Building Director Involvement in Strategy
The key Role of Information Processes

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Abstract

This study is based on the results of a survey of 161 Canadian companies. It examines how two processes aimed at reducing information asymmetry between management and corporate boards (information management systems and board development programs) impact board involvement in strategy. The findings generally confirm that efforts to improve information management systems and board development programs do result in increased strategic involvement.

Introduction

Stakeholders' expectations of corporate boards have changed dramatically over this last decade. While boards were once asked only to review past corporate performance and either accept or reject management's plans and analyses, they are now expected to participate actively in strategy formulation and implementation (Adams and Ferreira, 2007; Zahra and Pearce, 1990). However, with boards being asked to play a more significant role in the strategic process, the policies, the processes and structure implemented to assist directors with their new task must be examined closely. Specifically, processes meant to reduce information asymmetry between companies and their corporate boards have been of particular interest to academics and practitioners alike. Moreover, now that most North American listed companies have a majority of outside directors on their boards (Business Roundtable, 2008), information asymmetry problems have become more significant: Outside directors typically do not possess the same access to company information as executive directors, nor do they have the same company-specific knowledge (Roberts *et al*., 2005; Rutherford and Buchholtz, 2007). This information and knowledge imbalance can have a significant impact on a board's ability to create and protect shareholder value by providing sound advice to senior management and monitoring whether the company is positioned to achieve long-term success.

To promote board involvement in strategy, many have suggested that management needs to provide its directors with appropriate information and should develop appropriate educational and orientation programs to build and maintain their directors' skills and knowledge (Epstein and Roy, 2007; Roberts *et al.*, 2005). The focus of this study is on two specific processes meant to reduce information asymmetry (information management and director development) and how they impact board involvement in strategy. When examining information management issues, our focus is on two information characteristics (the type of information and the access directors have to numerous sources of information). In regards to director development issues, we examine two board programs that aim to supporting director development (orientation and education

programs). By examining these issues, we aim to contribute to the literature on governance by providing much needed empirical evidence on board functioning, particularly on information-related issues (Rutherford *et al.*, 2007). Furthermore, with most surveys reporting that directors still do not have appropriate information and knowledge to help them fulfill their emerging roles and responsibilities (McKinsey 2008; Deloitte, Touche, Tohmatsu, 2007; Johanson, 2008), we aim to provide guidance to organizations as they evaluate the informational and educational needs of their directors. When examining these board processes, we hypothesized that because they reduce information asymmetry, more efficient information management and director development programs would improve the board's involvement in strategy. These hypotheses were tested through a survey of 161 Canadian companies listed on the Toronto Stock Exchange. Findings generally confirmed that efforts towards improving information management systems and board development programs resulted in increased strategy involvement.

The paper is organized as follow. The first section presents the literature review and conceptual framework. The second and third sections present the methodological aspects of the study and its main results, respectively. A discussion of the results, along with their implications for future research and managerial practices, is presented in the last section.

Conceptual framework and hypotheses

The board's role in strategic oversight has long been debated (McNulty and Pettigrew, 1999; Pugliese and Wenstøp, 2007). Although regulators, academics and governance practitioners agree that boards should be involved in strategic management, there are divergent views about the type and degree of that involvement. In this study, two board processes are examined as potential determinants of directors' involvement in strategy: (1) board development processes and (2) information management processes (see figure 1).

