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An Examination of the Structure of Executive Compensation and Corporate Social Responsibility: A Canadian Investigation

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ABSTRACT. We explore the extent to which Boards use executive compensation to incite firms to act in accordance with social and environmental objectives (e.g., Johnson, R. and D. Greening: 1999, *Academy of Management Journal* **42**(5), 564–578 ; Kane, E. J.: 2002, *Journal of Banking and Finance* **26**, 1919–1933.). We examine the association between executive compensation and corporate social responsibility (CSR) for 77 Canadian firms using three key components of executives' compensation structure: salary, bonus, and stock options. Similar to prior research (McGuire, J., S. Dow and K. Argheyd: 2003, *Journal of Business Ethics* **45**(4), 341–359), we measure three different aspects of CSR, which include Total CSR as well as CSR Strengths and CSR Weaknesses. CSR Strengths and CSR Weaknesses capture the positive and negative aspects of CSR, respectively. We find significant positive relationships between: (1) Salary and CSR Weaknesses, (2) Bonus and CSR Strengths, (3) Stock Options and Total CSR; and (4) Stock Options and CSR Strengths. Our findings suggest the importance of the structure of executive compensation in encouraging socially responsible actions, particularly for larger Canadian firms. This in turn suggests that executive compensation can be an effective tool in aligning executives' welfare with that of the "common good", which results in more socially responsible firms (Bebchuk, L., J. Fried and D. Walker: 2002, *The University of Chicago Law Review* **69**, 751–846; Zalewski, D.: 2003, *Journal of Economic Issues* **37**(2), 503–509). In addition, our findings suggest the importance of institutional context in influencing the association between executive compensation and CSR. Further implications for practice and research are discussed.

KEY WORDS: corporate governance, executive compensation, social performance, social responsibility

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Introduction

Firms that are socially responsible are concerned about how their operations affect the environment in which they live and work (Waddock and Graves, 1997a). Traditionally, socially responsible firms are willing to forgo short-term profits to invest in social and environmental objectives with no immediate payoff. The argument follows that by being more socially responsible and focused on long-term objectives, these firms will enjoy profitability in the longer term (Kane, 2002). Consequently, it may be in the interests of shareholders (narrowly defined) and stakeholders (widely defined) to use executive compensation to encourage actions that promote corporate social responsibility (CSR) (c.f., Marens, 2002).

CSR is comprised of factors that encapsulate firms' attention to a broad group of stakeholders, which extends beyond their traditional responsibility to investors to include consumers, employees, and the immediate as well as the extended community (Clarkson, 1995; Hillman and Keim, 2001).[1] CSR is becoming more important to firms as there is increased pressure to attend to stakeholders beyond the traditionally and narrowly defined shareholder (Donaldson and Preston, 1995). Not surprisingly, some Boards are increasing their attention to the objectives encapsulated by CSR as their responsibilities extend to include the variety of interests represented by diverse stakeholder groups (Berthelot et al., 2003; Jones and Wicks, 1999). This study examines the effectiveness of executive compensation as a tool to encourage firms to act in a manner that is consistent with CSR. Although some work has examined the association between particular components of executives' compensation and CSR (e.g., Jaggi and Freedman, 1992; Mahoney and Thorne, 2005; Russo and Fouts, 1997; see Berthelot et al., 2003 for a review), an integrated understanding of how the structure of executive compensation can be used to encourage CSR remains to be achieved, and whether particular components may be more important than others in encouraging CSR.

We found only one previous study that uses an integrated approach that simultaneously considers how the structure of executive compensation is important for encouraging CSR in firms. Using one year of U.S. based data; McGuire et al. (2003) examined the association between the current year structure of executive compensation and a four-component measures of CSR and found a positive association between CSR Weaknesses and Salary, a positive association between CSR Weaknesses and long-term incentives and no association between any form of CSR and bonuses. Although McGuire et al. (2003) provide foundation to launch research into an integrated approach to examining the association between CSR and executive compensation, further work is needed to determine the extent to which these findings apply to other time periods, other databases and other national contexts.

In our study, we use an integrated approach to consider the association between executive compensation and CSR for Canadian firms. Using Canada as the basis of our study allows us to consider to what extent McGuire et al. (2003) findings extend beyond the U.S. context, and we select Canada because it has a similar culture but different institutional context from the U.S.[2] Prior research suggests that a firm's national institutional context, which includes legal, regulatory, and professional structures, influences executives' sensitivity to firms' social performance (c.f., Holloway et al., 1999). Thus, by relying on a Canadian data base, we potentially isolate the impact of institutional context on the association between executive compensation and CSR. Not only do our findings provide insight into the extent to which previous findings may extend beyond American borders, but they also provide preliminary evidence of whether differences in national institutional context may moderate the association between executive compensation and CSR.

