

**RELATIONSHIP BETWEEN EXECUTIVE COMPENSATION AND
FINANCIAL PERFORMANCE OF COMMERCIAL STATE OWNED
ENTERPRISES IN THE ENERGY SECTOR IN KENYA**

**BY
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DECLARATION

I declare that this research project is my original work and has not been submitted for an award of a degree in any other University for examination/academic purposes.

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This research project has been submitted for examination with my approval as the University Supervisor.

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DEDICATION

A special dedication to my family. My loving dear wife Esther (Ph. D student), my children Kailu, Kisonzo, Mutuku and Kata. A special mention to my mother Kailu Kyalo, for many hours they had to endure my absence in the family throughout my MBA course.

I have been deeply humbled by the knowledge acquired during my studies at the University of Nairobi.

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ABBREVIATIONS AND ACRONYMS

ANOVA	Analysis of variance
CEO	Chief Executive Officer
ERC	Energy regulatory commission
GDC	Geothermal Development Company
KENGEN	Kenya Electricity Generation Company Limited
KETRACO	Kenya Electricity Transmitting Company
KPRL	Kenya Petroleum Refineries Limited
KPC	Kenya Pipeline Company Limited
KPLC	Kenya Power and Lighting Company Limited
NOCK	National Oil Corporation of Kenya
NSE	Nairobi Securities Exchange
REA	Rural Electrification Authority

ABSTRACT

Corporate governance scholars attempt to understand factors that underpin executive compensation and if it enhances firm financial performance and subsequently firm value. These studies have resulted into mixed and at times conflicting results. This study therefore sought to determine the effect of executive compensation on financial performance of commercial state owned corporations in the Ministry of Energy in Kenya. This cross sectional study collected secondary data from published financial statements of eight state owned commercial enterprises for a five year period from 2010 to 2014. The study finds weak negative associations between executive compensation and financial performance on one hand and firm size and financial performance on the other hand. The relationships are statistically significant. While relating firm size and financial performance, the study establishes that 38.9 percent of variations in financial performance is explained by variations in firm size such that a unit increase in firm size has a commensurate decline in ROA to the extent of 0.062. While relating firm size, executive compensation and financial performance, the study establishes that 45.2% of variations in financial performance is explained by variations in firm size and executive compensation. It is established that a unit increase in firm size has a commensurate decline in ROA to the extent of 0.059 and a unit increase in executive compensation has a commensurate decline in ROA for the firms to the extent of 0.027. These findings that are consistent with earlier study findings in different sectors confirm that high executive compensation is not a prerequisite for corporate performance in the public owned corporations and there is need for rationalization and harmonization to ensure that executive pay enhances value for state corporation ownership. Assets utilization should also be investigated to limit idle capacity and asset accumulation in the organizations. The study suggests further inquiry using long period data that cater for different political and economic dispensation that may also affect the performance of such enterprises.

CHAPTER ONE:

INTRODUCTION

1.1 Background of the Study

Crystal (1991) observe that compensation paid to the top executives of corporations is a politically sensitive area with critics claiming that amounts paid to executives are too high. The levels of compensation in all countries have been rising dramatically over the past decades. Not only is it rising in absolute terms, but also in relative terms. Gabaix and Landier (2008) established that the compensation of other senior executives has risen more rapidly than that of rank and file workers but has not kept pace with CEO pay. A reason for these huge increases is a result of the addition of this risky pay which necessitated an increase in compensation of the risk averse executives.

Tosi, *et al.* (2000) opine that corporate governance scholars have long attempted to understand a myriad of factors that underpin executive compensation. The most popular stream of research based on agency theory suggests that the board of directors and performance based incentives are among the critical governance mechanisms that allow reducing opportunistic behavior of executives and aligning their interests with those of shareholders.

Ochieng (2012) refers to various publicized landmark events and corporate frauds including the bursting of the dotcom bubble in 2000, the housing bubble and the subprime debacle to explain the renewed interest in high levels of executive compensation and the possibility that executive compensation plan structures could contribute to such events. This new attention is informed by two different views adopted when evaluating executive compensation. Foremost, the rent extraction

approach that attributes executive compensation to power rather than inputs and secondly, the efficiency approach that attributes executive compensation to inputs that the executive officer brings to the organization.

1.1.1 Executive Compensation

Executive compensation (also executive pay), is financial compensation received by an officer of a firm. It is typically a mixture of salary, bonuses, shares of and/or call options on the company stock, benefits, and perquisites, ideally configured to take into account government regulations, tax law, the desires of the organization and the executive, and rewards for performance (Maijoor & Vanstraelen, 2006).

Bebchuk and Grinstein (2005) and Murphy (1999) opine that executive compensation is pay received by an officer of a firm, often as a mixture of salary, bonuses, and shares of and/or call options on the company stock, paid expenses (perks) or insurance. It refers to the benefits and remuneration accruing to top management of a corporation mostly the Board of Directors including the CEO.

Bebchuk and Fried (2004) and Kuhnen and Zwiebel (2009) discuss the various components of executive compensation to include a basic salary, bonus, stock options, and grant of shares, pension, severance pay and perquisites. Other benefits include employee benefits and pension ideally configured to take into account government regulations, tax law, the desires of the organization and the executive, and rewards for performance.