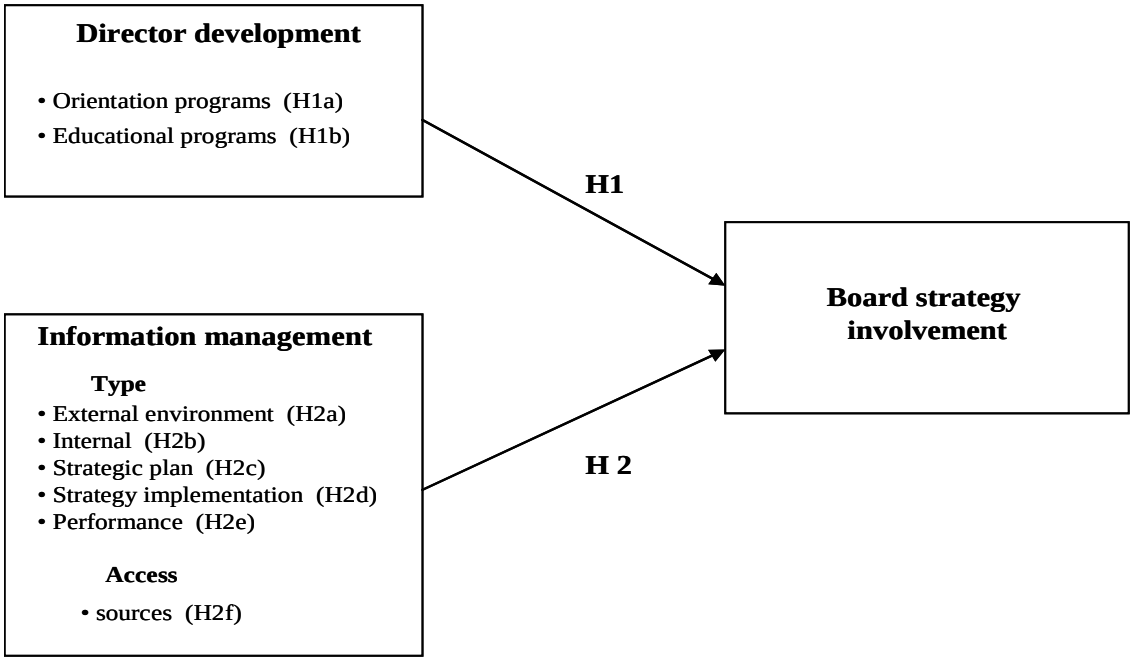

Figure 1: Conceptual framework

Developing board skills and knowledge

The first element of the framework resides with activities related to developing directors' skills and knowledge. Academics have been increasingly examining the skills and knowledge of corporate directors as potential determinants of board strategy involvement. Results of such studies have emphasized the critical role knowledge and skills play in increasing board involvement as they provide the resources to understand strategic issues and contribute meaningfully to strategy development and evaluation (Pugliese and Wenstøp, 2007; Roy, 2009; Ruigrok *et al.*, 2006).

While most studies have focused on the characterization of boards' skills and knowledge at a certain point in time, the focus of this study is on processes implemented to develop them. This objective echoes the growing attention given to human resources practices such as recruiting, rewarding and learning as potential sources of competitive advantage (Wright *et al.*, 2001). As seen in Figure 1, the proposed framework focuses on director educational and orientation programs. The objective of typical orientation programs is to familiarize directors with the company's operations and industry and to provide them with a clear understanding of their role (Long, 2008). While orientation programs are primarily designed for newly appointed directors, education programs focus on building and maintaining both new and existing directors' competencies on a variety of topics that are necessary for effective monitoring and strategy involvement.

Because board orientation and education programs are still relatively recent, we know little about the actual quality of these programs and their impact on board performance. When examining the information Fortune 500 companies disclose about their educational programs, Roy (2008) has called attention to the generic and non-specific nature of the information provided in corporate governance guidelines. That said, there is empirical evidence suggesting that these programs can have a positive impact on board performance: Brown (2007) examined these issues with non-profit organizations and found that orientation activities had a significant positive impact on whether the board members were perceived as competent. He also found that board members' competencies were significantly related to board performance. The arguments presented above suggest that processes aimed at developing directors' skills and knowledge should increase board involvement in strategy, hence we formulate the following hypotheses:

- Hypothesis 1a: Efforts devoted to director orientation programs are positively related to board strategy involvement.
- Hypothesis 1b: Efforts devoted to director education programs are positively related to strategy involvement.

Information management

The second element of the conceptual framework resides in information management decisions. When assessing the quality of an information strategy, three essential criteria are widely recognized in the literature: timeliness, reliability, and relevance (Rutherford and Buchholtz, 2007). As seen in figure 1, two aspects were investigated in this study: By examining the type of information directors received and the number of information sources they could access, this study focuses on the relevance and reliability of information. Regarding the relevance of information, most surveys have demonstrated that directors still do not have appropriate information to help them fulfill their current and emerging roles and responsibilities. For the most part, board information still includes traditional accounting-based performance measures such as earnings and return on investment to assess corporate performance (McKinsey 2008; Deloitte,

Touche, Tohmatsu, 2007; Johanson, 2008). Yet, many have denounced the limitations of financial accounting information as a management tool because it focuses attention on historical figures (Kaplan and Norton, 1992; Ittner and Larcker, 1998). Traditional financial measures are typically viewed as lagging indicators, measuring current and past performance but not adequately predicting future performance. However, involvement in strategy decisions requires information that allows for better insight into the organizations' future competitive position.

