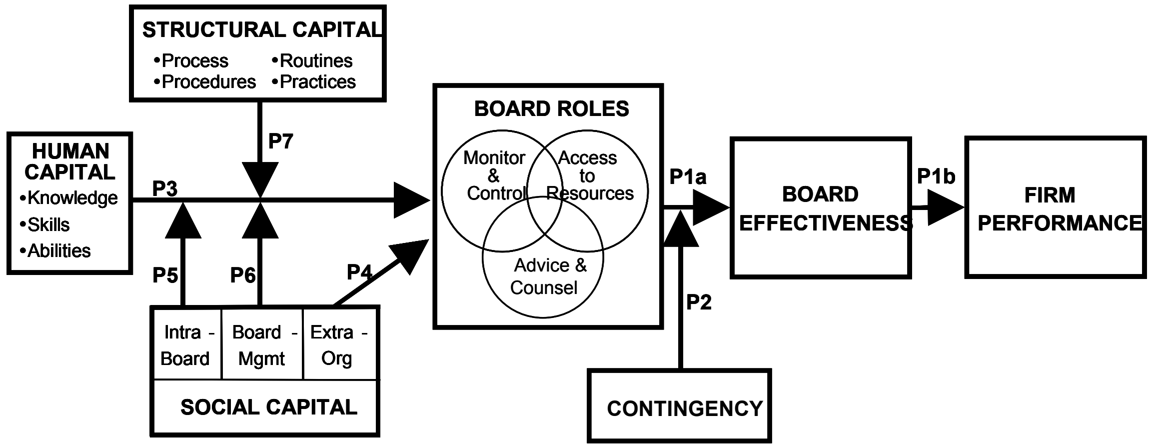


Figure 2: Intellectual Capital Framework of the Board



ENDNOTES

1. We take the view that by definition the firm may not mean the same thing as shareholders. This is as much a philosophical question as a management one, in that the firm may be seen to be operated in the interests of stakeholders or a specific subset of stakeholders such as shareholders.