CORPORATE GOVERNANCE: AN ANALYSIS OF THE RELATIONSHIP BETWEEN QUALITY AND COST

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Abstract

The purpose of this study is to analyse linkages between the quality and cost of Canadian firms' governance practices. With this in mind, the study relates the compensation of chief executive officers (CEOs) and non-executive directors to best governance practice index developed by The Globe and Mail. We collected data for the years 2013, 2014 and 2015, constituting 602 observations from all the Canadian companies included in The Globe and Mail corporate governance ratings for which financial information was available on the Research Insight database. We examined the relationship between the quality and cost of Canadian firms' governance practices with a regression model. The analyses results tend to indicate some relationship between CEO and non-executive director compensation and the quality of governance practices. However, firm size appears to the determining explanatory factor. The study results also indicate that some activity sectors seem to have better governance practices than others.

Keywords: Corporate Governance, CEO Compensation, Non-Executive Director Compensation, Governance Practices

Authors' individual contribution: Conceptualization – S.B. and M.C.; Methodology – S.B. and M.C.; Formal Analysis – S.B and M.C.; Resources – S.B. and M.C.; Writing – S.B.; Supervision – Y.L.

1. INTRODUCTION

Since the first years of the 21st century, corporate governance practices have been the focus of numerous debates among key financial market stakeholders and academics. The financial scandals in the early 2000s also led to more stringent requirements respecting corporate governance practices in most Western countries (Martynova & Renneboog, 2014). According to the European Corporate Institute, 88 industrialised and developing countries had issued 310 corporate governance codes and/or principles by 2011 (Aguilera, Goyer, & Kabbach de Castro, 2014). In United States, the federal government has introduced substantial regulations to establish requirements to achieve extensive oversight of corporate management by the board and audit committee (Sarbanes-Oxley Act 2002), to limit executive pay and the firm's control of the proxy process (Dodd-Frank Act 2010), and to ban specific corporate governance provisions such as CEO duality (Shareholder Bill of Rights Act and Shareholder Empowerment Act 2009) (Aguilera et al., 2014). In Canada, the Canadian Securities Administration (CSA) has issued documents focusing on the audit committee's composition and responsibilities (National instrument NI 52-110) auditor oversight (NI 52-108), as well as the roles played by the chief executive officer (CEO) and the chief financial officer (CFO) to ensure that the reported information is accurate and of the highest quality (NI 52-108). The CSA also introduced new guidelines respecting corporate governance (NI 58-201) and corporate governance mechanisms disclosure (NI 58-101) in 2005 (Salterio, Conrod, & Schmidth, 2013).

Academic research has also focused extensively on corporate governance practices (Hardi & Buti, 2012; Carcello, Hermanson, & Ye, 2011; Kumari & Pattanayak, 2013), frequently examining the influence of such practices on firms' financial performance and the quality of accounting information (Carcello et al., 2011). However, few studies have concentrated on the cost of governance practices for firms, such as executive and non-executive director pay, which can constitute a significant share of some firms' net earnings. Could better governance practices be tied to the level of executive and non-executive director compensation? Are better-paid executives and non-executive directors more likely to institute good governance practices? This study is intended to respond to these questions.

With this in mind, the study relates CEO and non-executive director compensation to best governance practice index developed by The Globe and Mail. The analyses results indicate that CEO and non-executive director compensation appear to be linked to improved corporate governance practices, especially as concerns board composition and shareholding and CEO and director compensation. Firm size also appears to be related to CEO and non-executive director compensation practices, as well as to better practices concerning shareholders' rights. The fact that at least one shareholder holds at least 10% of the firm's share capital is significantly and negatively related to all the good governance practices studied. These findings are interesting since they highlight the importance of both CEO and non-executive director compensation. Other studies should be carried out to examine potential links between the compensation awarded to CEOs and non-executive directors and their skills or firms' short- and long-term financial performance. Although many studies have addressed CEO compensation, few have examined non-executive directors' compensation and skills.

