THE RELATIONSHIP BETWEEN EXECUTIVE REMUNERATION AND COMPANY PERFORMANCE IN SOUTH AFRICA

by

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DECLARATION

I, **Vuyani D Ndlovu** declare that:

- The research work reported in this dissertation, except where otherwise acknowledged, is my original work.
- This dissertation has not previously been submitted for any academic fulfillment and/or examinations at any other academic institution.
- This dissertation does not contain other authors' data, pictures, graphs or any other information, unless specifically acknowledged as being sourced from them.
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DEDICATION

To my family, Nonjabulo (Wife), Mpilwenhle (daughter)and sons (Mpumelelo and Nduduzo).

ABSTRACT

Executive remuneration has been the subject of close scrutiny, huge public outcries and criticisms in the recent past. This has invariably attracted unprecedented research interest across different sectors of the economy. This research study examined CEO remuneration-company performance relationship in the South African context. The focus was to determine if these two constructs were correlated and aligned with the corporate governance principles as postulated in the optimal contracting theory. The study was therefore motivated by the desire to provide data-based evaluation of the existence, nature and magnitude of CEO pay-performance sensitivity. Ultimately, this sought to contribute to the creation of an efficient executive remuneration package design model. To this end, an archival quantitative research approach was adopted. Secondary data for CEO remuneration and company performance metrics of the JSE listed entities were statistically analysed. For results' interpretation, descriptive, regression and time series statistical analyses were performed. Study findings confirmed the existence of a positively linked relationship between CEO remuneration and company performance in South Africa. Based on regression analyses, the overall relationship was found to be weak to moderate. It was however found that market based company performance measures (Share price and earnings per share) had stronger influence on executive remuneration determination. The research further confirmed the existence of two key total remuneration components, fixed guaranteed pay and performance based short-term incentives, respectively. Whilst CEO remuneration was found to be fixed pay-biased, structural shift towards a more variable pay-dependent remuneration structure was however observed over the six year study period. These research findings were viewed as an affirmation of the positive influence of the new corporate governance and legislative measures (King III and Companies Act (2008)) in ensuring clean corporate governance in South African companies. The expectation is therefore to strengthen the envisaged positive link between executive remuneration and corporate performance, whilst addressing the contentious issue of income disparities between company CEOs and their ordinary employees.

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ABBREVIATIONS

AltX	Alternative Exchange
ALSI	All Share Index
CE	Capital Employed
CEO	Chief Executive Officer
CFO	Chief Financial Officer
CPI	Consumer Price Index
CTC	Cost to Company
CV	Coefficient of Variation
DY	Dividend Yield
EBITDA	Earnings before interest, tax, depreciation and amortisation
EPS	Earnings per share
EVA	Economic value added
FP	Fixed Pay
HEPS	Headline earnings per share
HPY	Holding Period Yield
JSE	Johannesburg Stock Exchange
KPI	Key performance indicator
MRP	Marginal Revenue Product
NOI	Net Operating Income (Profit)
NYSE	New York Stock Exchange
P/E ratio	Price per earnings ratio

ROA	Return on Asset
ROE	Return on owner’s equity
SOX	Sarbanes-Oxley Act of 2002
SP	Share Price
STI	Short-term Incentive
VP	Variable Pay
VUCA	Volatility, Uncertainty, Complexity and Ambiguity
WACC	Weighted Average Cost of Capital

CHAPTER ONE - INTRODUCTION

1.1 Introduction

The primary challenge in executive remuneration and company performance relationship is discovering a mutually favourable balance between these two constructs. This is compounded by the lack of generally accepted norms of the expected strength and significance of such a relationship. Besides, organisational performance measures are themselves subject to interpretation with a variety of sometimes conflicting measures cited as valid and reliable (Bussin & Modau, 2015).

This chapter therefore seeks to introduce the investigation into the executive pay and performance relationship topic. It gives a concise outline of the background to the study, research problem to be addressed and anticipated significance of the study. Furthermore, the purpose of the study and research questions to be answered are herein outlined.

1.2 Research Background

There have recently been huge public outcries and criticisms about the current levels of executive pay within Johannesburg Stock Exchange (JSE) listed firms, when compared to salaries of ordinary employees (Deysel & Kruger, 2015). Whilst emotionally charged overgeneralisations may not be factual, South Africa consistently ranks among highly unequal countries in terms of the Gini index due to income disparities (World Bank, 2013 cited in Bradley, 2013).

Following the 2007/8 global economic recession, there has been an increased research interest on the justification of perceived high levels of executive remuneration. The focus has been centred on the correlation between executive compensation and organisational performance. Financial meltdown, like the 2008 global economic recession, is generally attributed to large portions of remuneration rewarded to executives as a result of misaligned remuneration policies (Azim & Ahmmod, 2014; Bussin, 2015; Asafo-adjei, 2015). According to Asafo-adjei (2015), bonus driven remuneration structures tend to encourage reckless and/or excessive risk taking by executives which may be misaligned with shareholder interests.

There is general consensus that executive remuneration is pivotal in attracting, rewarding, motivating and retaining skilled executives for organisational success (Hough, Thompson Jr., Strickland III & Gamble, 2011). There is however conflicting conclusions on the effectiveness and efficiency of linking such compensation to organisational performance (Theku, 2014). According to Azim & Ahmmod (2014), the possible root cause of those conflicting findings is the existence of performance measurement differences because of external and internal factors that impact on executive remuneration levels.

Most of the research by Bradley (2013); Modau (2013); Resnick (2013); Bussin (2015); Bussin & Modau (2015); Deysel & Kruger (2015) in this research area has however been focused on the link between executive pay and enterprise performance in the financial services industry and/or specific sectors of the economy, respectively. In a South African research study by Bradley (2013, p.560), it was disputed that such a relationship is strictly influenced by the economic sector in which a company operates.

Shaw (2011) had however reiterated and supported the need to expand such research beyond financial services sector, on the basis that remuneration practices vary from industry to industry. In South Africa, numerous others studied this topic, including Bradley (2013); Modau (2013); Resnick (2013); Bussin (2015); Bussin & Modau (2015); Deysel & Kruger (2015), to mention a few. Theku (2014) explored this topic in the South African mining industry, and confirmed an existence of a moderate to strong link between Chief Executive Officer (CEO) pay and mining company performance.

The role of corporate governance as an effective oversight mechanism entrusted with the alignment of corporate interests in an agency relationship (Theku, 2014), has not been spared the prevailing criticism. The unprecedented escalations in executive pay levels, in the midst of global corporate scandals and corporate governance failures, have reinforced the rationale for the criticism against corporate governance and executive remuneration (Choe, Tian & Yin, 2008). Corporate governance is at the heart of criticism for being part of the problem wherein executives get excessively rewarded without consequences for corporate failures (Theku, 2014). A recent phenomenon of certain CEOs willingly forfeiting

their bonuses when their companies perform poorly (Deysel & Kruger, 2015), is evidence of systematic corporate governance failure.

The purpose of this study is therefore to explore this link between executive compensation and corporate performance in South Africa, without any bias to a specific economic sector. It further seeks to evaluate the effectiveness of corporate governance in addressing conflict of interests in agency relationships. Findings of such a study are expected to contribute to the national debate on executive compensation and company performance as well as corporate governance.

1.3 Problem Statement

There is general agreement that remuneration, including that of executives, is pivotal in attracting, rewarding, motivating and retaining skilled personnel for organisational success (Hough, et al., 2011). As such, the key role of executive management is to sustainably maximise shareholder value. Ideally, remuneration contracts and packages should be aligned to enterprise performance in order to alleviate issues of agency problems and manage associated costs.

This should adequately incentivise executives to manage and control businesses in alignment with their shareholders' interests (Talha, Sallehhuddin & Masuod, 2009). The Companies Act (Act No. 71 of 2008) and King III corporate governance principles (King III) advocate for a positive correlation between executive remuneration and organisation performance (Bussin, 2015).

There has however been an increased discomfort about the relationship between executive remuneration and organisational performance. According to Bussin and Modau (2015), the primary challenge is striking a mutually beneficial balance between executive pay and organisational performance. The increased scrutiny and debate is being exacerbated by widening income inequalities in South Africa (Theku, 2014). This is further exercebated by the inadequacy of generally accepted guidelines on the strength and nature of an ideal pay-performance relationship. Besides, organisational performance measurements are themselves subject to interpretation, with a variety of sometimes conflicting metrics suggested as valid and reliable (Bussin and Modau, 2015). These challenges are

complicating attempts to create an efficient and effective model that can be utilised for executive remuneration structural design.

There is therefore a compelling need for an evidence-based understanding of the nature of such a relationship in the South African context. This will significantly contribute to the body of knowledge on executive remuneration design. This will further provide sound and critical guidelines towards the development of a robust model to optimally design executive remuneration packages and structures. Research in this area is even more relevant in this postmodern era of economic volatility, uncertainty, complexity and ambiguity (VUCA).

1.4 Research Motivation

Effective and efficient alignment of executive remuneration with organisational performance has been an issue of close scrutiny, especially in the aftermath of recent global economic crisis. Optimal contracting relies on the premise that effective incentives should link executive remuneration and organisational performance in ways that align the interests of both shareholders and executives (Talha, et al., 2009). Excessive executive remuneration erodes company resources in terms of capital and dividend return to shareholders which may lead to retrenchments, labour disputes, and other adverse unintended economic consequences (Asafo-adjei, 2015).

This research study seeks to make a contribution to the body of knowledge on executive remuneration by providing data-based evidence and insight of the nature and strength of the executive pay-performance relationship in South Africa. Such an insight is critical to the development of a suitable model to structure executive remuneration in a manner that protects shareholders from over-remunerating executives in times of economic expansion. It is also crucial that executives are similarly protected from being underpaid and exploited in times of economic meltdown. It is also hoped that findings from this study will enlighten all key stakeholders on the determinants of CEO compensation structure and level.

1.5 Purpose and Objectives of the Study

The purpose of the study was to explore the existence, strength and nature of the relationship between executive remuneration and enterprise performance amongst JSE listed companies. The study objectives were therefore:

1.5.1 To establish if there is a link between executive remuneration and organisational performance;

1.5.2 To statistically assess and evaluate executive remuneration constructs; and

1.5.3 To assess the executive remuneration trends with the advent of the King III corporate governance principles and the Companies Act 2008).

1.6 Research Questions

The following research questions were formulated to address the research problem statement and the related research study objectives:

1.6.1 Is there a correlation between executive remuneration and the selected organisational performance measures? A positive correlation is recommendable to mitigate agency problems.

1.6.2 Which remuneration components make up an executive remuneration package, and how are these components structured? A performance-based remuneration structure helps in the alignment of divergent interests between executive management and shareholders.

1.6.3 Are remuneration policies aligned to the King III corporate governance principles as legislated in the Companies Act 2008)? Companies Act 2008 and King III require that executive remuneration and company performance should be positively correlated. Envisaged remuneration contracts are to be structured in ways that ensure adequate link between remuneration and company performance. This is achievable through provision of strong incentives for executives for their efforts in the management and control of organisations in the best interest of shareholders.

1.7 Brief Research Methodology

To fulfil the purpose of this research study, a deductive research methodological approach, based on longitudinal, descriptive and quantitative research design was employed. The research study sample was based on the JSE actively listed entities in the periods from 2010 to 2015.

A purposive sampling technique was adopted through which JSE actively listed companies that met the prescribed criteria, were indiscriminately selected. The data that were used in the study were secondary in nature, sourced from McGregor BFA database (INET BFA, 2014). Its reliability, accuracy and credibility were therefore based on the statutory requirements that strictly govern all JSE listed entities.

1.8 Scope of the Study

The research scope was to empirically explore the relationship between the performances of JSE listed companies and remunerations of their executives. This was to be based on secondary data sourced from McGregor BFA database and annual integrated reports (INET BFA, 2014), from which statistical analyses were to be undertaken to establish if any correlations existed. In addition, statistical analyses were to be undertaken to enhance an understanding on how such remunerations are typically constructed and structured.

Given the CEO's envisaged pivotal role in the management and control of business resources, the scope of the study was limited to CEO pay. It is however acknowledged that company performance is collectively influenced by all employees and management, not just the CEO (Bradley, 2013; Azim & Ahmmod, 2014). Owing to a CEO's responsibility to provide strategic vision, business model and mandatory requirements for an organisation to disclose executive remuneration; this study was focused solely on the CEO remuneration in relation to company performance. This was based on the assumption that any pay-performance relationship findings will possibly be a good indication of the entire executive remuneration structural design trends and patterns in South Africa.

1.9 Study Report Outline

The format and outline of this research study report is hereunder summarised:

Chapter One: Introduction

This section sought to explain in detail what was to be investigated in this research study. It further described the research topic and scope of the study, as well as the motivation for embarking on such a study, by referring to appropriate and contemporary literature. This chapter therefore consists of nine (9) sub-sections, namely:

- Research study background,
- Statement of research problem,
- Research study motivation,
- Research study objectives,
- Derived research questions,
- Brief research methodology
- Scope of the study,
- Overall research study report outline, and
- Summary of the introduction section.

Chapter Two: Literature review

This chapter covers a review of relevant literature on executive remuneration, company performance measures and the relationship thereof. This section details what had already been uncovered about the research problem and seeks to explore effective ways of answering the research questions that have been formulated. The chapter is arranged into focus areas of executive remuneration theories, typical remuneration structural design, corporate performance measures, pay-performance sensitivity narrative, relevant corporate governance issues and the summary to the reviewed literature.

Chapter Three: Research Design and Methodology

This chapter covers the research design and the methodological approach that is adopted. It outlines details of the quantitative methodology used in the study in

terms of reliability, accuracy and validity of the study findings. The data collection techniques, data sources, data collection instruments, subsequent data analysis, ethical considerations and potential study limitations are herein outlined.

Chapter Four: Results

This chapter presents the research study results and its findings. These are herein summarised using tables and graphs. These are further interpreted and analysed using statistical methods.

Chapter Five: Discussion of Results

This chapter gives a detailed discussion of the research findings in relation to the research objectives. The results' analyses are corroborated and integrated with available literature with reference to the research study objectives and the formulated research questions.

Chapter Six: Conclusion and Recommendations

Based on the study findings and the ensued discussion of results, the final chapter provides conclusion and recommendations that need to be incorporated into the structural design of executive remuneration packages and contracts. The chapter identifies areas of potential research for future consideration.

1.10 Summary

The recent huge public outcries and criticisms about the poor relationship between executive remuneration and organisational performance is gaining momentum. The global economic recession of between 2007 and 2008 has intensified the call for increased scrutiny on this area.

Whilst there has been increased research interest in the area of executive remuneration and enterprise performance, most of it has been industry or sector specific. Given the widespread criticism and contention of this relationship across all sectors or industries, and the pervasive income inequalities in South Africa, a more comprehensive market-wide research study was considered more befitting. This study sought to indiscriminately evaluate the pay-performance trends across all economic sectors represented in the JSE.

This study contributes to the currently limited body of knowledge on executive remuneration and organisational performance. This will hopefully contribute to the development of a general model in designing executive remuneration packages in accordance with optimal contracting principles.

The next chapter reviews relevant, contemporary theories and literature on executive remuneration, company performance measures and the relationships thereof, as well as the impact of legislative interventions. This was aimed at providing theoretical background and different perspectives in addressing the formulated research questions.

CHAPTER TWO - LITERATURE REVIEW

2.1 Introduction

This chapter covers the theoretical framework that underpins executive remuneration, organisational performance measures and their relationships, as well as relevant corporate governance fundamentals. This will delve into some of the fundamentals of executive remuneration theories, its constructs and the related enterprise performance measures. In addition, previous research findings on this topic will be explored, together with contemporary and relevant legislative developments in corporate governance.

2.2 Executive Remuneration Theories

Theku (2014) defined executive remuneration as the sum of all financial rewards and benefits that are paid to individual executives in return for their contributions to company performance. An improperly compensated executive may lead to agency costs wherein an executive is not adequately motivated to improve company profitability and boost share performance (Kuepper, 2007). Executive compensation is also critical for investors in making investment decisions that are based on the generation of sustained market related returns (Graham & Winfield, 2010). Appropriate executive remuneration is therefore aimed at ensuring alignment of interests between executives and shareholders for the ultimate goal of organisational value maximisation (Talha, et al., 2009).

Executive management plays a key role in the efficient and effective utilisation of organisational resources in pursuit of shareholder value maximisation (Bussin, 2015). This topic has extensively been researched on the basis of various theories including principal-agent, optimal contracting, managerial power, stewardship, tournament, labour-market, etc.

2.2.1 Principal-Agent Theory

The relationship between executive remuneration and corporate governance is explained by the agency theory (Talha, et al., 2009). This governs the relationship between management (agent) and shareholders (principals) to ensure that

management operates in the best interest of shareholders to maximise enterprise market value (Firer, Ross, Westerfield & Jordan, 2012).

This theory seeks to address conflict of interests that emanates from divergent goals, by tying executive remuneration to company performance (Theku, 2014). This is intended to align management and shareholder interests in a mutually beneficial way that ensures business sustainability. Ultimately, this seeks to ensure that both risks and/or returns are equitably shared between a principal and his agent (Theku, 2014). This sharing of risks and/or returns popularised the use of stock options in CEO contracting. On the contrary, Schneider (2013) discouraged this approach on the basis that an agent gets awarded free stock options in anticipation that positive corporate results will be delivered, thus diluting shareholders' equity. A shareholder will first need to recover the value of awarded stock options to the agent before any real growth in returns could be realised.

This theory is based on the premise that management will only do their best to improve the enterprise performance when the associated pay is linked to company profitability (Talha, et al., 2009). As a consequence, shareholders tend to exercise control and influence managerial decision-making by designing executive incentive schemes aimed at the alleviation of conflict of interest. Executives will therefore be rewarded financially for sustainably maximising shareholders' interest. The recently witnessed significant structural changes in executive compensation have however put doubt on the effectiveness of this approach to align divergent interests in an agent-principal relationship (Scholtz & Smit, 2012).

According to Firer, et al. (2012), there are two significant economic incentives and motivation for management to want to maximise an enterprise market value in alignment with shareholders' goal; namely:

- When managerial compensation is tied up to company performance, including organisation economic performance; and
- When managers are seen to be successfully pursuing shareholder goals, their career prospects blossom by being in greater demand in the labour market, thus commanding higher pay.

The agency theory therefore postulates that linking managerial remuneration to company performance is an effective mechanism of mitigating agency problems and associated agency costs (Deysel & Kruger, 2015). Agency costs are defined by Theku (2014) as the sum of costs associated with producing and managing contractual terms and obligations in an agent-principal relationship. Such contracts are established to minimise and/or eliminate the likelihood and repercussions of conflict of interests between shareholders and management. This conflict of interests, emanating from inherent divergent interests and/or goals is called agency problem.

Agency costs arise from separation of corporate ownership and control, reflecting the magnitude of divergence between expected value maximising managerial activities and managers' actual actions. This includes monitoring and bonding expenditures (contracting costs) undertaken to reduce the impact of divergence (Azim & Ahmmod, 2014). Some degree of agency cost is therefore inevitable in the post-modern, widely-held companies.

As evidenced in many corporate scandals recently reported in the media, there are instances when management goals are unfortunately pursued for self-enrichment at the expense of shareholders. This agency problem emanates from managers' tendency to use their discretion to engage in business activities for self-enrichment at the shareholders' expense.

Among central issues in executive compensation debate is the inadequacy of this agency theory to justify the pervasive phenomenon of excessive executive pay. Agency theory in executive pay is therefore advocated as a remedy to shareholders' optimal contracting problem (Choe, et al., 2008). The envisaged contract is to be designed by shareholders and/or their representatives to maximise shareholder value, subject to managerial incentives and participation constraints (Choe, et al., 2008).

2.2.2 Optimal Contracting Theory

This theory focuses on the alignment of principal-agent interests through incentive based financial reward schemes (Bussin, 2015). Bussin (2015) asserts that pay-performance alignment depends on the attainment of an optimal contract, from which deviations lead to weak pay-performance sensitivity. According to Theku

(2014), this theory refers to an appropriately formulated and mutually beneficial contract in an agent-principal relationship that ensures the highest level of effort by management on behalf of shareholders.