In order to provide boards with more relevant and balanced information, Epstein and Roy (2007) proposed an information package that includes financial and non-financial information and which also reflects the traditional stages of the strategic management process [(situation analysis (industry and internal competencies information), strategy formulation, implementation process, evaluation and control)]. This type of information could allow for a better understanding of the various steps and decisions that lead to the formulation of a coherent strategy to pursue the firm's mission as well as the setting of an implementation plan and control mechanisms. The second aspect addressed in this study is the reliability of the information provided to corporate boards. This aspect is of significant importance as information can be used to exercise power over boards; management can indeed hold, conceal, or manipulate information (McNulty and Pettigrew, 1999). While financial information is subject to specific regulation and auditing, general management information is not (Johanson, 2008). Hence, pressures to increase access to a broader range of sources have mounted in recent years (Charan, 2005). The arguments presented above suggest that processes aimed at improving the quality of the information strategy should enhance board involvement in strategy. More specifically, we predict that an increase in information related to the different stages of the strategic process will increase strategy involvement. We also predict that an increased access to a wider variety of informational sources will also enhance board involvement in strategy.

- Hypothesis 2a: Increased information about the firm's external environment will enhance board involvement in strategy.
- Hypothesis 2b: Increased information about internal metrics will enhance board involvement in strategy.
- Hypothesis 2c: Increased information about strategic decisions will enhance board involvement in strategy.
- Hypothesis 2d: Increased information about strategy implementation will enhance board involvement in strategy.
- Hypothesis 2e: Increased information about corporate performance will enhance board involvement in strategy.
- Hypothesis 2f: Increased information access will enhance board involvement in strategy.

Methodology

Data collection and sampling

A sample consisting of the 600 largest Canadian public companies listed on the Toronto Stock Exchange (based on sales) was selected from Standard and Poor's Compustat database. This group included service, resources and manufacturing firms. The survey was conducted by telephone by a specialized survey firm over a three-month period. The pre-tested questionnaire used for this study was computerized using the Interviewer system, which allows for 100% authentication of data entry; the questionnaire had an average duration of 19.7 minutes. Because

of their key role in corporate and board issues, corporate secretaries were contacted for the interviews. Of the 600 companies in the sample, 369 were excluded for the following reasons: discontinued or incorrect telephone numbers (n=29); or unreachable after 55 attempts (n=340). Therefore, the final sample consisted of 231 companies. Of these, 12 did not complete the questionnaire while 58 refused to participate. The survey thus generated 161 usable questionnaires, for a response rate of 26.7%.

Metrics

- Information type

A list of information items was presented to the respondents. Using Likert-type scales (where 1 = very little and 5 = very much), the respondents were asked whether directors received these information items. Items were grouped into five categories based on the typical strategic management process. For each category, items were averaged to produce an index: industry information ($\propto$ = 0.81), organizational performance information ($\propto$ = 0.71), internal competency information ($\propto$ = 0.63), strategic information ($\propto$ = 0.80) and strategy implementation information ($\propto$ = 0.72). The list of items was adapted from Epstein and Roy (2007).

- Information – access to external information sources

Using Likert-type scales (where 1 = very little and 5 = very much), the respondents were asked to evaluate to what extent directors had access to five external sources found in the literature (Tashakori and Boulton, 1983; Charan, 2005). The items were then averaged to produce an index.

- Education programs

Using Likert-type scales (where 1 = completely disagree and 5 = completely agree), the respondents were asked to appraise their board education programs against five statements describing best practices extracted from the literature (NACD, 2001; Shultz, 2001). The items were then averaged to produce an index.

