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CEO and Executive Vice President Compensation and Company Performance: An Empirical Study

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Abstract:

This paper examines the complex relationship between compensation levels of the Top Management Team (TMT) and firm performance. Data was collected from a random sample of the 2013 Fortune 500 list of largest United States Based companies. The results show that levels of Vice President Compensation have a stronger direct relationship with firm performance than CEO compensation.

Keywords: *Executive compensation, strategic management, company performance, empirical*

1. Introduction

Researchers (Child, 1972; Festinger, 1957; Kerr & Bettis, 1987; Tosi, Werner, Katz, & Gomez-Mejia, 2000; Gomez-Mejia, Berrone, & Franco-Santos, 2010) have long sought to establish a clear relationship between the compensation of a company's chief executive officer (CEO) and the company's performance. However, despite decades of effort, researchers have yet to fully explain the definitive nature of the relationship between CEO compensation and company performance. Many researchers (Belliveau, O'Reilly & Wade, 1996; Child, 1972; Finkelstein & Hambrick, 1988) have found a direct positive relationship between CEO compensation and company performance, while other studies (Dillard & Fisher, 1990; Jensen & Murphy, 1990; Kerr & Bettis, 1987) have found no direct relationship.

Research over the past few years has identified some areas of potential research interest that could offer an explanation for the conflicting findings of past studies into the relationship between executive compensation and company performance. Previous research exploring the relationship between executive compensation and company performance has focused primarily on the compensation packages of the CEO. However, a company's performance does not solely rely on the talents of the CEO. Hambrick (1997) stressed that the entire top management team is essential in managing a large company. A company's vice presidents are often instrumental in the formulation and implementation of management policies that eventually lead to successful company performance (Hambrick, 1997). Therefore, this study sought to improve upon previous research by incorporating the compensation packages of the executive level vice presidents who constitute the majority of the top management team.

2. Review of Pertinent Literature

Researchers (Child, 1972; Festinger, 1957; Kerr & Bettis, 1987; Tosi, Werner, Katz, & Gomez-Mejia, 2000; Gomez-Mejia, Berrone, & Franco-Santos, 2010) have long sought to establish a clear relationship between the compensation of a company's Chief Executive Officer (CEO) and the company's performance. However, despite decades of effort, researchers have yet to fully explain the definitive nature of the relationship between CEO compensation and company performance. Many researchers (Belliveau, O'Reilly & Wade, 1996; Child, 1972; Finkelstein & Hambrick, 1988) have found a direct positive relationship between CEO compensation and company performance. In contrast, other researchers (Dillard & Fisher, 1990; Jensen & Murphy, 1990; Kerr & Bettis, 1987) have found no positive relationship between CEO compensation and company performance.

In an effort to clarify the contrasting findings of previous researchers, Tosi, Werner, Katz & Gomez-Mejia (2000) conducted a meta-analysis of 137 articles comparing CEO compensation and company performance. A meta-analysis is an empirical technique that allows the researcher to integrate the results of several previous, often contradictory studies. In doing so, the researcher is able to obtain a better estimate of the true relationship between variables (Tosi et al., 2000). Tosi et al. (2000) concluded that a weak but positive relationship existed between CEO compensation and company performance, with CEO compensation accounting for less than five percent of the total variance observed in company performance.

Previous researchers (Child, 1972; Festinger, 1957; Kerr & Bettis, 1987; Tosi et al., 2000; Nyberg et al., 2010) exploring the relationship between executive compensation and company performance largely concentrated solely on the CEO. Throughout much of the 1950s, 1960s and 1970s, CEOs were largely unknown figures to the general public. The compensation packages for CEOs of

that era, even adjusted for inflation, were much smaller than what is typical today (Colvin, 2001). However, beginning in the 1980s CEOs began to become nationally known figures. Over the decades, as companies have competed for those figureheads to lead their firms, CEO compensation increased disproportionately to company performance (Wilson, 1999).

However, Hambrick (1997) stressed that a firm's strategic performance does not rely solely on the talents of the CEO alone. The complexity of managing a large modern corporation requires the contributions of the entire Top Management Team. The Top Management Team (TMT) of a company consists of a Chief Executive Officer (CEO), a President, although the position of President is often held by the CEO, and the executive level vice presidents. The executive level vice presidents who constitute the majority of the members of the TMT are instrumental in the formulation and implementation of management policies that eventually lead to successful company performance (Hambrick, 1997; Dyer & Hatch, 2006; D'Aveni et al., 2010).