The pervasive approach to the study of executive remuneration views managerial pay contracts as a partial "*remedy"* to agency problems (Bebchuk & Fried, 2003). Under this optimal contracting approach, board of directors are assumed to design and structure executive remuneration schemes to ensure efficient incentives to maximise shareholder value, whilst mitigating agency problems (Bebchuk & Fried, 2003).

Optimal contracting is widely acknowledged as a key mechanism for the alleviation of agency problems and creation of envisaged greater pay-performance sensitivity (Bussin, 2015). In contrast, Schneider (2013) asserts that optimal contracting is not necessarily a remedy to agency problems, but it rather helps to effectively mitigate the impact thereof. The widely speculated and touted alternate theory to optimal contracting has been managerial power as the driver to executive remuneration package design.

2.2.3 Managerial Power Theory

Managerial power theory hypothesises that corporate boards are "*captured*" by executive management to the point that they end up serving their own narrow interests instead of shareholders' (O'Relly & Main, 2010). The prevailing hypothesis in the myriad of empirical research studies is that high unabated managerial power leads to excessive executive pay, which may culminate into poorer firm performance due to unabated agency costs (Choe, et al., 2008).

Doscher & Friedl (2011) is of the view that executives, through their managerial powers, may influence boards and/or remuneration committees to favourably structure their remuneration packages. In a financial services' study, Modau (2013) concluded that executive pay contracts are predominently devoid of optimal contracting, but propensity of CEOs to influence their own compensation contracts. The misalignment between firm performance and executive pay, coupled with structural pay changes, is attributable to managerial power's increased prominence in the era of economic VUCA (Bussin, 2015). The

emergence of managerial power theory is largely attributed to corporate governance failures (Theku, 2014).

In support of this view, Ellig (2007) argues that executive remuneration package structure may tend to lean towards the easiest path for the executive to earn a more favourable remuneration. Bebchuk & Fried (2003) held the view that managerial power is both the potential solution to agency issues and root cause of the agency problems itself. According to Schneider (2013), the existence of a psychological contract and social forces between management and the board, provide incentives that adversely influence the design of optimal contracts. As such, boards and remuneration committees collude with the CEOs, culminating into excessive pay and setting up pay contracts that are misaligned with shareholders' interests (Conyon, 2006).

The crux of managerial power theory is that an executive's influence on the remuneration-setting process can culminate into an executive-bias pay contract at the expense shareholders (Choe, et al., 2008). This is exercebated by the influence that some CEOs have on the appointment and pay of board members. This creates room for power abuse and undue influence on the utilisation of corporate resources, creating deficiencies in the structural design of executive remuneration packages (Theku, 2014). From a managerial power perspective, CEOs tend to set their pays. Resultant excessive pay constitutes an economic rent, an amount greater than necessary to get the executive manager to fulfil his/her fidiciary duties, thus deviating from optimal contracting (Conyon, 2006).

The above theories (optimal contracting and managerial power) are indicative of the inherent weaknesses that characterise agency relationships. Despite these weaknesses, it is still generally accepted that executive incentives can be effectively utilised to align divergent interests, thereby mitigating agency costs. Any attempts to 'sugar-coat' these weaknesses will lead to inefficient remuneration structures. This will adversely affect both remuneration designs and company performance.

Managerial power and undue executive influence on the allocation and utilisation of business resources have created inefficiencies in the structural design of executive remuneration packages (Theku, 2014). Contrary to this view is the

stewardship theory, which assumes that executives are responsible and ethical agents of the shareholders.

2.2.4 Stewardship Theory

Stewardship theory is based on the premise that managers are responsible stewards/agents of the organisation resources they control and manage. Accordingly, the conflict of interests that is advocated by the agency theory is therefore non-existent. This theory is optimistic about executive managerial behaviour and views executives as “inherently” ethical and not inclined to abuse of business resources they control and manage (Fallatah, 2015).

According to the stewardship theory, it will be more beneficial to have an executive with dual responsibility as CEO and board Chairman (Dimitrova & Hartman, 2015). Conversely, the board Chairman has to protect the shareholders’ interests by independently endorsing the business strategy, recruiting, supervising and remunerating senior executives and ensuring accountability to shareholders and key stakeholders (Talha, et al., 2009). Accordingly, the CEO should serve as the highest-ranking corporate officer, administrator, in charge of total management of business activities. As such, Talha, et al. (2009) recommended the separation of roles between board Chairman and CEO to avoid conflict of interest and promote good corporate governance.

Similarly, King III corporate governance code recommends that a Chairman should be an independent non-executive director who is not also a CEO (Deloitte, 2013). Whilst the Chairman is required to maintain an objective viewpoint of the affairs of the company, the CEO is also required to intimately partake in the development and execution of management plans for the organisation.

Recently, a new executive remuneration theory which is believed to explain the disproportionately high wage gap between executives and ordinary employees is being cited in literature as the tournament theory.

2.2.5 Tournament Theory

This theory is based on personnel economics which describes a phenomenon where pay differences are based on individual hierarchical level, instead of marginal productivity output. It has been used to explain income disparities between executive management and ordinary organisational employees (Theku, 2014).

The proponents of this theory argue that overpaying top executives serves as an inspiration to low level employees to exert themselves with the hope of climbing the corporate ladder to similar high paying positions (Hardford, 2006). The basis for this argument is that employees are frequently ranked relative to each other and promoted not for their individual absolute performance, but for outperforming colleagues (Hardford, 2006). As such, tournaments, competition for promotions, are an integral and often invisible part of a workplace environment.

This theory advocates that the hierarchical ranks resemble a tournament wherein the total prize is shared amongst participants in accordance with individual effort (Theku, 2014). The more optimal the pay gaps between different ranks; the larger is the incentive for performance maximisation at all organisational levels. This approach is said to outweigh pay for performance as it motivates everyone, instead of a few individuals (Connelly, Tihanyi, Crook & Gangloff, 2014).

The possible downside for this theory is that it may create fierce competition amongst employees which may end up being toxic and detrimental to teamwork and organisational success. The other ubiquitous theory is labour-market theory which is hereafter discussed.

2.2.6 Labour Market Theory

According to this theory, executive remuneration is determined by labour market dynamics and equilibrium forces wherein talent supply and demand influence compensation levels (Theku, 2014). Consequently, remuneration levels where there is scarcity of highly sought after, skilled and experienced executives, are by default high. In support of this perspective, Choe, et al. (2008) conceded that CEO's remuneration structure and level can depend on factors like talent and the demand-supply interactions in the CEO labour market.

The market equilibrium forces are therefore dependent on the CEO labour market demand-supply interactions. The market demand is dependent on the number of employers who are willing and able to utilise the available talent as well as the marginal revenue product (MRP) of that talent for the specific employer. Similarly, the market supply depends on the available talent and willingness to offer services at alternative compensation rates.

According to Schiller (2011), the dilemma in determining appropriate executive remuneration levels is the elusiveness of MRP. Whilst a CEO is expected to provide strategic direction to ensure organisational success, it is however difficult to quantify a CEO's value contribution (Schiller, 2011). The concept of opportunity wage seems to help explain executive pay, but fails to justify the high levels that are being widely reported (Schiller, 2011). Research findings by Fulmer (2009) supported this view and confirmed the influence of competition, wherein companies are willing and able to pay a premium for the retention and/or attraction of experienced CEOs.

The reality though is that the prevailing debate is not only on high executive remuneration levels, it also extends to the structural designs of these remuneration packages. The next subsection seeks to explore this area and establish the structural components and various determinants for different structural designs of remuneration packages.

2.3 Executive Remuneration Structure

Remuneration broadly refers to total reward that encompasses extrinsic (financial) and intrinsic (non-financial) rewards (Grobler, Warnich, Carrell, Elbert & Hatfield, 2011). Accordingly, extrinsic rewards include monetary direct payment and indirect financial benefits, whilst intrinsic rewards relate to the fulfilment of personal goals, autonomy and job related prospects. Executive remuneration structural design is accordingly cited as an important mechanism to reward or penalise CEOs for corporate performance (Theku, 2014). This is however only achievable if variable performance-sensitive remuneration structure is adopted (PwC, 2010).

In general, executive remuneration structure may differ from ordinary employees' as it includes base pay, annual bonus, long-term incentives, executive benefits

and perks (Grobler, et al., 2011). Figure 1 illustrates some of the influential factors and typical make-up of executive remuneration structure:

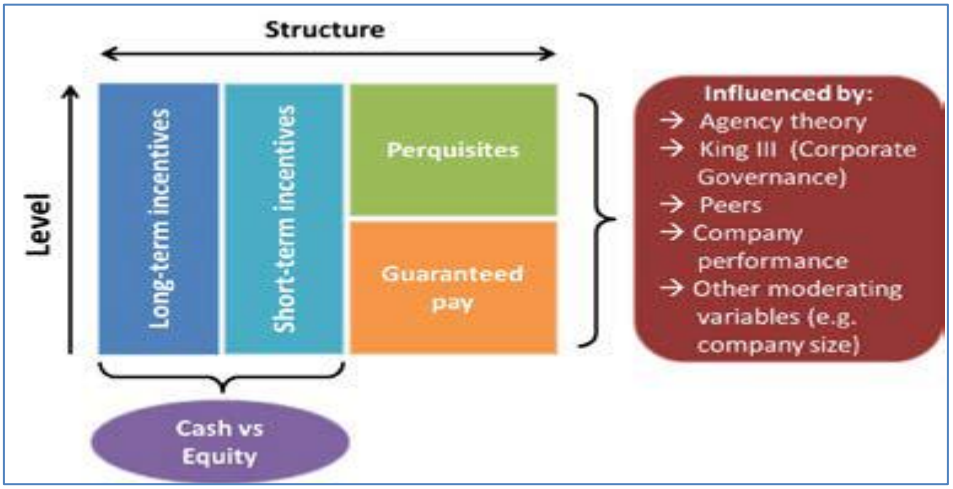


Figure 1: Typical Executive Pay Structure (Deysel & Kruger, 2015, p.141)

Ellig (2007) categorises the different remuneration package components as follows:

- **Salary**: guaranteed regular base cash pay that is risk-free and normally received on monthly basis.
- **Perquisites:** benefits and perks that relate to cash payments towards healthcare insurance, retirement benefits, travel allowance, etc.
- **Short term incentives (STI)**: cash rewards for successfully implementing the organisational strategy, achieving financial goals and objectives. These are generally paid as performance bonus forming the variable pay (VP) component of the total remuneration.
- **Long term incentives (LTI)**: These may consist of multi annual payments that could include company share options.

Whilst well designed remuneration packages are to be linked to organisational performance, its structural design is often complicated by the issue of guaranteed (fixed) pay, which forms part of the total cost to company (CTC). According to Bussin (2015), most executive remuneration packages are determined on the basis of company specific factors (such as size, performance, structure, etc) and executives' specific factors (such as age, work experience, tenure, career path,

etc). Choe, et al. (2008) conceded that, whilst managerial power unambiguously leads to excessively high pay, it is its structure that has a higher bearing to pay-performance relationship.

Figure 2 illustrates the typical components of an executive remuneration structure as required in a remuneration report.

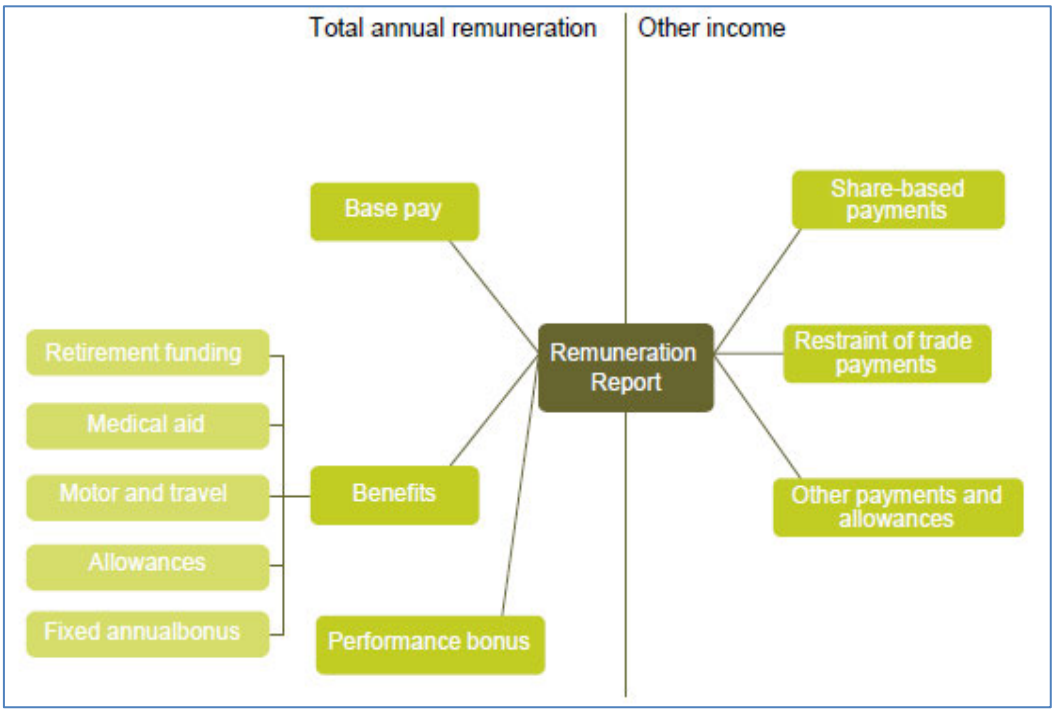


Figure 2: Total Executive Remuneration Structure (PwC, 2010, p.13)

The remuneration structure is ordinarily determined by the board, through its remuneration committee. One of the fiduciary duties for a remuneration committee is to optimally combine the above remuneration structural components and ensure a balanced remuneration structure that protects shareholders against opportunistic actions by executives (PwC, 2010; Theku, 2014).

The structural changes in remuneration structure have recently been observed and reported in South Africa. The recent research study on the relationship between CEO pay and performance of the top 40 JSE listed entities was conducted by Bussin & Modau (2015). The study found that the average percentage (%) mix between fixed pay (FP) and STI as a percentage of total remuneration had soared from 44% in 2006 to 59% in 2012 (Bussin & Modau, 2015, p.10).

Figure 3 illustrates these structural changes in remuneration package between 2006 and 2012 in the Top 40 JSE listed companies.

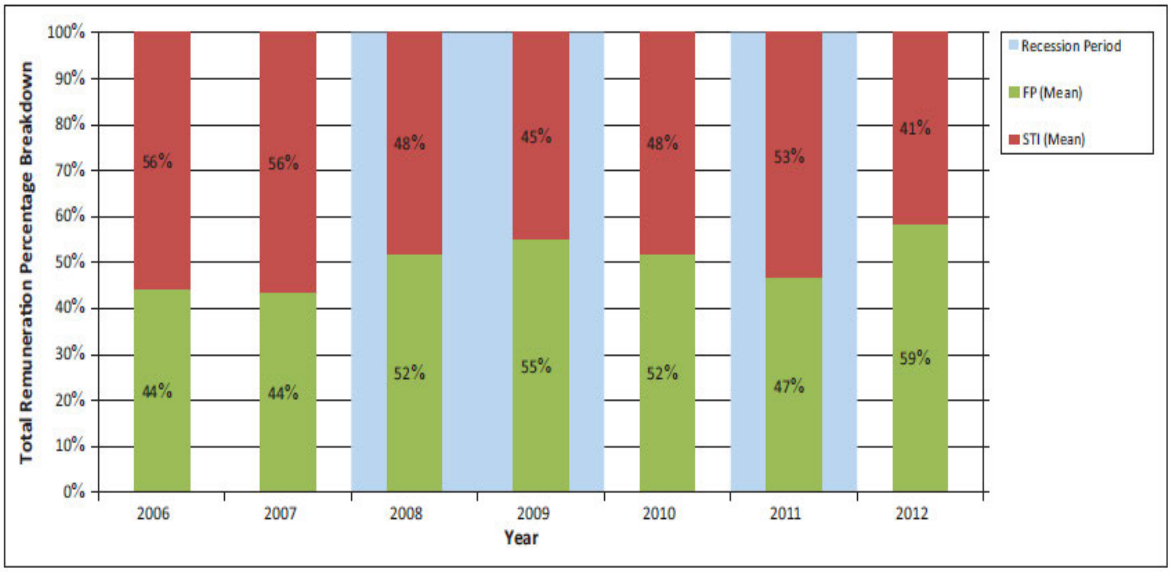


Figure 3: Remuneration structure (Bussin & Modau, 2015, p.70)

Deysel & Kruger (2015) conceded that the retention and/or attraction of an experienced executive require a competitive guaranteed base pay package. The rest of the pay package tends to be open to abuse as demonstrated by the reported CEO remunerations that have significantly outpaced ordinary employees' earnings growth (Deysel & Kruger, 2015). According to Deysel & Kruger (2015, p. 141), company CEOs in the JSE Top 40 index received a mean increase of over 20%, with their short-term incentives increasing by more than 50%, against a 13% adjustment in the minimum wages of miners. It is such reports that are fuelling public outcries and creating unprecedented research interest in the area of executive compensation and corporate performance.

2.4 Corporate Performance

Company performance is generally operationalised into accounting and/or market based performance indicators. It is generally categorised into absolute financial measures from audited financial statements within a specific financial year, or derived financial ratios from these statements or market performance based on the equity markets. Financial statements are used to evaluate past business activities by assessing business performance against its objectives and its potential for the future (Graham & Winfield, 2010).

Financial statements are therefore aimed at providing financial information to key stakeholders for decision-making about resource allocation to the reporting business. The information of interest is by and large related to business decisions and its consequences on financing, investing and dividend policy (Graham & Winfield, 2010). Such information is contained in the statements of financial position, comprehensive income, cash flows and changes in equity. Financial statements are therefore intended to provide information on resource availability, resource financing and ultimately what the firm was able to achieve (Reilly & Brown, 2012).

Whilst there is general consensus that there should be a relationship between reported company performance and executive compensation, there are however disagreements on which performance measures to use (Azim & Ahmmod, 2014). Bussin (2015) argues that, besides being backward looking (historical), accounting based company performance measures are prone to manipulation by executives to influence the perceived company's financial position. Besides its proneness to manipulation, accounting measures do not reflect a company's risk exposure embodied in the cost of own equity in the capital structure (de Wet, 2012). Bussin (2015) identified the following areas which are open to unscrupulous manipulation:

- Asset depreciation policy, whether accelerated or straight line;
- Inventory evaluation policy;
- Use of short-term, non-capitalised leases to obtain productive assets; and
- Holding borrowed funds as available cash until after the financial year-end.

Linking remuneration to accounting performance measures is therefore viewed as risky in that executives may manipulate books for their own benefit. A company is however permitted to alter accounting methods, provided they remain consistent for the financial reporting period; but this inevitably lead to inconsistencies and incomparabilities across companies (Azim & Ahmmod, 2014). Besides, accounting measures disregard the time value of money because financial statements that are utilised are based on historical data (Azim & Ahmmod, 2014).

Given the existence of the agent-principal relationship between executives and shareholders, Bussin (2015) advocates for market based measures in defining firm performance. This is based on the notion that executive management's key role is to maximise shareholder value. This value is invariably reflected on the market share price performance. One criticism for this approach is that it punishes executives, whereas share price is invariably determined by market conditions and not so much the executives' contribution (Azim & Ahmmod, 2014).

Unlike accounting based measures, the capital market is the source of information, and such information is less susceptible to manipulation by company agents (Bussin, 2015). Whilst it may be relatively difficult to manipulate market performance measures, management can still influence the market's reaction by providing false information to the general public (Azim & Ahmmod, 2014).

In contrast, change in market share price is a secondary measure since an organisational primary aim is always related to revenue targets, competitive advantage creation, accounting profits, return on assets (ROA), etc (Resnick, 2013). In South Africa alone a number of different company performance measures have been used in similar studies, including studies by Bradley (2013); Modau (2013); Resnick (2013); Bussin (2015); Bussin & Modau (2015); Deysel & Kruger (2015), to mention a few. Some of these company KPI's are hereforth discussed.

