

РАЗДЕЛ 3
КОРПОРАТИВНОЕ
УПРАВЛЕНИЕ
В ЮЖНОЙ АФРИКЕ

SECTION 3
CORPORATE
GOVERNANCE IN
SOUTH AFRICA



CEO COMPENSATION AND PERFORMANCE OF STATE OWNED
ENTERPRISES IN SOUTH AFRICA

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Abstract

The study investigates the relationship between CEO compensation and performance of State Owned Enterprises (SOEs) in South Africa, using data for the period 2009 to 2011. The results indicated that there exist no positive relationship between CEO compensation and SOEs performance as measured by return on assets. The results also indicated a positive relationship between CEO compensation (base salary) and the size of SOEs as measured by total revenue and number of employees. The results suggest that board members of SOEs in South Africa should hold CEOs accountable for the performance of SOEs, and should not pay huge salaries and bonuses to non performing CEOs.

Keywords: CEO Compensation, SOE Performance, Corporate Governance, South Africa

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1. Introduction

The issue of the gap between the remuneration paid to company directors and that paid to other employees has, in recent times, made headlines in the international media. The chief executive officers (CEOs) of the 15 largest companies in the United States were reported to have earned 520 times more than the average worker in 2007

(International Labour Organisation (IOL), 2008). A study conducted by PwC (2011) of the top 40 companies listed on the Johannesburg Stock Exchange (JSE) revealed that the median pay of executive directors has increased by 23.3% to R4.8 million in 2010. This, of course, has significantly increased the wage gap between executives and ordinary company employees. Two cases in point are the salary increases of 109% paid to Eskom

executives (*Business Day*, 2011) and the 81% increase for Sasol's directors (Politicsweb, 2011); both these increases prompted labour unions to embark on a violent strike, with members demanding that their wage increases matched those of their managers.

In the United States the Securities and Exchange Commission set tighter rules towards the end of 2006 for corporate proxies – these rules require that more information be provided about the methods used to compile pay packages for top management (Jeppson, Smith and Stone, 2009). In 2007, the average overall compensation for chief executives at 200 large companies that had filed proxies in the United States approached \$12 million. Recent reports in Kenya, which state that pay increases have pushed civil servants ahead of private sector (TradeMark SA, 2012), have added fuel to the debate on remuneration paid to executives, especially executives of state owned enterprises. Unlike private companies, state owned enterprises (SOEs) receive the bulk of their revenue from the Treasury (the tax payer) and are supposed to serve the public. However, the remuneration of top executives in SOEs seems to be competing with that of private companies, resulting in consumers paying high tariffs in SOEs such as Eskom when, in fact, these consumers should be benefiting from the subsidy paid to Eskom by the Treasury.

In the UK, the Chief Secretary to the Treasurer announced on 12 February 2012 that there would be a review into all public sector bonuses in order to ensure that bonuses would only be paid for 'genuine excellence' and that 'there is no reward for failure' in publicly funded bodies (Winnet and Kirkup, 2012).

Given all this, the question arises: does the compensation of the Chief Executive Officer (CEO) reflect company performance in South Africa? To be more specific: is there a relationship between the compensation of the Chief Executive Officer (CEO) and the performance of state owned enterprises (SOEs) in South Africa?

To date, the empirical studies used to confirm or reject relationships between CEO compensation and company performance have principally used data from listed companies in the USA, UK, Australia, Japan and other emerging or transitional economies. Little or no study has been conducted using data from state owned enterprises. The purpose of this paper is to help fill the gap, and to add to the existing body of literature on the topic of executive compensation by investigating the relationship between CEO compensation and performance of SOEs in South Africa. To this end, we shall use data for the period 2009 to 2011. The remainder of this paper is structured as follows: firstly, a literature study presents the theoretical foundation of the study related to CEO remuneration and company performance. Secondly,

we shall then outline the sample, variables and methodology used. Thirdly, we shall analyse the data and, lastly, we shall present the results of this analysis and put forward our recommendations.

2. Literature review

According to Agency Theory, an agency problem exists when an agent, such as a CEO, has established an agenda that conflicts with the interests of the stockholders (Attaway, 2000). Lilling (2006) states that the CEO is the agent, while the shareholders are the principals. The agent (CEO) is looking after his or her best interests: in other words, he or she wants to get paid as much as possible. On the other hand, the principals (shareholders) own a stake in the company, and want the company to perform as best as it can. The board members must find a way to compensate the CEO so that he or she is amply rewarded if the company performs well. One way to avoid agency problems would be to reward executives on the basis of financial returns to shareholders. Mallin (2007) explains that the economic literature demonstrates that the compensation received by senior management should be linked to company performance for economic reasons. However, given the salary increases paid to executives, shareholders are now convinced that there is no connection between executive pay and corporate performance (Attaway, 2000). In fact, shareholders should be the focal group whose interests are furthered by designing executive salary arrangements that result in a high-performance company. According to Bruce, Buck and Main (2005), the key factor in effecting this outcome is pay-performance sensitivity.