Researchers (Bognanno, 2001; Ryan & Wiggins, 2000) have found that the difference between CEO compensation and vice president compensation is often significant. Ryan and Wiggins (2000) found that the compensation packages of the CEO were 45 percent higher than the compensation packages of the next highest executive level vice president. Carpenter and Sanders (2002) found that top management team compensation was a better predictor of future firm performance than CEO compensation. Therefore, this study sought to expand and improve upon previous research by incorporating the compensation packages of the executive level vice presidents who constitute the majority of the top management team.

In addition, this study will also explore the relationship between the compensation packages of the Top Management Team and two different measures of company performance. Measures of company performance fall into two broad categories, market based and accounting based measures of performance. Market based measures of performance include a company's market value or stock price among others. Accounting based measures of performance include return on equity (ROE) and return on assets (ROA) among others.

Market based measures of performance enjoy the advantage of being easily determined, objective, and widely understood by owners and managers alike (Grossman & Hoskisson, 1998). The core support for market based measures of performance lies in the "Efficient Markets Theory" of modern stock exchanges. The "Efficient Markets Theory" states that changes in a company's stock price reflect changes in the firm's underlying fundamental value (Fama, 1970). The market appropriately values expenses that may be risky but are believed by the market to have positive strategic potential. The perceived risk versus the potential benefit is weighed and incorporated into a company's stock price (Grossman & Hoskisson, 1998).

Grossman and Hoskisson (1998) also theorized that accounting based measures of performance might offer an accurate measure of company performance. Accounting based measures of performance have enjoyed wide acceptance and use. Measures such as ROE and ROA are easily determined, perceived to be objective, and also widely understood by owners and managers alike (Grossman & Hoskisson, 1998).

3. Methods

A core objective of the study was the comparison of executive compensation and company performance for United States based companies. United States based companies for the study were restricted to the Fortune 500 companies identified in the May 20, 2013 issue of *Fortune* magazine. The Fortune 500 is an annual list, compiled by *Fortune*, of the 500 largest companies based within the United States of America.

The top management team of a company consisted of executives who held titles ranging from chairman of the board and vice chairman of the board, to chief executive officer (CEO), president, several variations of vice president and occasionally founder. For this study, the executives considered to belong to the top management team were listed on The Securities and Exchange Commission's Form DEF 14a. Any listed executive, who held the title of CEO, either alone or in conjunction with other titles, was classified as a CEO. Any listed executive who did not have the title of CEO, chairman, vice chairman, president or founder was classified as a vice president. Any listed executive who held the title of Chairman, vice chairman, president or founder but did not hold the title of CEO was eliminated for this study.

For this study, the components of the executive compensation packages included the salary, bonus, options value, other annual compensation and long-term incentive payments awarded to an individual executive during the course of one fiscal year. Salary consisted of the annual cash and non-cash remuneration earned by the named executive during the fiscal year. Bonus consisted of all cash and non-cash rewards awarded to the named executive during the fiscal year. Options are the right to purchase shares of a company's stock, usually at a reduced price on a future date. For this study, the value of the options granted was determined using the Modified Black Scholes method. Other annual compensation was the dollar value of all other annual compensation that was not categorized as salary or bonus. This included items such as perquisites, company cars, club memberships, and other personal benefits. Long-term incentive payments (LTIP) were the amount paid to an executive under a company's long-term incentive plan. LTIP plans measure company performance over a period of more than one year (generally three years).

Executive compensation data, for the year 2013 was gathered utilizing Dunn and Bradstreet's Hoovers Online Database. The Hoovers Online database provided detailed compensation packages of top management team executives. Missing and inaccurate information from the Hoovers Online database was augmented by a search of the Security and Exchange Commission's "Edgar Database."

For this study, the individual components of executive compensation packages (salary, bonus, options value, other annual compensation and LTIP) made up the independent variables utilized in further analysis. The components of executive compensation were sorted into CEO or Vice President Compensation variables.

The market based measure of performance for this study was defined as the percent change in a company's year-end market value. The year-end market value of a company was defined as, "The close price (of a single common share of stock) for the fiscal year

multiplied by the company's common shares outstanding" (Standard and Poor's Research Insight, 2001). In order to determine the market based measure of performance, the fiscal year end market value of each company based within the United States was gathered for the years 2012 and 2013 utilizing Dunn and Bradstreet's Hoovers Online Database. The percent change in fiscal year end market value for the year 2012 to 2013 was then determined.