The rest of this article is organised into several sections. It first reviews previous literature, before moving on to describe the research methodology and then to discuss the study's key findings. Lastly, it sets out the study's main conclusions and limitations, as well as potential avenues for future research.

2. LITERATURE REVIEW

Good governance practices are important because of the agency problem that exists between investors and managers. In fact, the separation of ownership and control (Shleifer & Vishny, 1997) lies at the heart of the agency problem. On the one hand, investors provide managers with funds, which they may use productively or to cash out their interests in the company. On the other, the investors need managers' specialised human capital to produce returns on the funds they've invested (Shleifer & Vishny, 1997). "But how can financiers be sure that, once they sink their funds, they get anything but a worthless piece of paper back from managers?" (Shleifer & Vishny, 1997).

A number of mechanisms can help reduce the agency problem. For example, financial and executive markets make it easier to discipline managers because under-performing firms are more likely to be targeted for takeover (Shleifer & Vishny, 1997), while under-performing managers are more likely to be replaced. As well, various countries have introduced corporate governance codes and/or principles and regulations that more effectively protect investors, such as the Sarbanes-Oxley Act and the Canadian Securities regulation. Shleifer and Vishny (1997) also mention executive compensation contracts, particularly when they include incentives to encourage executives to act in investors' best interests.

However, hiring, evaluation and contract preparation processes all require another mechanism – the board of directors. According to Kim, Nofsinger, and Mohr (2010), a board of directors has five main tasks: (1) to hire, evaluate, and perhaps even fire top management (this duty also includes putting in place and monitoring an executive compensation plan designed to align the interests of managers and shareholders; (2) to vote on important operating proposals; (3) to vote on key financial decisions; (4) to provide management with expert advice; and (5) to ensure accurate reporting to shareholders of the firm's activities and financial condition.

Unlike executive compensation, which is been explored in numerous studies, little research has been conducted on non-executive director compensation (Magnan, St-Onge, & Gélinas, 2010; Hahn & Lasfer, 2010). Although Hahn and Lasfer (2010) have pointed out that a wealth of literature, albeit largely inconclusive, has been published respecting the roles non-executive directors are expected to play, research, in general, has not examined any ties these roles may have to remuneration. One reason for the lack of direct research on the compensation of non-executive directors that has been put forward is that there does not seem to be a consensus on the non-executive director's role or roles (Hahn & Lasfer, 2010). In their view, it differs from one country to the next. However, the perception of directors' roles seems to converge over time. Kim, Mauldin, and Patro (2014) see them as complementary. In their opinion, monitoring and advisory functions, which are both different and complementary, may account for the uncertainty about how non-executive directors should be compensated. Monitoring activities are likely to be rewarded by fixed compensation or attendance fees, while an advisory role is more likely to be remunerated with stock options or full-value equity unit grants.

Another important issue that has received little attention is the level of compensation. Although non-executive directors' compensation should be high enough to attract and reward high-calibre individuals, Magnan et al. (2010) suggest that it should not be so high as to make some non-executive directors "non-independent" from the firm. If the level of compensation constitutes a significant share of a particular non-executive director's income, it may impair his or her objectivity and judgement under certain conditions (Magnan et al., 2010). The non-executive director may engage in actions in order to remain on the board. It should also be noted that non-executive directors are often virtually able to determine and approve their own compensation packages (Magnan et al., 2010), which may exacerbate the problem in some companies.

Another major source of motivation for directors is their reputation (Masulis & Mobbs, 2014). According to Fama and Jensen (1983) preserving and enhancing their reputation in directorship markets is a primary motivation for directors (Masulis & Mobbs, 2014). They want to build their reputation because it directly affects their value on the labour market and the possibility of securing future directorships (Masulis & Mobbs, 2014; Fama, 1980). In considering the size of the firm supervised by directors, Masulis and Mobbs

(2014) note that when directorships are considered to be more prestigious, attendance at board meetings is higher. They also indicate that such directors are more eager to sit on audit and compensation committees (which can be more time consuming), where their talents are likely to be more evident to the external labour market (Masulis & Mobbs, 2014). In light of the above, we can assume that non-executive directors' compensation, which to a large extent reflects the directorship's reputation, is tied to the quality of a firm's governance practices. If non-executive directors are more committed to prestigious directorships, more attention may be paid to overall governance practices. This leads to the following hypothesis:

H1: The level of non-executive director compensation is positively linked to the quality of a firm's governance practices.