Similar to McGuire et al. (2003), we measure three different aspects of CSR, which include Total CSR as well as CSR Strengths and CSR Weaknesses. Total CSR is composed of both a company's strengths (e.g., positive union relations, strong community giving, environmental planning) and/or weaknesses (e.g., safety problems, human rights violations, environment fines). CSR Strengths and CSR Weaknesses capture the positive and negative aspects of CSR, respectively. Since a firm's CSR Strengths and CSR Weaknesses can potentially offset each other in arriving at Total CSR, we separately consider all three facets of CSR.

Likewise, we analyze three key components of executives' compensation structure: salary, bonus, and stock options. We focus on CEO compensation since the CEO is clearly accountable to the Board of Directors (and ultimately, to the firm's owners) for overall firm performance. Our statistical analysis considers the association between various components of executive compensation, including salary, bonus and stock options, and we also control for ownership structure, firm performance, leverage/ financial slack, firm size and industry.

We extend prior understanding of the association of executive compensation and CSR in two additional ways. First, we consider both a four-component and a more comprehensive seven-component measure of CSR. We adopt a four-component measure of CSR to provide a direct comparison to the results of McGuire et al. (2003) however, to provide richness to our understanding of the association of the structure of executive compensation and CSR, we also use the more comprehensive seven-component measure. Second, we use lagged CSR data for our analysis to attempt to capture the influencing impact of executive compensation on CSR.

This paper is organized as follows. The next section provides an overview of the literature and the paper's hypotheses. Method then follows in the third section. Results are presented in the fourth section. Finally, the fifth section summarizes the key findings.

Hypothesis Development

According to Gilbert (1956), responsible stockholders are enfranchised in the corporate process and would encourage corporations to pursue non-financial objectives that embrace social and environmental objectives. Zalewski (2003) asks whether "it is possible to modify corporate objectives so that activities that promote the common good also personally benefit executives and stockholders?" (p.504). One way in which the Board of Directors potentially can steer executives' decision-making in a particular direction is through the structure of executive compensation (Bebchuk et al., 2002; Craighead et al., 2004). Traditionally, the goals of the Board have been to encourage executives to maximize firm profitability by aligning executives' self-interest with that of shareholders (Amihud and Lev, 1981; Holmstrom, 1979; Jensen and Meckling, 1976). Nevertheless, if the goals of the Board are to encourage executives to further social and environmental objectives, executive compensation may be used to align executives' self-interest with CSR (c.f., Bebchuk et al., 2002; Marens, 2002; Zalewski, 2003). To gain insight into this supposition, our study examines the association between executive compensation and CSR to see if particular executive compensation structures might be effective in promoting CSR in firm decision-making.

Research on CSR and executive compensation has traditionally considered whether separate components of executive compensation are associated with CSR (see Berthelot et al., 2003, for a review of this literature). This stream of research has yielded mixed findings indicating that CSR sometimes has no association, sometimes is positively related with, and sometimes negatively associated with executive compensation (e.g., Jaggi and Freedman, 1992; Russo and Fouts, 1997). Therefore, it is not clear whether and to what extent particular components of executive compensation are useful in promoting CSR.

Recently, McGuire et al. (2003) used an integrated approach to consider the association between CSR and three key components of executive compensation: salary, bonus and stock options. Using a U.S. sample and one-year of data, McGuire et al. (2003) found a significant positive association between CEO compensation of salary and CSR Weaknesses and a positive association between CEO long-term incentives and CSR Weaknesses. Their findings suggest that firms with CSR Weaknesses pay larger salaries and larger long-term incentives than those with stronger CSR. Although this research established the importance of various elements of the structure of executive compensation (e.g., salary, bonus and long-term incentives) to encourage different aspects of CSR (CSR Weaknesses and CSR Strengths) in firms, McGuire et al.'s use of a single database (a single time period and a single country) and simple statistical techniques (no lagged data) suggests that more work is needed to increase our understanding or how executive compensation may be used to influence CSR throughout the world.

Since executive compensation plans are awarded in an integrated manner by the Board of Directors, an integrated approach to consider the association between all components of executive compensation and CSR may be insightful for continuing to develop our understanding of the association between executive compensation and CSR. Accordingly, similar to McGuire et al. (2003), we adopt an integrated approach in our study to consider three key components of executives' compensation structure and CSR as the executive compensation literature suggests that Boards usually take an integrated approach in the designing of executive compensation plans (Murphy, 1999). Although our methodological approach considers the components of executive compensation simultaneously, we separately develop hypotheses for the association of CSR and each component of executive compensation: salary, bonus and stock options. Each is detailed below in turn.

Salary and CSR

Salary is a fixed part of executives' compensation; however, higher salaries have traditionally been associated with increased managerial hubris (Hambrick and Finklestein, 1995). As salary levels get higher, Berman (1999) argues that managerial attention is less focused on stakeholders' interests, and therefore, less inclined to make decisions that consider the best interests of society. Thus, we expect a negative association between Salary and Total CSR, and a negative association between Salary and CSR Strengths and, conversely, a positive association between Salary and CSR Weaknesses. Thus, we propose the following hypotheses:

H1a: There is a negative association between Salary and Total CSR.
H1b: There is a negative association between Salary and CSR Strengths.
H1c: There is a positive association between Salary and CSR Weaknesses.