Unlike private and public companies, the major shareholder in SOEs is the government. In South Africa, SOEs are defined in terms of the Public Finance Management Act (PFMA), 1 of 1999. There are two main categories of SOEs in South Africa, those that fall directly under the Department of Public Enterprises and those that do not fall directly under this Department. There are currently nine SOEs that fall directly under the Department of Public Enterprises. The South African government, as the major shareholder of SOEs that fall directly under the Department of Public Enterprise, is responsible for the appointment of board members. The CEO is thus appointed by the Minister of Public Enterprises after recommendations from board members and after consultation with the Cabinet. In order to prevent the abuse of power by the ruling party and to prevent cadre deployment, the National Planning Commission headed by the Minister in the Presidency made a proposal that the power to appoint CEOs in SOEs should be removed from the

Minister of Public Enterprises and given to the Board of Directors (Shoba, 2011).

Studies on executive compensation can be traced back to the late 1950s (Jeppson, Smith and Stone, 2009). Company performance has been measured in different ways by different researchers (see Lilling, 2009; Jepson, Smith and Stone, 2009; Crumley, 2008; Attaway, 2000; Izan, Sidhu and Taylor, 1998). The most common methods used to measure company performance are shareholder equity, share performance, and profitability (see Liling, 2009; Attaway, 2000), while CEO compensation is usually measured in term of base salary, cash bonus, share awards, option awards, and benefits such as pensions and other perks (Jeppson, Smith and Stone, 2009; Crumley, 2008).

Previous studies conducted internationally have found a small but significant link between CEO compensation and company performance. Izan, Sidhu and Taylor (1998) conducted a study on 99 listed Australian companies for the years 1987 to 1992, using both accounting and share price as performance measures. The results indicated that there was no connection between CEO pay and performance.

Attaway (2000) conducted a study on the relationship between company performance and CEO compensation using a sample of 42 computer and electronic firms listed in E.S. Hardy's article entitled "Payday for America's 800 top chief executives". The results revealed a small but positive relationship between company performance and the compensation paid to CEOs.

Lilling (2006) conducted a study into the link between CEO compensation and company performance, making use of the theory of incentive-based contract, where the CEO is paid a base salary and is rewarded with a performance-based bonus (which can take the form of cash, stock grants or stock options). For his study, Lilling used data obtained from Compustat North America, which consisted of 16 211 companies for the period 1993 to 2003. The results revealed a positive relationship between CEO compensation and a company's market value. The study concluded that incentive-based contracts are effective owing to the positive pay-to-performance link.

Crumley (2008) conducted a study of the relationship between company performance and CEO compensation in the U.S. commercial banking industry, making use of data collected from 36 companies during the period 2001 to 2003. The results indicated that there is a weak relationship between both percentage stock price return and percentage return on equity and the percentage change in CEO compensation. The study further revealed a strong relationship between sales, assets and number of employees and dollar level of CEO compensation.

Jeppson, Smith and Stone (2009) also conducted a study on the relationship between CEO compensation and company performance. The study used change in net income, percentage change in net income, and total revenue as measures of company performance. The results of this study revealed that no strong relationship existed between CEO compensation and company performance in terms of variable change in net income and percentage change in net income; however, the study also revealed the existence of a significant relationship with total revenue.

Studies conducted in South Africa on the relationship between CEO remuneration and company performance are scanty. However, in 2009, Scholtz conducted a study on share options as part of executive remuneration. As a result of his study, he proposed changes at internal governance level in order to align executive remuneration with the interests of stakeholders. Theunissen (2010) conducted a study on remuneration and benefits of the directors of State owned enterprises. He recommended that remuneration should be distributed more equally (i.e. throughout all ranks of employees) because an CEO's performance is the result of work done by all employees, not just the CEO.

3. Research objectives

The objective of the study was to investigate the relationship between CEO compensation and performance of SOEs in South Africa, using data for the period 2009 to 2011. Data was obtained from SOEs that fall directly under the Department of Public Enterprises and an equal number of SOEs that do not fall directly under this Department. The study tested the relationship between SOE performance and CEO compensation using premises and variables that have been used in prior studies. The study aimed to build on previous studies conducted into the relationship between CEO compensation and company performance, with particular reference to Jeppson, Smith and Stone (2009), Attaway (2008), Crumley (2008) and Izan, Sidhu and Taylor (1998).