1.1.2 Firm Performance

This is a measure of the extent the corporation has attained its goals and objectives thereby meeting the needs of all stakeholders and specifically shareholders. According

to Bien (2002), financial performance is the economic financial condition of an entity in a given time, which is also known as financial effectiveness.

The performance of a firm has to do with how effectively and efficiently it is able to achieve the set goals which may be financial or operational. The financial performance of a firm relates to its motive to maximize profit both to shareholders and on assets (Chakravarthy, 1986) while operational performance concerns with growth and expansions in relations to sale and market value (Hofer and Sandberg, 1987).

Leah (2008) explain that financial performance refers to the measurement of the results of a firm's strategies, policies and operations in monetary terms. These results are reflected in the firm's return on assets (ROA) and return on investments (ROI). Various researchers have used different measures to capture organizational performance including net income, Sales (Dollinger, 1984), Return on Investments (ROI), Return on sales (ROS), and a combination of ROI and ROS (Pegels and Yang, 2000), return on assets (ROA) (Birley and Wiersema, 2002) and market to book value of the equity as well as profitability and market share/ growth (Entrialgo, et al. 2000).

1.1.3 Executive Compensation and Firm Performance

Ideally, executive compensation and financial performance are perfectly correlated, but associative studies on executive compensation and performance have yielded mixed results. The executives who build real value in the company they manage should be paid handsomely well but not excessive, hence a level which is able to attract, maintain, and motivate such skilled managers who will enable the firm achieve its objectives and goals in the long term (Busaule, 2011).

Murphy (1999) provides a general overview of the literature, methodology and issues in executive compensation, starting from the influential study of Jensen and Murphy (1990), which first identified the pay-performance puzzle and reported that there is little relationship between executive pay and company performance. Main et al (1996), Izan, Sidhu and Taylor (1998), and Benito and Conyon (1999) have confirmed these low pay performance sensitivities. Most studies have found out that there exists a positive relationship between cash compensation and financial performance in terms of profitability measures. The purpose of executive compensation is to attract and retain skilled labor. It also encourages employees to act in accordance with all the stakeholders' desires and thus reduce possible conflicts of interest within the organization.

Kaplan and Atkinson (1989) explain that executive compensation should be designed in a way that affects employees positively and should fulfill three criteria. The executive compensation should be competitive in terms of size in order to attract and keep the best employees; Incentive programs shall communicate and strengthen the main objectives of the company by attaching flexible compensation to performance; Flexible compensation shall encourage a performance oriented corporate climate by observing and rewarding good performance.

1.1.4 State Corporations in the Energy Sector of Kenya

The ministry of energy sector in Kenya comprises of various parastatals / statutory bodies in the energy sector. Kenya Power and Lighting Company Limited (KPLC); Kenya Petroleum Refineries Limited (KPRL); Kenya Electricity Generating Company Limited (Kengen); National Oil Corporation of Kenya (National Oil); Kenya Pipeline Company Limited (KPC); Energy Regulatory Commission (ERC); Rural

Electrification Authority (REA); Energy Tribunal; Geothermal Development Company (GDC) and Kenya Electricity Transmitting Company (KETRACO) (Birech, 2011).

State corporations in Kenya have been put under performance contracting as an effective and promising means of improving the performance of public enterprises as well as government departments. Birech (2011) explain that the PC is a critical instrument used by the Government of Kenya to realize its targets and cascaded downwards from the top to the bottom of the state institutions. It promotes transparency and accountability in the management of public resources and utilization of the same for mutual benefit of the people of Kenya. The use of performance contract is also useful in promoting good corporate governance and also offers better and efficient project management and implementation.

1.2 Research Problem

The relationship between executive compensation and firm performance has been documented in the literature to date. The compensation studies suggests that pay performance sensitivities should vary systematically with firm size and CEO stature, with strongest sensitivities associated with executives in larger firms. Ideally, executive compensation and firm performance are perfectly correlated, but associative studies on executive compensation and performance have yielded mixed results (Aduda and Musyoka, 2011).

The performance of state owned corporations in Kenya's energy sector is of significance given the realization that development projects recommended under vision 2030 will increase demand of Kenya's energy supply. According to the Vision

2030 document, the Government is committed to continued institutional reforms in the energy sector, including a strong regulatory framework, encouraging more private generators of power, and separating generation from distribution.

There are mixed results in theory and empirical evidence with regard to the relationship between financial performance and executive compensation. Tosi *et al.* (2000) observed a weak correlation between CEO pay and performance but a strong positive correlation with CEO pay and firm size. Shah *et al.* (2006) found a positive relationship between total CEO compensation and firm performance and explain that CEO compensation is a function of performance measures, size and corporate governance variables. In the UK, Ozkan (2007) found out that there is a positive relationship between CEO pay and a firm's performance. In Sweden, Tariq (2010) established that compensation of the CEO is an increasing function of size of the firm and also growth of the company.