2.4.1 Return On Assets

This is a profitability measure that an entity achieves with the assets under its control and management. It is hence cited as a good measure of a company's managerial performance, as it reflects the efficiency and effectiveness with which organisational assets are being utilised to generate accounting returns (Bradley, 2013). Graham & Winfield (2010, p.62) cited ROA as a measure of both asset acquisition (investment decisions) and asset utilisation (operational decisions), calculated as follows:

$$ROA\ (\%) = \frac{Net\ Profit}{Average\ total\ assets} \times 100\%$$

A company's ROA is therefore a KPI for overall productivity in terms of the percentage of profits generated relative to total company resources. A negative ROA will therefore imply poor utilisation of business resources due to questionable investment and/or operational management decisions.

2.4.2 Return On Equity

This is a measure of how well an enterprise utilises shareholders' investments (equity) in its capital structure to maximise shareholder returns. It is an indication of the rate of return which management has generated on the applied capital (Reilly & Brown, 2012). Whilst it is an accounting measure and therefore prone to manipulation, it is well understood and widely used as a corporate performance measure (Bradley, 2013). Graham & Winfield (2010, p.63) cited return on equity (ROE) as the measure that drives share price, and is calculated as follows:

$$ROE\ (\%) = \frac{Net\ Profit}{Average\ Equity} \times 100\%$$

An ROE should at least exceed the prevailing interest rates to be considered strong enough to cover an entity's cost of capital. Whilst this metric will be expected to be at least positive, a negative ROE may not necessarily imply bad investment decisions by management, but could be attributed to high restructuring costs which could ultimately lead to profitability in the long run. Generally, %ROE should significantly exceed a risk-free investment return to be worthwhile for a business to accept volatility that comes with higher-risk activities (Graham & Winfield, 2010).

2.4.3 Earnings Per Share

This is a measure of how much income (earnings) shareholders receive per shareholding (Azim & Ahmmod, 2014). This reflects shareholder return since shareholders' main aim is to maximise their wealth by increasing share price and dividends. This therefore demonstrates whether company executives are acting in the best interests of their principals (Azim & Ahmmod, 2014). This can either be calculated as basic or diluted earnings per share (EPS):

$$Basic\ EPS\ (Cents) = \frac{Net\ Profit}{Number\ of\ Ordinary\ Shares}$$

In an Australian research study conducted by Azim & Ahmmod (2014), executive remuneration variables were found to be significantly and positively linked to EPS and dividend yield (DY).

2.4.4 Headline Earnings Per Share

This is another EPS measure which uses headline earnings instead of just earnings. It is an accounting based performance measure of company profitability that apportions headline earnings to each of the outstanding shares (Theku, 2014). Headline earnings accounts for all the earnings from operational, trading, and interest activities, that have been discontinued or acquired at any point during the financial year (Kuepper, 2007). These are exclusive of proceeds or incurred costs from the disposal of discontinued operations, non-current assets, related businesses, or from any permanent devaluation or write off of their values. Headline earnings therefore commonly excludes profits or losses on the sale of fixed assets and the impairment of non-trading assets (Graham & Winfield, 2010).

Headline earnings per share (HEPS) is one of the traditional performance metrics that has been cited and used by Deysel & Kruger (2015) in their study in the banking industry. Whilst Deysel & Kruger (2015) supported the use of this measure, they acknowledged that some metrics have evolved and now account for the excess value created by management. One of these being economic value added (EVA).

2.4.5 Economic Value Added

Economic value added (EVA) is a measure of an organisation's financial performance on the basis of residual wealth calculated by deducting weighted average cost of capital (WACC) from its net operating profit (Bussin & Modau, 2015). EVA is therefore an internally risk-adjusted performance measure that incorporates a company's full WACC; yielding positive results if an enterprise's after-tax profits exceed the cost of capital (de Wet, 2012).

This is accordingly calculated as follows (Bussin & Modau, 2015, p.8):

$$EVA\ (ZAR)\ = \frac{NOI}{(CE\ \times WACC}$$

Where, NOI is the net operating income adjusted for taxes on cash basis;

CE is the capital employed; and

WACC is the weighted average cost of capital employed.

EVA is cited by numerous research sources to have a stronger correlation with shareholder returns than most other tested accounting measures (de Wet, 2012). The challenge with its use is its difficulty to apply for peer reviews, given the differences in the cost of capital expectations of various companies (Deysel & Kruger, 2015). In a South African research on executive pay, de Wet (2012) concluded that a stronger correlation between executive remuneration and EVA existed than between executive pay and market value added (MVA) or shareholder value creation.

2.4.6 Earnings Before Interest Tax Depreciation and Ammortisation

Earnings before interest, tax, depreciation and amortisation (EBITDA) is disclosed in the statement of comprehensive income. This is a measure of cash flow in terms of operating earnings with no considerations for the effect of changes in working capital or capital expenditures (Reilly & Brown, 2012). As such, EBITDA is consistently higher than the other cash flow measures from operating, investing and/or financing activities. Given the perceived deficiency of this measure, Reilly & Brown (2012, p.265) do not support its use as a performance measure.

2.4.7 Turnover

Sales/revenue is disclosed in the statement of comprehensive income as the first line item. This is the gross inflow of economic income generated during the course of ordinary business activities, excluding capital injection from equity (Graham & Winfield, 2010). Revenue recognition is one measure that is prone to manipulation as reported in the recent accounting scandals. Ideally, revenue is to be recognised when the transaction income amount is reliably measurable, and when there is high probability of economic benefit flowing into the entity (Graham & Winfield, 2010). If not scrutinised, businesses may prematurely and/or fictitiously recognise it, thus creating an illusion of an attractive statement of comprehensive income.

Turnover is however an obvious starting point as an easily identifiable and observable absolute performance (Shaw, 2011, p.25). Concerns about its

susceptibility to manipulation (Graham & Winfield, 2010) are allayed by the reality that it is an externally and independently audited figure (Shaw, 2011).

2.4.8 Total assets

All assets, non-current and current assets are disclosed in the statement of financial position. Whilst this is a good measure of the investment decisions by a business, there are significant differences in the valuation of various asset types (Graham & Winfield, 2010). Some assets may be carried at cost, depreciated at cost, revalued at fair value, etc. The challenge is not so much on which accounting model is used, but is when companies juggle between measurement models to "*sweeten up*" the financial statement.

2.4.9 Share price

This is a market based performance measure which is based on volume weighted average price of the share for the financial year. This is a total monetary value of the shares traded during the year divided by the number of shares traded during the reporting period. Share performance is a measure of absolute performance that translates into shareholder value (Shaw, 2011). This includes share price (SP) and HEPS.

Share price is therefore a measure of how the market views the company to be worth. The use of SP as a determinant for executive remuneration is however criticised on the basis that share price is influenced by market conditions, not the executives' contribution (Azim & Ahmmod, 2014). Market views are entirely dependent on market perceptions about the value of a company share (Graham & Winfield, 2010). Such market perceptions are frequently evaluated through the analysis of the price per earnings ratio.

2.4.10 Price per Earnings ratio

The price per earnings (P/E) ratio is an investor's measure of expected returns from a company's earnings. It is indicative of how much investors are willing to pay per rand of company earnings. Generally, the higher the P/E ratio, the higher the future returns that investors expect in comparison to its peers with a lower P/E ratio.

A low P/E ratio may however imply that a company is currently undervalued or that it is outperforming its historical typical performance. The meaningful use of P/E ratio is however limited to companies within the same sector due to differences on how companies generate their revenues and timelines during which those revenues are generated and recognised. The major difference between companies could be attributable to their gearing ratio which ultimately affects the share price.

2.4.11 Corporate Performance Summary

According to Gentry & Shen (2010), accounting and market performance measures are positively correlated with low covariance of less than 10%, with no evidence of convergence. To minimise potential bias, Bussin (2015) recommends the use of both measures in evaluating CEO pay-company performance link.

In a research study by Scholtz & Smit (2012), executive pay was regressed on various firm performance measures which were perceived by shareholders as related to company value. Findings from this research validated positive regression coefficients of different strengths for all tested variables, with the exception of EBITDA (Scholtz & Smit, 2012).

A similar study was conducted by Deysel & Kruger (2015) in the banking sector using a seven (7)-year time period, wherein company performance measure in terms of share price, ROE, EBITDA and HEPS were used. This approach was supported by Bradley (2013) wherein the top 40 JSE listed companies were successfully investigated.

A South African CEO pay-performance research study by Shaw (2011) looked at financial service organisations wherein firm performance measures were categorised into absolute financial performance measures, and ratios, as well as market performance measures. Similarly, the study utilised profitability and shareholder returns in terms of ROE and HEPS as measures of organisational performance.

Performance linked pay is therefore widely regarded as an efficient and effective mechanism in agency problem alleviation. Through such a mechanism, executives are to be rewarded for their level of efforts and contributions as

measured through firm performance (Theku, 2014). The challenge is to establish specific firm performance measures that can be efficiently attributed to CEO's performance output, leading to optimal remuneration determination.

It is therefore pertinent that shareholders or their representatives should identify value drivers for the firm. This should accordingly form the basis of defining executives' performance targets (Resnick, 2013). The next subsection covers pay-performance sensitivity concept as postulated by optimal contracting theory.

2.5 Pay-Performance Sensitivity

Bussin (2015) defines pay-performance sensitivity as the relationship measure between remuneration and a broad set of corporate performance variables. It is in line with the concept of optimal contracting wherein high-performing executives are to be rewarded handsomely and proportionately (Fallatah, 2015). This is a measure of the appropriateness with which an executive is compensated in accordance with how an organisation is managed and controlled (Shaw, 2011). It should hence be recognised as a measure of change in executive's pay that is attributable to a given company performance.

Pay-performance sensitivity can generally be quantified in terms of a correlation between pay and specific company performance indicators (Shaw, 2011). One possible measure is the Rand increase in a CEO's wealth associated with a Rand increase in the firm's market capitalisation. When Nulla (2015, p.76) investigated this relationship between CEO pay and corporate performance among the large New York Stock Exchange (NYSE) listed entities, the results were less favourable. The correlation between CEO salary, CEO bonus, ROA, ROE, EPS, cash flow per share, net profit margin, common stock outstanding, book value of common stock outstanding, and market value of common stocks outstanding, were characterised as weak, respectively.

In a research study of the top JSE listed companies, Bradley (2013) and Resnick (2013) observed little or no correlations between CEO remuneration and some of the key corporate performance measures. Some of these key performance measures included ROE, ROA, EPS, share price, net asset value, etc. Resnick (2013) however found a positive link between executive remuneration and accounting measures of company revenue and net profit, respectively. Whilst

Shaw (2011) found a moderate to strong pay-performance correlation in the South African financial services sector, a shift from variable to fixed pay component in the remuneration structure was observed (Bussin & Modau, 2015, p. 141). A progressive decline in the pay-performance sensitivity was also reported by Shaw (2011) between 2008 and 2012. The respective average *r* scores for CEO pay and company performance in terms of book value (BV), EBITDA and profit were 0.56, 052 and 0.45 (Bussin & Modau, 2015, p.5) . These results were indicative of a decline in pay-performance sensitivity.

Pay-performance sensitivity metrics are accordingly utilised as measures of the quality of corporate governance. Ceteris paribus, high sensitivity is indicative of enhanced alignment between executive pay and shareholder interests, implying larger responsiveness to corporate performance. Existence of a strong relationship between executive remuneration and some corporate performance metrics, including total assets, revenue and share performance for Alternative Exchange (AltX) listed companies was however found by Scholtz & Smit (2012). It was found that the link also held during a period of economic rescession, with the exception of share price, which was an insignificant performance measure in this period.

Scholtz & Smit (2012) attributed these positive findings to the effectiveness of corporate governance, which prescibes that a remuneration committee should make proposals to the board regarding remuneration policy position and direction. Scholtz & Smit (2012) projected that the pay–performance sensitivity should strengthen with the advent of King III and Companies Act 2008. This requires that companies should adopt remuneration policies over the long term. The envisaged remuneration policies are to be deliberated and approved by shareholders (Deloitte, 2013). It is concluded that a long-term increase in shareholder value is realiseable if executive remuneration policies are linked to corporate performance in accordance with corporate governance principles.

2.6 Corporate Governance

Whilst providing incentives is widely considered as the best possible solution to agency problems, there are other cited mechanisms to encourage management to act for shareholders' benefit. These include, amongst other things, effectively and

efficiently monitoring management activities and contractually binding management performance to firm performance (Azim & Ahmmod, 2014). Such mechanisms are explicitly outlined in corporate governance systems.

South African companies are regulated by the King III Code of Corporate Governance Principles (King III), as well as the Companies Act 2008. Corporate governance codes are a set of recommended best practices that are generally designed to address organisational governance system deficiencies (Modau, 2013).

The increases in executive pay, against the backdrop of global corporate scandals and corporate governance failures, has put executive compensation under the spotlight of corporate governance debate (Choe, et al., 2008). In an attempt to restore public and investor confidence, the US responded with the introduction of enhanced corporate governance standards under the Sarbanes-Oxley Act of 2002 (SOX). This Act sought to ensure that executive management certifies the accuracy of reported financial statements, thus creating an enhanced level of accountability and transparency (Fallatah, 2015).

According to Scholtz & Smit (2012), an improvement in corporate governance requirements and compliance can improve the envisaged link between executive compensation and organisational performance. Talha, et al. (2009) defines corporate governance as business rules and incentives by which company executive management direct and control a company in pursuit of short-term and long-term shareholder value creation. This has to be effectively and efficiently realised whilst taking into account the interests of other legitimate stakeholders, like employees, creditors, the community, regulators, etc. Corporate governance is therefore underpinned by the cardinal values of “fairness, accountability, responsibility and transparency” as the foundation of the rule of law (Hough , et al., 2011).

The advent of significant corporate governance principles and regulatory reforms in the aftermath of the recent global economic recession bears testimony to the role that incentive remuneration had played (Bussin, 2015). Based on the conflicting research findings on the issue of executive pay and enterprise performance, it is evident that a challenge does exist. The challenge is primarily

centred on the identification of a mutual balance between remuneration that helps to motivate executives without overcompensating them, particularly when company performance is unfavourable.

In the United States, between 2003 and 2007, CEO pay was estimated to have grown in real terms by a total of 45 percentage points, compared to a mere 2.7 percentage points for the average American employee (Ebert, Torres & Papadakis, 2008, p.2). A similar trend was reported in the Netherlands over the same period, wherein remuneration growth was estimated at 192 percentage points compared with 2.4 percentage points for an ordinary employee (Ebert, et al., 2008, p.2).

In South Africa King III requires specific executive remuneration disclosures about payment to certain directors in accordance with the Companies Act 2008 and JSE listing requirements (Scholtz & Smit, 2012). King III recommends a comprehensive set of norms about the role of board of directors, its composition, management of the agency relationship, executive remuneration, etc (Modau, 2013). Besides, the code requires remuneration committees to also disclose the basis on which executives are being incentivised (Deysel & Kruger, 2015). Such legislative interventions are intended to make it difficult for directors to reward themselves in spite of poor performance in achieving agreed upon organisational goals (PwC, 2010). The main drive for King III in South Africa is to ensure that sustainable top-down external regulatory framework is maintained. It is hoped that this will motivate executives to prioritise organisational interests above theirs in order to maximise shareholder wealth (Modau, 2013).

The most contentious issue in South Africa has been the wage gaps between CEOs and ordinary employees. Adjustments in ordinary employee salaries are generally determined on the basis of prevailing inflation rate figures. In the period, 2010 to 2015, the average consumer price index (CPI) was estimated at not more than 5.5% (Trading Economics, 2016). Figure 4 illustrates the 2013 wage gaps in terms of average employee salary compared to the total remuneration of the highest paid executive in an organisation, commonly the CEO:

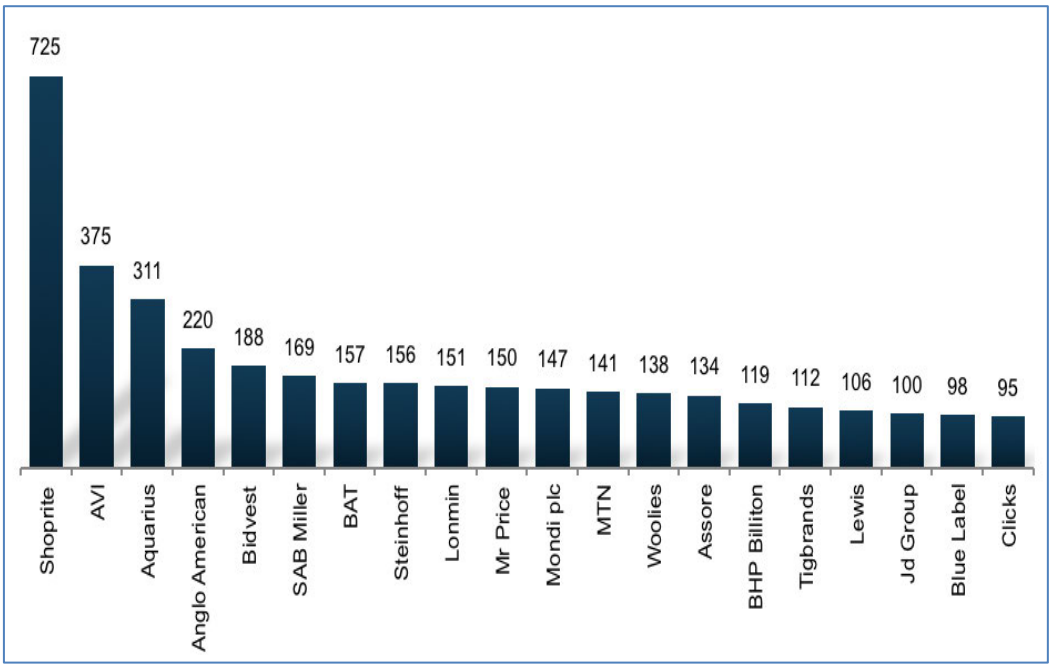


Figure 4: Top 20 CEO to average employee wage gaps **(Preston, n.d)**

Based on the above 2013 data, Shoprite had the highest gap (at 725 times) between its total CEO remuneration and average employee salary. In this instance, remuneration paid to the Shoprite CEO was largely made up of guaranteed pay which is indicative of a long-term nature of the disparity as opposed to a once-off anomaly. This study put the average pay gap between CEO and an ordinary employee at almost 190 times in South Africa.

The argument by some of the cited multinational companies' remuneration committees is that due to global diversification, it is not necessarily relevant to compare their CEO compensation to an average South African employee salary (Preston, n.d). It is for this reason that there is intensified calls and convincing case by organised labour for a national minimum wage to eradicate perceived labour exploitation in South Africa.

It is however encouraging that certain CEOs have willingly relinquished or deferred their incentive bonuses in light of their companies' poor performance (Deysel & Kruger, 2015). In the recent past the Investec's CEO had a pay cut of 87 percentage points and ABSA's Group CEO deferred her R14 million incentive bonus (Bloemberg, 2012 cited in Deysel & Kruger, 2015). Such recent trends in executive remuneration are attributable to an increased focus on corporate governance in the business environment.

Ebert, et al. (2008) argued that executive management jobs have become more complex owing to the VUCA in market conditions under which firms have to operate. Such market conditions have necessitated the need to seize globalisation opportunities and ubiquitous technological developments. This phenomenon explains the reasons for firms to increasingly focus on performance in the determination of executive pay (Ebert, et al., 2008). Coincidentally, the pervasive executive remuneration increases have been received with mixed feelings and are being regarded as the major source of excessive income inequality.

2.7 Summary

The literature review has provided an overview of the principal issues influencing executive remuneration. The existence of inherent conflict of interest between executive management (agent) and shareholders (principal) is explained by the agency theory. According to this theory, such conflict of interest is mitigated by incentivising executive management in such a way that motivates them to fulfil their fiduciary duties in accordance with shareholders' interests. This theory is juxtaposed against other contemporary theories that are cited as alternatives in the determination of executive remuneration.