4. Research methodology

4.1. Data, variables, and hypotheses

The study population consisted of all nine SOEs that fall directly under the Department of Public Enterprises and all SOEs that do not fall directly under this Department. Secondary data used in the empirical study was acquired from SOE annual reports for the years 2009 to 2011, thus providing the researchers with three years of uninterrupted observations. The data for a particular SOE was included in the test sample only if the following

two conditions were met. First, the data for each dependent and independent variables had to be available for each of the three years covered by the study. Second, each SOE had to be managed by the same CEO for the entire duration of the study. Attaway, 2000 (citing Madura et al., 1996) suggests that, for the study to be able to determine whether CEO compensation is linked to company performance, the same CEO should be in place during the period in which performance is measured. Due to the fact that most SOEs were not managed by the same CEO for the entire period under review, the sampling frame of this study was thus limited to five SOEs that fall directly under the Department of Public Enterprises and five selected SOEs that do not fall directly under this Department, thus resulting in a total sample frame of ten SOEs.

4.2. Definition of variables

Variables used to measure SOE performance

Company performance has been analysed in different ways by different researchers. Most studies (see Attaway, 2000; Izan, Sidhu and Taylor, 1998) used profitability, share performance, or shareholder equity (ROE) to measure company performance. However, others (Canarella and Gasparyan, 2008; Lilling, 2006) used return on assets (ROA) as proxy to measure company performance. Attaway (2000) argues that the use of profitability as a measure of company performance is subject to criticism, simply because profitability may not reflect the company's real value (because executives can manipulate profitability indicators). Attaway (2000) further argues that executives can do this by manipulating the depreciation policy (accelerated versus straight-line), changing inventory valuation procedures (FIFO versus LIFO), using short-term, non-capitalised lease to obtain productive equipment, and using 'window-dressing techniques' such as holding borrowed money as cash until the end of the financial year to make the balance sheet look good.

Hagel, Brown and Davidson (2010) concur with Attaway (2000) by arguing that return on equity (ROE) is not the best way to measure company performance, because this places the focus on returns given to company shareholders. They further argue that companies can resort to certain financial strategies to artificially maintain a healthy return on equity (ROE) and hide the company's deteriorating performance in terms of actual business fundamentals. For example, growing debt leverage and share buybacks funded through accumulated cash can help a company's ROE, even though its operational profitability is eroding. Given this, according to Hagel, Brown and

Davidson (2010), ROA is a better ratio for measuring financial performance, because it takes into account the assets used to support the company's activities.

Further reasons for using the ROA instead of the ROE is that the Department of Public Enterprises has argued that the performance of SOEs should not be judged using the standard applicable to the private sector (i.e. whereby dividends are declared to shareholders). Indeed, the Department decided that SOEs were not obliged to declare dividends. They argued that revenue or profit should be "reinvested" in infrastructure development and other commercial activities that they are involved in order to strengthen their balance sheets with a view to increase their access to the capital markets, and thereby reduce their dependence on the fiscus (Ensor, 2011; Shoba, 2011). For the purpose of this study, ROA is defined in two ways: firstly, it is defined as the percentage of corporate return on assets or the ratio of earnings before interest and taxes to average total assets (ROA₁). Secondly, ROA is also defined as the ratio of earnings before interest and taxes to total assets (ROA₂).

Size of SOE

According to Crumley (2008), one of the most important influences of compensation, according to the literature, is the size of the company. The size of the company is measured by its book value of assets, level of sales and number of employees (Crumley, 2008). Lilliang (2006) agrees with Crumley (2008), and states that the most commonly used measure of the size of a company is its sales volume and number of employees. In this study, annual total turnover, value of total assets, and number of employees were used to measure the size of SOEs.

Variables used to measure CEO compensation

Due to the fact that benefits paid to CEOs differed from one SOE to another, total compensation was thus limited to base salary plus cash bonus only. Also, because the annual cash bonus was not paid regularly during the duration of the study, dummy variables were used, with 1 indicating that a bonus was paid to the CEO, and 0 indicating that no bonus was paid to the CEO.

Hypotheses

The literature (i.e. in the discipline of Economics) argues that, for sound financial reasons, compensation awarded to senior management should be linked to company performance (Malin, 2007). In order to investigate whether CEO

compensation in SOEs concurs with what is said in the literature, the following seven hypotheses were tested:

HO: 1 - A positive relationship does not exist between SOE performance as measured by the return on assets (ROA) and CEO compensation (base salary plus cash bonus).

HO: 2 - A positive relationship does not exist between the size of SOEs as measured by total revenue (in Rands) and CEO compensation (base salary plus cash bonus).

HO: 3 - A positive relationship does not exist between the size of SOEs as measured by total revenue (in Rands) and CEO compensation (base salary only).

HO: 4 - A positive relationship does not exist between the size of SOEs as measured by total assets (in Rands) and CEO compensation (base salary and cash bonus).

HO: 5 - A positive relationship does not exist between the size of SOEs as measured by total assets (in Rands) and CEO compensation (base salary only).