In Kenya, there exists mixed study findings on the relationships. Aduda and Musyoka (2011) establishes a negative non-significant relationship between executive compensation and performance of the commercial banks. Ongore and K'obonyo (2011) finds a positive relationship between insider ownership and performance of firms listed at the NSE when executives take firm ownership stakes as part of compensation. Lishenga (2011) observe that insider ownership falls with falling firm performance as CEO remuneration is insensitive to firm performance amongst companies listed at the NSE. Busaule (2014) found a positive but insignificant relationship between financial performance and executive compensation of commercial banks in Kenya. These mixed findings globally and locally point to the reality that the studies have not exhaustively explored the link between executive

compensation and firm performance. The study thus poses the question: what is the relationship between executive compensation and financial performance of commercial state owned corporations in the energy sector in Kenya?

1.3 Research Objective

This study sought to establish the relationship between executive compensation and financial performance of commercial state owned corporations in the energy sector in Kenya.

1.4 Value of the Study

Stock Market Regulators: This study provides an understanding of executive compensation and to contribute to a better understanding of some basic problems with our corporate governance system. A full understanding of the flaws in current compensation arrangements, and in the governance processes that have produced them, is necessary to enable the stock market regulators to craft laws that will minimize excess in executive compensation among the parastatals.

Shareholders: Our corporate governance system gives boards' substantial power and counts on them to monitor and supervise company managers. As long as corporate directors are believed to carry out their tasks for the benefit of shareholders, current governance arrangements, which insulate boards from intervention by shareholders, appear acceptable. The analysis of the executive pay landscape casts doubt on the validity of this belief and on the wisdom of insulating boards from shareholders.

Scholars/Researchers: This study fills an important gap in the literature by providing rigorous econometric evidence on the pay performance relationships of Kenyan parastatals executives. In so doing, the study contributes to one of the most important recent public-policy debates in Africa, on corporate governance reform.

CHAPTER TWO:

LITERATURE REVIEW

2.1 Introduction

This chapter presents both conceptual and empirical literature on executive compensation and firm performance. The theoretical framework, determinants of firm performance, empirical studies and chapter summary is presented.

2.2 Theoretical Framework

The executive compensation and firm performance link is explained by various theoretical propositions as discussed hereunder. These theories include the agency theory, stewardship theory and expectancy theory.

2.2.1 Agency Theory

The theory developed by Jensen and Meckling (1976) refer to the firm as a ‘black box’, operated so as to meet relevant marginal conditions with respect to inputs and outputs, thereby maximizing profits, that is, present value. The authors signalled that no theory exists, explaining the way in which the conflicting objectives of individual participants are brought into equilibrium to succeed in value maximization.

Jensen and Meckling (1976) define an agency relationship as a contract under which one or more persons (the principal(s)) engage another person (the agent) to perform some service on their behalf which involves delegating some decision-making authority to the agent. The authors notice that if both parties are utility maximizers (opportunistic behavior); a good reason exists to believe that the agent will not always act in the best interests of the principal. According to Jensen and Meckling (1976) divergence exists between the agent’s decisions and those decisions which would

maximize the welfare of the principal. Within this principal-agent relationship, owners have an interest in maximizing the value of their shares, whereas managers are more interested in 'private consumption of firm resources' and firm growth.

Costs that arise because of the delegation decision-making authority from the principal to the agent, which is due to the 'separation of ownership and control' in modern corporations, are referred to as 'agency costs'. Jensen and Meckling (1976) define as the sum of the agency costs: Monitoring costs; Bonding costs and The residual losses. The 'model of man' underlying the Agency Theory is that of a rational actor who seeks to maximize his or her utility with the least possible expenditure. Both agents and principals seek to receive as much possible utility with the least possible expenditure. Thus, given the choice between two alternatives, the rational agent or principal will choose the option that increases his or her individual utility (Davis *et al.*, 1997).

2.2.2 Stewardship Theory

The theory proposed by Donaldson and Davis (1991) holds that there is no inherent, general problem of executive motivation. "The executive manager, under this theory, far from being an opportunistic shirker, essentially wants to do a good job, to be a good steward of the corporate assets." According to stewardship theory, performance variations arise, not from inner motivational problems among executives, but from whether the structural situation in which the executive is located facilitates effective action by the executive.

Following Davis *et al.* (1997), in stewardship theory, the model of man is based on a steward whose behavior is ordered such that pro-organizational, collectivistic

behaviors have higher utility than individualistic, self-serving behaviors. The stewardship theory defines situations in which managers are not motivated by individual goals. They are rather stewards whose motives with the objectives of their principals are aligned.

Stewardship theorists assume a strong relationship between the success of the organization and the principal's satisfaction. A steward protects and maximizes shareholders' wealth through firm performance, because, by so doing, the steward's utility functions are maximized" (Davis *et al.*, 1997). Stewards are motivated by intrinsic rewards, such as reciprocity and mission alignment, rather than solely extrinsic rewards. The steward, as opposed to the agent, places greater value on collective rather than individual goals; the steward understands the company's success as his own achievement. According to Davis *et al.* (1997), the primary difference between agency theory and stewardship theory lies in the assumptions about human nature. According to the agency theory, people are individualistic, utility maximizes. According to stewardship theory, people are collective self-actualizers who achieve utility through organizational achievement.

