Executive pay-performance relationship: evidence from Islamic republic of Pakistan

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ABSTRACT

The purpose of the study is to empirically examine the impact of firm size and its performance on total cash compensation of executives. The study uses a sample of 32 companies from three different sectors listed at Karachi stock exchange for the period ranging from 2006 to 2010. Pearson correlation analysis and regression analysis are used to analyze the impact of firm performance and its size on total cash compensation of executives. We find the firm size and its performance have significant and positive impact on total cash compensation of executives. The firm size is the most significant determinant of total cash compensation of executives as compared to firm performance. Most of the executive pay and performance literature is published with reference to USA, UK and other developed economies but fewer studies are conducted in developing economies like Pakistan. This is the pioneer study of its kind with reference to Pakistan so it can be a useful source of reference.

INTRODUCTION

Top Management is the main decision makers in every organization. Their decision has large influence on the firm’s performance. Thus compensation of top executives is most important issue because it affects their decision making processes. So because of its importance executive compensation has gained significant attention of researchers since 1980s (Murphy, 1999). Many researchers have conducted the research on the executive’s compensation in different back grounds such as (Kaplan, 1994; Izan et al, 1998 Matolcsy, 2000; Gompers et al, 2003; Murphy et al, 2004; Gabaix et al, 2008 and Frydman et al, 2008) among others. Most of the research work has been conducted in developed countries but fewer are with reference to developing economies like Pakistan. So this is motivation behind this study to provide empirical evidence on executive cash compensation and firm performance.

The main purpose of the study is to examine the impact of firm size and firm performance on total cash compensation of executives. For this, study uses a sample of 32 companies listed at Karachi stock exchange selected randomly from three different manufacturing sectors i.e. construction & material, consumer goods and chemical. The study uses five years data ranging from 2006-2010. The dependent variable is total cash compensation which is sum of cash compensation of chief executive officer, board of directors and other top manager’s. The independent variables are firm performance and firm size. Where firm performance is measured through return on total assets (ROA) and firm size measured through log natural of total assets. The study finds that firm performance and its size has positive and significant impact on top executive cash compensation.

The paper is organized in this way next section is literature review, third section is methodology, fourth section is results and discussion and final section is conclusion, limitations & further research avenues.

LITERATURE REVIEW

Many researchers have conducted research on relationship between executive compensation and corporate performance. They have analyzed the relationship between executive compensation and firm’s performance in different back grounds and reported mixed results. Following are the studies which are related to this study.

Murphy (1985) studies the relationship between managers compensation and firm’s performance. He provides statistical evidence on the association between the top managers pay and corporate performance measured through share holders returns and growth in firm’s sales.

Hogan and Sigler (1998) study chief executive officer (CEO) pays and firms performance relationship. The study uses two techniques first is ordinary least squares regression and other is Andrew Sine Technique. The study is conducted on a sample of 800 American corporations for the period of seven years 1986-1992. The results show there is significant positive relationship between chief executive compensation and corporate performance.

Gregg et al. (2005) analyze the association between top management cash compensation and firm performance using a large sample of 415 UK firms for period ranging from 1994-2002. The results show that there is little association between top management cash compensation and corporate performance.

Merhebi et al. (2006) analyze pay and performance relationship of Australian CEO Compensation by using regression analysis. A sample of 722 companies from Australia for the period of ten years ranging from 1990-1999 is used to analyze the relationship. They reported that the CEO compensation has positive and significant relationship with firms performance measured through return on assets (ROA) and return on equity (ROE). They also provide the evidence about positive and significance relationship between chief executive officer compensation and firm size.
Ozkan (2007) provides empirical evidence on CEO remuneration and corporate performance relationship. They use Generalized Method of Moment system estimation (GMM) technique to analyze the relationship. A sample of 390 companies from UK for seven years period ranging from 1999 to 2005 was used by the study. They conclude that CEO cash compensation has positive as well as significant relationship with firm’s performance but total compensation has positive relationship but insignificant relationship with corporate performance.