Numerous studies have examined executive compensation (Murphy, 1999; 2013). Because this issue has attracted the attention of legislators and the media, it has spawned a great many academic studies (Conyon, 2013). Researchers are especially interested in the determinants of executive compensation and how they relate to corporate performance. Scant research has examined the relationship between reputation and compensation (Graffin, Pfarrer, & Hill, 2012) or the link between executive compensation and corporate governance practices. However, some researchers have examined the inverse relationship; for example by studying the linkage between CEO pay and the presence of independent compensation committees (Conyon, 1997, Newman & Mozes, 1999), independent boards, interlocked directors and busy outside directors (Core, Holthausen, & Larcker, 1999), although the results have been mixed to date.

As for the relationship between compensation and the quality of governance practices, it is our hypothesis that the highest-paid CEOs should be encouraged to introduce good governance practices, with the aim of bolstering the legitimacy of their compensation. Since compensation and governance practice disclosures are mandatory in Canada, investors, analysts, and the media are able to access and analyse the information. High compensation coupled with good governance practices might appear more legitimate than high compensation and poorer governance practices. Highest paid CEOs could thus see an advantage in implementing good governance practices, which could, for example, improve their reputation and limit the controversy surrounding their compensation. We thus propose the following hypothesis:

H2: The level of CEO compensation is positively linked to the quality of a firm's governance practices.

3. RESEARCH METHODOLOGY

This study uses a sample made up of all Canadian companies included in The Globe and Mail 2013 corporate governance ratings for which financial information was available on the Research Insight database. Governance information (i.e. CEO and non-executive director compensation, number of directors) was derived from the proxy circulars available on the www.sedar.com database. This official website enables access to most public securities documents and information filed by issuers on the Canadian markets in Canada. In all, 229 firms met these criteria. We collected data for the years 2013, 2014 and 2015, constituting 602 observations. Table 1 presents the firms according to the sector of activity.

Table 1. Firm according to sector of activity (in 2013)

Sector of activity	*Freq*	*Pct*
Mines	45	20.27
Oil and gas	37	16.67
Finance, insurance and real estate	46	20.72
Manufacturing	31	13.96
Transportation	29	13.06
Other	34	15.32
Total	229	100.00

3.1. Empirical model

To examine the relationship between the quality and cost of Canadian firms' governance practices, we developed the following regression model:

$$QUALITY_i = \beta_0 + \beta_1 DIRCOMP_i + \beta_2 CEOCOMP_i + \beta_3 NDIR_i + \beta_4 BLOCKH_i + \beta_5 SIZE_i + \beta_{6-7} YEAR_i + \beta_{8-12} SECTOR_i + \varepsilon_i \quad (1)$$

Where $QUALITY_i$ is the score obtained for the quality of governance practices based on The Globe and Mail ranking; $DIRCOMP_i$ is the total compensation of all non-executive directors (excluding senior executives who are also board members); $CEOCOMP_i$ is the total CEO compensation; $NDIR_i$ is the number of directors on the board; $BLOCKH_i$ is a dummy variable equal to 1 if at least one of the firm's shareholders holds over 10% of its share capital and 0 otherwise; $SIZE_i$ is the total assets of the firm; $YEAR_i$ is the dummy control variable for the years 2013 and 2014; $SECTOR_i$ is the sector of activity in which the firm is active, according to Worldwide Business Directory primary SIC-CODE classifications. ε_i is the residual term. *H1* and *H2* will be supported if the estimators of coefficients β_1 and β_2 are positive and significant. The other variables, $NDIR_i$, $BLOCKH_i$, $SIZE_i$, $YEAR_i$ and $SECTOR_i$ are the control variables identified in previous studies as having a potential impact on the quality of firms' governance practices. The size variable (*SIZE*) derives from the Research Insight database, while the data respecting firms' governance practices ($DIRCOMP_i$, $CEOCOMP_i$, $NDIR_i$ and $BLOCKH_i$) were manually extracted from the management proxy circulars of each firm, available on the Canadian Securities Administrators site (www.sedar.com).