Bonus and CSR

The payment of a bonus rewards executives for achievement of short-term performance targets, rather than building the firm's long-term potential (Stata and Maidique, 1980). An executives' bonus is traditionally contingent on short-term financial goals (Murphy, 1999). This has important implications for the promoting of CSR because, as Bebchuk et al. (2002) argues, unless the contingent nature between firm performance and contingent compensation is severed then executives will fail to consider social equity. Moreover, the excessive focus on the short term promoted by the granting of a bonus may be detrimental to the fulfillment and consideration of longer term, socially responsible actions (Kane, 2002; McKendall et al., 1999; Zalewski, 2003).[3] Accordingly, we anticipate a negative association between Bonus and Total CSR and Bonus and CSR Strengths and a positive association between Stock Options and CSR Weaknesses. Consequently, we propose the following hypotheses:

H2a: There is a negative association between Bonus and Total CSR.
H2b: There is a negative association between Bonus and CSR Strengths.
H2c: There is a positive association between Bonus and CSR Weaknesses.

Stock options and CSR

Stock options are the most typical form of long-term incentive compensation and are contingent on the value of the stock in the future (Murphy, 1999). Stock options focus executives' efforts on increasing future stock value, as the executive's wealth will increase if the stock price increases. It follows that executives that receive stock options are more likely to take actions consistent with maximizing the interests of the firm in the longer term. On the one hand, excessive focus on a firm's financial performance even in the longer term may be detrimental to the promotion of social and environmental objectives (Bebchuk et al., 2002; Zalewski, 2003). However, if the capital markets recognize the advantage of pursuing longer term goals, then both stock price and executive's self-interest would benefit from firm's pursuing CSR. On the other hand, Kane (2002) suggests that socially responsible firms are willing to forgo short-term profits to invest in social and environmental objectives, which benefit the firm and society in the longer run but have no immediate payoff but will enjoy profitability in the long term. Thus, we expect a positive association between the granting of Stock Options and Total CSR and Stock Options and CSR Strengths and a negative association between Stock Options and CSR Weaknesses. Thus, we propose the following hypotheses:

H3a: There is a positive association between Stock Options and Total CSR.
H3b: There is a positive association between Stock Options and CSR Strengths
H3c: There is a negative association between Stock Options and CSR Weaknesses

Method

Our study adopts a similar analysis to that used in McGuire et al. (2003); however we extend McGuire's work in three important ways. First, we rely upon a more comprehensive seven-dimension measure of CSR as well as the four-dimension measure of CSR relied upon by McGuire et al. (2003). Second, similar to the techniques adopted in the executive compensation literature (see Murphy, 1999); we rely upon an empirical approach with lagged CSR data. Lagged CSR data compares this year executive compensation with next years' CSR: we use lagged CSR data for our analysis to attempt to capture the influencing impact of executive compensation on CSR. Third, we consider the association between Canadian executives' compensation and CSR. We adopt Canada as our nation of study because it has a similar culture but different institutional context from the U.S.; therefore, our results provide preliminary evidence of whether differences in national institutional context may moderate the association between executive compensation and CSR. Since there are similar measures of CSR and executive compensation provided for U.S. and Canadian firms, the results of our study provide an indication of whether McGuire et al.'s findings extend beyond American borders.

Sample Selection

The sample selected for our study comprises the largest 100 Canadian firms, based on TSE market capitalization (i.e., the TSE 100 Index) from 1995. Data on stock options, salary and other incentives is obtained from the annual proxy statements and from the Blue Book of Canadian Business. Financial data is obtained from annual financial statements, the Financial Post Information Service Database and the Globe and Mail. Data on CSR is drawn from the CSID database (as described below). Data is collected for 1995 and 1996, to provide an opportunity for capturing the lag between CSR and executive compensation. Missing CSR data reduced the sample size to 77 firms for 1996 and to 69 firms for 1995.

Measures

Measurement of CSR

CSID Database. In this paper, we measure CSR by the ratings in the CSID, a multidimensional database. The CSID is a database of CSR for Canadian firms developed in 1992 by Michael Jantzi Research Associates, Inc. (MJRA), specializing in the assessment of CSR for Canadian corporations.[4] Ratings for the CSID are determined by MJRA through extensive research, including public and private documents, interviews, surveys, analysis of litigations and legislative actions. The CSID database specializes in the assessment of CSR for Canadian corporations and contains social profiles of over 400 publicly traded Canadian companies, including the companies on the Toronto Stock Exchange (TSE) 300 Index.