2.2.3 Expectancy Theory

Proposed by Vroom (1964), the theory predicts that an individual will act in a certain way based on the expectation that the act will be followed by a given outcome and on the attractiveness of that outcome to the individual. The theory states that the actions of an individual are driven by expected consequences. Deciding among behavioral options, an individual is likely to select an option with the greatest motivation forces (MF).

Gatewood, et al. (2002) explain that a person must believe that exerting a given amount of effort can result in the achievement of a particular level of performance (the effort performance relationship). However, even if expectancies change based on direct and indirect experience or other beliefs, those changes may not be followed by corresponding changes in actual behavior, like effort or performance

2.3 Determinants of Firm Performance

A number of factors are established in the literature to influence firm performance. Some of these factors include size of the firm, age of the firm, capital structure and external macro economic factors.

2.3.1 Size of the Firm

Dean et al. (2000) explain that firm size affects its marketing capabilities, attitudes, needs and practices which are important for the firm's performance and success. The larger the firm, the more advantageous it is for the firm in acquiring resources. A large firm will have advanced equipment, adequate capital, more employees and higher economies of scale. On the contrary, a small business will need less capital to finance its investment whereas, a large business enterprise will need a lot of capital to plan and finance the investments, hence more flexible. Pandey (2005) indicate that size of a firm can be measured in terms of number of employees, type of technology used, amount of capital invested in it or its market coverage.

2.3.2 Capital Structure

Capital structure has long been regarded as an important parameter from a financial economics standpoint since it is linked with a firm's ability to meet the demands of various stakeholders (Jensen, 1986). As explained by Jensen and Meckling (1976),

when financial leverage increases, it may bring better returns to some existing shareholders but its risk also increases as it causes financial distress and agency costs.

Simerly and Li (2002) underscore that capital structure decisions are important not only because of the need to maximize returns to the shareholders, but also because of the impact of such decisions on an organization's ability to deal with its competitive environment.

2.3.3 External Factors

Mohd (2005) indicate that these as environmental factors which contribute to either the failure or success of the business enterprises. Kuratko and Hodgetts (2004) identify these factors to include the number of competitors in the market and the competitive strategies they have employed.

As explained by Colvin (1991), the performance of the firm will be high when the firm has gained competitive advantage over the rival. If the external factors outweigh the firm, this may cause massive losses and could end up in collapsing the firm.

2.4 Empirical Review

Tosi *et al.* (2000) reported that there is a weak correlation between CEO pay and performance but a strong positive correlation with CEO pay and size of the firm and it is this correlation which is turned into a causal mechanism, to reward managers for increasing the firm size of firms even though they destroy value in doing so.

Ogoye (2002) carried out an empirical study on the 41 public companies in Kenya between 1994 -1998 and established that salary, allowances, pensions and loans accounted for 70%, 14%, 7% and 6% of management compensation respectively. He

also found that the relationship between management compensation and firm performance was negative and statistically insignificant. Sales were found to be positively and significantly related to management compensation.

Mululu (2005) did a study on the relationship between board activity and firm performance of the listed firms at the NSE and indicated that governance structures are subject to more influence from the CEO and are correlated with higher levels of CEO compensation. Moreover, the boards' activity is positively related to the financial performance of firms suggesting that boards' activity is a value relevant to attribute in corporate governance. The CEO is able to determine his/her benefits through interference with the appointment of non executive directors and also members of the remuneration committee.

Shah *et al.* (2006) studied a sample of 114 listed companies in Pakistani for the period 2002-2006 and found out that CEO compensation is a function of performance measures, size, corporate governance variables like CEO duality, board independence and board size, ownership structures and concentration, audit committee independence. The study found a positive relationship between total CEO compensation and firm performance.

Ozkan (2007) through his study found out that there is a positive relationship between CEO pay and a firm's performance(at least in the UK) and the relationship is positive for cash compensation (salary and bonus) but when total compensation(cash compensation and equity compensation) is considered then the relation becomes less significant. Also he found out that there is a strong negative relation between CEO compensation and firm performance and further asserted that CEO and Board members engage in cronyism.

Frydman and Saks (2008) through their studies found out that the average CEO compensation in large US public companies has increased in real terms by 500%. Equity compensation which until the 1980s has been insignificant accounts for almost all the growth.

Bizjak, Lemmon and Naveen (2008), Faulkender & Yang (2009) reported that firms benchmark their pay on peer groups to determine levels of executive salary , bonus or option rewards based on the industry and size. Size of the firm is the most important determinant according to Murphy (1999), also through his study he found out a strong relation between CEO cash compensation and firm's revenues for each 5 years period between 1970 and 1996 and is the same across industries.

Tariq (2010) studied the 30 largest companies in Sweden from 2004 to 2008 and after controlling for firm size and growth opportunities found out a negative and insignificant relationship between pay and performance. The compensation of the CEO is an increasing function of size of the firm and also growth of the company.