The quality of governance practice is based on The Globe and Mail ranking[1]. This corporate governance rating includes a number of elements that have been examined in previous research (Donker & Zahir, 2008). The ranking scores used by Berthelot, Morris, and Morril (2010), Yang (2011), and Bozec, Bozec, and Dia (2010) are based on a scale of 100 points that covers four components. The first component, equal to 31 points, relates to

[1] Since 2001, The Globe and Mail, a reputable Canadian national newspaper, has produced Board Games Reports in partnership with the Rotman School of Management at the University of Toronto. Report on Business has examined the boards of directors of the companies and income trusts on the S&P/TSX composite index to assess the quality of their governance practices, based on various criteria. The evaluation looks at over 50 different corporate governance practices in four broad subcategories relating to board composition, compensation, shareholder rights and disclosure. The marks are based on information published in the companies' most recent annual shareholder proxy circulars (The Globe and Mail, 2018).

the composition of the board. Within this component, points are granted for the number of fully independent board members, as well as for audit, compensation and nominating committees. They are also awarded if the positions of CEO and chairman are occupied by the same person and if directors enjoy sociable or clubby relationships with each other. Also taken into account are the number of directors' outside commitments; the appointment of women board members; the establishment of a formal procedure for assessing the performance of the board and that of individual directors; the holding of regular directors' meetings to which management is not invited; and disclosures respecting the board's succession planning process for the position of CEO and its practices for educating directors during the year.

Totalling 28 points, the second component addresses shareholding and compensation issues. For example, points are granted when it is mandatory for directors and the CEO to hold shares in the firm, if the company has an anti-monetisation policy for the CEO, and if the company discloses details on CEO compensation. The third component, amounting to 28 points, focuses on shareholder rights issues, i.e. voting policy, advisory vote on executive compensation, non-voting or subordinate voting shares and voting process. The final component, which accounts for 13 points, concentrates on disclosure issues. Marks are awarded for disclosures on firms' corporate governance practices relating to directors, such as the relationships among directors, detailed biographies, specific skills or fields of expertise and age of each director, director attendance at board and committee meetings, the total accumulated value of directors' equity holdings, and explanations of how each director's share ownership complies, or does not comply, with the required share-ownership guideline (The Globe and Mail, 2017). Table 2 presents the definition of each quality governance practice variable.

Table 2. Definitions

Variables respecting quality of governance practices	
$QUALITY_i$	The score (/100) obtained for the quality of governance practices is based on the score the firms obtained for all the elements evaluated by The Globe and Mail.
$BOCOMP_i$	The score (/31) obtained for the quality of governance practices is based on the score the firms obtained for board composition in The Globe and Mail ranking.
$SHARE_i$	The score (/28) obtained for the quality of governance practices is based on the score the firms obtained for shareholding and the compensation of the non-executive directors and CEO in The Globe and Mail ranking.
$SHRIGHTS_i$	The score (/28) obtained for the quality of governance practices is based on the score the firms obtained for shareholder rights components in The Globe and Mail ranking.
$DISCLO_i$	The score (/13) obtained for the quality of governance practices is based on the score the firms obtained for transparency components in The Globe and Mail ranking.

Note: The Globe and Mail changed its weighting scheme in 2015. $BOCOMP_i$ now has a possible total score of 32, $SHARE_i$ of 29, and $DISCLO_i$ of 11.