The CSID index is unique in that it provides ratings of firms on dimensions of social performance by using largely objective screening criteria applied consistently across a wide range of companies (Griffin and Mahon, 1997; Waddock and Graves, 1997a, b; Wood and Jones, 1995). The CSID index has the benefit of third party, independent rankings of all Toronto Stock Exchange 300 companies with data gathered from a range of sources, both internal and external to the firm. In designing the rating criteria MJRA uses to rate firms' CSR, MJRA's investment analysts review corporate documents, including each company's annual report, annual information form and proxy information circular. They also analyze the firm's environmental policy, health and safety policy, and code of business conduct in order to better evaluate the company's performance (For further information, see Mahoney and Roberts, 2004). In addition, MJRA's analysts track hundreds of publications across Canada and access a broad range of material from government, labor, industry, and not-for-profit organizations and interview important stakeholders, including company and industry executives, community groups, environmental organizations, government and regulatory representatives, and union representatives (MJRA, 2000).

Measurement approaches to CSR. Four- and seven-item measure of CSR: In our paper, we consider two different configurations of CSR: a four-item measure and a more comprehensive seven item measure. To provide a basis for comparison to McGuire et al. (2003) study, we use a four-items configuration of CSR that includes the dimensions of *community, employee relations, environment and product and business practices*. Additionally, we also consider our findings using a more comprehensive seven-item measure of CSR that not only includes the four dimensions used by McGuire et al. (2003) but also includes three additional dimensions of *diversity, international* and *other*.

Three aspects of CSR: Similar to McGuire et al. (2003), we also consider three different aspects of CSR: *Total CSR, CSR Strengths* and *CSR Weaknesses*. The first aspect, *Total CSR*, is a comprehensive measure of CSR based on the CSID composite measure, which is the sum of a firm's net strength and weakness for each CSR dimension that reflects key stakeholder relationships. For the strength rating of any dimension, 2 represents a major strength, 1 indicates a notable strength and 0 indicates no strengths. For the weakness ratings, 2 indicates a major concern, 1 indicates a notable concern, and a 0 indicates no notable concerns. These dimensions, which are important emerging influences on corporate strategy (Prahalad and Hamel, 1994), include *community*, *diversity*, *employee relations*, *environment*, *international*, *product and business practices* and *other*.[5]

Since a firm's CSR Strengths and CSR Weaknesses can potentially offset each other in arriving at Total CSR (Graves and Waddock, 1994), we separately consider all three facets of CSR. CSR Strengths capture the positive aspects of a company's decisions on social and environmental dimensions (i.e., positive union relations, strong community giving, environmental planning). CSR Weaknesses capture the negative aspects of a company's decisions on social and environmental dimensions (e.g., safety problems, human rights violations, environment fines). Thus, we measure *CSR Strengths* and *CSR Weaknesses* by adding the positive and negative dimension scores for each measurement, respectively.

Measurement of executive compensation

CEO Compensation is used to avoid the potential confounding effect on our results from changes in the mix of executives that may be included through the sample time period. Firms with incomplete data, CEO changes in a given year, non-resident CEO's and firms with major changes in ownership were dropped from the sample.

Salary. Salary is measured as the annual cash salary paid to an executive during the calendar year in total Canadian dollars.

Bonus and Stock Options. Measurement of contingent executive compensation can be done employing either an ex-post approach (which effectively measures the extent to which executives are rewarded for realized performance) or an ex-ante approach (which effectively measures the extent to which executives receive inducements for anticipated performance). We use Bonus as our ex-ante measure. Bonus rewards an executive through cash compensation in the form of additional incentive bonus payments on an ex-ante basis as an inducement for future performance. Bonus is calculated as a percentage of bonus payments to total CEO's compensation.

We measure stock option grants as a percentage of stock options to total CEO's compensation. Stock option grants are valued in dollar terms using the model proposed by Smith and Zimmerman (1976). The Smith and Zimmerman valuation model attaches a nonnegative value to the options based on their discounted present value at year-end after adjusting for dividends, as discussed in Hemmer (1993), [6] and is particularly appropriate for the valuation of Canadian options as the available information on (used in the Black-Scholes model) debt is not readily available in Canada.[7]

Lagged associations

Our study includes a 1-year lag between compensation and CSR to capture the influence of executive compensation on CSR.

Control variables

Consistent with prior empirical research, we control for firm ownership, size performance, leverage/financial slack, and industry (Ullman, 1985). Craighead et al. (2004) found that Canadian firm's compensation plans are related to firm ownership concentration. Similarly, we control for concentration of ownership though the use of a dummy variable by splitting firms based upon their ownership concentration. Firms with related external shareholder blocks that control more than 20% of outstanding votes are classified as closely-held while firms with no significant shareholder blocks are designated as widely-held (Craighead et al., 2004). This is consistent with Canadian GAAP as it defines shareholders with more than 20% ownership as having significant influence over a firm's strategies and policies.