- Orientation program

Using Likert-type scales (where 1 = completely disagree and 5 = completely agree), the respondents were asked to appraise their board orientation programs against five statements describing best practices extracted from the literature (NACD, 2001; Shultz, 2001). The items were then averaged to produce an index.

- Strategic involvement

Using Likert-type scales (where 1 = very little and 5 = very much), the respondents were asked to evaluate the extent to which directors were involved in five strategic aspects derived from the literature (Zahra and Pearce, 1990; OECD, 2004). The items were then averaged to construct an index that produced a Cronbach's alpha ($\propto$) of 0.76.

Four variables were selected to control for organizational characteristics and board demographics. These variables were included in the analysis because they were expected to correlate with one or both of the dependent variables. Company size was measured using the number of employees; age was calculated as the number of years since the company was founded. As regards board demographic variables, independence was measured as the ratio of independent directors to the total number of directors; board size was calculated as the total number of directors.

Table 1: Construct Items and Reliability

Variables	Items	∝
Education programs	1. Directors receive continuing education on current issues facing the company 2. Directors receive education on emerging issues 3. Formal evaluation of director skills and competencies 4. Educational programs to remedy performance deficiencies identified 5. A majority of directors have participated in our educational program	0,77
Orientation program	1. Providing material regarding the company's business and operations 2. Visits to the company facilities 3. Meetings with key company personnel	0,65
External environment information	1. Technological forecast 2. Industry information and trends 3. Regulatory, political, and economic information 4. Competitor intelligence (major initiatives and positioning)	0,81
Internal information	1. Employee satisfaction (for example, retention, turnover) 2. R&D investments 3. Strengths and weaknesses analysis of the company	0,63
Strategic plan information	1. Five-year strategic plan (long term corporate strategy) 2. Operating plans 3. Annual strategic plan 4. Major capital expenditures, acquisition, and divestures 5. Reports of major risk factors	0,80
Implementation information	1. Progress report on major capital expenditures, acquisition, and divestures 2. Progress report on strategic plan 3. Reports on operating variances (deviation/shortcomings from original plan)	0,71
Corporate performance information	1. Reports on operating performance (for example productivity or quality data) 2. Reports on financial performance (overall corporate financial performance) 3. Competitive positioning of the company (market share, pricing, quality)	0,71
Information access	1. Company managers 2. Company book and records 3. Company plants and facilities 4. Outside consultants 5. Outside legal counsel	0,71
Strategy involvement	1. Adopting a strategic planning process 2. Reviewing the strategic plan 3. Monitoring corporate performance 4. Overseeing major capital expenditures, acquisitions and divestitures 5. Monitoring the implementation of the strategic plan	0,76

The various constructs were examined to assess reliability and unidimensionality. Statistical reliability was assessed by computing Cronbach's alpha (∝). Ahire and Devaraj (2001) recommend a threshold of 0.50 for emerging construct scales and 0.70 for maturing constructs. Therefore, the coefficient values for the multiple-item scales employed in this study met these

requirements and were considered reliable (see Table 1). Principal component factor analyses were conducted to assess unidimensionality on construct scales. In each case, only one factor explained variance.

Results

Descriptive Statistics

The sample primarily consisted of large companies; the average number of employees was 3,529 (standard deviation = 7.181). Various sectors were represented, including resources (21.7% of sample), manufacturing (37.9%) and services (40.4%).

Table 2: Descriptive statistics and tolerance statistics

Variables	Mean	S.D.	Tolerance statistics
Board size	8,92	2,53	0,573
Independence	68,11	0,18	0,871
Employees	3 529	7 181	0,746
Age	35,92	32,17	0,739
Education	3,69	0,77	0,779
Orientation	4,23	0,55	0,682
External Inf.	3,69	0,82	0,479
Performance inf.	4,33	0,60	0,416
Internal inf.	3,58	0,79	0,524
Strategy inf.	4,13	0,68	0,248
Implementation.inf.	4,03	0,70	0,374
Inf. access	4,40	0,67	0,811
Strategy inv.	4,14	0,60	