Fernandes *et al.* (2010) studied an international comparison of CEO pay and reported that in the UK as a percentage of 2006 total compensation package salary and pension was 51%, equity based incentives was 30%, bonus 19% suggesting that there has been a decline in the importance of base salary and an increase in the percentage of equity based incentives pay for executives. Executive pay performance sensitivity with respect to cash compensation including base salary and non equity bonuses and their growth is well above inflation and wage growth for UK directors. It is the non equity incentive payments which were paid on the basis of past short term profits that have

been most heavily criticized by regulators (Walker 2009a, 2009b; FSA 2009) as not being related to long term performance. Previous UK studies that have explored relative performance evaluation found insignificant results (Main *et al.* 1996; Benit & Conyon, 1999).

Aduda and Musyoka (2011) sought to examine the relationship between executive compensation and performance of commercial banks listed at the Nairobi securities exchange. The regression analysis results establishes a negative non-significant relationship between executive compensation and performance of the commercial banks. In the large commercial banks, the study observes that bank size is a key criteria in determining executive compensation as it is significantly but negatively relates to compensation. This is also attributed to the diminishing influence of key owners in the management as the banks grow in size. The negative correlation suggests the capping of executive compensation to ensure maximization of returns to shareholders. As such, the interests of the executive directors are subordinated to those of the shareholders in keeping with the agency theory.

Ongore and K'obonyo (2011) in a census study examine the interrelations among ownership structure and firm performance measured using accounting based measures amongst all firms listed at the NSE. The study is informed by the proposition that insider ownership is actualized through executive share options. The findings suggest a positive relationship between insider ownership and firm performance thereby affirming the proposition that when managers own shares, they become more committed to the organization since they have a stake in the residual income of the firm and they are likely to bear the costs of mismanagement.

Lishenga (2011) investigates the sensitivity of corporate governance structures and practices to performance declines amongst companies quoted on the NSE. Several components of corporate governance including CEO compensation measured as salaries and bonuses, board composition, CEO and insider equity holdings, and frequency of board meetings are studied with reference to the financial performance of the firms classified in cohorts of losers, winners and mixed. The study employs the Tobin's Q as proxy for financial performance and concludes that insider ownership falls with falling firm performance as CEO remuneration is insensitive to firm performance.

Cheruiyot (2013) sought to examine the effect of audit quality on executive compensation of firms listed at the NSE. The study notes that firms listed in NSE grant more equity-based compensation to their CEOs when audit quality is efficient in terms of Number of accounting and audit committee, Audit fees and Number of Auditing hours. The results suggest that it is important to consider the effect of detection mechanisms such as auditor quality while examining the relation between executive compensation and accounting manipulation.

Busaule (2014) sought to determine the relationship between financial performance and executive compensation of commercial banks in Kenya where it considered a functional form relationship between the financial performance as measured by return on equity and executive compensation using a regression model. The study found a positive but insignificant relationship between financial performance and executive compensation of commercial banks in Kenya thereby suggesting that accounting measures of performance like return on equity are not key determinants of executive compensation for commercial banks in Kenya. The study recommends that

commercial banks should incorporate other factors like risk, size of the bank, skill, quality and experience of the executives to determine the optimal compensation needed to align their interests to those of shareholders.

2.5 Chapter Summary

The studies reviewed direct to diverse and mixed findings as some studies establish positive relationships between executive pay and firm performance while other studies establish negative relationships. The relationships range from weak, strong, significant and non significant which portrays that they may be influenced by other factors not incorporated in all the studies.

The mixed findings include Murphy (1999) describing a strong relationship between CEO cash compensation and firm's revenues, Lishenga (2011) conclusion that CEO remuneration is insensitive to firm performance, Tosi *et al.* (2000) observation of a weak correlation between CEO pay and performance, Ogoye (2002) and Aduda and Musyoka (2011) findings of a negative relationship between management compensation and firm performance, Shah *et al.* (2006), Ozkan (2007) and Busaule (2014) findings of a positive relationship between CEO total compensation and firm performance. These mixed findings necessitate the need for further investigations of this relationship in other study settings as controlled by other factors that influence firm performance.

CHAPTER THREE:

RESEARCH METHODOLOGY

3.1 Introduction

The purpose of this study was to establish the relationship between executive compensation and firm performance. In this chapter, the research design, target population, data collection methodology and procedures as well as data analysis are presented.

3.2 Research Design

This study adopted a cross - sectional research design. This design is appropriate when data is gathered systematically over a period of time in order to answer a research question. Mugenda and Mugenda (2003) contend that cross-sectional studies are appropriate where the overall objective is to establish whether significant associations among variables exist at some point in time. Aduda and Musyoka (2011) applied the same technique to determine the sensitivity of executive pay to changes in firm performance.

3.3 Target Population

The target population comprised of eight commercial state corporations in the Ministry of Energy as listed in appendix one. Due to the small size of the population, no sampling was done.

3.4 Data Collection

The study relied on secondary data on firm performance and executive compensation. Data on net income, total assets and executive compensation were extrated from the individual company published financial statements for a five year period (2010 to 2014).