Size and profitability has been linked to corporate social performance and executive compensation levels (McGuire et al., 1988; McKendall et al., 1999;

McWilliams and Siegel, 2000). Evidence suggests that larger firms tend to exhibit more corporate social responsibility behaviors (Burke et al., 1986) and that firms that exhibit corporate social responsibility are more profitable (Waddock and Graves, 1997a) We therefore use total sales as a control variable for size and ROE as control variable for profitability . McGuire et al. (2003) used ROA to control for profitability and the log of total employees to control for size. We used the debt-to-equity ratio as a measure of leverage/financial slack where McGuire et al. (2003) used the times interest earned ratio as their measure of leverage.[8] Similar to McGuire et al. (2003), we use dummy variables for the firm's primary SIC code to control for performances that may vary by industries.

Results

Descriptive statistics and correlation analysis

Tables I and II present the descriptive statistics and the results of the correlation analysis.

As shown on Table I, the mean Total CSR is 1.68 for the current year (1985) and 1.82 for the lagged year (1986). The mean of CSR Strengths are 3.58 and 3.74 for current year and lagged year, respectively. Additionally, the mean of CSR Weaknesses is 1.90 for the current year and 1.92 for the lagged year. Of the executive compensation variables, the percentage of stock options is significantly related to the current CSR Strengths and Salary is significantly related to lag CSR Strengths. The control variable of size is significantly related to both current and lagged Total CRS and CRS Strengths.

Regression analysis

We present the results of four analyses of the association between the structure of executive compensation and CSR. Table III describes the association using the four-item configuration of CSR and current year executive compensation data, which best facilitates comparisons with McGuire et al. (2003). Variations on McGuire et al.'s approach are presented in the next three analyses. Table IV describes the association using a seven-item configuration of CSR and current year executive compensation data, to provide a more

TABLE I

Pearson correlation matrix correlations with current csr and compensation, profitability, governance, size and debt variables

Variable	Mean	SD	1	2	3	4	5	6	7	8	9
Total CSR	1.68	2.367									
CSR Strengths	3.58	2.172	0.843***								
CSR Weaknesses	1.90	1.285	−0.417***	.137							
Salary	539,329	236,104	0.160	0.218	0.074						
% Bonus	25.1%	18.5	0.025	−0.033	−0.102	−0.110					
% Stock Options	60.7%	68.6	0.112	0.238**	0.197	0.066	−0.387***				
ROE	9.56%	9.43	0.112	0.059	−0.105	0.006	0.252**	0.112			
Wide Held	54%	50.2	0.084	0.061	−0.051	−0.167	0.183	0.125	0.151		
Size	3,666	4,382	0.419***	0.434***	0.030	0.658***	−0.008	0.017	0.092	−0.012	
Debt -To-Equity	77.59	73.052	−0.031	0.020	0.090	0.127	−0.146	0.025	−0.038	0.102	0.131

***p <0.01; **p <0.05.

TABLE II

Pearson correlation matrix correlations with lagged CSR and compensation, profitability, governance, size and debt variables

Variable	Mean	SD	1	2	3	4	5	6	7	8	9
Total CSR	1.82	2.453									
CSR Strengths	3.74	2.155	0.870***								
CSR Weaknesses	1.92	1.211	−0.479***	0.017							
Salary	539,329	236,104	0.173	0.260**	0.112						
% Bonus	0.251	0.185	0.002	0.025	−0.041	−0.110					
% Stock options	0.607	0.686	0.122	0.168	0.052	0.066	−0.387***				
ROE	9.56	9.43	0.090	0.040	−0.110	0.006	0.252**	0.112			
Wide Held	0.54	0.502	−0.015	−0.025	−0.016	−0.167	0.183	0.125	0.151		
Size	3,666	4,382	0.450***	0.482**	−0.055	0.658***	−0.008	0.017	0.092	−0.012	
Debt-To-Equity	77.59	73.052	−0.014	0.006	0.039	0.127	−0.146	0.025	−0.038	0.102	0.131

*** $p < 0.01$; ** $p < 0.05$.

comprehensive analysis using current year data. Table V describes the association using the four-item configuration with lagged data. Table VI describes the association using the seven-item configuration with lagged data.

Table III shows the regression results examining three different CSR measures (Total, Strengths and Weaknesses) using the same four dimensions (*community, employee relations, environment and product and business practices*) adopted by McGuire et al. (2003) and current year executive compensation data. Contrary to McGuire et al. (2003) who found that Stock Options and Salary were significantly related to CSR Weaknesses, the results of Table III only support hypothesis H3b as the percentage of Stock Options is significantly related to CSR Strengths at $p < 0.001$.[9]

Table IV presents the regression examining the association between the three measures of CSR (Total, Strengths and Weaknesses) using the more comprehensive measure of CSR (incorporating all seven dimensions of the index) and current year