4. RESULTS

4.1. Descriptive statistics

The descriptive statistics of the variables used in the analyses are set out in Table 3. The mean total compensation of non-executive directors of Canadian firms for 2013 to 2015 inclusively ($DIRCOMP_i$) was CAN$ 1,714,634, while the mean compensation of non-executive directors (total director compensation divided by the total number of non-executive directors on the board) ($MDIRCOMP_i$) was CAN$ 162,141. The mean CEO compensation ($CEOCOMP_i$) and total assets of the firms in the sample were respectively CAN$ 5,505,136 and CAN$ 39.629 billion.

The firms obtained a mean (median) score of 72.12% (73%) for quality of governance practices ($QUALITY_i$). It is worth noting that the standard deviation of this variable is 14.555, which signals significant disparities among the firms in the sample. As for the sub-indices, the mean (median) scores are as follows: 22.05 (22) for board of directors' composition, 19.25 (20) for directors' participation and compensation, 21.65 (23) for shareholder rights, and 9.18 (10) for transparency. Some firms obtained perfect scores for each sub-index, in contrast to others whose scores were relatively weak. The lowest overall index was 32%. Lastly, the mean (median) number of board directors was 10.34 (10).

Table 3. Descriptive statistics (N = 602)

Variables	*Mean*	*SD*	*Median*	*Minimum*	*Maximum*
$DIRCOMP_i$ (CAN$)	1,714,634	988,599	1,467,250	171,958	5,402,927
$MDIRCOMP_i$ (CAN$)	162,141	72,593	153,536	27,139	481,413
$CEOCOMP_i$ (CAN$)	5,505,136	10,182,937	3,546,431	198,941	198,031,061
$SIZE_i$ (millions CAN$)	39,629	135,873	4,726	321	1,104,373
$NDIR_i$	10.34	3.192	10.00	4	21
$QUALITY_i$	72.13	14.555	73	32	99
$BOCOMP_i$	22.05	4.963	22	7	32
$SHARE_i$	19.25	5.666	20	2	29
$SHRIGHTS_i$	21.65	4.822	23	3	28
$DISCLO_i$	9.18	2.548	10	2	13

Note: $DIRCOMP_i$ is the total compensation of all non-executive directors (excluding senior executives who are board members); $MDIRCOMP_i$ is the total non-executive director compensation divided by the total number of non-executive directors on the board; $CEOCOMP_i$ is the total CEO compensation; $SIZE_i$ is the total assets of firm; $NDIR_i$ is the number of directors on the board; $QUALITY_i$ is the total score as reported in The Globe and Mail ranking; $BOCOMP_i$ is the board composition score; $SHARE_i$ is the shareholding and compensation score; $SHRIGHTS_i$ is the shareholders' rights score; $DISCLO_i$ is the corporate governance disclosure quality score.

4.2. Correlation analysis

Table 4 presents the Pearson correlations among test variables. As could be expected, the largest correlations were between total composite governance score ($QUALITY_i$) and component scores ($BOCOMP_i$, $SHARE_i$, $SHRIGHTS_i$, $DISCLO_i$), with correlations ranging from 0.709 to 0.863. The $SIZE_i$ variable is significantly correlated with all the other variables. These results support many previous studies where size is linked to CEO and non-executive director compensation. The number of directors on the board ($NDIR_i$) is also tied to all the other variables, which suggests that firms with larger boards have better governance practices (0.306). Finally, the non-executive director compensation variable ($DIRCOMP_i$) is significantly linked to the total composite governance score ($QUALITY_i$) and sub-index scores ($BOCOMP_i$, $SHARE_i$, $SHRIGHTS_i$, $DISCLO_i$), while the CEO compensation variable ($CEOCOMP_i$) is significantly linked to the total composite governance score ($QUALITY_i$) and sub-index score related to shareholding and the compensation of the directors and CEO ($SHARE_i$). However, these two variables, $CEOCOMP_i$ and $DIRCOMP_i$, are significantly correlated (0.330), suggesting that firms paying their CEOs higher compensation also pay higher compensation to their non-executive directors.