Table 2 presents the mean, standard deviation, and tolerance statistics for the variables. A number of general conclusions may be drawn from Table 2. First, consistent with Canadian and US survey results, the average percentage of independent directors is relatively high (68.11%). Second, the results on the type of information directors are receiving are also consistent with most survey results, with directors primarily provided with historical data; the results suggest that directors are receiving (in decreasing order of importance): (1) performance-related information (including reports on operating and financial performance and competitive positioning); (2) information concerning company strategy (including strategic plans and acquisition projects); (3) strategy monitoring information (including progress reports and operating variance reports); (4) internal information (including internal data on key performance drivers); and (5) information concerning the external environment (including industry and competitor information). As regards information access and board development programs, Table 2 shows that directors apparently have access to a variety of sources (4.40/5) and that the companies in our sample have devoted more efforts to orientation programs than to education programs (4.23/5 vs. 3.69/5).

Examining the hypotheses

In order to examine the hypotheses, we ran regression analyses using SPSS. Table 2 provides tolerance statistics for the independent and control variables used in the regression models. Tolerance statistics values indicate whether an independent variable has a strong linear

relationship with the other independent variables. A minimum threshold of 0.2 ensures that there is no multicollinearity concern (Menard, 1995). The tolerance statistics of our variables are all above this minimum threshold. Results for the regression analyses are presented in Table 3. Four linear regression models were examined: In model 1, regression analysis was run on the control variables only. Model 2 includes both control variables and the independent variables associated with board development. Model 3 further includes independent variables associated with board information (type) whereas model 4 finally includes the independent variable related to informational access.

Table 3: Regression analysis: Dependent variable - strategy involvement

	Model 1 (standard coefficients)	**Model 2** (standard coefficients)	**Model 3** (standard coefficients)	**Model 4** (standard coefficients)
Control variables				
▪ Board size	-0,029	-0,109	-0,119	-0,044
▪ Company size	0,018	0,051	0,043	0,030
▪ Age	0,079	0,040	0,022	0,004
▪ Percentage of independent	0,138*	0,086	0,050	0,037
Board development				
▪ Orientation program		-0,089	-0,138	-0,060
▪ Education program		0,369***	0,244**	0,151**
Board Information				
▪ External information			-0,062	-0,047
▪ Internal information			0,124**	0,157**
▪ Strategy planinformation			0,481***	0,397***
▪ Implementation information			0,160**	0,197**
▪ Performance information			-0,055	-0,130
Board information sources				
▪ Information access				0,340***
Model summary				
R^2	0,024	0,136	0,480	0,575
Adjusted R^2	-0,013	0,085	0,421	0,521
F change	0,651	6,566	12,870	21,262

* p<0,10; ** p<0,05; *** p<0,01; **** p<0,001 (2-tailed)

Hypothesis 1 suggests that efforts towards the implementation of board development programs are positively related to board strategy involvement. Results only show support for

Hypothesis 1b (education programs); they do not provide any support for hypothesis 1a (orientation programs).

Hypothesis 2 states that increased information about each of the five stages of the strategic management process and increased information access will enhance board strategy involvement. Results indicate partial support for this hypothesis: Whereas we did not find specific support for hypotheses H2a, which focuses on information about the firm's external environment and hypothesis H2e regarding corporate performance information, results regarding information related to internal metrics (H2b), the strategic plan (H2c) and the implementation of strategy (hypothesis 2d) reveal a positive and significant impact on strategy involvement. With regards to Hypothesis H2f, results suggest that increased access to a wider variety of informational sources had a positive and significant impact on strategy involvement. Hence, results indicate that information obtained through increased access to company records, managers, consultants, or plant visits, can be useful in assisting the board with its strategy involvement tasks.

Discussion and conclusion

This study demonstrated that efforts to reduce information asymmetry through better information management and directors' development programs can translate into greater involvement in strategy. The results from the regression analyses provided support for most hypotheses and valuable insights into these issues. First, results about board development activities suggest that investing in director development does affect board strategy involvement. Although the actual quality of director development programs has been questioned (Roy, 2008), study findings have shown that education programs can have a positive impact on strategy involvement. These results probably reflect our strict characterization of educational programs: The construct used to characterize those programs includes best practices items such as the formal evaluation of director skills and the widespread participation of directors. However, results regarding orientation programs were not significant. More information about the quality and depth of these programs may clearly be necessary to assess whether they can really contribute to superior board performance.