TABLE III

Current CSR (four dimensions) and compensation 1995

Explanatory variables		Dependent variable: *Total CSR*	Dependent variable: *Total strengths CSR*	Dependent variable: *Total weakness CSR*
Salary	β_1	−0.069 (−0.408)	−0.069 (−0.389)	−0.005 (−0.027)
% Bonus	β_2	0.035 (0.234)	0.125 (0.806)	0.155 (0.929)
% Stock options	β_3	0.203 (1.523)	0.381 (2.718)***	0.315 (2.089)
ROE	β_4	0.065 (0.514)	0.009 (0.066)	−0.090 (−0.629)
Ownership	β_5	0.024 (0.192)	0.031 (0.236)	0.013 (0.096)
Size	β_6	0.219 (1.355)	0.283 (1.661)	0.123 (0.637)
Debt-to-Equity	β_7	−0.114 (−0.813)	−0.069 (−0.467)	0.068 (0.427)
Adjusted R-square		0.222	0.134	−0.001
F		2.383***	1.750*	0.994
N		69	69	69

Firm-specific intercepts not reported.

*** $p < 0.01$; ** $p < 0.05$; * $p < 0.10$, one-tailed if directional prediction, two-tailed otherwise.

1. Standardized Regression coefficient

2. t statistic

TABLE IV

Current CSR (seven dimensions) and compensation 1995

Explanatory variables		Dependent variable: *Total CSR*	Dependent variable: *Total strengths CSR*	Dependent variable: *Total weakness CSR*
Salary	β_1	−0.047 (−0.303)	0.023 (0.142)	0.125 (0.742)
% Bonus	β_2	0.085 (0.637)	0.175(1.226)	0.138 (0.937)
% Stock options	β_3	0.227 (1.877)*	0.393 (3.057)***	0.246 (1.852)*
ROE	β_4	0.060 (.517)	0.016 (0.129)	−0.083 (−0.657)
Ownership	β_5	−0.075 (0−.665)	−0.075 (−0.627)	0.011 (0.090)
Size	β_6	0.381 (2.590**	0.463 (2.969)***	0.082 (0.508)
Debt-to-Equity	β_7	−0.110 (−0.866)	−0.102 (−0.760)	0.029 (0.211)
Adjusted *R*-square		0.356	0.274	0.227
F		3.680**	2.831***	2.427***
N		69	69	69

Firm-specific intercepts not reported.
***p <0.01; **p <0.05; *p <0.10, one-tailed if directional prediction, two-tailed otherwise.
1. Standardized Regression coefficient
2. t statistic

executive compensation data. We found the percentage of Stock Options is significantly related to CSR Strengths at p <0.001 and supports hypothesis H3b. Consistent with McGuire et al. (2003), we also found that the percentage of Stock Options is marginally significantly related to CSR Weaknesses at p <0.10. H3c is not supported as this is the opposite direction of what we expected. In addition, the percentage of Stock Options is marginally significantly related to Total CSR at p <0.10 level, given marginal support to Hypothesis H3a.

Table V presents the regression examining the association between the four-item measures of executive compensation and CSR using lagged data. These results support Hypothesis H3a and H3b as Stock Options are significantly related to Total CSR

TABLE V

Lagged CSR (four dimensions) and compensation 1995

Explanatory variables		Dependent variable: *Total CSR*	Dependent variable: *Total strengths CSR*	Dependent variable: *Total weakness CSR*
Salary	β_1	−0.161 (−1.047)	−0.099 (−0.618)	0.123 (0.671)
% Bonus	β_2	0.167 (1.285)	0.235 (1.740)*	0.114 (0.738)
% Stock options	β_3	0.340 (2.739)***	0.385 (2.985)***	0.043 (0.291)
ROE	β_4	0.021 (0.189)	0.013 (0.114)	−0.019 (−0.144)
Ownership	β_5	−0.082 (−0.724)	−0.057 (−0.479)	0.072 (0.529)
Size	β_6	0.326 (2.209)**	0.380 (2.476)**	0.064 (0.361)
Debt-to-Equity	β_7	−0.110 (−0.841)	−0.101 (−0.743)	0.014 (0.090)
Adjusted *R*-square		0.249	0.189	−0.069
F		2.797***	2.262**	0.652
N		77	77	77

Firm-specific intercepts not reported.
***p <0.01; **p <0.05; *p <0.10, one-tailed if directional prediction, two-tailed otherwise.
1. Standardized Regression coefficient.
2. t statistic.

and CSR Strengths at $p < 0.001$. Additionally, Bonus is marginally significantly positively related to CSR Strengths at $p < 0.10$, which is in the opposite direction of that predicted by H2b. These results were not found by McGuire et al. (2003).

The results of our most comprehensive and sophisticated analysis uses lagged CSR and includes all seven dimensions are presented in Table VI. As shown in Table VI, the percentage of Stock Options is significantly related to Total CSR and CSR Strengths ($p < 0.001$) supporting Hypothesis H3a and H3b. Also, supporting Hypothesis H1c, Salary is significantly related to CSR Weaknesses ($p < 0.05$). Contrary to Hypothesis H2b, we find that percentage of Bonus is significantly positively related to CSR Strengths at ($p < 0.05$). The significant association between Salary and CSR Weaknesses is consistent with the McGuire et al. (2003) study.