Ideally, a remuneration contract, as envisaged in the optimal contracting theory, should be aligned to company performance. This is founded on the principle of providing executive incentives that alleviate agency problems and ultimately mitigate agency costs.

The advent of the King III corporate governance codes and subsequently, Companies Act 2008, sought to enhance the envisaged relationship between company performance and executive remuneration. Successful management of agency costs and ultimate balanced alignment of executive remuneration with corporate performance is indicative of adherence to, effective and efficient corporate governance processes (Theku, 2014). Managerial agency costs are therefore inevitable in an agency relationship and are therefore at the heart of executive remuneration theory.

The overarching principle of King III is that companies should remunerate executives fairly and responsibly by paying special attention to market related FP;

mix of FP and VP; and performance conditions (PwC, 2010). This principle emphasises the need for rewarding performance and penalising failure; and aligning the interests of executives with those of shareholders.

Despite all this, new phenomena have come to the fore, with executives becoming more innovative in circumventing the envisaged pay-performance requirements. This phenomenon is explained through the managerial power theory. This is reflected in the extent to which an executive is able to influence the process through which his/her remuneration contract is formulated.

Other theories that seem to contradict the establishment of a mutual relationship between executive management and shareholders are reported in literature as tournament and labour market theories. Some of these theories seek to justify the disconnect between executive remuneration and organisational performance.

Most of the theoretical and empirical literature on executive remuneration is based on the premise that such pay arrangements are aimed at agency costs' alleviation and shareholder value maximisation (Walker, 2010). Accordingly, the fundamental objective of an executive remuneration theory is to ensure equitable risk and return sharing, at optimal cost to the principal. The next chapter, Chapter Three (3), seeks to outline the research approach and research methodology that were adopted and employed to fulfill the set research objectives and accordingly answer the formulated research study questions.

CHAPTER THREE - RESEARCH METHODOLOGY

3.1 Introduction

This chapter discusses the adopted research approach and methodology that were employed to fulfill the set research objectives and accordingly answer the research questions raised by this study. Research methodology is thus the chronological arrangement of ideas, method and classification into a design of research (Sekaran & Boegie, 2013).

Research is generally based on some underlying philosophical assumptions about its validity and the appropriateness of its research method that is used for knowledge development. Additionally, this chapter therefore outlines the research methodology and design used in the study, including strategies for data collection and analysis as well as anticipated limitations. The research design for this study is a descriptive and empirical research study that is analysed through quantitative methods. Furthermore, the justification for the data collection method used in the study is discussed.

3.2 Research Philosophy

The adopted research approach was archival and quantitative (positivist) in nature. Positivism relies on data-supported reality that is observable, measurable and can be analysed for relationship evaluation in the collected data that is generalisable to the population (Sekaran & Boegie, 2013). Such approach was deemed more suitable for this study as it is generally used with a deductive approach wherein data is collected to test a theory (Creswell, 2008). This was on the basis that the study sought to evaluate the existence, nature and/or strength of the relationship between CEO pay and firm performance in JSE listed entities.

3.3 Research Design

A research design is a plan for the research study based on the formulated research question for which evidence based answers are being sought (Creswell, 2008). It serves as an architectural blueprint of a study project, linking the research topic to a particular research paradigm, research approach, literature

review, research questions, data collection technique and subsequent data analysis (Sekaran & Boegie, 2013).

The study therefore followed an empirical study approach based on historically archived secondary data from reliable and credible sources. The approach was therefore ex post facto in nature wherein the focus was on variable reporting without manipulation. Secondary data was sourced from recognised and credible database in which financial performance data disclosing organisational performance measures and executive remuneration were published. McGregor BFA was however used as the primary source of secondary data.

Each component of CEO remuneration (fixed pay and variable pay, excluding equity based rewards) and company performance (ROE, ROA, EPS, SP and P/E ratio) was analysed as the dependent variable. A similar research approach to investigate the extent and nature of the relationship between CEO cash remuneration and firm performance among NYSE entities was conducted by (Nulla, 2015). Its purpose was to educate investors, and the general public on the determinants of CEO cash remuneration that influence the rewarding of CEOs with salaries and bonuses. Shaw (2011); Modau (2013); Theku (2014); Bussin & Modau (2015) all effectively used similar performance measures in their various research studies in the South African context.

A relationship evaluation was conducted for each pair of variables to establish the existence, nature and/or strength of the relationship in terms of coefficients of determination (R^2) and correlation (r), respectively. Theku (2014) successfully used the same approach in a similar study for the South African mining industry. In another similar study on the top 20 largest JSE listed firms, Resnick (2013) found that CEOs and chief financial officers (CFO) received lower pays as a results of poor company performance results.

3.4 Target Population

According to Sekaran & Boegie (2013), research population is the entire group of elements (members) of interest about which a study seeks to make statistical inferences. As such, the target population is defined in terms of research elements, geographical location and timeframe of the study (Sekaran & Boegie, 2013). This study target population was limited to JSE actively listed companies,

encompassing all economic sectors over a six year period (2010 – 2015). The basis for this universe selection was informed by the fact that JSE listed entities are obligated to executive remuneration disclosure and publishing of their independently audited financial statements. The extension of the universe to extract a representative sample of all JSE listed companies was in order to align the research with the general challenges that are characteristic of the South African economy.

3.5 Reseach Instruments

For secondary data collection, McGregor BFA database (INET BFA, 2014) was used as the primary source. Unlike primary data, secondary data refers to data that is already in existence in sources like books, periodicals, government publications, databases, internet, archives, media, corporate reports, etc (Sekaran & Boegie, 2013). McGregor BFA database was fully licensed at the University of KwaZulu Natal, Westville campus library. Microsoft (MS) Excel 2010 was used for data capturing and subsequent statistical analysis. The MS software was fully licenced through Tongaat Hulett Ltd.

The adopted research instrument was therefore a data matrix into which each company data in terms of its CEO remuneration (FP, VP and TR) and corporate performance (ROE, ROA, SP, EPS and P/E ratio) were collated for each year of study (2010 – 2015). These were extracted from McGregor BFA database into a spreadsheet using MS Excel 2010.

This unobtrusive data collection method is supported by all researchers who have investigated executive remuneration and corporate performance; and is viewed as indispensable for most business research (Sekaran & Boegie, 2013). This is in contrast to survey research wherein primary sources of data rely on individuals to provide data through interviews, focus groups, administered questionnaires, panel discusions, etc (Creswell, 2008).

3.6 Unit of Analysis

The dependent (response) variables, fixed (total guaranteed) pay, variable (short-term incentives, excluding share options) pay components of the total CEO remuneration, as well as total remuneration (sum of FP and VP) were selected as

key remuneration measures of executive pay and were analysed against key company performance measures. Long term incentives (e.g. share options) were deliberately left out of the remuneration analyses.

A combination of accounting and market based key company performance measures were selected for the study and evaluated as independent variables:

- ROE – a measure of shareholders' return to invested equity. It is therefore a measure of how well an enterprise utilises shareholders' investments (equity) in its capital structure to generate profits.
- ROA – a managerial performance measure of how effective and efficient a company utilises its assets to generate accounting returns.
- SP – a measure of absolute market based performance that translates into shareholder value based on volume weighted average share price for the financial year.
- EPS – is a measure of shareholder returns per share holding which demonstrates whether executives' and shareholders' interests are aligned.
- P/E ratio – is an investor's measure of expected returns from a company's earnings, indicative of how much investors are willing to pay per rand of company earnings.

3.7 Validity and Reliability

Research design constitutes a number of decisions that ultimately bear on the quality of collected data and the credibility of the research findings. This is therefore concerned with quality assurance of the research method that ultimately relate to the characteristics of validity and reliability.

Validity is an indication of the condition of being true and/or the level of authenticity of the data to address the research questions (Larson & Farber, 2015). In this study, the performance measures and executive remuneration constructs were selected based on literature review findings. Besides, the numerical data were extracted from a credible source (McGregor BFA database). These factors are deemed to elimininate the likelihood for data collection bias.

Besides, the selected research variables have previously been utilised with success in similar studies across the world.

Research findings from this study are therefore expected to be valid for its purpose. Any differences from the previous research studies will be based on factual data-based evidence, and not as a result of data collection errors and results' interpretation.

Furthermore, reliability is a measure of dependability of the research findings (Keller, 2012). According to Sekaran & Boegie (2013), reliability is an extent to which a measure is bias-free, attesting to consistency and stability of the adopted research instruments. Data collection and sampling technique used in a study are therefore critical in ensuring both research validity and reliability. Reliability may be verified by testing the repeatability of the study findings when different data sets are utilised (Resnick, 2013).

JSE publicly listed companies are subject to stringent mandatory regulatory requirements, scrutiny, and their financial statements are externally and independently audited. Published data from such sources are therefore expected to be verifiable and relatively of high quality, integrity and reliability. Given the reliability and credibility of the data sets used in this study, it was deemed not essential to verify data reliability. This view was supported by Resnick (2013) in a similar study on the top twenty (20) JSE listed companies.

3.8 Data Collection

A purposive sampling technique was adopted through indiscriminately selecting JSE listed firms that met the prescribed criteria. This is a non-probabilistic sampling technique wherein participants' selection is based on availability, convenience and representativeness to the population's identified characteristics (Creswell, 2008).

The study covered the reporting periods from 2010 to 2015. There were 389 public companies listed on the JSE board as at the 28th January 2016 (Johannesburg Stock Exchange, 2016). Of this research population, share trading for 30 entities was on suspension for various reasons, and were hence excluded from the research study.

The target research population for this study therefore consisted of 359 actively listed companies, but only data available on the McGregor BFA and/or JSE databases for the companies in the sample were to be used in the statistical analyses. For each of the actively listed companies, their annual financial performance data were accessed for the reporting periods between 2010 and 2015 through the recognised databases. The following criteria were therefore adopted to selected companies that made up the final research sample for analyses:

- The company needed to be actively listed on the JSE board in the periods, 2010 to 2015;
- The CEO remuneration for the shortlisted companies needed to be in South African currency (ZAR);
- The company CEO needed to have had an uninterrupted tenure for at least five of the six year study period.
- The selected organisational measures needed to be accessible from the McGregor BFA database.
- For regression analyses, each dependent variable needed to be paired with corresponding independent variable(s), otherwise if insufficient data existed; the case had to be discarded.

Figure 5 shows the number of companies that were included in the CEO remuneration descriptive statistical and time series analyses for each of the years in the study period.

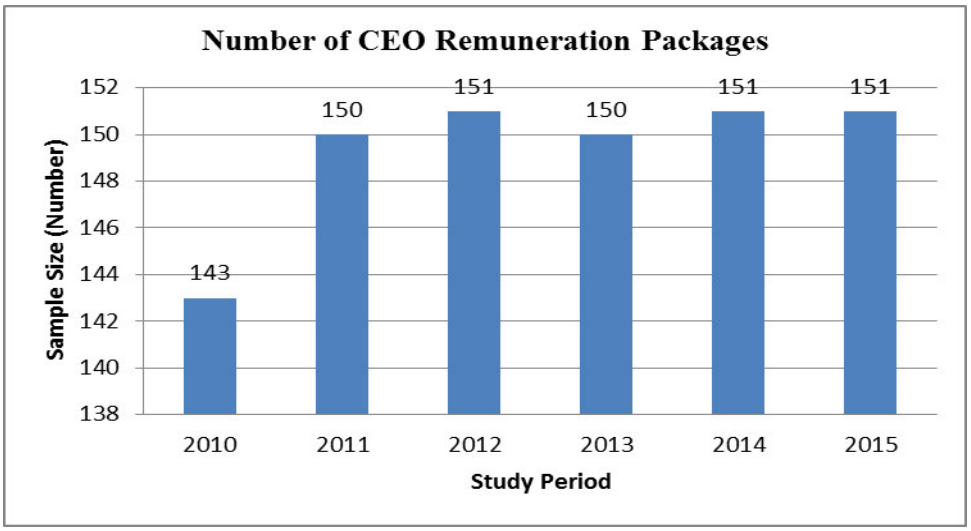


Figure 5: Sample Sizes per Study Period: Remuneration Descriptive Statistics

Sample sizes as detailed in Figure 5 were selected from the target population of 359 elements. The sampling process, based on the above predetermined selection criteria, was aimed at ensuring adequate representativeness to the target research population for generalisability (Sekaran & Boegie, 2013). The sampling process was therefore based on the non-probability sampling design wherein research elements have no predetermined chance of being selected (Sekaran & Boegie, 2013), based on a purposive sampling technique. A similar sampling design, based on a predetermined criteria, was successfully utilised by Deysel & Kruger (2015) wherein JSE listed banks were investigated over a seven-year study period.

The adopted research target population was informed by the need for credibility, validity and reliability of the utilised data over the study period. This was based on the statutory requirement that all JSE listed companies are obligated to disclose executive remuneration and publish independently audited financial results in accordance with King III and Companies Act 2008, respectively. Furthermore, Theku (2014, p.33) asserts that McGregor BFA database information is credible.

3.9 Data Analysis

The selected company performance variables for a period of six (6) years from 2010 to 2015 (inclusive) were used for the purposes of the study. Secondary data regarding CEO remuneration was also obtained for the study period. The relevant

numerical data for JSE listed entities was statistically analysed to investigate the pay-performance relationship over the study period.

The initial part of the analysis took the form of numerical and graphical descriptive statistical analyses. This was aimed at evaluating measures of central location of the collected data and time series analyses of the different variables in terms of trends.

This was followed by relationship analysis for each pair of variables to establish the existence, nature and strength of the relationship in terms of coefficients of correlation (r) and determination (R^2), respectively. A bivariate regression analysis was therefore conducted for each paired variables. The statistical analysis was also extended to include a multivariate regression analysis in order to determine the most appropriate predictors of the dependent variable (executive remuneration) within a model of explanatory variables (company performance measures).

The coefficient of determination (R^2) measures the proportion of the variation in the dependent variable that is explained by the variation in the independent variables (Keller, 2012). The R^2 ranging from zero (0) to one (1) is referred to as a descriptive goodness measure of fit wherein a high value indicates the strength of the relationship (Keller, 2012).

On the other hand, a correlation coefficient (r) determines if the relationship exists, whilst measuring its strength and direction, where it exists (Larson & Farber, 2015). It measures the extent to which two variables are correlated in terms of how one variable is represented by a variance in the other variable (Deysel & Kruger, 2015). It ranges from -1 to +1, wherein (+) is indicative of a positive correlation and (-) implying the existence of a negative correlation. The closer the correlation coefficient to absolute 1, the stronger is the correlation between the tested variables. The negative (-) and positive (+) signs are therefore indicative of the nature of the relationship (Keller, 2012). Table 1 illustrates the correlation coefficient limits for the strengths' interpretation (Modau, 2013, p.45).

Table 1: Correlation Coefficient Limits and Strengths

Limits	Relationship
$0.71 \leq r \leq 1.00$	Strong
$0.31 \leq r \leq 0.70$	Moderate
$0.00 < r \leq 0.30$	Weak
$r = 0.00$	None

Descriptive statistical analysis was used to identify the centralisation and dispersion of data sets of the dependent and independent variables, respectively. The focus was on mean, median and standard deviation to conduct time series analysis over the study period. These trend analyses were aimed at answering research questions pertaining to corporate governance issues in South Africa, whereas the regression analysis for relationship evaluation.

3.10 Study Limitations

The study was targeted at the entire population of the JSE listed company population within a predetermined study period of six (6) years. This therefore consisted of companies from different industries. The research findings will therefore be only applicable to the South African JSE listed companies and may not be suitable for generalisation to other markets outside the Republic of South Africa.

The data analysis was conducted on the basis of secondary data sourced from McGregor BFA database and annual financial statements of the selected companies. The accuracy of the results is therefore dependent on the reliability and accuracy of the secondary data used. The conclusions were therefore based on the interpretation of the statistical analyses of the utilised secondary data.

It is however acknowledged that company performance is influenced by all employees and management, not just the CEO (Bradley, 2013; Azim & Ahmmod, 2014). But, due to the CEO's responsibility to provide strategic vision, business model and having the most easily accessible compensation disclosures; this study was solely focused on the CEO pay.

Executive remuneration was only assessed against limited, but commonly cited accounting and market based company performance measures. Findings from this study should be adequately reliable to generalise about what is happening in the South African economy, given that the research sample was indiscriminately selected from the entire JSE population, without any bias to a specific industry or sector of the economy.

Accounting based performance reports are inevitably historic in nature, and therefore backward looking, which may not accurately predict future performance. Despite this deficiency, accounting metrics are still generally accepted and widely utilised for enterprise performance evaluation (Deysel & Kruger, 2015; Graham & Winfield, 2010).

On the other hand, market based company performance is largely influenced by macroeconomic forces which renders it less reliable as a company performance measure. Such shortcomings may however be mitigated by benchmarking a company market performance against its market or industry peers (Deysel & Kruger, 2015).

3.11 Significance of the Study

This research study seeks to contribute to the body of knowledge on executive remuneration, by providing data-supported evidence of the strength and nature of the CEO pay-performance sensitivity in the South African context. Such an understanding is pivotal to the development of an effective and efficient model to design and structure executive remuneration.

Contemporary executive remuneration literature asserts that performance-based executive remuneration packages are paramount in the justification of the pervasive high levels of such remuneration packages. Remuneration committees are faced with an ethical dilemma to attract, motivate and retain skilled executives, whilst ensuring compliance with good corporate governance principles of fairness and responsibility.

3.11 Ethical Considerations

The research study was based on secondary data that is freely accessible from public sources like the Internet, financial statements and/or research databases.

This therefore implied that no permission for secondary use and/or analysis was deemed necessary. The ownership or source of the original data was however accordingly acknowledged in the research report. None of the research elements that were selected in the research sample is directly cited in the reported study findings. Besides, only the analytical results were presented and discussed in the report.

Whilst there were no vulnerable groups used in the study, nor confidential data utilised, an ethical clearance was successfully sought from the UKZN's Humanities & Sciences Research Ethics Committee. Full approval, reference number – *HSS/0211/016M* was accordingly granted.

3.12 Conclusion

In summary, a deductive research methodological approach, based on longitudinal, descriptive and quantitative research design was used. The research study sample was based on the JSE actively listed entities in the periods from 2010 to 2015.

A purposive sampling technique was adopted through which JSE actively listed firms that met the prescribed criteria, were indiscriminately selected. The data that were used in the study were secondary in nature. Its reliability, accuracy and credibility were therefore based on the statutory requirements that strictly govern all JSE listed entities.

As such, this section sought to give direction to the subsequent evaluation and analysis of the relationship between CEO pay and firm performance in the South African context. The next section of the study report presents analyses and gives a brief analysis of the research results to seek answers to the research questions.

CHAPTER FOUR – PRESENTATION AND ANALYSIS OF RESULTS

4.1 Introduction

Chapter Three (3) outlined the adopted research methodological approach and design that were used in the collection and subsequent analysis of the research data. Chapter Four (4) therefore sought to provide a detailed analysis of the obtained research results.

It will therefore present a broad descriptive and inferential statistical analyses to outline an overview of the data that was used, and simultaneously present the relevant findings that help to answer the research questions in Chapter One (1).

4.2 Descriptive Statistics – Company Performance

Table 2 summarises numerical descriptive statistical analysis of corporate performance measures that were analysed for the research study.

Table 2: Mean Corporate Performance Measures

Company Performance Measure	2010	2011	2012	2013	2014	2015
ROE (%)	7.34	-7.76	10.73	11.78	-18.16	9.36
ROA (%)	9.73	9.24	8.93	5.23	2.11	-42.72
EPS (Cents)	302	323	335	346	348	356
SP (Cents)	4511	4510	4811	5277	5930	6045
P/E	6.88	8.01	-22.03	19.31	43.56	21.02

It is noted that negative mean ROE were recorded for 2011 (-7.76%) and 2014 (-18.16%), respectively. This implies that during these periods, listed South African companies did not create wealth for its shareholders; instead the invested equity was on average destroyed. Similarly, an average negative ROA (-42.72%) was recorded for 2015 which was indicative of economic challenges facing most companies in terms of profitability and asset utilisation.