HO: 6 - A positive relationship does not exist between the size of SOEs as measured by number of employees and CEO compensation (base salary and cash bonus).

HO: 7 - A positive relationship does not exist between the size of SOEs as measured by number of employees and CEO compensation (base salary only).

All these hypotheses were tested using Pearson Product-Moment Correlation and linear least squares regression analysis.

5. Results

Table 1 shows the descriptive statistics for this study. These statistics are divided into three panels: Panel A depicts the results of SOEs that fall directly under the Department of Public Enterprises, Panel B depicts the results of SOEs that do not fall directly under this Department, while Panel C depicts the results of the descriptive statistics of all samples.

Table 1. Descriptive statistics

Variable	Panel A: SOEs that fall directly under the Department of Public Enterprise (N =15)				Panel B: SOEs that do not fall directly under the Department of Public Enterprise (N =15)			
	Mean	Minimum	Maximum	Std. dev.	Mean	Minimum	Maximum	Std. dev.
	CEOANSal	2 802 021.27	2 011 000	3 831 000	625 949.47	2 083 685.73	1 081 000	3 908 000
DUM_AnBon	0.27	0	1	0.498	0.53	0	1	0.516
CEOTotComp	3 113 154.60	2 011 000	5 674 000	1 016 029.30	2 083 685.73	1 081 000	3 908 000	1 072 542.93
Tot. Rev.	12 831 463 210	127 517 726	36 474 000 000	14 973 097 684	6 740 248 533	1 061 142 000	21 169 000 000	5 794 972 234
Tot. Ass.	18 224 037 635	519 925 867	85 771 000 000	25 965 817 237	37 805 685 933	91 878 000	2,E+11	68 284 580 569
EBIT	2 819 822 668	-543 900 000	35 712 000 000	9 171 666 444	1 819 447 800	-488 170 000	22 521 125 000	5 758 042 875
No. Emp.	7 891.47	680	23 520	8 395.22	4 553.00	178	18 870	6 656.34
ROA ₁	0.0496	-0.140	0.501	0.1613	0.065	-0.021	0.405	0.102
ROA ₂	0.0497	-0.126	0.628	0.180	0.056	-0.022	0.326	0.083

NOTES:

CEOASal - total annual salary paid to the CEO; DUMAnBon - total annual cash bonus paid to the CEO; CEOTotComp - CEO total compensation; Tot. Rev. - total annual revenue in Rands; Tot. Ass. - total assets in Rands; EBIT - earnings before interest and tax; No. Emp.- total number of employees; ROA₁ and ROA₂ return on investment.

Table 2. Descriptive statistics (Panel C: Total sample)

Variable	N	Mean	Minimum	Maximum	Std. dev.
CEOANSal	30	2 442 853.50	1 081 000	3 908 000	936 985.25
DUM_AnBon	30	0.40	0	1	0.498
CEOTotComp	30	2 598 420.17	1 081 000	5 674 000	1 152 296.66
Tot. Rev.	30	9 785 855 872	127 517 726	36 474 000 000	11 577 514 959
Tot. Ass.	30	28 014 861 784	519 925 867	2,E+11	517 26 706 783
Net Inc	30	2 319 635 234	-54 300 000	35 712 000 000	7 541 492 004
No. Emp.	30	6 222.23	178	23 520	7 635.22
ROA ₁	30	0.057	-0.140	0.501	0.133
ROA ₂	30	0.053	-0.126	0.628	0.138

Table 1 depicts the descriptive statistics for this study. The final sample for 2009 to 2011 data set consisted of 5 SOEs that fall directly under the Department of Public Enterprises (resulting in 15 observations), 5 SOEs that do not fall directly under this Department (also resulting in 15 observations), and 10 SOEs for the total sample (resulting in 30 observations). The descriptive statistics are presented in three panels: Panel A represents SOEs that fall directly under the Department of Public Enterprises (N=15), Panel B consists of SOEs that do not fall directly under this Department (N=15), and Panel C depicts the results of the total sample (N=30). The mean compensation of CEOs (base salary and cash bonus) was R2 802 021.27 for Panel A, R2 083 685.73 for Panel B, and R2 442 853.50 for Panel C. The mean return on assets (ROA₁) was 4.97% and (ROA₂) for Panel A, 5.6% for Panel B, and 5.3% for Panel C. The mean total revenue was R12 831 463 210 for Panel A, R6 740 248 533 for Panel B, and R9 785 855 872 for Panel C. The mean total assets were R18 224 037 635 for Panel A, R37 805 685 933 for Panel B, and R28 014 861 784 for Panel C. The mean number of employees was 7892 for Panel A, 4 553 for Panel B, and 6 222 for Panel C.