Sigler (2011) examine the relationship between CEO pay and firms performance. To analyze the relationship study uses Regression analysis. A sample of 280 companies from USA listed on New York Stock Exchange for the period of four years ranging from 2006 to 2009 is used in the study. They report there is significant and positive relationship between CEO remuneration and corporate performance measured by ROE. They also conclude that firm size measured through log of number of employees in the organization is significant determinant of CEO compensation. Further they provide evidence that tenure has significant variable on determining the CEO remuneration.

Many other studies have also reported positive relationship between executive officers compensation and firms performance from different back grounds such as (Jensen and Murphy, 1990; Murphy, 1999 and Zhou, 2000) among others. Some researchers also reported insignificant or negative relationship between executive compensation and firm performance such as (Define et al. 1994; Ilian et al. 1998 and O’Neill and Iob, 1999). Matolcsy (2000) study the relationship between executive cash compensation and corporate performance and reported mixed results.

Generally literature provides mixed results on relationship between executive compensation and firm performance. Some studies provide positive and significant and some negative and insignificant relationship results in different back grounds. This study will provide empirical evidence on executive compensation and firm performance from Pakistani manufacturing companies.

Methodology
Data and sample
To empirically examine the impact of firm performance and size on total cash compensation of executives the study uses 32 companies listed at Karachi stock exchange. These companies are randomly selected from three manufacturing sectors which are chemical, consumer goods and construction & material. The study period is five years from 2006-2010. The data is extracted from publically available annual reports of the companies. These reports are accessed through firm’s websites.

Variables
The study uses two independent variables and one dependent variable. The independent variables are firm size and firm performance. The study uses return on assets (ROA) as a measure of firm performance also used by (Merhebi et al., 2006). Like other studies this study also uses log natural of total assets as a measure of firm size like (Ciscel, 1974; Decker, 1988 and Finkelstein et al., 1989). ROA is calculated by dividing the earnings before interest and taxes (EBIT) of firm for a specific year by firm total assets for a specific year. The dependent variable is total cash compensation of chief executive officer plus the total cash compensation of board of directors plus total cash compensation of other executives whose salary is equal or greater than half million rupees.

Hypothesis
The objective of the study is to analyze the impact of firm size and performance on total cash compensation of executives. Following testable hypothesis are developed

\[ H_1: \] Firm size has positive impact on total cash compensation of executive of Pakistani manufacturing firms.

\[ H_2: \] Firm performance has positive impact on total cash compensation of executives of Pakistani manufacturing firms.

Statistical Model Specification
Firstly study implies Pearson correlation analysis to check the association between the variable used in the study. Secondly multiple regression analysis is used to check impact of firm performance and size on total cash compensation of executives. So the following regression model is developed:

\[ (TECC)_{i,t} = \beta_0 + \beta_1 (\text{Size})_{i,t} + \beta_2 (\text{ROA})_{i,t} + e_{i,t} \]  

(Equation-1)

Where

- \((ROA)_{i,t} : \) return on assets of firm \(i\) in year \(t\).
- \((TECC)_{i,t} : \) total cash compensation of executives of firm \(i\) in year \(t\)
- \((\text{Size})_{i,t} : \) log natural of total assets of firm \(i\) in year \(t\)

Results and Discussion
Pearson correlation analysis
Pearson correlation analysis is used to check the relationship between the variables. The quantitative value of correlation coefficient indicates the strength of relationship and sign shows the direction of relationship either positive or negative.

Table 1: Correlation coefficient between variables

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<th>2006</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
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<tbody>
<tr>
<td>ROA and TECC</td>
<td>0.181</td>
<td>.385**</td>
<td>0.274</td>
<td>.449***</td>
<td>.503***</td>
</tr>
<tr>
<td>SIZE and TECC</td>
<td>.506***</td>
<td>.492***</td>
<td>.501***</td>
<td>.458***</td>
<td>.467***</td>
</tr>
</tbody>
</table>

*** Correlation is significant at the 0.01 level (2-tailed).
** Correlation is significant at the 0.05 level (2-tailed).
* Correlation is significant at the 0.1 level (2-tailed).