3.5 Data Analysis

According to Cooper and Schindler (2006), data analysis refers to a process of editing and reducing accumulated data to a manageable size, developing summaries, looking for patterns and applying statistical techniques to arrive to findings. The study applied the statistical package for social sciences (SPSS) to run the data for analysis. Specifically, multiple regression analysis and correlation analysis were conducted.

3.5.1 Analytical Model

The relationship was analyzed in a multivariate regression model of the form:

$$\text{Perf} = f(\text{EXREM}, \text{Size}, \text{Capital Structure})$$

$$\text{Perf}_{jt} = \alpha + \beta_1 \text{EXREM}_{jt} + \beta_2 \text{SIZE}_{jt} + \beta_3 \text{CAPSTR}_{jt} \dots \dots \dots 3.1$$

Where:

Perf _{jt} :	Performance – Return on Assets (net income/ Total assets)
EXREM _{jt} :	Executive Remuneration – Log of directors remuneration
SIZE _{jt} :	Firm Size – Log of firms total assets
CAPSTR _{jt} :	Capital Structure – debt equity ratio (Total debt/ Total equity)
α:	A constant
β ₁ , β ₂ , β ₃ :	Coefficients

3.6 Tests of Significance

Inferential statistics such as non parametric test which include analysis of variance (ANOVA) was used to test the significance of the overall model at 95% level of confidence. Coefficient of correlation (r) was used to determine the magnitude of the relationship between the dependent and the independent variables. Coefficient of determination (r²) was used to show the percentage for which each independent

variable and all independent variables combined explain the change in the dependent variable. As applied by Aduda and Musyoka (2012) and Lishenga (2011), Pearson correlation coefficient (r) and Beta coefficient (β) are used to test for relationships between executive compensation and firm performance.

CHAPTER FOUR:

DATA ANALYSIS, RESULTS AND DISCUSSIONS

4.1 Introduction

This chapter presents the information processed from the data collected during the study on the relationship between firm performance and executive compensation. It presents the descriptive statistics, correlation analysis and regression analysis from the study findings.

4.2 Descriptive Statistics

Table 4.1 below presents the descriptive statistics for the study variables. As indicated, the mean return on assets for the corporations in the five year period was 0.0764 with a standard deviation of 0.090. The ROA data set has a range from -0.177 to 0.455 and the data has both a positive kurtosis and skewness at 8.138 and 1.309 respectively.

Table 4.1: Descriptive Statistics

		ROA	EXECCOMP	CAPSTR	SIZE	Valid N (listwise)
N	Statistic	40	40	40	40	40
Minimum	Statistic	-.177	9.378	-4.660	15.985	
Maximum	Statistic	.455	13.157	7.579	19.819	
Mean	Statistic	.0764	10.649	.1494	17.747	
Std. Deviation	Statistic	.090	.920	1.513	.934	
Skewness	Statistic	1.309	1.387	2.125	.486	
	Std. Error	.374	.374	.374	.374	
Kurtosis	Statistic	8.138	1.978	17.620	-.564	
	Std. Error	.733	.733	.733	.733	

Executive compensation and capital structure datasets both have positive skewness and positive Kurtosis over the years. The mean capital structure is at 0.1494 as the minimum is -4.66 and the maximum is 7.579. The mean levels of executive compensation transformed into natural logarithm is at 10.649 as the minimum is at 9.378 and the maximum is at 13.157. The mean firm size in terms of natural log of assets is 17.747 as the minimum is 15.985 and the maximum is 19.819. Size data set has positive skewness and a negative peakdeness.

4.3 Correlation Analysis

Table 4.2 below is a correlation matrix presenting the association between firm financial performance, executive compensation, capital structure and firm size.

Table 4.2: Correlations

	ROA	EXECCOMP	CAPSTR	SIZE
ROA	1			
EXECCOMP	-.340*	1		
CAPSTR	.060	-.271	1	
SIZE	-.636**	.107	-.098	1

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

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

As indicated in Table 4.2, there is a statistically significant weak negative association between executive compensation and performance of the commercial state owned corporations in the energy sector in Kenya ($r = -0.340$). The table presents that there is a weak positive association between firm performance and capital structure ($r = 0.060$) which is not statistically significant. Also, a weak negative association is identified between executive compensation and capital structure ($r = -0.271$) which is not statistically significant.

The correlation analyses results infer a strong negative association between firm size and firm performance ($r = -0.636$) which is statistically significant. There is also a weak negative association between firm size and capital structure ($r = -0.098$) which is not statistically significant. There is also a weak positive association between firm size and executive compensation ($r = 0.107$). The relationship is however not statistically significant. This finding however rekindles Bizjak, Lemmon & Naveen (2008) and Faulklender & Yang (2009) propositions that firms benchmark their pay on peer groups to determine levels of executive salary , bonus or option rewards based on the industry and size and as such firm size is a determinant of executive pay. The findings conflict with Tosi *et al.* (2000) reporting that there is a weak correlation between CEO pay and performance and a strong positive correlation with CEO pay and size of the firm.

4.4 Executive Compensation and Firm Financial Performance

The study conceptualized a multiple regression model to test the relationship between executive compensation and firm financial performance as controlled by firm size and firm capital structure. The findings are summarized in tables 4.3, 4.4 and 4.5 below.