Based on the above results, it is clear that there is a large variation in some of the variables. Only the variation of the total sample (Panel C) will be explained. CEO total compensation varies from a

minimum of R1 081 000 to a maximum of R5 764 000. Similarly, return on assets varies from a minimum of -14.0% to a maximum of 4.9% (ROA₁), and -12.6% to a maximum of 62.8% (ROA₂). Total turnover varies between R127 517 726 and R364 74 000 000, and number of employees varies between 178 and 23 520. These variations indicate that there are significant differences between the maximum and the minimum values, but they do not explain the reasons for the variability of the values.

Regression analysis

The result of the Pearson Correlation was omitted in this study because no significant correlation was observed. Regression was thus used to predict CEO compensation and SOE performance using the variable ROA₂. The results of ROA₁ were not analysed, since they revealed no correlation with other variables. The variable ROA₂ will now be referred to as ROA in the following paragraphs. Regression was also used to test whether there is a positive relationship between CEO total compensation (base salary plus annual cash bonus), CEO compensation (base salary only), and the size of the SOE (total revenue, total assets, and number of employees). Table 3 depicts the regression analysis of both the dependent variable (ROA) and the independent variable (CEO total compensation).

Table 3. Regression analysis of both the dependent variable (ROA) and the independent (CEO total compensation) variable

Model summary (ROA)					ANOVA
Panel A: SOEs that fall directly under the Department of Public Enterprises					
Model	R	R-square	Adjusted R-square	Std. Error of Estimate	Sign.
1	0.22 ^a	0.000	-0.076	0.18720964	0.425
Panel B: SOEs that do not fall directly under the Department of Public Enterprises					
Model	R	R-square	Adjusted R-square	Std. Error of Estimate	Sign.
1	0.183 ^a	0.034	-0.041	0.08513205	0.513
Panel C: Total sample					
Model	R	R-square	Adjusted R-square	Std. Error of Estimate	Sign.
1	0.073 ^a	0.005	-0.030	0.14024326	0.701

a. Predictors: (Constant), CEO total compensation.

The regression results of Hypothesis 1 shown in Table 4 reflects an R-square of 0.000 for Panel A, 0.034 for Panel B, and 0.005 for Panel C, which is the correlation coefficient squared. It is interpreted as the proportion of the total variation of 0 for Panel A, 3.4% for Panel B, and 0.5% for Panel C of the value of CEO compensation explained by the ratio return on assets (ROA). Since these percentages are low, this suggests that CEO total compensation for SOEs is not dependent on the ROA ratio.

The correlation coefficient (R) of ROA for Panel A was 0.22, for Panel B 0.183, and for Panel C 0.073. The results of the analysis of variance (ANOVA) are 0.938 for Panel A, 0.513 for Panel B, and 0.701 for Panel C and therefore indicate no significant relationship. Hypothesis 1 is therefore not rejected. A positive relationship does not exist between CEO total compensation and ROA. Table 4 depicts the regression analysis of the dependent variable (total revenue in Rands) and the independent variable (CEO total compensation).

Table 4. Regression analysis of the dependent variable (total revenue) and independent variable (CEO total compensation)

Model summary (total revenue)					ANOVA
Panel A: SOEs that fall directly under the Department of Public Enterprises					
Model	R	R-square	Adjusted R-square	Std. Error of Estimate	Sign.
1	0.173 ^a	0.030	-0.045	15302966999	0.537
Panel B: SOEs that do not fall directly under the Department of Public Enterprises					
Model	R	R-square	Adjusted R-square	Std. Error of Estimate	Sign.
1	0.244 ^a	0.060	-0.013	5831489977	0.380
Panel C: Total sample					
Model	R	R-square	Adjusted R-square	Std. Error of Estimate	Sign.
1	0.272 ^a	0.074	0.041	11338329154	0.146

a. Predictors: (Constant), total revenue.

The regression results of Hypothesis 2 shown in Table 4 reflects an R-square of 0.030 for Panel A, 0.060 for Panel B, and 0.074 for panel C, which is the correlation coefficient squared. It is interpreted as the proportion of the total variation, or 3% for Panel A, 6% for Panel B, and 7.4% for Panel C of the value of CEO compensation explained by the total revenue (in Rands). Since

these percentages are low, this suggests that CEO total compensation is not dependent on the total revenue of the SOE.

The correlation coefficient (R) of total revenue for Panel A is 0.173, for Panel B 0.244, and for Panel C 0.272. The ANOVA results are 0.537 for Panel A, 0.380 for Panel B, and 0.146 for Panel C, thus indicating no significant relationship.

Hypothesis 2 is therefore not rejected. A positive relationship does not exist between CEO total compensation and the size of SOEs as measured by total revenue. Table 5 depicts the regression

analysis of the dependent variable (total revenue in Rands) and the independent variable (CEO compensation – base salary).