The correlation coefficient table 1 shows firm performance measured through ROA has positive relationship with total cash compensation of executive at 5% level of significance in 2007 and 1% in 2009 and 2010. This means total cash compensation of executive increases with firm performance. The correlation coefficient between firm size and total executive compensation has positive relationship at 1% level of significance in all years. It means a firm larger in size compensate more to the executives than a smaller firm. The overall conclusion drawn from above results is that Total cash compensation of executives increase with firm performance and its size. Our results are constant with (Sigler, 2011) and Merhebi et al, 2006).

Regression Analysis
Table 2: R- Square for equation 1

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<tbody>
<tr>
<td>R-Square</td>
<td>.279***</td>
<td>.321***</td>
<td>.383***</td>
<td>.444***</td>
<td>.491***</td>
</tr>
</tbody>
</table>

*** Significant at 1% ** Significant at 5%.: *Significant at 10%

The study uses regression analysis to analyze the impact of firm performance and firm size on the total cash compensation of executives. Table 2 shows that the value of R-Square is increasing through the years and the significance level is 1% in all years. That indicates the explanatory power of ROA and firm size is increasing over the years. So based on the results of R-Square it can be conclude that the independent variables firm
size and performance explain maximum variation in total executives cash compensation.

**Firm size and total cash compensation of executives**

Table 3: Coefficients of independent variable of equation 1

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<tbody>
<tr>
<td>Size</td>
<td>.497***</td>
<td>.427**</td>
<td>.563***</td>
<td>.494***</td>
<td>.489***</td>
</tr>
<tr>
<td>ROA</td>
<td>.152</td>
<td>.288**</td>
<td>.368**</td>
<td>.485***</td>
<td>.524***</td>
</tr>
</tbody>
</table>

***Significant at 1% ; **Significant at 5% ; .Significant at 10%

The results of this study are constant with international findings of studies who reported positive and significant impact on total cash compensation of executives. The coefficient of size is significant at level of 1% in all years but in 2007 the level of significance is 5%. The beta coefficient of firm size is 49.4% at 1% level of significant on average. It implies that for a 10% increase in firm size, the total cash compensation of executives forecast to increase by 4.94%. On the bases of regression results the hypothesis $H_1$ is accepted.

Firm performance and Total cash compensation of executives

The values of coefficient of firm performance measured by ROA are reported in the table 3. The values of coefficients are presented in table 3 shows that ROA has positive impact on the total cash compensation of executives for all years at 10% level of significant in 2007, 5% in 2008 and 1% in 2009 and 2010. The ROA coefficient is increasing over the years that show relationship between cash compensation of executives with firm performance is strengthening over the years. The coefficient beta is 0.363 on average. It implies that for a 10% increase in ROA, the total cash compensation of executives forecast to increase by 3.63%. Based on the regression results hypothesis $H_2$ is accepted. So the overall conclusion is that firm performance measured by ROA has positive impact on total cash compensation of executives. Our findings are similar with international studies like (Zhou, 2000; Merhebi et al., 2006) who reported positive relationship between cash compensation of executives with firm performance which is constant with international findings.

Further research avenues

Further research has five directions. First, there should be similar study by increasing sample size or by conducting same research in service industry of Pakistan like banks and insurance companies. Second, there should be similar study conducted in other developing countries. Third, there should be study that examines the impact of firm size and performance on Chief executive officer, board of directors and other Key personals separately. Fourth, a study should be conducted that examine which element in the pay of top manager is highly correlated to firm performance because that study can help the compensation committee in deciding the pay for top managers. Fifth, there should be a study that examines the impact of top managers pay on firm performance.

References