Table 4.3: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1				
1	.636 ^a	.405	.389	.0706645
2	.693 ^b	.480	.452	.0669467

a. Predictors: (Constant), SIZE

b. Predictors: (Constant), SIZE, EXECCOMP

As presented in table 4.3 above, in model one, 38.9% of variations in financial performance of the commercial state owned firms is explained by variations in the

firm size (Adjusted $R^2 = 0.389$). Model two presents that 45.2% of variations in financial performance of the firms is explained by variations in both the firm size and the levels of executive compensation.

Table 4.4: ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.129	1	.129	25.879	.000 ^b
	Residual	.190	38	.005		
	Total	.319	39			
2	Regression	.153	2	.077	17.086	.000 ^c
	Residual	.166	37	.004		
	Total	.319	39			

a. Dependent Variable: ROA

b. Predictors: (Constant), SIZE

c. Predictors: (Constant), SIZE, EXECCOMP

From the ANOVA statistics presented in table 4.4 above, the processed data, which are the population parameters, had a significance level of 0.000 for both models which shows that the data is ideal for making a conclusion on the population's parameter. In model one, The F calculated at 5% level of significance was 25.879 which is greater than the critical F value of 3.72 which infer a significant relationship between firm size and firm performance. In Model two, the F calculated at 5% level of significance was 17.086 which is greater than the critical F value of 3.72 which infer a significant relationship between firm size, executive compensation and firm performance.

Table 4.5: Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.170	.215		5.435	.000
	SIZE	-.062	.012	-.636	-5.087	.000
2	(Constant)	1.407	.228		6.163	.000
	SIZE	-.059	.012	-.607	-5.092	.000
	EXECCO MP	-.027	.012	-.275	-2.310	.027

a. Dependent Variable: ROA

Model one in table 4.5 above shows a statistically significant weak negative relationship between firm size ($\beta=-0.062$, $t=-5.087$, $p<0.05$) and firm financial performance which infers that amongst the commercial state owned corporations in the energy sector, size negatively influence financial performance. This may be attributable to asset accumulation and idle productive capacity. From Model one, the study derives the following equation:

$$\text{Perf}_{jt} = 1.170 - 0.062\text{SIZE}_{jt}$$

This indicates that without providing for size, the constant firm performance is at a level of 1.17 in ROA. A unit increase in firm size has a commensurate decline in ROA for the firms to the extent of 0.062. This finding conflicts the general expectation that bigger firms perform better than smaller firms.

Model two in table 4.5 above shows statistically significant weak negative relationships between firm size ($\beta=-0.059$, $t=-5.092$, $p<0.05$), executive compensation ($\beta=-0.027$, $t=-2.310$, $p<0.05$) and firm financial performance. From Model two, the study derives the following equation:

$$\text{Perf}_{jt} = 1.407 - 0.059\text{SIZE}_{jt} - 0.027 \text{EXREM}_{jt}$$

This infers that without accounting for firm size and executive compensation, the constant levels of firm performance is represented by ROA of 1.407. Further, a unit increase in firm size has a commensurate decline in ROA for the firms to the extent of 0.059 and a unit increase in executive compensation has a commensurate decline in ROA for the firms to the extent of 0.027.

The finding of a negative effect of executive compensation levels on financial performance of firms is consistent with earlier findings by Ogoye (2002), Tariq (2010) and Aduda and Musyoka (2011) who found that the relationship between management compensation and firm performance was negative. These earlier studies however did not establish statistically significant relationships which the current study attests to. The findings are not consistent with the assertions of Shah *et al.* (2006), Ozkan (2007), Ongore and K'obonyo (2011) and Busaule (2014) who found a positive relationship between total CEO compensation and firm performance.

CHAPTER FIVE:

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter presents a summary of the key elements of the study, discussion of major findings and interpretation of the results. The chapter further presents the conclusions drawn from the research findings as well as recommendations for improvement and suggestions for further research.

5.2 Summary of Findings

The study sought to determine the effect of executive compensation on financial performance of commercial state owned enterprises in the energy sector in Kenya. Secondary data was collected on eight enterprises for the period 2010 to 2014. The secondary data extracted from the published financial statements were for net income, total assets, director remuneration, total debt and total equity. These data sets were useful in deriving annual firm performance (return on assets), annual firm capital structure (debt equity ratio), executive compensation proxied by director remuneration and firm size proxied by assets accumulated by the firm.

Correlation analysis results suggest statistically significant weak negative association between executive compensation and financial performance of the commercial state owned corporations in the energy sector in Kenya. The findings conflict with Tosi *et al.* (2000) arguments that there is a weak correlation between CEO pay and firm performance. The analysis also confirms a statistically significant strong negative association between firm size and financial performance of the commercial state owned corporations in the energy sector in Kenya.