Table 4. Correlation coefficients (N = 602)

	1-	2-	3-	4-	5-	6-	7-	8-	9-	10-
1- $QUALITY_i$	-									
2- $BOCOMP_i$	.824**	-								
3- $SHARE_i$	.863**	.594**	-							
4- $SHRIGHTS_i$	.765**	.496**	.522**	-						
5- $DISCLO_i$	.709**	.530**	.584**	.386**	-					
6- $CEOCOMP_i$	.102**	.063	.125**	.060	.076	-				
7- $DIRCOMP_i$	.292**	.286**	.286**	.152**	.228**	.330**	-			
8- $MDIRCOMP_i$	.184**	.247**	.116**	.109**	.151**	.266**	.821**	-		
9- $NDIR_i$	.306**	.209**	.384**	.143**	.234**	.195**	.654**	.163**	-	
10- $SIZE_i$	.239**	.198**	.227**	.186**	.125**	.143**	.370**	.133**	.424**	-

*** p-value ≤ 0.01; * p-value ≤ 0.05.*

Note: $QUALITY_i$ is the total score as reported in The Globe and Mail ranking; $BOCOMP_i$ is the board composition score; $SHARE_i$ is the shareholding and compensation score; $SHRIGHTS_i$ is the shareholders' rights score; $DISCLO_i$ is the corporate governance disclosure quality score; $CEOCOMP_i$ is the total CEO compensation; $DIRCOMP_i$ is the total compensation of all non-executive directors; $MDIRCOMP_i$ is the total non-executive director compensation divided by the total number of non-executive directors on the board; $NDIR_i$ is the number of directors on the board; $SIZE_i$ is the total assets of the firm.

Table 5 presents the mean comparison for director and CEO compensation ($DIRCOMP_i$, $CEOCOMP_i$), the number of directors ($NDIR_i$), and the size ($SIZE_i$) of the organisations. The observations have been organised according to whether they were above or below the median ranking of The Globe and Mail ($QUALITY_i$).

Table 5. Means comparison

Variables(1)	Mean		Test T
	Lower median	Upper median	
$DIRCOMP_i$ (CAN$)	1,520,749	1,917,751	***
$MDIRCOMP_i$ (CAN$)	153,943	170,730	**
$CEOCOMP_i$ (CAN$)	5,187,654	5,837,736	
$SIZE_i$ (millions CAN$)	18,587.08	61,673.79	***
$NDIR_i$	9.65	11.03	***

**** p < 0.001; ** p < 0.05; * p < 0.1 (two-tailed test).*

(1) Financial variables are expressed in millions of Canadian dollars.

Note: $DIRCOMP_i$ is the total compensation of all non-executive directors; $MDIRCOMP_i$ is the total non-executive director compensation divided by the total number of non-executive directors on the board; $CEOCOMP_i$ is the total CEO compensation; $SIZE_i$ is the total assets of firm; $NDIR_i$ is the number of directors on the board.

As can be seen, the means of all the variables tested, with the exception of CEO compensation, differ significantly. The directors' compensation seems to be higher when they head firms or sit on the boards of firms with better governance practices. The number of directors is also higher in firms with better practices (10.58 vs. 9.03). Lastly, as for firm size, the results suggest that firms with better governance practices are, on average, larger than those with poorer governance practices.

4.3. Regression analyses

Table 6 sets out the results of the regression analyses testing the relationships between the quality of governance practices and CEO and non-executive director compensation. Note that none of the model regressions present variance inflation factors higher than 3, indicating potentially serious multicollinearity problems (Neter, Wasserman, & Kutner, 1985).