The accounting based measure of performance for this study was defined as a company's annual return on equity. Return on equity is, "Income before extraordinary items and discontinued operations less preferred dividend requirements, but before adding savings due to common stock equivalents, divided by Common Equity as Reported" (Standard and Poors Research Insight, 2001). Common Equity as Reported is defined as the "common shareholders'" interest in the company (Standard and Poors Research Insight, 2001). Annual return on equity was gathered utilizing Dunn and Bradstreet's Hoovers Online Database.

The statistical procedure employed in this study was ordinary least squares (OLS) regression analysis. OLS regression analysis for this study utilized SPSS 22.0. SPSS defines OLS regression as, "(OLS) regression estimates the coefficients of the linear equation, involving one or more independent variables, which best predict the value of the dependent variable."

Previous research (Belliveau, O'Reilly, & Wade, 1996; Tosi, Werner, Katz, & Gomez-Mejia, 2000) found that company size accounts for as much as 40 percent of the variance observed in the correlation between executive compensation and company performance. Therefore, this study also controlled for the effects of company size. Company size, for this study, was defined as a company's total employees for the year 2013. (Werner & Tosi, 1995).

The final sample for this study consisted of executives who met all the requirements for inclusion in the study, and were employed in companies that also met all the requirements for inclusion in the study. For this study, 163 observations were gathered from 50 companies chosen at random from the 2013 Fortune 500 list. The resultant sample consisted of 50 CEO's and 113 identified Vice Presidents.

4. Results

Specifically, the following hypotheses were tested for this study.

- Hypothesis One- There will be a positive relationship between CEO compensation and the accounting based measure of performance.
- Hypothesis Two- There will be a positive relationship between Vice President Compensation and the accounting based measure of performance.
- Hypothesis Three- The positive relationship between Vice President Compensation and the accounting based measure of performance will be stronger than the relationship between CEO compensation and the accounting based measure of performance.
- Hypothesis Four- There will be a positive relationship between CEO compensation and the market based measure of performance.
- Hypothesis Five- There will be a positive relationship between Vice President Compensation and the market based measure of performance.
- Hypothesis Six- The positive relationship between Vice President Compensation and the market based measure of performance will be stronger than the relationship between CEO compensation and the market based measure of performance.

The first hypothesis for this study was; "There will be a positive relationship between CEO compensation and the accounting based measure of performance." The author found a significant relationship between CEO compensation and the accounting based measure of performance which accounted for 11.4% of the variance observed in the accounting based measure of performance. Therefore, Hypothesis One was supported.

4.1. Hypothesis One

Model	Variables Entered	Variables Removed Method	Method
1	Employees		Enter
2	Total Compensation		Enter

Table 1

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.233	.054	.035	14.17710
2	.387	.150	.114	13.58405

Table 2

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	555.712	1	555.712	2.765	.103
	Residual	9647.526	48	200.990		
	Total	10203.238	49			
2	Regression	1530.492	2	765.246	4.147	.022
	Residual	8672.746	47	184.527		
	Total	10203.238	49			

Table 3

Model		B	Std. Error	Beta	t	Sig.
1	(Constant)	15.868	2.426		6.541	.000
	Employees	3.829E-5	.000	.233	1.663	.103
2	(Constant)	7.449	4.338		1.717	.093
	Employees	1.704E-5	.000	.104	.712	.480
	Total Compensation	8.816E-7	.000	.335	2.298	.026

Table 4

The second hypothesis for this study was; “There will be a positive relationship between Vice President Compensation and the accounting based measure of performance.” The author found a significant relationship between Vice President Compensation and the accounting based measure of performance which accounted for 18.1% of the variance observed in the accounting based measure of performance. Therefore, Hypothesis two was supported.

4.2. Hypothesis Two

Model	Variables Entered	Variables Removed	Method
1	Employees		Enter
2	Total Compensation		Enter

Table 5

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.216	.047	.038	14.61881
2	.442	.195	.181	13.49002

Table 6

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1158.941	1	1158.941	5.423	.022
	Residual	23721.767	111	213.710		
	Total	24880.708	112			
2	Regression	4862.826	2	2431.413	13.361	.000
	Residual	20017.882	110	181.981		
	Total	24880.708	112			

Table 7

Model		B	Std. Error	Beta	t	Sig.
1	(Constant)	16.198	1.700		9.531	.000
	Employees	4.109E-5	.000	.216	2.329	.022
2	(Constant)	6.835	2.601		2.627	.010
	Employees	1.325E-5	.000	.070	.761	.488
	Total Compensation	2.141E-6	.000	.413	4.511	.000

Table 8

The third hypothesis for this study was; “The positive relationship between Vice President Compensation and the accounting based measure of performance will be stronger than the relationship between CEO compensation and the accounting based measure of performance.” The author found that the significant relationship between Vice President Compensation and the accounting based measure of performance which accounted for 18.1% of the variance observed in the accounting based measure of performance was

stronger than the relationship between CEO compensation and the accounting based measure of performance which only accounted for 11.4% of the variance observed. In addition, the author found that the significance of the relationship between Vice President Compensation and the accounting based measure of performance was frankly stronger at .000 than the relationship between CEO compensation and the accounting based measure of performance which was only .02. Therefore, Hypothesis three was supported. The author found no significant relationship between either CEO or Vice President Compensation and the market based measure of performance. Therefore, hypotheses four, five and of necessity hypothesis six were not supported.