The findings infer weak non statistically significant negative association between executive compensation and capital structure on one hand, and between firm size and capital structure on the other hand. The study also establishes a non statistically significant weak positive association between firm performance and capital structure. The weak positive association between firm size and executive compensation is a departure from Tosi *et al.* (2000) of a strong positive correlation with CEO pay and size of the firm. This finding should lead to a revisit of Bizjak, Lemmon & Naveen (2008) and Faulklender & Yang (2009) propositions that firms benchmark their pay on peer groups to determine levels of executive and as such, firm size is a determinant of executive pay.

Regression analysis models suggest that 38.9% of variations in financial performance of the commercial state owned firms is explained by variations in the firm size and 45.2% of variations in financial performance of the firms is explained by variations in both the firm size and the levels of executive compensation. The results suggest a weak negative relationship between firm size and firm financial performance which infers that amongst the commercial state owned corporations in the energy sector, size negatively influence financial performance. This may be attributable to asset accumulation and idle productive capacity. From the regression model, the study indicates that without providing for size, the constant firm performance is at a level of 1.17 in ROA and a unit increase in firm size has a commensurate decline in ROA to the extent of 0.062.

Further regression analysis shows statistically significant weak negative relationships between firm size and financial performance on one hand and executive compensation and firm financial performance on the other hand. The study findings infer that

without accounting for firm size and executive compensation, the constant levels of firm performance is represented by ROA of 1.407. Further, a unit increase in firm size has a commensurate decline in ROA for the firms to the extent of 0.059 and a unit increase in executive compensation has a commensurate decline in ROA for the firms to the extent of 0.027. The finding of a negative effect of executive compensation levels on financial performance of firms is consistent with earlier findings by Ogoye (2002), Tariq (2010) and Aduda and Musyoka (2011) who found that the relationship between management compensation and firm performance was negative though these earlier studies did not establish statistically significant relationships which the current study attests to.

5.3 Conclusions

From the findings, it is concluded that there are statistically significant weak negative association between executive compensation and financial performance as well as between size and financial performance of the commercial state owned corporations in the energy sector in Kenya. This therefore imply that increased investments in executive remuneration and assets acquisition may not be value adding for the ownership of such enterprises which in this case is the public.

Regression analysis models infer that 38.9% of variations in financial performance of the commercial state owned firms is explained by variations in the firm size and 45.2% of variations in financial performance of the firms is explained by variations in both the firm size and the levels of executive compensation. This points to the larger explanatory power of size over executive compensation on financial performance. The regression models show statistically significant weak negative relationships between

firm size and financial performance on one hand and executive compensation and firm financial performance on the other hand. Specifically, without incorporating firm size and executive compensation in the analysis, the constant ROA for firms is 1.407 as any unit increase in firm size has a commensurate decline in ROA for the firms to the extent of 0.059 and a unit increase in executive compensation has a commensurate decline in ROA for the firms to the extent of 0.027. The study findings of a negative effect of executive compensation levels on financial performance confirms earlier findings in similar studies by Ogoye (2002), Tariq (2010) and Aduda and Musyoka (2011).

5.4 Limitations of the Study

Secondary data was collected from the specific firms' financial reports. The study was therefore limited to the degree of precision of the data obtained from the secondary source. While the data was verifiable since it came from the firms publications which are filed with the ministry of energy, it nonetheless could still be prone to these shortcomings.

The study was based on a five year study period from the year 2010 to 2014. A longer duration of the study will have captured periods of various economic significances such as booms and recessions and country political dispensation. This may have probably given a longer time focus hence given a broader dimension to the problem.

The study was limited to establishing the relationship between executive compensation and financial performance among state owned commercial corporations. For this reason the private firms and non commercial firms could not be incorporated in the study.

5.5 Recommendations

In view of the research findings, a negative relationship is evident between executive compensation and financial performance which imply that there is no increased value for higher executive compensation in the public sector corporations. There should therefore be harmonization and review of the executive remuneration system in the public sector corporations to enhance performance. This should include pay for performance perks.

The study documents a negative relationship between size and financial performance of the state owned commercial enterprises. This is an indication of excess asset capacity in the public sector organizations where there are chances of idle capacity. Efforts should be directed on rationalization of productive capacity of the assets acquired to ensure they are utilized in value creation.

5.6 Suggestions for further Research

This study has reviewed the effect of executive compensation on performance of the energy sector corporations in Kenya. A similar study should be carried out in other government sectors to find out if the same findings will be obtained.

The study suggests that further studies can be conducted on CEO and board's turnover so as to establish how change in the boardroom affects public corporations financial performance. Future studies can also be done on the effect of CEO attributes on performance of such firms. Such studies should review the relationships between CEO turnover and CEO compensation.

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**APPENDIX ONE: COMMERCIAL STATE CORPORATIONS IN THE
MINISTRY OF ENERGY**

- 1 Geothermal Development Company (GDC)
- 2 Kenya Electricity Generating Company Limited (Kengen)
- 3 Kenya Electricity Transmitting Company (KETRACO)
- 4 Kenya Petroleum Refineries Limited (KPRL)
- 5 Kenya Pipeline Company Limited (KPC)
- 6 Kenya Power and Lighting Company Limited (KPLC)
- 7 National Oil Corporation of Kenya (National Oil)
- 8 Rural Electrification Authority (REA)