Column *M1* shows the results of the estimation of equation (1). The adjusted *R2* for Model 1 indicates that the independent variables explain 32.8 % of the quality of the corporate governance practices as evaluated by The Globe and Mail ranking ($QUALITY_i$). Since the coefficients of variables associated with non-executive director compensation ($DIRCOMP_i$) and CEO compensation ($CEOCOMP_i$) are significant, the observations support *H1* and *H2*. However, the $SIZE_i$ variable is significantly and positively linked to quality of governance practices ($QUALITY_i$), which indicates that firm size appears to be related to better governance practices. The variable representing the presence of at least one block holder ($BLOCKH_i$) is negatively and significantly related. Lastly, the control variables $YEAR13_i$ and $YEAR14_i$ show negative and significant coefficients, signalling that the quality of governance practices, evaluated according to The Globe and Mail index, tends to improve over the years. The coefficients of the dummy variables associated with the mining and metals and oil and gas industry sectors are also negative and significant, indicating that firms in these sectors appear to have poorer governance practices.

Table 6. Regression results

Variables	*M1: Model 1*	*M2: Model 2*	*M3: Model 3*	*M4: Model 4*	*M5: Model 5*
	QUALITY$_i$	***BOCOMP$_i$***	***SHARE$_i$***	***SHRIGHT$_i$***	***DISCLO$_i$***
LogDIRCOMP$_i$	8.765**	4.964***	1.963*	1.519	0.846
LogCEOCOMP$_i$	3.900**	1.121*	1.880**	-0.157	1.500***
NDIR$_i$	-0.052	-0.127	0.146	-0.097	0.023
BLOCKH$_i$	-8.094***	-2.864***	-1.439***	-3.468***	-0.922***
LogSIZE$_i$	2.806**	0.184	1.199**	1.059**	0.125
YEAR13$_i$	-5.676***	-2.165***	-2.332***	-1.706***	0.525**
YEAR14$_i$	-3.353**	-1.222**	-1.192**	-0.782*	-0.163
INDMM$_i$	-7.320***	-0.741	-4.507***	-1.216*	-0.628*
INDOG$_i$	-6.406***	-0.455	-2.472***	-2.989***	-0.363
INDFIN$_i$	-1.590	0.612	-0.953	-0.917	-0.091
INDMAN$_i$	1.078	1.370**	-0.405	-0.163	-0.094
INDTRP$_i$	1.037	1.505**	0.669	-1.634**	0.568
Intercept	-24.093	-13.991**	-15.028	7.818**	-6.865**
R	0.584	0.515	0.590	0.473	0.438
R^2	0.342	0.266	0.348	0.224	0.192
Adjusted R^2	0.328	0.251	0.335	0.208	0.176
F-value	25.470***	17.760***	26.252***	14.144***	11.672***

**** p < 0.001; ** p < 0.05; * p < 0.1 (one-tailed test).*

Note: QUALITY$_i$ is the total score as reported in The Globe and Mail; BOCOMP$_i$ is the board composition score; SHARE$_i$ is the shareholding and compensation score; SHRIGHTS$_i$ is the shareholders' rights score; DISCLO$_i$ is the corporate governance disclosure quality score; LogDIRCOMP$_i$ is the decimal logarithm of total compensation of all non-executive directors; LogCEOCOMP$_i$ is the decimal logarithm of total CEO compensation; NDIR$_i$ is the number of directors on the board; BLOCKH$_i$ is a dummy variable equal to 1 if at least one of the firm's shareholders holds more than 10% of its share capital and 0 otherwise; LogSIZE$_i$ is the decimal logarithm of total assets; YEARS13$_i$ is a dummy variable equal to 1 if the financial and ranking data concern fiscal year 2013 and 0 otherwise; YEARS14$_i$ is a dummy variable equal to 1 if the financial and ranking data concern fiscal year 2014 and 0 otherwise; INDOG$_i$ is a dummy variable equal to 1 if the firm sector is oil and gas and 0 otherwise; INDMM$_i$ is a dummy variable equal to 1 if the firm sector is mining and metals and 0 otherwise; INDMAN$_i$ is a dummy variable equal to 1 if the firm sector is manufacturing and 0 otherwise; INDFIN$_i$ is a dummy variable equal to 1 if the firm sector is finance, insurance, and real estate and 0 otherwise; INDTRP$_i$ is a dummy variable equal to 1 if the firm sector is transportation and public utilities and 0 otherwise.