Second, results about information management generally indicate that efforts to provide directors with more information can have a positive effect on board strategy involvement. They demonstrate that information has the potential to counter passive boards by further engaging directors in strategy. That said, an increase in two types of information did not seem to enhance strategy involvement. The non significant results found about the external information construct were somewhat surprising. Information about the industry such as its trends, its regulatory and technological environment and key competitors, constitutes strategic information on which are typically built strategic plans. As such, this type of information should be valuable for directors to truly evaluate the quality of the proposed strategies. These results may suggest that this type of information is more aligned with strategy formulation and is considered to be management's domain. This type of information may be considered too general and too disconnected for directors to find useful. The second type of information that was not positively and significantly associated with strategy involvement was the corporate performance construct. As showed in Table 1, the performance information construct is mostly comprised of historical data, some of which subject to external auditing: Reports on financial performance, reports on operating performance, and information about the company's competitive positioning. These results partly illustrate the potential limits and consequences that have been denounced by several authors (Kaplan and Norton, 1992; Ittner and Larcker, 1998). They have indeed underscored the

limitations of financial accounting information as a management tool because it brings attention to historical figures. Greater involvement in strategy requires information that allows for better insight into the organizations' competitive position in the future.

Results about greater access to a wider variety of informational sources indicate that efforts to establish communication channels with managers, employees or consultants can be beneficial. These results certainly validate requirements from some regulators to disclose how issues regarding directorial access to management and independent advisors are being addressed.

Study findings have globally shown the significant impact the type of information has on board behaviour and how management, through their information strategy, can shape their boards. And, as such, this study's findings contribute to the literature on governance by providing relevant empirical evidence based on primary data on this complex topic. Few studies have examined the actual impact of these information decisions on board behaviours. Another important contribution of this study is its detailed characterization of board information, drawing on insights derived from strategic process research. Amid ongoing criticism that boards are over-reliant on financial information, this study explicitly examines board information and how it influences board performance.

This study certainly has managerial implications and should provide guidance to organizations currently examining the functioning of their boards. Determining an appropriate information strategy that satisfies and balances the interests and needs of both management and directors is a challenging task. While directors may require more information, CEOs often fear that too much information can lead to undue interference. Furthermore, merely providing more information is not the solution. Information overload has been reported as a genuine problem that can divert directors' attention from important issues (Epstein and Roy, 2007). Moreover, it is not the board's responsibility to micro-manage the company, and making unreasonable requests for information can be time-consuming and create tensions with management. Hopefully, these results will encourage dialogue between management and directors to examine and evaluate their current information strategy. They need to examine whether the information they are providing is preventing directors to truly engage in strategy decisions. Furthermore, companies prepared to provide more information to their directors must also evaluate whether they have the ability to assimilate and comprehend this information. Therefore, any plan to provide directors with more information must be complemented with appropriate educational programs.

Although this study enhances our knowledge of the challenges and consequences associated with decisions regarding information management and board development programs, the results obtained must be interpreted in the context of its limitations. The study relies heavily on perceptual measures. Although perceptual measures are often used in managerial literature (Ketokivi and Schroeder, 2004), they may lead to desirability bias. However, getting access to the strategic and confidential information boards receive is challenging; given the complex and sensitive nature of these issues, qualitative analyses can be particularly appropriate. Case studies would allow for a more thorough examination of board information and would make it possible to further our understanding of these issues.

This study's findings and limits draw attention to several interesting venues for future research. While our study concentrated on education and orientation programs to improve the board's level of skills and knowledge, other processes such as the selection process and performance evaluation systems can all have an impact on overall board knowledge and skills. And, as such, these processes should also be examined closely. Also, as more consideration is being given to the information directors receive, increased focus should also be directed towards director's qualities such as diligence. Indeed, even if improved information is being sent out to

directors, and greater access to a variety of information sources is being established, there is no guarantee that directors will devote the appropriate time towards examining this material or taking advantage of these additional sources of information. Directors usually face many competing demands for their time and some do not devote enough time and effort towards the successful accomplishment of their responsibilities. In addition to near-perfect attendance at board and committee meetings, significant preparation before meetings is essential.

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