An average negative P/E ratio (-22.03) was also recorded in 2012 which implies that on average, companies were experiencing losses during this period. The rest of mean performance metrics showed positive trajectories over the study period. The trends are further illustrated graphically in Figures 6, 8, 10, 12 and 14, respectively.

Table 3 indicates the median variables over the study period for each of the selected company performance measures:

Table 3: Median Corporate Performance Measures

Company Performance Measure	2010	2011	2012	2013	2014	2015
ROE (%)	13.44	12.70	13.10	13.24	12.45	12.33
ROA (%)	9.99	8.40	8.61	8.17	8.75	8.11
EPS (Cents)	104	97	103	99	86	94
SP (Cents)	1225	1390	1477	1629	1771	1674
P/E	10.99	11.25	11.47	12.56	12.79	12.25

Numerical descriptive statistical analyses of corporate performance metrics in terms of median, reflected a similar trend in Table 2, but none of the parameters were negative.

4.2.1 Company Performance Measures

Company performance was evaluated and statistically analysed in terms of both accounting and market based metrics. These metrics included return on equity (ROE), return on assets (ROA), share price (SP), earnings per share (EPS) and stock price per earnings (P/E ratio), respectively.

The number of items for each measure was six, based on the six year study period, 2010 to 2015. Each item consisted of between 200 and 278 cases based on the availability of data for each performance measure for each case in a study period.

4.2.2 Return On Equity

The data in Table 2 indicates that the mean ROE dropped from over 7% in 2010 to below negative (-) 7% in 2011, before steadily increasing to almost 12% in 2013. It however hit its lowest point in 2014 at below negative (-) 18%. Figure 6 indicates the trend based on the mean ROE over the study period, 2010 to 2015:

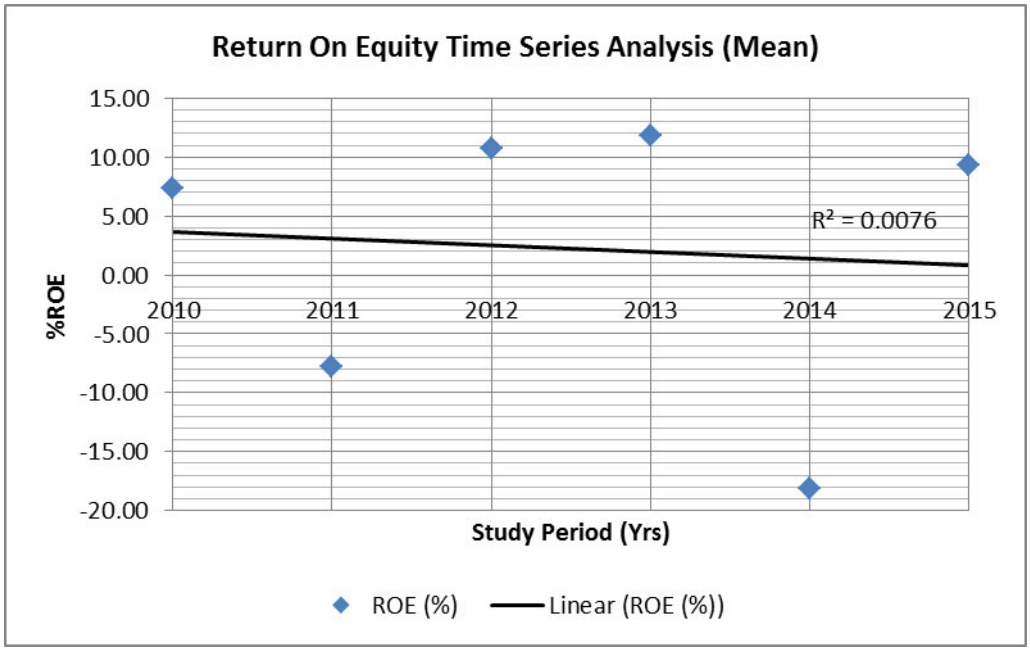


Figure 6: Mean Return On Equity Trend

The scatter plot of mean %ROE over the study period indicated an non-linear trend as demonstrated by the R^2 of 0.0076. The volatile nature of this measure over time is indicative of the VUCA in capital market conditions of the post-modern economic era. Less than 1% of the volatility in mean %ROE of the sampled JSE listed companies can be predicted by linear equations.

Figure 7 indicates a similar trend as in Figure 6 but based on the median %ROE over the study period, 2010 to 2015:

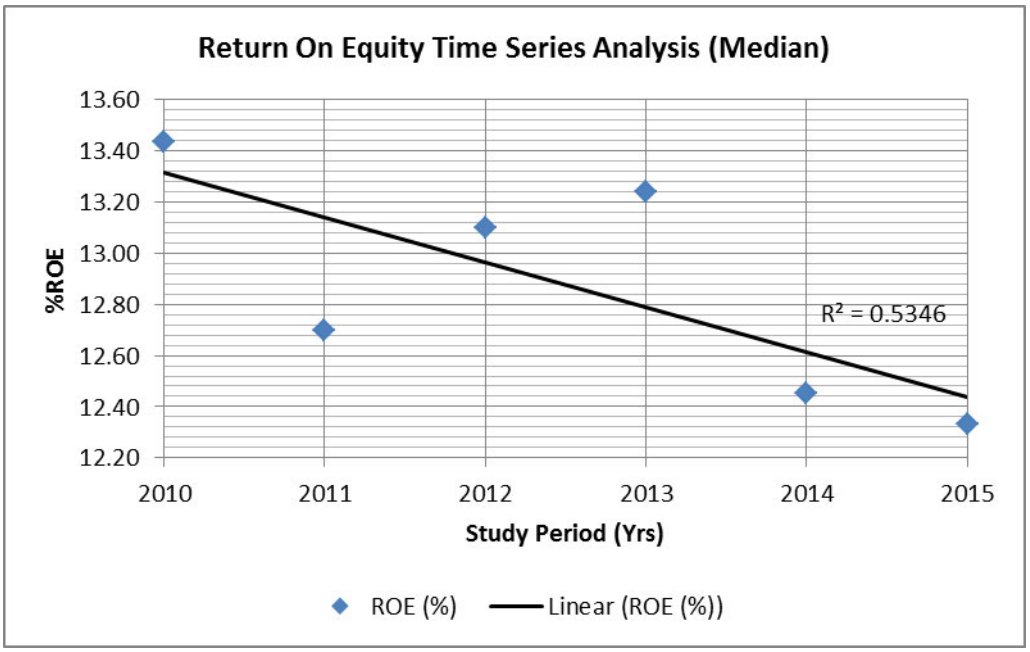


Figure 7: Median Return On Equity Trend

Whilst the scatter plot of median %ROE over the study period indicated a relatively better linear trend as demonstrated by the R^2 of 0.5346, the downward trend observed can be moderately defined by linear equations. Similar to mean % ROE trend, the volatile nature of this measure over time is indicative of the VUCA in market economic conditions of the post-modern era, but only about 53% of that variation is predictable by linear equations.

These trends are a measure of how well shareholders' investments (equity) were being utilised in capital structure to maximise returns. Albeit the observed downward trends, the median ROE over the study period remained in excess of the mean prevailing interest rates and was therefore considered strong enough to cover companies' cost of capital. Generally, %ROE should significantly exceed a risk-free investment return to be worthwhile for a business to accept volatility that comes with higher-risk activities (Graham & Winfield, 2010).

4.2.3 Return On Assets

The data in Table 2 indicate that the mean ROA ranged from 2.11% to 9.73% in the periods between 2014 to 2010, before plummeting to its lowest levels over the

six year study period in 2015, with a figure of negative (-) 42.72%. Figure 8 indicates the trend based on mean ROA over the study period, 2010 - 2015:

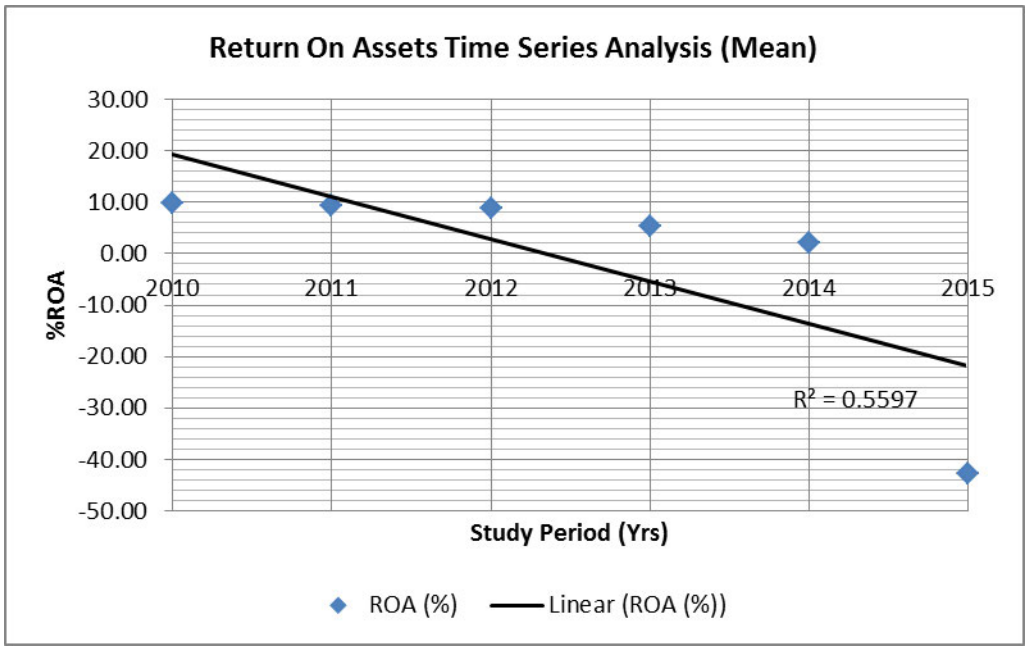


Figure 8: Mean Return On Assets Trend

The scatter plot of mean %ROA over the study period indicated a relatively linear trend as demonstrated by the R^2 of 0.5597, with a moderate downward trend. The volatile nature of this measure over time is indicative of the VUCA in capital market conditions of the post-modern economic era. More than 55% of the volatility in mean %ROA of the sampled JSE listed companies was predictable by linear equations.

Figure 9 indicates a median %ROA trend for the sampled JSE listed companies over the study period, 2010 to 2015:

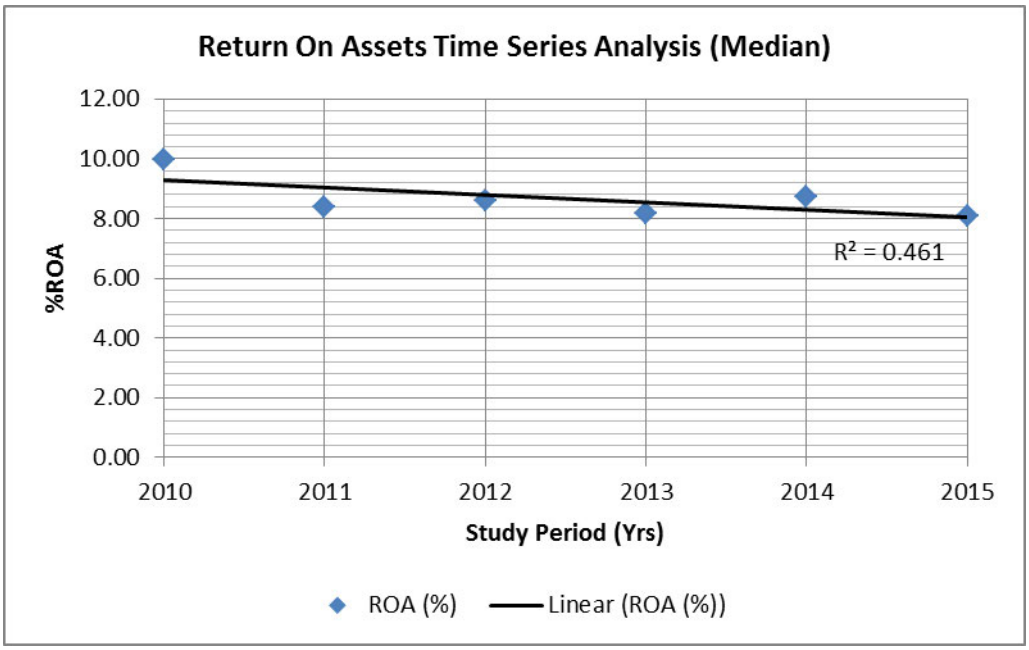


Figure 9: Median Return On Assets Trend

The scatter plots of median %ROA over the study period indicated a moderately downward linear trend as demonstrated by the R^2 of 0.461. The downward trend observed can be moderately defined by linear equations. Similar to %ROE (mean and median) trend, the volatile nature of this measure over time is indicative of the VUCA in market economic conditions of the post-modern era, but only about 46% of that volatility can be confidently predicted by linear equations.

These downward trends (mean and median) are therefore indicative of lacklustre managerial performance in the utilisation of organisational assets to generate accounting returns. According to Graham & Winfield (2010, p.62), ROA is a measure of both asset acquisition (investment decisions) and asset utilisation (operational decisions).

4.2.4 Share Price

The data in Table 2 indicates that the mean share price went through a steady growth from R45.11 in 2010 to R60.45 in 2015 over the study period. This equates to a holding period yield (HPY) of about 34% over the study period.

Figure 10 indicates this growth trend based on the mean share price over the study period, 2010 to 2015:

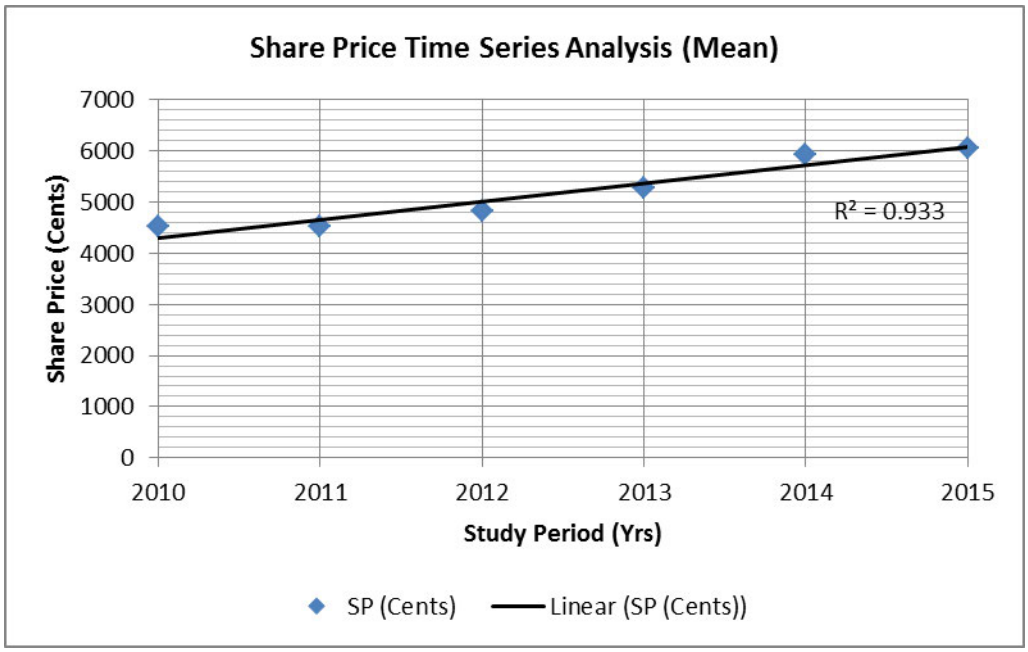


Figure 10: Mean Share Price

The data in Table 3 indicates that the median share price went through a steady growth from R12.25 in 2010 to R16.74 in 2015 over the study period. Similarly, this equates to an HPY of over 36% over the study period. This growth trend is illustrated in Figure 11 based on the median share price over the study period, 2010 to 2015:

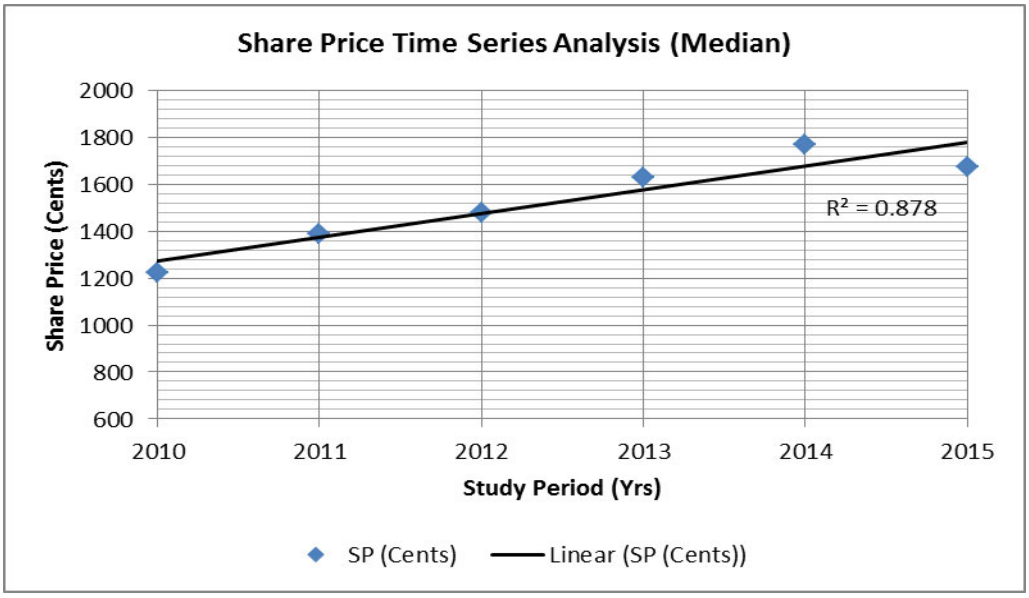


Figure 11: Median Share Price Trend

The respective scatter plots of both mean and median SP over the study period indicated strong upward linear trends as demonstrated by the R^2 of 0.933 and 0.878, respectively. These upward trajectories can therefore be confidently defined by linear equations. Unlike the tested performance metrics of ROE and ROA trends, the stable nature of this measure over an extended period of time is indicative of its reliability as a key company performance measure. For the analysed companies in this study, 88% - 93% of variation in share price can be predicted by linear regression modelling.

4.2.5 Earnings Per Share

The data in Table 2 indicates that the mean EPS went through a steady growth from R3.02 in 2010 to R3.56 in 2015 over the study period. Figure 12 illustrates this growth trend based on the mean EPS over the study period, 2010 to 2015

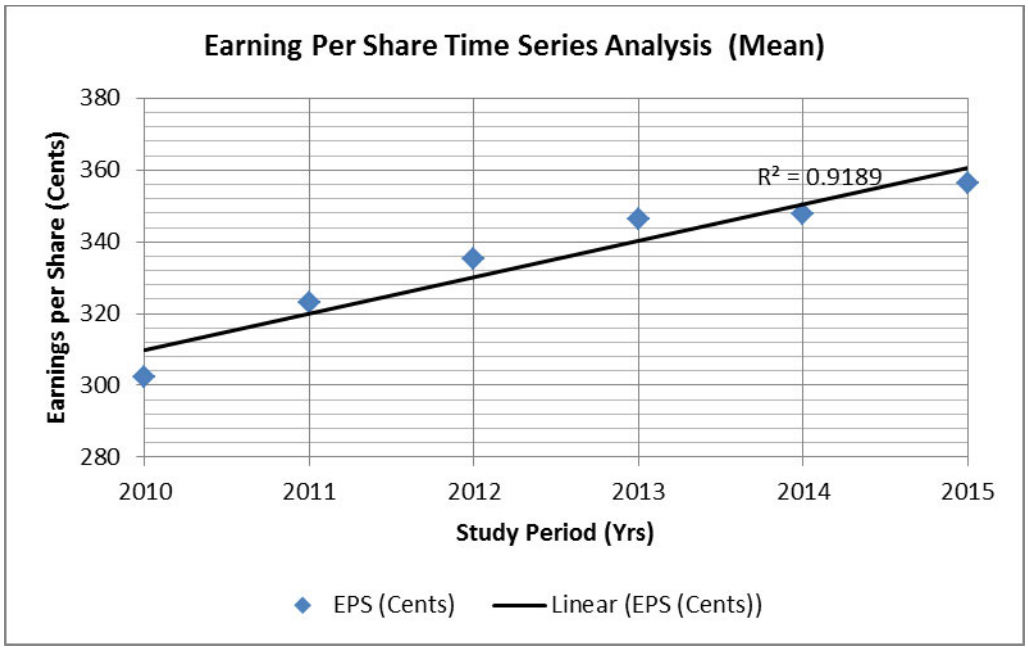


Figure 12: Mean Earnings per Share Trend

The steady growth in EPS is a reflection of the steady growth in the share price as demonstrated in Figure 10 and 11, respectively. The high R^2 of 0.9189 implies that almost 92% of the variation in mean EPS of the sampled JSE listed companies can be predicted by a linear regression model.