Table 5. Regression analysis of both the dependent (total revenue) and independent (CEO compensation – base salary) variable

Model summary (number of employees)					ANOVA
Panel A: SOEs that fall directly under the Department of Public Enterprise					
Model	R	R-square	Adjusted R-square	Std. Error of Estimate	Sign.
1	0.604 ^a	0.365	0.316	12 382 239 411	0.017*
Panel B: SOEs that do not fall directly under the Department of Public Enterprises					
Model	R	R-square	Adjusted R-square	Std. Error of Estimate	Sign.
1	0.244 ^a	0.060	-0.013	5 831 489 977	0.380
Panel C: Total sample					
Model	R	R-square	Adjusted R-square	Std. Error of Estimate	Sign.
1	0.424 ^a	0.180	0.150	10 671 627 505	0.020*

a. Predictors: (Constant), CEO base salary.

*Significant at 0.005 level (two-tailed)

The regression results of Hypothesis 3 shown in Table 5 reflects an R-square of 0.365 for Panel A, 0.060 for Panel B, and 0.180 for panel C, which is the correlation coefficient squared. It is interpreted as the proportion of the total variation, or 36.5% for Panel A, 6% for Panel B, and 18% for Panel C of the value of CEO compensation explained by the total revenue (in Rands). The total variation for Panel A is slightly higher (36.5%). The correlation coefficient (R) is 0.604, and the ANOVA value is 0.017. The total variation for

Panel C is 18%, the correlation coefficient (R) is 0.424, and the ANOVA value is 0.020. The total variation for Panel A (6%) is the lowest, the correlation coefficient (R) is 0.244, and the ANOVA value is 0.380. Hypothesis 3 is therefore rejected. A positive relationship does exist between CEO compensation (base salary) and the size of SOEs as measured by total revenue. Table 6 depicts the regression analysis of both the dependent variable (total assets in Rands) and the independent variable (CEO total compensation).

Table 6. Regression analysis of both the dependent (total assets) and independent

(CEO total compensation) variable Model summary (total assets)					ANOVA
Panel A: SOEs that fall directly under the Department of Public Enterprises					
Model	R	R-square	Adjusted R-square	Std. Error of Estimate	Sign.
1	0.132 ^a	0.017	-0.058	26 711 788 260	0.640
Panel B: SOEs that do not fall directly under the Department of Public Enterprises					
Model	R	R-square	Adjusted R-square	Std. Error of Estimate	Sign.
1	0.222 ^a	0.049	-0.024	69 101 464 750	0.427
Panel C: Total sample					
Model	R	R-square	Adjusted R-square	Std. Error of Estimate	Sign.
1	0.191 ^a	0.036	0.002	51 675 528 964	0.313

a. Predictors: (Constant), CEO total compensation.

The results of the regression summary of Hypothesis 4 shown in Table 6 reflect an R-square of 0.017 for Panel A, 0.049 for Panel B, and 0.036 for panel C, which is the correlation coefficient squared. It is interpreted as the proportion of the total variation, or 1.7% for Panel A, 4.9% for Panel B, and 3.6% for Panel C of the value of CEO compensation explained by the total assets. Since these percentages are low, this suggests that CEO compensation is not dependent on total assets.

The correlation coefficient (R) of total assets for Panel A is 0.132, for Panel B 0.222, and for

Panel C is 0.191. The results of ANOVA are 0.640 for Panel A, 0.427 for Panel B, and 0.313 for Panel C, thus indicating no significant relationships. Hypothesis 4 is therefore not rejected. A positive relationship does not exist between CEO compensation and the size of SOEs as measured by return on total assets. Table 7 depicts the regression analysis of both the dependent variable (total assets in Rands) and the independent variable (CEO compensation – base salary).

Table 7. Regression analysis of both the dependent (total assets) and the independent (CEO compensation – base salary) variable

Model summary (number of employees)					ANOVA
Panel A: SOEs that fall directly under the Department of Public Enterprises					
Model	R	R-square	Adjusted R-square	Std. Error of Estimate	Sign.
1	0.485 ^a	0.235	0.176	23 565 856 934	0.067
Panel B: SOEs that do not fall directly under the Department of Public Enterprises					
Model	R	R-square	Adjusted R-square	Std. Error of Estimate	Sign.
1	0.222 ^a	0.049	-0.024	69 101 464 750	0.427
Panel C: Total sample					
Model	R	R-square	Adjusted R-square	Std. Error of Estimate	Sign.
1	0.158 ^a	0.025	-0.010	51 979 693 187	0.404

a. Predictors: (Constant), CEO base salary.