The analyses were repeated with the components (*BOCOMP$_i$*, *SHARE$_i$*, *SHRIGHTS$_i$*, *DISCLO$_i$*) of The Globe and Mail index as independent variables rather than the total score (*QUALITY$_i$*). The results of these analyses are set out in columns *M2*, *M3*, *M4*, and *M5*. The explanatory thresholds of the variance (adjusted *R2*) of the dependent variables representing each of the (*QUALITY$_i$*) index components are also relatively low; between .176 for corporate governance disclosure quality (*DISCLO$_i$*) and .335 for shareholding and compensation (*SHARE$_i$*). The coefficient of the variable representing non-executive directors' compensation (*DIRCOMP$_i$*) is positive and significant in Model 2, supporting the possibility that non-executive directors' compensation is tied to better practices in respect of board composition. It is also marginally significant in Model 3, indicating a slight positive link with governance practices associated with shareholding and non-executive director and CEO compensation. Higher non-executive directors' salaries appear to encourage firms to adopt better shareholding and compensation practices. These findings may moreover be due to a wish to legitimate higher compensation to third parties. The coefficient associated with the variable representing CEO compensation is positive and significant in Models 3 and 5 ($p < 0.05$), and marginally significant in Model 2 ($p < 0.10$). These findings thus support the possibility that CEO compensation is linked to best governance practices as concerns shareholding and director compensation (*SHARE$_i$*), the quality of corporate governance disclosure (*DISCLO$_i$*) and board composition (*BOCOMP$_i$*). As can be seen, firm size coefficients (*SIZE$_i$*) are positive and significant in the regressions where the dependent variables were the shareholding and compensation score (*SHARE$_i$*) and the shareholders' rights score (*SHRIGHTS$_i$*). Large corporations, therefore, seem to have better practices in respect of shareholding, director and CEO compensation and shareholders' rights. Some coefficients associated with the activity sectors are also significant in certain analyses, appearing to signal that the quality of governance practices differs from one activity sector to another.

Overall, the results of these analyses appear to be relatively consistent and support, at least in part, *H1* and *H2*. They tend to indicate some statistically significant links between the quality of firms' governance practices and the compensation paid to their CEOs and non-executive directors.

5. CONCLUSION

The study results support, at least in part, positive relationships between the quality of firms' governance practices and non-executive director and CEO pay. They also support the possibility that higher-paid non-executive directors and CEOs implement better governance practices. However, further studies should be conducted to determine whether the relationships noted can be attributed to the skills and/or reputation (and the protection of this reputation) of the firm's non-executive directors and senior executives. The presence of at least one shareholder holding over 10% of the share capital and firm size also appears to be linked to the quality of corporate governance practices among Canadian firms. It is possibly easier for large firms with more resources to implement the practices advocated by the business community. Also, large firms generally attract the most attention from financial analysts and journalists, which could encourage them to introduce better governance practices. However, in cases where at least one of the firm's shareholders holds over 10% of its share capital, the firm's governance practices appear to be of poorer quality. The study results also indicate that some activity sectors seem to have better governance practices than others. For instance, governance practices relative to board composition appear to be better in the manufacturing sector, while those respecting shareholders' rights and shareholding and director and CEO compensation seem to be poorer in the mining and gas and oil sector. These findings are interesting overall since they are among the first to target non-executive director compensation and its potential relationship to the quality of governance practices.

However, this study has certain limitations. For example, the size of the sample is limited to firms included in The Globe and Mail ranking. The analyses may also have excluded certain explanatory variables. Lastly, the observations are relevant only to Canadian firms subject to Canadian legislation.

Nonetheless, this study points up various avenues for future research. It could also be worthwhile examining whether the level of non-executive director compensation is associated with better performance, lower management earnings or improved CEO pay-for-performance sensitivities. Similarly, the structure of non-executive director compensation (fixed, attendance fees, stock options, and so on) and its relationship to directors' advisory or oversight roles could also be an area of research to explore to shed more light on the determinants underlying a board's effectiveness.

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