The data in Table 3 shows that the median EPS was relatively static at R1.04 in 2010 and R0.94 in 2015 with a slight decline over the study period. This relatively

static trend is illustrated in Figure 12 based on the median EPS over the study period, 2010 to 2015:

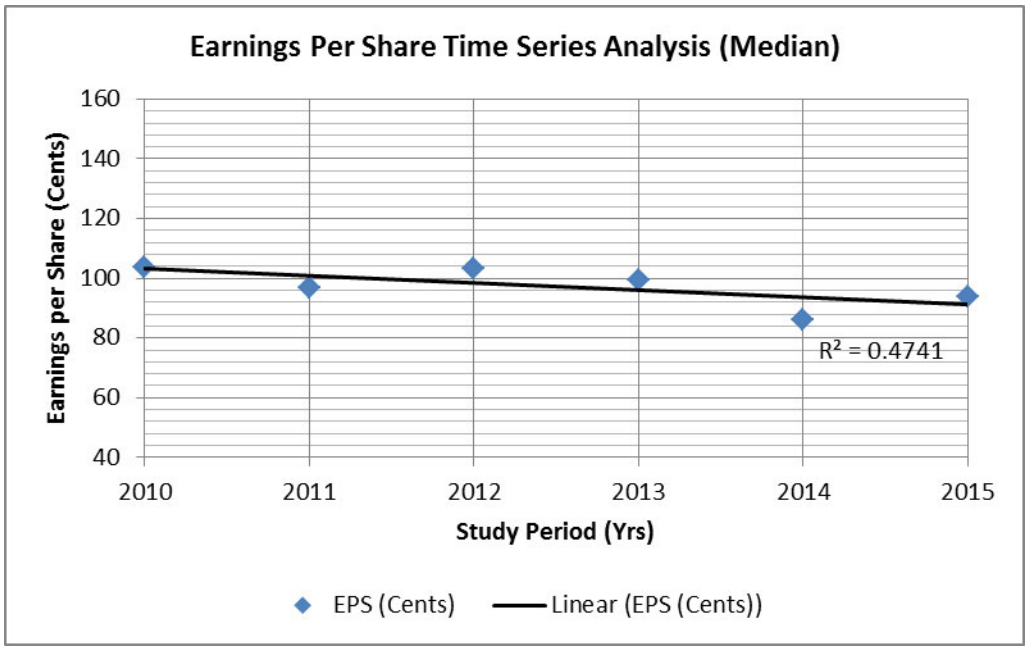


Figure 13: Median Earnings per Share Trend

However, the median EPS trend is relatively static, with a slight downward trajectory over the same study period and for the same research sample. The moderate R^2 of 0.4741 implies that less than 50% of the variation in median EPS of the sampled JSE listed companies, can be predicted by a linear regression model.

4.2.6 Price per Earnings Ratio

The data in Table 2 indicates that the mean P/E ratio went through cyclic fluctuations with a somewhat upward trend between 2011 and 2014, with its lowest point of negative (-) 22.02 in 2012 and highest peak of 43.56 in 2014, respectively. Figure 14 summarises this cyclic trend based on the mean P/E ratio over the study period, 2010 to 2015

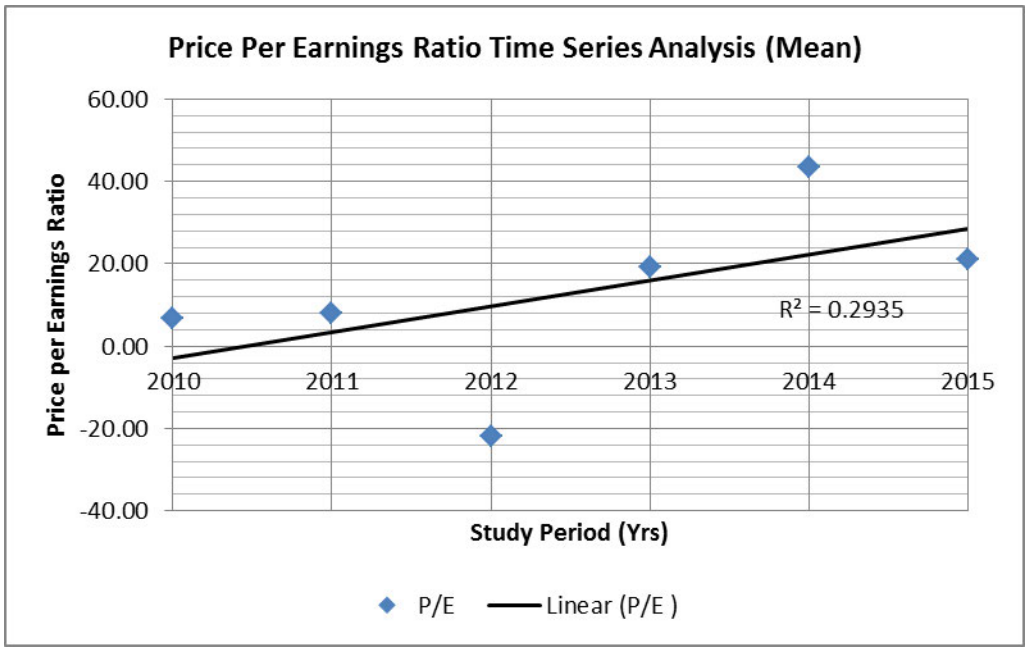


Figure 14: Mean Price per Earnings Ratio Trend

The data in Table 3 indicate that the median P/E ratio similarly went through cyclic fluctuations with a relatively stronger upward trend between 2010 at 10.99 and 2015 at 12.25, respectively. A peak of 12.79 was however recorded for 2014. Figure 15 shows this cyclic trend based on the median P/E ratio over the study period, 2010 to 2015.

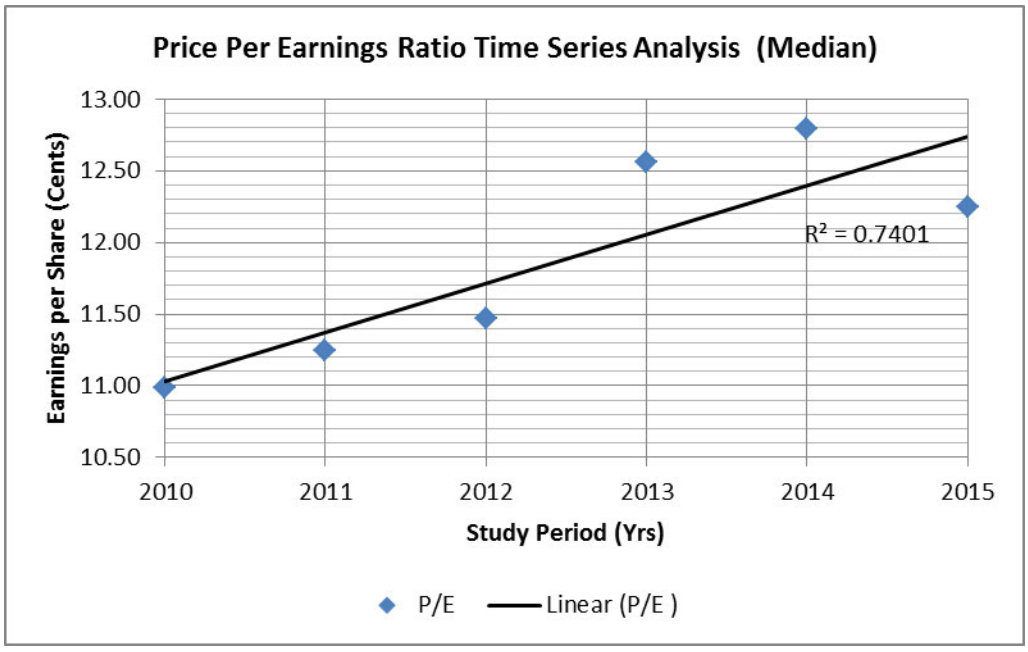


Figure 15: Median Price per Earnings Ratio Trend

The respective scatter plots of both the mean and median P/E ratio over the study period indicated a different trend. Mean P/E ratio trend showed a more volatile nature of this performance measure, with an R^2 of 0.2935. This therefore meant that the mean P/E ratio volatility could not be confidently predicted by linear regression modelling.

Median P/E ratio trend was however more stable, with an R^2 of 0.7401. The variation in median P/E ratio can therefore be predicted by linear regression modelling to almost 74% accuracy.

4.3 Descriptive Statistics - CEO Remuneration

Table 4 contains a summary of the descriptive statistical analysis for guaranteed fixed pay awarded to CEOs in the period between 2010 and 2015.

Table 4: CEO Annual Fixed Pay Summary

Year	Mean	Median	Standard Deviation
2010	R 3,367	R 2,558	R 3,086
2011	R 3,592	R 2,768	R 3,388
2012	R 3,979	R 3,034	R 3,777
2013	R 4,524	R 3,436	R 4,720
2014	R 5,059	R 3,628	R 4,968
2015	R 5,535	R 4,042	R 5,366

Figure 16 illustrates a graphical trend of the descriptive statistics for CEO guaranteed fixed pay component over the study period, 2010 to 2015.

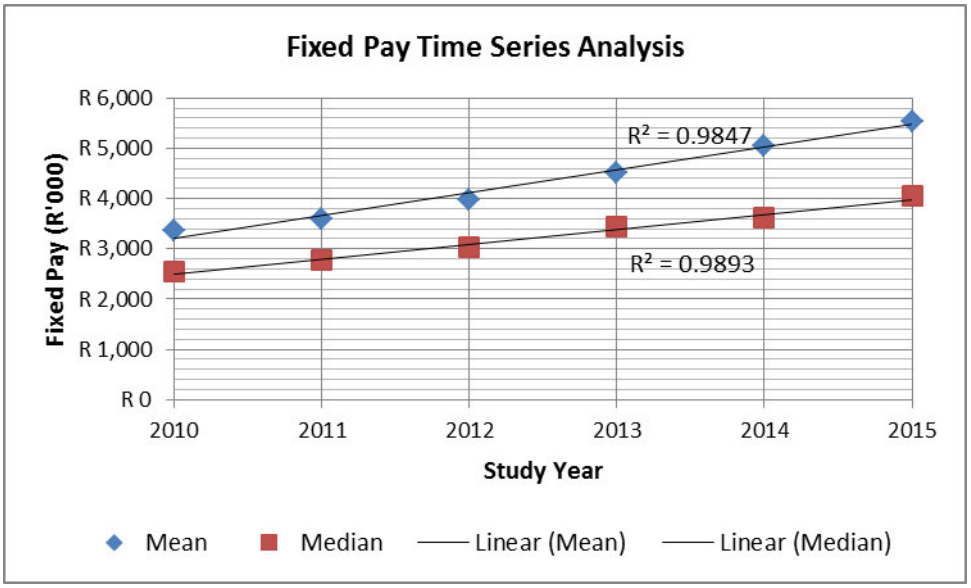


Figure 16: CEO Guaranteed Fixed Pay Trend Analysis

The trajectory for both the mean and median FP is indicative of an upward trend. Both mean and median scatter plots of CEO FP in Figure 16 can be approximated by linear equations with the coefficients of determination (R^2) at 0.9847 and 0.9893, respectively. Based on the measured standard deviation and the mean figures, the CEO fixed pay dispersion (degree of variation) amongst the JSE listed companies was estimated at about 96.72% in terms of correlation of variation (CV). This is indicative of the magnitude of variability in terms of what different companies are paying to their CEOs.

Table 5 summarises the descriptive statistical analysis for the variable pay awarded to CEOs in the same period between 2010 and 2015.

Table 5: CEO Annual Variable Pay Summary

Year	Mean	Median	Standard Deviation
2010	R 2,511	R 1,560	R 2,747
2011	R 3,273	R 1,820	R 4,051
2012	R 3,647	R 2,250	R 4,164
2013	R 3,805	R 1,806	R 5,345
2014	R 4,210	R 2,360	R 4,966
2015	R 5,235	R 2,854	R 6,833

Figure 17 shows a graphical representation of the descriptive statistics for CEO variable component of total remuneration over the study period.

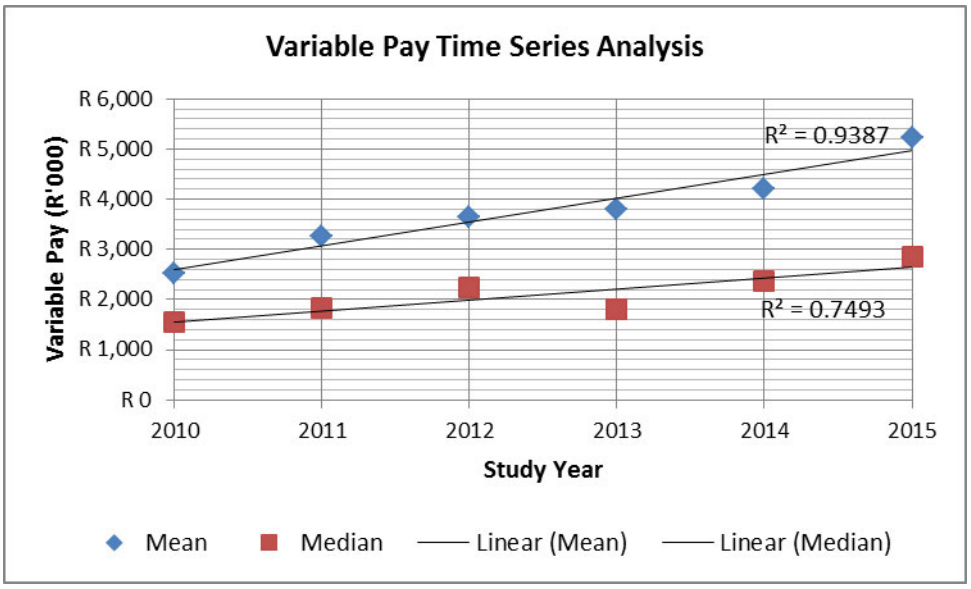


Figure 17: CEO Variable Pay Trend Analysis

A similar upward trend as in figure 16 for FP was observed. Based on the time series analysis and the respective coefficients of determination, the mean variable pay trend can be approximated by a linear equation with an R^2 of 0.9387. Moderate approximation strength at 0.7493 coefficient of determination was however observed for the median variable pay over the same study period.

The CEO variable pay dispersion (degree of variation) amongst JSE listed companies was estimated at more than 120% in terms of the CV. This variation was much higher than that of FP. This is indicative of an even wider magnitude of variability in terms of how companies reward their CEOs for performance.

4.3.1 CEO Remuneration Structure

Figure 18 shows the structural make-up of total CEO remuneration in terms of guaranteed FP and VP as percentage of total remuneration in the periods 2010 to 2015.

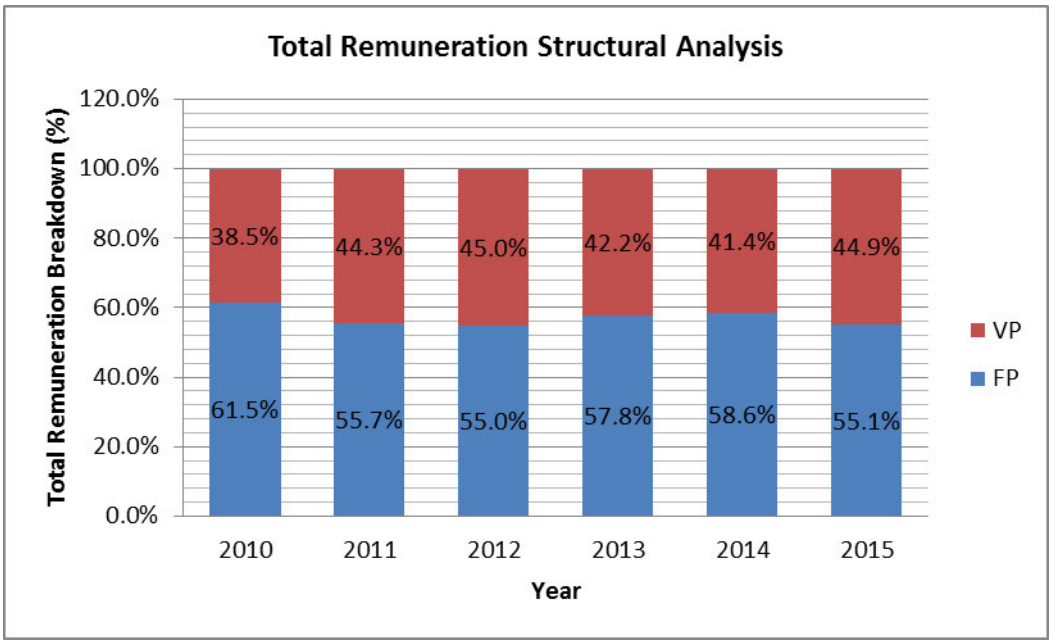


Figure 18: Graphical Descriptive Statistical Analysis-Remuneration Structure

From the collected data and time series analysis, it was evident that FP reduced from 61.5% in 2010 to the lowest of 55.0% in 2012. This downward trend started peaking up again to 57.8% in 2013 and 58.6% in 2014, respectively. Over the six year study period, 2010 to 2015, the total remuneration mix was estimated at 57.3% FP against 42.7% VP.

4.3.2 Fixed pay

As respectively illustrated in Table 4 and Figure 16, the mean CEO guaranteed fixed pay component increased steadily from R3.37m in 2010 to R5.54m in 2015. A similar growth trend was observed on the basis of median FP of R2.56m in 2010 to R4.04 in 2015.

The trends equated to compound annual pay growth rates of 10.7% and 9.7%, respectively. This magnitude of growth is significantly high when viewed on the basis that fixed pay growth exceeded the mean CPI of between 5.0% and 5.5% over the same period of 2010 to 2015 (Trading Economics, 2016).

It is however evident that fixed pay has not experienced exorbitant growth as may have been reported in the media. In real terms, an annual percentage growth of between 9.7% and 10.7% may be in line with average wage growth rate in South Africa. This however needs to be analysed in tandem with growth rate in terms CEO variable pay component of the total remuneration.

4.3.3 Variable Pay

The variable pay component of total remuneration is critical in remuneration structural design and is one of the major sources of criticisms in the aftermath of the recent financial crisis (Shaw, 2011). It is one of CEO remuneration components that is expected to be strongly linked to company performance.

As respectively illustrated in Table 5 and Figure 17, the mean CEO variable pay component increased steadily from R2.51m in 2010 to R5.24m in 2015. A similar upward growth trend was observed on the basis of median VP of R1.56m in 2010 to R2.85 in 2015.

The mean and median VP trends significantly outpaced FP growth rate (10.7% and 9.7%) as it equated to compound annual growth rates of 18.1% and 13.3%, respectively. This level of growth is excessively high when compared to the mean CPI of between 5.0% and 5.5% over the same period of 2010 to 2015 (Trading Economics, 2016).

This growth rate analysis supports the evidence depicted in Figure 18, demonstrating a structural shift from fixed pay-dependant CEO remuneration of 61.5% in 2010 to 55.1% in 2015.