Not surprisingly, Table VI shows a significant association between firm size and Total CSR ($p < 0.01$) and CSR Strengths ($p < 0.01$), although not between firm size and CSR Weaknesses. We also find that the amount of variability explained by *R* squared is greater for the broader CSR measure that includes seven dimensions, and is greater than the *R* squared reported by McGuire et al. (2003). This suggests that an additional contribution of our study is the identification of the increased power of the statistical analysis obtained when using the seven-item measure of CSR and lagged associations between CSR and executive compensation.

The strong association between Stock Options and Total CSR and CSR Strengths found on Table VI suggests that executives who receive stock options tend to take actions to enhance their firms' CSR. However, we were surprised to find that this final analysis failed to reveal a significant relationship between Salary and Total CSR as we predicted in Hypothesis H1a. A better explanation for our findings may be attributed to the strong association between firm size and CSR. Also contrary to hypothesis H2b, Table VI reveals a positive association between Bonus and CSR Strengths, which suggests that executives who received a bonus last year were more likely to ensure that positive measures to address CSR were taken by the firm. This finding, coupled with the lack of a significant finding between Bonus and Total CSR and Bonus and CSR Weaknesses (Hypothesis H2a and H2c), suggests that bonuses may not discourage executives from behaving responsibly as previously hypothesized (c.f., Anderson, 1995; Boyd, 1994; Conyon and Peck, 1998). Further work is needed to explore this latter finding.

TABLE VI

Lagged CSR (seven dimensions) and compensation 1995

Explanatory variables		Dependent variable: *Total CSR*	Dependent variable: *Total strengths CSR*	Dependent variable: *Total weakness CSR*
Salary	β_1	−0.163 (−1.196)	0.012 (−0.081)	0.310 (2.007)**
% Bonus	β_2	0.171 (1.493)	0.280 (2.338)**	0.151 (1.162)
% Stock options	β_3	0.320 (2.921)***	0.408 (3.568)***	0.077 (0.622)
ROE	β_4	0.047 (0.475)	−0.021 (−0.200)	−0.132 (−1.178)
Ownership	β_5	−0.139 (−1.377)	−0.112 (−1.068)	0.081 (0.713)
Size	β_6	0.481 (3.684)***	0.532 (3.903)***	−0.029 (0.848)
Debt-to-Equity	β_7	−0.125 (−1.082)	−0.142 (−1.178)	0.001 (0.005)
Adjusted *R*-square		0.412	0.360	0.247
F		4.811***	4.058***	2.778***
N		77	77	77

Firm-specific intercepts not reported.

***$p < 0.01$; **$p < 0.05$; *$p < 0.10$, one-tailed if directional prediction, two-tailed otherwise.

1. Standardized Regression coefficient.
2. *t* statistic.

Discussion

Our findings suggest the importance of the structure of executive compensation for influencing executives' focus on CSR, and in particular the important role of contingent compensation (stock options and bonus) in influencing CSR. Interestingly, our results also reveal the importance of size for understanding the association between executive compensation and CSR, and more particularly, for clarifying the association between salary and CSR. When firm size is included in the analysis, the significant association between salary and CSR no longer exists.

Our results may be useful for providing important insights into CSR and corporate governance and provide guidance to firms when designing compensation plans. For example, larger firms, which pay executives higher salaries, may be particularly concerned with the compliance aspect of CSR and attempt to structure their compensation plans to try to ensure that they comply with regulatory and legal aspects of CSR. Finally, our findings suggest the importance of measures and statistical approaches to consider the association between executive compensation and CSR, and that the use of more integrated and sophisticated approaches are useful in clarifying the relationships.

Our findings suggest that executive compensation is associated with CSR in Canada, as well as in the U.S. as suggested by McGuire et al. (2003). Even when using the same measures and methods, we report slight differences from McGuire et al. (2003) who found that Stock Options and Salary were significantly related to CSR Weaknesses, we report that Stock Options is significantly related to CSR Strengths. Thus, our findings suggest that while to some extent McGuire et al.'s findings extend beyond the U.S. context, differences between the institutional environments may result in a slight difference in the importance of particular associations. Further work is needed in this area before more concrete conclusions can be reached. Nevertheless, the results of our analysis are encouraging because they do suggest the effectiveness of compensation structure to focus executives' efforts on positive CSR actions in Canada.

Like all research, ours has limitations associated with the sample size, measures and methodology. The use of the CSID ratings as a measure of CSR has some advantages, but also is limited due to its equal weighting of each of the dimensions of CSR. Further research using different weights for each of the dimensions may prove to be beneficial. Also, it is important to recognize that although an independent firm performs the CSID ratings, they are the result of MJRA's definitions and evaluations of CSR. Additional research is needed to investigate the meaning and importance, if any, of these CSR ratings when they are incorporated into more specific industry or firm-level analysis. Studies can aid in the development of this research stream by investigating the construct validity of CSID ratings and providing critiques of MJRA's perspective on CSR.