5. Discussion

In an effort to improve upon previous research into the relationship between executive compensation and company performance, this study primarily sought to address the question; can including vice president compensation improve the understanding of the relationship between executive compensation and company performance? The author had hypothesized that the relationship between vice president compensation and company performance would be stronger than the relationship between CEO compensation and company performance.

When this theory was tested in hypotheses one, two and three, the author found that the results supported the primary premise of this study. The author did find a significant relationship between CEO compensation and the accounting based measure of performance in hypothesis one that accounted for 11% of the variance observed in ROE for 2013. However, in hypothesis two, the author found that the relationship between Vice President Compensation and the accounting based measure of performance accounted for a little over 18% of the variance observed in ROE for 2013. Since Vice President Compensation accounted for more of the observed variance between executive compensation and the accounting based measure of performance than CEO compensation, the third hypothesis and the primary premise of this study was supported. Clearly, the inclusion if not the outright substitution of Vice President Compensation should be considered for future research.

6. Limitations and Opportunities for Future Research

Although every effort was made to anticipate and control for possible complications in the initial planning stages of this project, this study is not without its share of limitations. The decision to limit the sample to the 500 largest companies in the United States does limit the ability to generalize the findings of this study to smaller companies. However, as the Fortune 500 is a common sample utilized by numerous researchers, it was felt that this limitation was in keeping with previous research.

The choice of measures of company performance is also an area of possible limitation for this study. There are countless measures of company performance for a researcher to choose from. Although many of the more exotic measures have been called into question by accounting scandals involving Enron, WorldCom, and others, there are still numerous well established respectable measures of company performance to choose from. This study chose return on equity (ROE) over other acceptable accounting based measures of performance such as return on assets (ROA) and return on sales (ROS). ROE was chosen because it is slightly less susceptible to executive manipulation than the others. However, ROA and ROS are also commonly employed in academic research and future research should consider incorporating them.

This study utilized the one year percent increase in year-end market valuation as the market based measure of performance. An executive manipulation, such as stock splits, new issues, and stock repurchases can easily alter share price of a company's stock, but not the company's total market value. Therefore, year-end market valuation was chosen over other common market based measures such as year-end stock price, average annual stock price and numerous others. However, performance measures relying on stock price in many variations are not without merit and acceptance in academic research. Therefore, future research should at least consider utilizing such measures. In addition, all accounting based and market based measures of performance both utilized and considered for this study have time elements that are widely used in academic research. Two, three and five-year averages of all these measures are commonly utilized in academic research and should also be considered in future studies.

The author's failure to find a significant relationship between executive compensation and the market based measure of performance would seem to lend support for Grossman and Hoskisson's (1998) theories concerning the importance of selecting measures of company performance that likely reflect industry requirements for success. Therefore, future research should at least attempt to select appropriate measures of company performance that would more accurately reflect industry requirements.

Another area for potential exploration for future studies is the possibility that the relationship between executive compensation and company performance will be stronger for companies based outside the United States because of the disproportionate growth in executive compensation within the United States in the past three decades. Great Britain, Germany, Australia and The Netherlands, as well as Canada, all require publicly traded companies within their borders to disclose details of executive compensation packages. Therefore, future research in any one, or all of these countries could prove beneficial.

7. Conclusion

Despite some limitations, and the complete lack of a relationship between the market based measure of company performance and executive compensation, the author is still confident in asserting support for the primary premise of this study. Vice President Compensation accounted for a little over 18% of the variance observed in the accounting based measure of performance. Many, if not most studies have found that the relationship between CEO compensation and company performance often accounts for around 5% of the variance observed. Clearly, the inclusion of an additional and comparable measure such as Vice President Compensation which has been found to account for 18% of the variance observed should certainly merit consideration for future research.

Despite all efforts, this study is by no means the definitive work in the field of executive compensation. However, some areas were clarified, some theories were strengthened and some questions and avenues for future research were identified.

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