4.3.4 Total remuneration

Table 6 summarises the descriptive statistical analysis for total CEO remuneration awarded to CEOs in the same period between 2010 and 2015.

Table 6: Total Annual CEO Remuneration Summary

Year	Mean	Median	Standard Deviation
2010	R 5,433	R 4,173	R 4,640
2011	R 6,451	R 4,431	R 6,035
2012	R 7,240	R 5,250	R 6,552
2013	R 7,822	R 5,364	R 7,971
2014	R 8,628	R 6,191	R 7,915
2015	R 10,042	R 7,462	R 10,054

The total CEO annual remuneration descriptive statistical analysis indicated that the mean package rose from R5.43m in 2010 to R10.04m in 2015. This amounted to an overall change in mean total remuneration package of 84.8% increase over the six year study period and an estimated annual compound growth rate of 14.1%.

Similarly, the median TR package increased from R4.17m in 2010 to R7.46m in 2015. Accordingly, this amounted to an overall package increase of 78.8% and an estimated compound annual package growth rate of 13.1%. Total CEO remuneration dispersion (degree of variation) amongst JSE listed companies was estimated at about 93.84% in terms of the CV. This variation is a reflection of the overall picture amongst JSE listed companies. This is indicative of the magnitude of variability in terms of how companies incentivise their CEOs for their contributions to company performance.

Figure 19 illustrates a graphical descriptive statistical trend for total CEO annual remuneration over the study period, 2010 to 2015

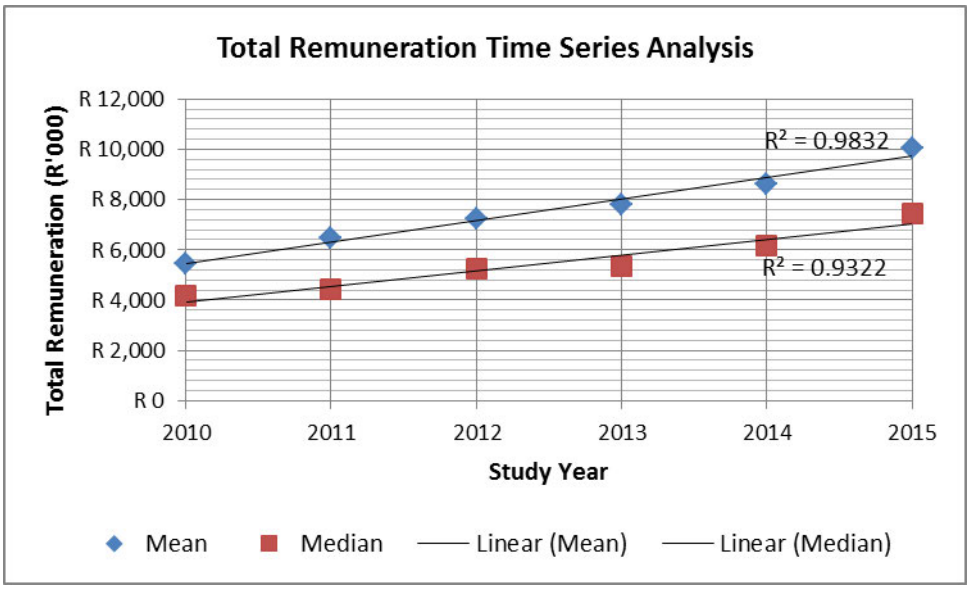


Figure 19: Total CEO Remuneration Trend

Total CEO remuneration trend analysis reflects a similar trajectory to that of both fixed and variable pays, respectively. Both the mean and median total remuneration plots are indicative of an upward trajectory that can be accurately approximated by linear equations with the coefficients of determination (R^2) at 0.9832 and 0.9322, respectively.

4.4 Bivariate Regression Analysis

Table 7 summarises correlation coefficient (r) results for each pair of remuneration components (dependent variable) and company performance measures (independent variables), respectively.

Table 7: Remuneration and Company Performance: Correlation Coefficients

Salary Components	Company Performance Measures				
	ROE	ROA	SP	EPS	P/E
FP	0.014066	0.028033	0.397928	0.306112	0.012081
VP	0.111144	0.051471	0.556138	0.580924	0.005734
TR	0.088445	0.070717	0.569070	0.533277	0.004787

Table 8 summarises coefficients of determination (R^2) results for each pair of remuneration components (dependent variable) and company performance measures (independent variables), respectively.

Table 8: Remuneration and Company Performance: Coefficients of Determination

Salary Components	Company Performance Measures				
	ROE	ROA	SP	EPS	P/E
FP	0.000198	0.000786	0.158347	0.093705	0.000146
VP	0.012353	0.002649	0.309289	0.337473	0.000033
TR	0.007823	0.005001	0.323840	0.284384	0.000033

4.4.1 Fixed Pay and Company Performance Measures

Regression analyses were performed using guaranteed fixed pay (FP) component of TR as the response variable and was tested against all the selected individual company performance metrics as independent variables. These relationships were evaluated in terms of coefficients of correlation and determination, respectively. The correlation coefficient results in Tables 7 indicated moderate relationships between two of the tested pairs of variables. FP was found to be moderately correlated with SP at 0.398 and at 0.306 with EPS, respectively. The rest of the performance metrics (ROE, ROA and P/E) were all found to be weakly correlated with FP. Whilst the relationships were found to be weak to moderate, all the tested paired variables were found to be positively correlated with FP.

In Table 8, coefficients of determination were also calculated to establish the proportion of variations in FP that could be explained by the variations in company performance metrics that were tested. The summarised results in Appendix 8.1 indicated coefficients of determination of less than 1.00% between FP and three of the tested performance variables, ROE (0.02%), ROA (0.08%) and P/E ratio (0.01%), respectively. SP and EPS however showed relatively stronger coefficients of determination of 15.84% and 9.37%, respectively. These are therefore descriptive goodness measures of fit and strengths of the evaluated relationships. This therefore meant that only 15.84% of the variations in FP can be predicted and explained by the variations in share price. Similarly, only 9.37% of variations in FP can be predicted and explained by EPS variations.

4.4.2 Variable Pay and Company Performance Measures

A bivariate regression analysis was also completed using variable pay (VP) component of TR as the response variable and the rest of company performance measures as the independent variables. This relationship was evaluated in terms of correlation coefficient and coefficient of determination, respectively. The regression results in Tables 7 and 8 indicated moderate relationships between two of the tested pairs of variables. VP was found to be moderately correlated with SP at 0.556 and at 0.581 with EPS, respectively. The rest of the performance metrics (ROE, ROA and P/E) were all found to have weak relationships with VP. Whilst the relationships were found to be weak to moderate, all the tested paired variables were found to be positively correlated with VP.

Coefficients of determination were also calculated to establish the proportion of variation in VP that is explained by variations in the company performance metrics that were tested. The results indicated coefficients of between 0.00% and 1.23% between VP and three of the tested performance variables, ROE (1.23%), ROA (0.26%) and P/E ratio (0.00), respectively. SP and EPS indicated relatively higher coefficients of determination of 30.93% and 33.74%, respectively. These are therefore descriptive goodness measures of fit and strengths of the evaluated relationships. This therefore meant that 30.93% of the variation in VP could be predicted and explained by the variations in share price. Similarly, 33.74% of variation in VP could be predicted from EPS variations.

4.4.3 Total Remuneration and Company Performance Measures

A bivariate regression analysis was performed using total remuneration (TR) as the dependent variable and individual company performance metrics as independent variables. This relationship was evaluated in terms of correlation coefficient and coefficient of determination, respectively. The correlation coefficient results in Table 7 indicated moderate relationships between two of the tested pairs of variables. TR was found to be moderately correlated with SP at 0.569 and at 0.533 with EPS, respectively. The rest of the performance metrics (ROE, ROA and P/E) were all found to have weak relationships with TR. Whilst the relationship was found to be weak to moderate, in all tested instances, all paired variables were found to be positively correlated.

Coefficients of determination were also calculated to establish the proportion of the variation in TR that is explained by the variations in the company performance metrics that were tested. The results indicated coefficients of less than 1.00% between TR and three of the tested performance variables, ROE (0.78%), ROA (0.50%) and P/E ratio (0.00), respectively. SP and EPS indicated relatively higher correlations of 32.38% and 28.44%, respectively. These are therefore indicative of descriptive goodness measures of fit and the strengths of evaluated relationships. This therefore means that 32.38% of the variation in TR can be predicted and explained by the variations in share price. Similarly, 28.44% of variation in TR can be predicted by EPS variation.

4.5 Multivariate Regression Analysis

4.5.1 Fixed Pay

Table 9 gives the multivariate regression analytical results for fixed pay component of total remuneration against the selected corporate performance measures of ROA, ROE, SP, EPS and P/E ratio, collectively.

Table 9: Multi Regression Summary Output – Fixed Pay

SUMMARY OUTPUT: Fixed Pay				
Regression Statistics				
Multiple R	0.4276			
R Square	0.1829			
Adjusted R Square	0.1780			
Standard Error	4050			
Observations	843			
	Coefficients	*P-value*	*Lower 95%*	*Upper 95%*
Intercept	3378	0.0000	2984	3772
EPS (Cents)	-1.601	0.0015	-2.5905	-0.6121
ROA (%)	-14.005	0.2689	-38.8523	10.8418
ROE (%)	-0.328	0.9494	-10.4720	9.8161
SP (Cents)	0.393	0.0000	0.3075	0.4787
P/E (Ratio)	-0.923	0.5916	-4.2972	2.4518

The regression results indicated a moderate correlation (r = 0.428) between fixed pay and the tested company performance measures. The adjusted coefficient of determination (R^2 = 0.178) indicated that 17.80% of total variation in risk-free guaranteed CEO fixed pay was explained by the variation in the six (6) tested

company performance measures. Based on the output results in Table 9, the regression model could be estimated by the following equation:

$$FP = 3378 - 1.601X1 - 14.005X2 - 0.328X3 + 0.393X4 - 0.923X5 ,$$

Where, X1 = EPS (Cents)

X2 = ROA (%)

X3 = ROE (%)

X4 = Share Price (Cents)

X5 = P/E ratio

The above model implies that a fixed pay of about R3.378m (intercept = 3378) was guaranteed, even if none of the performance measures were achieved or were all at zero. Both EPS and SP showed statistical significance in the regression model. P-values of 0.0015 and less than 0.0000 were recorded for EPS and PS, respectively. The rest of the independent variables (ROA, ROE and P/E ratio) were all found to be statistically insignificant (p>0.05).

Figure 20 illustrates time series analysis of CEO fixed pay as a function of corporate performance measures (ROA, ROA, SP, EPS and P/E ratio):

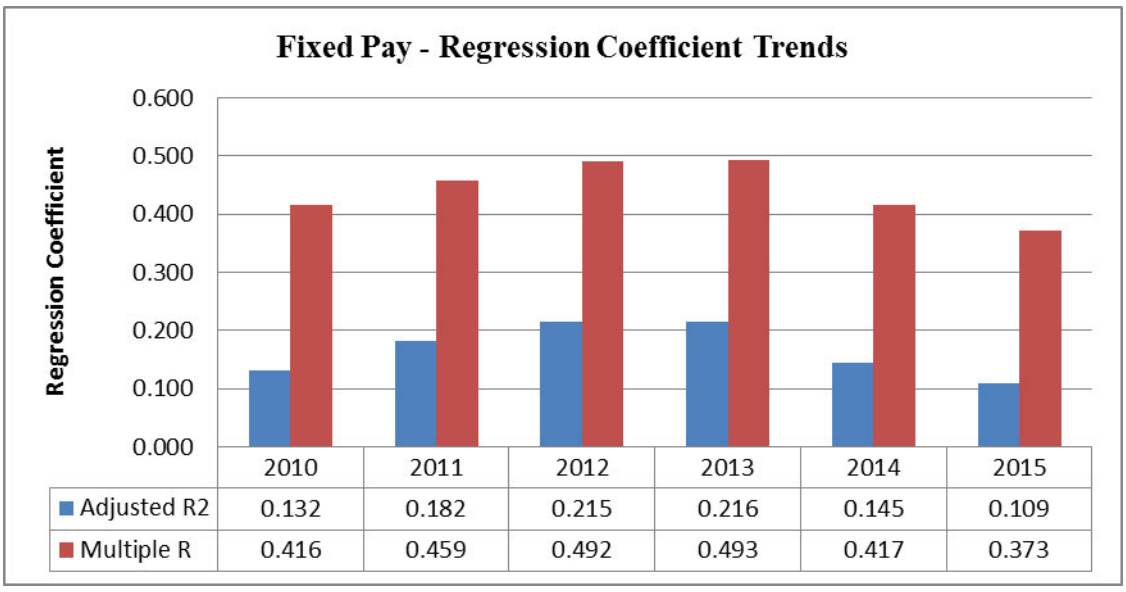


Figure 20: CEO Fixed Pay Multivariate Regression Time Series Analysis

An interesting trend was observed from 2010 to 2013, during which both coefficients of determination (adjusted R^2) and correlation (multiple R) where steadily and positively increasing, respectively. The coefficient of determination increased from 0.132 in 2010 to 0.216 in 2013 before hitting a steady decline from 2014 (R^2 = 0.145) to the lowest point in 2015 (R^2 = 0.109). Similarly, the coefficient correlation showed the same trend, increasing from 0.416 in 2010 to 0.493 in 2013, before regressing to the lowest point in 2015 at 0.373.

It is therefore noted that the relationship between fixed pay and corporate performance were showing signs of strengthening until hitting a decline from 2014 to 2015. Between 2010 and 2013, up to 21.50% of variation in fixed pay could be predicted and explained by variations in the corporate performance with 95% confidence level. During the entire study period (2010-2015), the relationships remained positive and moderate, varying from 0.416 in 2010 to 0.373 in 2015

4.5.2 Variable Pay

Table 10 summarises the multivariate regression analytical results for variable pay component of total remuneration against the tested corporate performance measures of EPS, ROA, ROE, SP, EPS and P/E ratio, collectively.

Table 10: Multi Regression Summary Output – Variable Pay

SUMMARY OUTPUT: Variable Pay				
Regression Statistics				
Multiple R	0.6054			
R Square	0.3665			
Adjusted R Square	0.3621			
Standard Error	3987			
Observations	733			
	Coefficients	*P-value*	*Lower 95%*	*Upper 95%*
Intercept	2124	0.0000	1699	2549
EPS	3.4045	0.0000	2.3684	4.4407
ROA	-26.7793	0.0418	-52.5586	-0.9999
ROE	10.1393	0.0491	0.0384	20.2402
SP	0.1357	0.0034	0.0451	0.2263
P/E	-0.6272	0.7151	-3.9997	2.7453

The regression results indicated a moderately higher correlation (r = 0.605) between variable pay and the tested company performance metrics. The adjusted

coefficient of determination (R^2 = 0.362) also indicated a better regression model that could predict 36.21% variation in variable pay. Based on the above output results in Table 10, the regression model could be represented by the following equation:

$$\boldsymbol{VP = 2124 + 3.405X1 - 26.779X2 + 10.139X3 + 0.136X4 - 0.627X5},$$

Where, X1 = EPS (Cents)

X2 = ROA (%)

X3 = ROE (%)

X4 = Share Price (Cents)

X5 = P/E ratio

The above model implies that a variable pay of about R2.124m (intercept = 2124) is payable even if none of the assigned company performance measures are achieved or are all at zero. This is a worrying phenomenon, given the expectation that at least this pay component (VP) should be performance based.

The three of the five tested independent variables were found to be statistically significant in the regression model, with the exception of ROE at p-values of 0.0491 (borderline) and P/E ratio at 0.7151, respectively. P-values of less than 0.0000, 0.0410 and 0.0034 were recorded for EPS, ROA and PS, respectively.

Figure 21 illustrates time series analysis of CEO variable pay as a function of corporate performance measures (ROA, ROA, SP, EPS and P/E ratio):

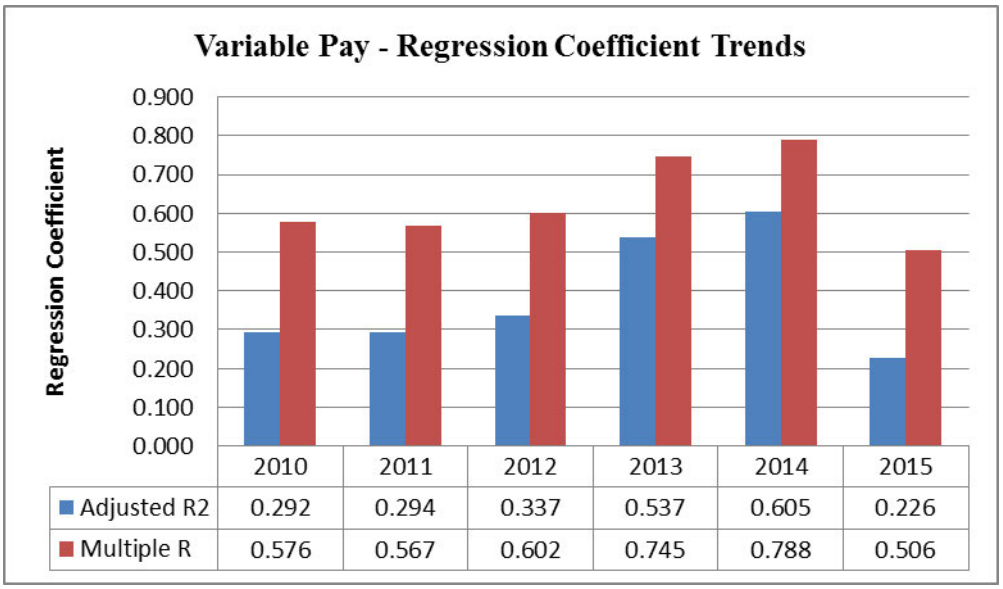


Figure 21: CEO Variable Pay Multivariate Regression Time Series Analysis

A more encouraging trend was observed from 2010 to 2014, during which both coefficients of determination (adjusted R^2) and correlation (multiple R) were steadily and positively increasing, respectively. The coefficient of determination increased from 0.292 in 2010 to 0.605 in 2014 before hitting a decline in 2015 (R^2 = 0.226). Similarly, the coefficient of correlation showed a relatively stronger and positive trend, increasing from 0.576 in 2010 to 0.788 in 2014, before regressing to the lowest point in 2015 at 0.506.

It was therefore noted that the relationship between variable pay and corporate performance were much stronger between 2010 and 2014. Between 2010 and 2014, up to 78.80% of variation in variable pay could be predicted and explained by variations in the corporate performance with 95% confidence level. During this period (2010-2014), the relationships remained positive and strong, ranging from 0.576 in 2010 to 0.788 in 2014, before plummeting to the lowest point (r = 0.506) in 2015.

4.5.3 Total Remuneration

Table 11 summarises the multivariate regression analytical results for total CEO remuneration against the tested corporate performance measures of EPS, ROA, ROE, SP, EPS and P/E ratio, collectively.