The regression results of Hypothesis 5 shown in Table 7 shows an R-square of 0.235 for Panel A, 0.049 for Panel B, and 0.025 for panel C, which is the correlation coefficient squared. It is interpreted as the proportion of the total variation, or 23.5% for Panel A, 4.9% for Panel B, and 2.5% for Panel C of the value of CEO compensation explained by total assets (in Rands). The total variation for Panel A (23.5%) is slightly higher compared with Panel B (4.9%) and Panel C (2.5%) – which is very low – and suggests that there is no positive relationship between CEO compensation and total assets of

SOEs. This is confirmed by the correlation coefficient R (0.485) for Panel A, ANOVA value (0.067), R (0.222) for Panel B, ANOVA value (0.427), and R (0.158) for Panel C, ANOVA value (0.404). Hypothesis 5 is therefore not rejected. A positive relationship does exist between CEO compensation (base salary) and the size of SOEs as measured by total assets. Table 8 depicts the regression analysis of both the dependent variable (number of employees) and the independent variable (CEO total compensation).

Table 8. Regression analysis of both the dependent (number of employees) and the independent (CEO total compensation) variable

Model summary (number of employees)					ANOVA
Panel A: SOEs that fall directly under the Department of Public Enterprises					
Model	R	R-square	Adjusted R-square	Std. Error of Estimate	Sign.
1	0.222 ^a	0.050	-0.024	8 493.76	0.425
Panel B: SOEs that do not fall directly under the Department of Public Enterprises					
Model	R	R-square	Adjusted R-square	Std. Error of Estimate	Sign.
1	0.260 ^a	0.068	-0.004	6 669.71	0.349
Panel C: Total sample					
Model	R	R-square	Adjusted R-square	Std. Error of Estimate	Sign.
1	0.307 ^a	0.094	0.062	7 394.93	0.099

a. Predictors: (Constant), CEO total compensation.

The regression results of Hypothesis 6 shown in Table 8 reflect an R-square of 0.050 for Panel A, 0.068 for Panel B, and 0.094 for panel C, which is the correlation coefficient squared. It is interpreted as the proportion of the total variation, or 5% for Panel A, 6.8% for Panel B, and 9.4% for Panel C of the value of CEO compensation explained by the number of employees. Since these percentages are low, this suggests that CEO compensation is not dependent on the size of SOEs as measured by the number of employees.

The correlation coefficient (R) of number of employees for Panel A is 0.222, for Panel B is

0.260, and for Panel C is 0.307. The results of the ANOVA are 0.425 for Panel A, 0.349 for Panel B, and 0.099 for Panel C, which indicates that no significant relationship exists. Hypothesis 6 is therefore not rejected: a positive relationship does not exist between CEO compensation and the size of SOEs as measured by the number of employees.

Table 9 depicts the regression analysis of both the dependent variable (number of employees) and the independent variable (CEO compensation – base salary).

Table 9. Regression analysis of the dependent (number of employees) and independent (CEO compensation – base salary) variables

Model summary (number of employees)					ANOVA
Panel A: SOEs that fall directly under the Department of Public Enterprises					
Model	R	R-square	Adjusted R-square	Std. Error of Estimate	Sign.
1	0.544 ^a	0.296	0.242	7311.145	0.036*
Panel B: SOEs that do not fall directly under the Department of Public Enterprises					
Model	R	R-square	Adjusted R-square	Std. Error of Estimate	Sign.
1	0.260 ^a	0.068	-0.004	6669.172	0.349
Panel C: Total sample					
Model	R	R-square	Adjusted R-square	Std. Error of Estimate	Sign.
1	0.405 ^a	0.164	0.134	7104.980	0.026*

a. Predictors: (Constant), CEO base salary.

*Significant at 0.005 level (two-tailed)

The regression results of Hypothesis 7 shown in Table 9 reflect an R-square of 0.296 for Panel A, 0.068 for Panel B, and 0.164 for panel C, which is

the correlation coefficient squared. It is interpreted as the proportion of the total variation, or 29.6% for Panel A, 6.8% for Panel B, and 16.4% for Panel C

of the value of CEO compensation explained by the total revenue (in Rands). The total variation for Panel A is slightly higher (29.6%) the correlation coefficient (R) is 0.544, and the ANOVA value is 0.036 (< 0.005). The total variation for Panel C (16.4%), the correlation coefficient (R), is 0.405, and the ANOVA value is 0.026 (< 0.005). The total variation for Panel B (6.8%) is the lowest, the

correlation coefficient (R) is 0.260, and the ANOVA value is 0.349 (> 0.005). Hypothesis 7 is therefore rejected for Panel A and C. A positive relationship does exist between CEO compensation (base salary) and the size of SOEs as measured by number of employees. Table 7 depicts the summary of the results.