Although it might be more interesting to have more current data, it is difficult, time consuming and expensive to obtain more current data as our analysis involved the combining of three labor intensive databases: (1) executive compensation, (2) CSR, and (3) hand collected corporate governance variables. However, given our research question examines whether there is an association between CSR and particular components of executive compensation, we do not anticipate that the fundamental association has significantly changed since the date of our database. Nevertheless, future research may consider whether these associations have strengthened (or weakened) over time, and what factors may account for any strengthening/ weakening that is reported.

A comparison between our findings and that of McGuire et al. (2003) suggest that the influence of executive compensation structure on CSR is not necessarily similar across national institutional contexts. Except for the association between Salary and CSR Weaknesses, we found differences between our results and those of McGuire et al. (2003) even when similar methodologies and measures were used. Furthermore, our findings also highlight the importance of using broader measures of CSR and lagged CSR variables in performing the analysis. For example, using the seven-item measure and lagged associations, as well as finding stronger *R*-squared, we found that Stock Options are positively related to Total CSR and CSR Strengths, and Bonus is positively related to CSR Strengths. These results point to the need for attention to the measures and methodologies used in this stream of research. Further investigation of these newly reported associations is also needed to gain insight into how best to influence firms' CSR policies and practices.

Many opportunities for future work arise from our study. For example, a specific investigation of particular institutional factors with different executive compensation plans may be particularly fruitful for understanding how to develop an environment that will encourage higher levels of CSR. In addition, future work considering the attitude of the Board and personal CSR philosophy of executives might also moderate the association between executive compensation and CSR.

Notes

[1] CSR encompasses a firm's consideration of its responsibility to investors and consumers, ethical responsibilities to society, legal responsibility to the government or the law, and discretionary responsibility to the community (Carroll, 1979; Griffin and Mahon, 1997). CSR is considered to encapsulate how well firms have met social and environmental expectations of the public and various stakeholders.

[2] Since Canada and the U.S. have very similar cultures as identified by Hofstede (1980, 2001), inter-country differences arising from differences in culture will be minimized, and differences in findings may not be considered due to cultural differences but may be attributable to national institutional context.

[3] McGuire et al. (2003) failed to find a relationship between Bonus and CSR Strengths and CSR Weaknesses.

[4] In their investigation of the association between executive compensation and corporate social responsibility in the U.S., McGuire et al. (2003) relied upon the use of the American database compiled by Kinder, Lydenberg, and Domini (KLD) database. The KLD database provides access to a wide range of consistently applied ratings of U.S. firms across a number of important social performance attributes that were determined by a knowledgeable group of individuals not connected with the firms (Waddock and Graves, 1997a). MJRA also has a longstanding research partnership with KLD. They exchange research and have collaborated on numerous research projects (MJRA, 2003). Both CSID and KLD use a comprehensive set of ratings for seven dimensions. Though KLD uses different descriptions for some of their dimensions, they cover the same basic social and environmental issues and use the same rating scales as the CSID. The major difference in the two databases is that KLD provides ratings for companies traded on U.S. stock exchanges while CSID provides ratings for companies traded on the Canadian stock exchange. Consequently, the Canadian CSID database is essentially comparable to the KLD database.

[5] For each of these three aspects of CSR, Michael Jantzi Research Associates, Inc. (MJRA) investigates a range of sources. Their analysts review corporate documents, including each company's annual report, annual information form, and proxy information circulars. They also analyze the firm's environmental policy, health and safety policy, and code of business conduct in order to better evaluate the company's performance. MJRA analysts track hundreds of publications and major newspapers across Canada and internally through on-line, CD Rom and subscription services. They also access a broad range of material from government, labor, industry, and not-for-profit organizations. In addition, they interview important stakeholders, including company and industry executives, community groups, environmental organizations, government and regulatory representatives, and union representatives.

[6] The Smith and Zimmerman (1976) model is computed in the following manner: Maximum (0, Stock price at grant date-Present value (Exercise price + Future Value (Dividend stream compounded at the risk-free rate until option expiration))).

[7] In their comparison of Canadian executive options using the two different pricing models of Smith and Zimmerman and Black-Scholes, there was a significant association at the $p < 0.001$ level (Craighead et al., 2004).

[8] The McGuire et al. (2003) paper controlled for activist institutional investment. As this variable was insignificant in all their models, we did not feel its inclusion in the model would neither affect the outcome nor could we obtain the data for our sample.

[9] The model between CSR Weaknesses and executive compensation is insignificant. In comparison, McGuire et al. (2003) did find a significant association between CSR Weaknesses and LTC ($p < 0.05$) and salary ($p < 0.01$).

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