Table 7. Summary of results

Hypothesis	Variable tested	Results
H1	SOE performance as measured by the return on assets (ROA) and CEO compensation (base salary plus cash bonus).	Not rejected (Accepted)
H2	Size of SOEs as measured by total revenue (in Rands) and CEO compensation (base salary plus cash bonus).	Not rejected (Accepted)
H3	Size of SOEs as measured by total revenue (in Rands) and CEO compensation (base salary only).	Rejected
H4	Size of SOEs as measured by total assets (in Rands) and CEO compensation (base salary and cash bonus).	Not rejected (Accepted)
H5	Size of SOEs as measured by total assets (in Rands) and CEO compensation (base salary only).	Not rejected (Accepted)
H6	Size of SOEs as measured by number of employees and CEO compensation (base salary and cash bonus).	Not rejected (Accepted)
H7	Size of SOEs as measured by number of employees and CEO compensation (base salary only).	Rejected

6. Limitations of the study

Certain restrictions were imposed on the selection of the sample used in this study. The first limitation is that, due to the fact that most SOEs did not have the same CEO managing the same SOE during the period under study (i.e. 2009 - 2011), the sample frame was reduced to five SOEs that fall under the Department of Public Enterprises and five SOEs that do not fall directly under this Department. The reason why most SOEs did not perhaps have the same CEO for the entire period might be because CEOs of SOEs that fall directly under the Department of Public Enterprises in South Africa are appointed by the Minister after consultation with the Board of Directors and Cabinet. This resulted in most SOEs an acting CEO or having a (different) acting CEO for the duration of the study.

The second limitation is that benefits paid to CEO in the selected sample frame were not the same. Some SOEs, for example, included base salary, allowances, bonus, and other contributions as part of CEO total compensation, while others included only the base salary and bonus, and yet others paid the CEO the base salary only with no bonus or other perks. In order to be consistent, therefore, only the base salary and the cash bonus was taken into consideration as CEO total compensation, and dummies were used in cases

where the cash bonus was not paid during certain years of the duration of the study.

7. Conclusion

One of the major roles of CEOs is to motivate employees and to provide leadership in the company's attempts to achieve its objectives. In order to ensure maximum performance from CEOs, the board members must find a way to compensate the CEO so that, if the company performs exceptionally well, the CEO will be paid accordingly. The objective of this study was to examine the relationship between CEO compensation and SOE performance in South Africa. A sample of five SOEs that fall directly under the Department of Public Enterprises and five SOEs that do not fall directly under this Department was selected, resulting in a total sample of ten SOEs.

The results of the analysis indicated that a positive relationship does not exist between CEO compensation and SOE performance as measured by return on assets (ROA). This is in contrast with the results of the study conducted by Lilling (2006), Merhebi, Pattenden, Swan and Zhou (2006), and Canarella and Gasparyan (2008), all of whom also used the ROA as the criterion for measuring company performance and found a positive

relationship. The results also contradict statements made in the literature, which says that compensation received by senior management should be linked to company performance for economic reasons (Mallin, 2007). The reasons for the deviation from similar studies and from statements made in the literature might be based on the following reasons. The first reason for the deviation might be the fact that SOEs are agencies which exist to provide a service to the public without making a profit. Secondly, SOEs receive a subsidy from the government and most of the SOEs surveyed had a deficit in total revenue (negative total revenue).

The results of the study also found that a positive relationship exists between CEO compensation (base salary) and the size of SOEs as measured by total revenue (in Rands), and also by number of employees. These results are supported by studies conducted by Merhebi, Pattender, Swan and Zhou (2006), Jeppson, Smith and Stone (2009), Lilling (2006), and Crumley (2008), all of whom found that a positive relationship exists between CEO compensation and total revenue.

8. Managerial implication and recommendations

Although we expected to find a positive relationship between COE compensation and company performance, we did not find this to be the case in this study when using the ratio return on asset (ROA) as proxy to measure SOE performance. Even though the objective of SOEs is not to make profit, but to provide the public with a service at a reasonable rate, it is important for management to ensure that asset usage is maximised in order to yield a good return on investment (so that SOEs receive sufficient turnover to be able to sustain their operations without being too dependent on government grants and subsidies).

It was also noted that only SOEs that fall directly under the Department of Public Enterprises reveal a positive relationship between CEO compensation (base salary) and the size of SOEs as measured by total revenue and number of employees. However, the same relationship could not be seen in SOEs that do not fall directly under this Department. This is a cause for concern, because all SOEs receive grants and subsidies from the government and there should be no disparity in their performance. The Board of Directors should therefore investigate the reason for such disparity and implement the necessary intervention.

Lastly, it is further recommended that the Board of Directors in SOEs should hold CEOs accountable for their performance and stop paying them huge salaries and bonuses when a SOE is not performing. The Board of Directors of SOEs in

South Africa should follow the example set up by the Chief Secretary to the Treasurer in the UK, who announced a review towards the end of 2006 into all public sector bonuses to ensure that bonuses should only be paid for 'genuine excellence' and that 'there is no reward for failure' in publicly funded bodies (*The Daily Telegraph*, 2012).

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