Table 11: Multi Regression Summary Output – Total Remuneration

SUMMARY OUTPUT: Total Remuneration				
Regression Statistics				
Multiple R	0.5882			
R Square	0.3460			
Adjusted R Square	0.3421			
Standard Error	6224			
Observations	844			
	Coefficients	*P-value*	*Lower 95%*	*Upper 95%*
Intercept	5002	0.0000	4396	5607
EPS	1.7437	0.0246	0.2237	3.2637
ROA	-24.6762	0.2050	-62.8569	13.5046
ROE	8.4758	0.2862	-7.1117	24.0634
SP	0.5131	0.0000	0.3815	0.6446
P/E	-1.5006	0.5702	-6.6859	3.6848

The regression results for total remuneration indicated a similar correlation (r = 0.588) to that of VP's. The adjusted coefficient of determination (R^2 = 0.342) also indicated a similar regression model strength. According to the obtained adjusted R^2, the model should be able to predict 34.21% variation in total remuneration. Based on the above regression summary output results in Table 11, the regression model could be represented by the following equation:

$$T\mathbf{R} = \mathbf{5002} + \mathbf{1.744} \times \mathbf{X1} - \mathbf{24.676} \times \mathbf{X2} + \mathbf{8.476} \times \mathbf{X3} + \mathbf{0.513} \times \mathbf{X4} - \mathbf{1.501} \times \mathbf{X5},$$

Where, X1 = EPS (Cents)

X2 = ROA (%)

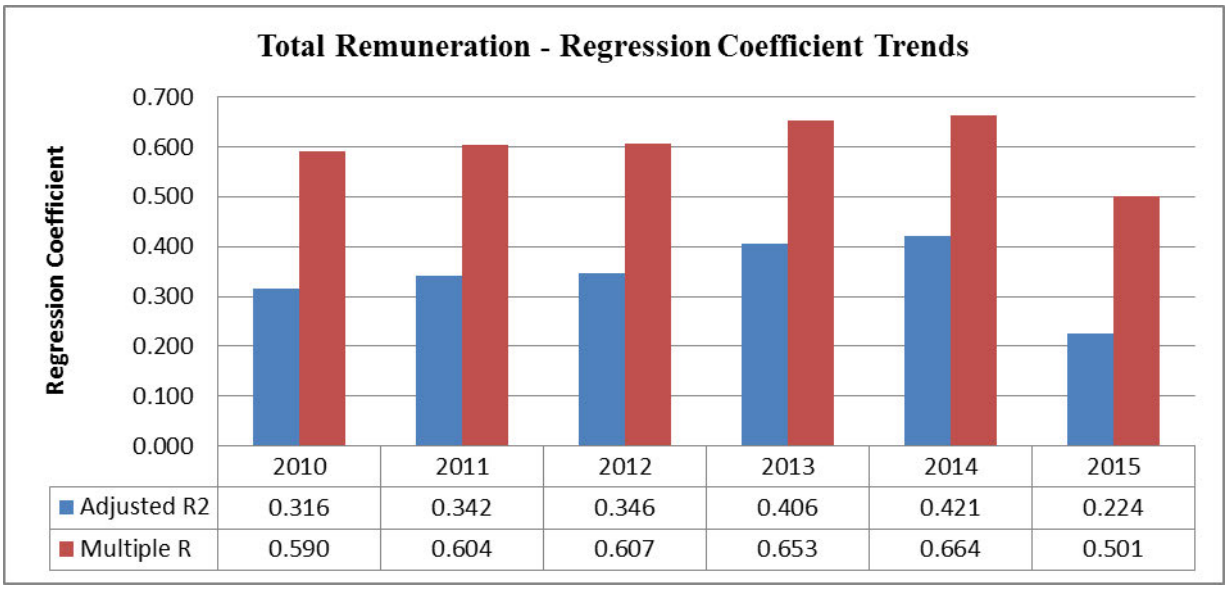
X3 = ROE (%)

X4 = Share Price (Cents)

X5 = P/E ratio

The above model implies that total remuneration of about R5.0m (intercept = 5002) will be awarded even if none of the assigned company performance measures are achieved or are all at zero. Three of the five tested independent variables were found to be statistically significant in the regression model, with the exception of ROE (p = 0.2862) and P/E ratio (p = 0.5702). EPS (p < 0.0000), ROA (p = 0.0246) and SP (p < 0.0000) recorded p-values that were lower than 0.05, respectively.

Figure 22 summarises the time series analysis of total CEO remuneration as a function of corporate performance measures (ROA, ROA, SP, EPS and P/E ratio):



	2010	2011	2012	2013	2014	2015
Adjusted R2	0.316	0.342	0.346	0.406	0.421	0.224
Multiple R	0.590	0.604	0.607	0.653	0.664	0.501

Figure 22: Total CEO Remuneration Multivariate Regression Time Series Analysis

Total CEO remuneration multivariate regression time series analysis reflected a similar trend to that of variable pay's. During 2010 – 2014, both coefficients of determination (adjusted R^2) and correlation (multiple R) showed steady and positive trajectories, respectively. The coefficient of determination increased from 0.316 in 2010 to 0.421 in 2014 before sudden decline in 2015 to an adjusted R^2 of 0.224. Similarly, the coefficient of correlation showed strong and positive trend, increasing from 0.590 in 2010 to 0.664 in 2014, before regressing to the lowest point in 2015 at 0.501.

The implications for the observed trends meant that the relationship between total CEO remuneration and corporate performance were much stronger between 2010 and 2014. The proportion of variation in total CEO remuneration that could be explained and predicted by the variations in corporate performance measures ranged between 31.60% in 2010 and 42.10% in 2014. During this period (2010-2014), the relationships between these two constructs remained positive and moderate, ranging from 0.590 in 2010 to 0.664 in 2014, before plummeting to the lowest point of r at 0.501 in 2015.

4.6 Summary

The descriptive statistical analyses indicated the existence of positive correlations across all measures of corporate performance and individual CEO remuneration components. The results however indicated that there was a weak to moderate relationship between the three measures of CEO remuneration and individual measures of corporate performance. Market based performance measures (SP and EPS) were found to have relatively stronger correlations with CEO remuneration components.

The regression models that were developed from multivariate regression analyses were all indicative of moderate correlations between individual CEO remuneration components and the tested company performance metrics. The variable pay component was however found to have a relatively stronger correlation (r = 0.60) compared to fixed pay (r = 0.42) and total remuneration (r = 0.58), respectively.

The next chapter seeks to provide a detailed discussion of the the research findings and attempt to give evidenced-based answers to the formulated research questions.

CHAPTER FIVE - DISCUSSION OF RESULTS

5.1 Introduction

Chapter five presents a detailed discussion of the formulated research questions and seeks to relate and corroborate the research findings with the reviewed literature.

The existence of inherent conflict of interest between executive management (agent) and shareholders (principal) is explained by the agency theory. According to this theory, such conflict of interest is mitigated by incentivising executives in ways that motivate them to fulfil their fiduciary duties in accordance with shareholders' interests. This theory is juxtaposed against other contemporary theories (optimal contracting, managerial power, stewardship, tournament and labour market) that are cited as alternatives in the determination of executive remuneration. Ideally, a remuneration contract, as envisaged in the optimal contracting theory, should be aligned to company performance. This is founded on the principle of providing executive incentives that alleviate agency problems and ultimately mitigate agency costs.

The advent of legislative interventions (King III and Companies Act 2008) sought to enhance the envisaged relationship between company performance and executive remuneration. Successful management of agency costs and ultimate balanced alignment of executive remuneration with corporate performance is indicative of adherence to effective and efficient corporate governance processes (Theku, 2014). The overarching King III principle is that companies should remunerate executives fairly and responsibly by paying special attention to market related FP; mix of FP and VP; and performance conditions (PwC, 2010). This principle emphasises the need for rewarding performance and penalising failure; and aligning the interests of executives with those of shareholders.

Most of the theoretical and empirical literature on executive remuneration is based on the premise that pay arrangements are aimed at agency costs' alleviation and shareholder value maximisation (Walker, 2010). Accordingly, the fundamental objective of an executive remuneration theory is to ensure equitable sharing of risks and/or returns, at optimal cost to the principal.

The primary purpose of this research study was to evaluate the existence, nature and magnitude of the relationship between CEO remuneration and corporate performance in the South African context in the periods between 2010 and 2015. It further sought to assess the effectiveness and efficiency of corporate governance in the alignment of interests between executives and shareholders. The purpose of this section is therefore to answer the research questions in Chapter One.

5.2 Discussion Summary: Research Question One

The primary research study objective was to evaluate if a correlation exists between corporate performance measures and CEO remuneration. Based on the Companies Act 2008 and King III corporate governance principles, the expectation was that a positive relationship should exist between CEO remuneration and measures of corporate performance (Modau, 2013).

Bivariate regression analyses were conducted between each measure of corporate performance and each measure of CEO remuneration. These analyses were supplemented by multi regression analyses between each CEO remuneration component and company performance measures.

The study results from bivariate regression analysis found positive and moderate relationships between all the individual components (FP, VP and TR) of total CEO remuneration and two key market based company performance metrics, share price and earnings per share, respectively. The study therefore confirmed a moderate correlation between CEO remuneration and market based company performance measures, with the exception of P/E ratio which was found to be weakly correlated to CEO compensation components. Both of the tested accounting performance measures were found to be positively linked to CEO remuneration, but the relationship was found to be weak.

The results further reinforced the position by Bussin (2015) that market based company performance measures should define firm performance. This was based on the view that executive managerial key role is to maximise shareholder value. This value is invariably reflected, amongst other things, on the market share price performance.

The results were therefore in sync with the optimal contracting theory wherein board of directors are presumed to design and structure executive remuneration schemes to ensure efficient incentives to maximise shareholder value, whilst mitigating agency problems (Bebchuk & Fried, 2003). This theory is generally accepted as key to the alleviation of agency problems and creation of envisaged greater pay-performance sensitivity (Bussin, 2015). As summarised in Table 7, the reality that correlation coefficients from the study were relatively stronger for the variable pay component than for the fixed pay component, was evidence of a performance sensitive remuneration structure. Based on the coefficients of determination, at least 32% and 28% of variations in CEO remuneration were explained by company share price and earnings per share, respectively. The rest of the tested performance metrics (ROA, ROE and P/E ratio) were found to account for less than 1% of variations in CEO remuneration.

Based on multivariate regression analysis, at least 36% of the variance in CEO variable pay component was predictable from the tested corporate performance metrics (ROA, ROE, SP, EPS and P/E ratio), with an overall correlation coefficient of about 0.6. Similarly, at least 34% of variation in total CEO remuneration was found to be predictable from the tested corporate performance measures, with a multiple correlation coefficient of 0.58.

5.3 Discussion Summary: Research Question Two

Research question two (2) sought to statistically evaluate CEO remuneration structure and evaluate the trends over the study period. Numerical descriptive statistical analyses of the CEO remuneration components were performed, focusing on the key constructs of guaranteed fixed pay, variable pay (short-term incentives, excluding equity based rewards) and total remuneration.

Descriptive statistical analytical results indicated that an average of almost 60% of CEO remuneration was fixed pay during the study period (2010 – 2015). A structural remuneration shift was however observed (see Figure 18) wherein FP component went through a gradual decline from 61.54% in 2010 to 58.64% in 2014, before hitting 55.12% in 2015. These results are contrary to the trends reported for the top 40 JSE listed entities by Bussin & Modau (2015, p10) wherein the mean FP component had soared from 44% in 2006 to 59% in 2012. The

downward trend from 2010 to 2015 could be attributable to the advent of more regulation in terms of the Companies Act 2008 and improved corporate governance in terms of King III. The higher proportion of FP to VP could also be attributable to the retention and/or attraction drive for experienced executives, requiring competitive guaranteed base pay packages (Deysel & Kruger, 2015).

Whilst executive pay structural design is an important mechanism to incentivise CEOs for corporate performance (Theku, 2014), this is only achievable if variable pay-performance sensitive structure is adopted (PwC, 2010). It is however argued by Asafo-adjei (2015) that variable pay driven remuneration structures tend to encourage reckless and/or excessive risk taking by executives who may be misaligned with shareholder interests.

5.4 Discussion Summary: Research Question Three

With the advent of Companies Act 2008 and King III, the expectation was to have positively correlated relationships between executive pay and corporate performance (Modau, 2013). Research question three (3) sought to establish data-supported evidence to verify if the remuneration policies were accordingly aligned to King III corporate governance principles as well as Companies Act 2008. King III requires that executives be remunerated fairly, responsibly, and that their remunerations be linked to corporate performance (Asafo-adjei, 2015). This therefore implies that remuneration policies should be formulated and executed in the best interests of both the executives and shareholders.

Based on the time series analysis, all CEO remuneration components showed upward trajectories over the study period. It was however noted that the mean total CEO remuneration package increased by almost 85.00% over the six year study period. This equated to an average annual compound increase of about 14.00%, against an average CPI of not more than 5.50% during the same period (Trading Economics, 2016). This was discomforting when viewed against the corporate governance principles of fairness and responsibility, in light of income inequalities that are being reported in South Africa. These study findings support the observations by Deysel & Kruger (2015, p. 141), wherein CEOs in the JSE Top 40 index were found to have received average annual increases of more than 20%, with STI's increasing by at least 52%.

It was however encouraging that pay-performance sensitivity was found to be steadily increasing during the study period. The average pay-performance sensitivity in terms of correlation coefficients was found to be higher for variable pay (r = 0.605) than for the guaranteed fixed pay component (r = 0.420). The trends over the study period seem to be validating a positive impact of the new regulatory interventions of King III and Companies Act 2008, respectively. The link between CEO variable pay and company performance improved in terms of correlation coefficient from moderate (r = 0.576) in 2010 to strong (r = 0.788) in 2014. This upward trend supported the expectation that the implementation of the Companies Act 2008 and King III will enhance the existence of a link between executive remuneration and organisation performance (Bussin & Modau, 2015).

5.5 Conclusion

Results from statistical analyses indicated that there were positive relationships between CEO remuneration and company performance in the JSE listed companies. The relationships were characterised as weak to moderate in terms of correlation and determination coefficients, respectively. The correlations between CEO remuneration components (FP, VP and TR) and company performance measures (ROE, ROA, SP, EPS and P/E ratio) were all found to be positive, and ranged between weak to moderate in terms of the correlation coefficient limits by (Modau, 2013, p.45).

Market based company performance measures of share price and earnings per share were found to be more statistical significant in influencing CEO remuneration in South Africa. The trend over the study period indicated the strengthening of corporate governance in JSE listed companies in ensuring performance based remuneration packages.

The next chapter discusses practical implications of these research findings in terms of key conclusions and recommendations..

CHAPTER SIX - CONCLUSION AND RECOMMENDATIONS

6.1 Introduction

In this chapter the study objectives are succintly reiterated and study findings are summarised into key conclusions. This is followed by key study recommendations which are presented to address practical implications to relevant stakeholders and prospects for future research.

6.2 Summary of Study Objectives

The purpose of this research study was primarily to evaluate the relationship between CEO remuneration and company performance in South Africa in the periods between 2010 and 2015. This was aimed at determinining whether these two constructs were in anyway correlated as postulated in King III and Companies Act 2008, respectively. This was based on the notion that such a relationship is crucial in the development of a suitable model to structure executive remuneration in ways that eradicate conflict of interests between shareholders and executives.

The overarching research question was therefore to investigate whether any correlation existed between CEO remuneration packages and performance of organisations they were leading. Furthermore, the question of the effectiveness of the legislative reforms in aligning the interests between executives and shareholders was to be explored.

6.3 Key Research Conclusions

6.3.1 Contrary to generalised sentiments that the link between CEO remuneration and corporate performance is non-existent to weak (de Wet, 2012), the JSE listed entities were found to have weak to moderate relationship between these constructs. The study findings also indicated an improvement in the relationship over the first five years of the study, before hitting a slump in 2015.

6.3.2 The study findings confirmed the general perception about the inherent structural changes in the makeup of CEO remuneration packages. A notable shift from risk-free guaranteed fixed pay-biased remuneration

package to performance based variable pay was observed. This coincided with the advent of more regulatory measures in South Africa which were aimed at aligning the interests of shareholders and those of the executives. This suggests that remuneration committees should be commended for striving to fulfil their fiduciary duties.

6.3.3 The expectation that pay-performance sensitivity levels will strengthen with the advent of King III and Companies Act 2008 over the study period, seem to have somewhat been realised. Executive remuneration was found to be positively linked with corporate performance, and the relationship was found to be largely significant.

The increasing trend of correlation coefficients over the study period was indicative of strengthening adherence to good corporate governance principles and compliance with the objectives of Companies Act 2008. Theory on properly designed remuneration contract explicitly shows that pay can ameliorate the agency problems by providing properly aligned incentives that motivate executives to optimise long-term company value creation (Conyon, 2006).

6.4 Key Recommendations

6.4.1 Whilst CEO remuneration and company performance were found to be positively correlated, the study findings showed that the statistical significance of that relationship varied from one performance measure to the other. It is therefore incumbent upon remuneration committees to formulate remuneration policies that are able to scrutinise specific value drivers for their specific organisations, and accordingly assign relevant performance measures in linking CEO remuneration.

6.4.2 These study results suggest that companies that seek to utilise executive remuneration as a mechanism to mitigate conflict of interests between executives and shareholders should be meticulous in their approach. Companies may either need to modify their remuneration structure (in order to strengthen an existing correlation), or consider alternative performance metrics to align these interests. This research study is therefore warning against unabatedly increasing executive remuneration with the hope that it

will address agency problems, without due considerations of the relevant value drivers for a particular agency relationship.

6.4.3 Based on the study results, market based company performance measures were potentially the focal point in pay-performance sensitivity evaluations. Remuneration committees should therefore enhance the incorporation of these measures in the determination of executive remuneration structures. This is more prudent, given the relative robustness of market based performance measures in comparison to the proneness of accounting based performance measures to manipulation.

6.4.4 Maximum wage in the form of executive pay cap should be enacted to curb the widening wage gap between executives and ordinary employees. This should place a cap on the annual financial incentive that any person may legally receive, in the same way as there is a floor of a minimum wage that is being proposed in South Africa.

6.5 Suggested Future Research

Whilst this study has undoubtedly contributed to the body of knowledge of the relationship between measures of company performance and CEO remuneration within the JSE listed companies, its potential limitations were highlighted in Chapter Three. Combined with additional challenges encountered during the research study, the view that further research is necessary to address these limitations in order to fully explore the area of executive remuneration and company performance in South Africa is supported.

The following potential areas for future research are hereunder presented:

6.5.1 The study could be expanded over an extended period of time. Whilst the six year study period may be adequate to cover full business cycle phases of expansion, peak, contraction, and trough (Reilly & Brown, 2012) for other industries, it remains a limited time period, given the myriad of significant macro and microeconomic factors at play. A longer time period encompassing major economic and market conditions like economic recession and economic boom may prove to add invaluable insights into such study findings.

6.5.2 No cause and effect analysis was conducted for the executive remuneration and company performance correlations. The primary study objective was only centred on the determination of the existence, nature and strength of the relationships. The reviewed literature did however allude to the other influences on the trends for executive remuneration levels. These factors included amongst others, labour market competitiveness, CEO age, CEO tenure, company size, etc.

These factors therefore need to be explored in detail in order to have a better understanding of the relationship between executive remuneration and company performance as well as its causal factors.

6.5.3 The research study was focused specifically on all JSE listed companies without any classification about industry sector, size, etc. It is however acknowledged that remuneration practices may vary from economic sector to economic sector. The variability amongst different sectors within the JSE listed companies may therefore affect the findings of this research. It is therefore prudent to also assess this level of variability to determine if its significance will have a bearing on the research findings in terms of generalisability.

6.5.4 The CEO remuneration data and its subsequent analysis excluded long-term incentive (LTI) components of total remuneration. LTI constitute the variable pay component that refers to all cash and share-based awards that accrue to an executive on the basis of company performance over an extended period, longer than twelve months (PwC, 2013). The challenge is always to compare LTI's on face value, and its analysis requires indicative modelling to determine the future expected value. Given the magnitude of equity based pay-outs and accruals to executives that have been witnessed in the recent past, it would be pertinent to also study this phenomenon, independently of the other pay components. Over the last decade or so, the weighting of incentive remuneration has increased significantly in South Africa. PwC (2013, p.10) bemoaned the plummeting of incentive based awards from an average 60% of guaranteed pay to almost 200% in the last decade.

6.5.5 Lastly, the decisions on how to design CEO compensation packages are sometimes based on subjective, non-scientific measures, which are not publicly disclosed or defined. It is therefore believed that a more meaningful approach to further investigate this topic could be to perform qualitative analysis on specific cases. A targeted case study analysis of a smaller sample size could address the issue of subjectivity. Dimitrova & Hartman (2015) believes that persuading companies to disclose their rationale for making executive remuneration decisions could be invaluable for investors and researchers in broadening overall understanding of the executive remuneration field.

6.6 Concluding Remarks

Theoretically, optimum remuneration contracts are structured to ensure adequate link between executive remuneration and company performance. This is done to provide strong incentives for executives for their efforts in the management and control of organisations in the best interest of shareholders. Besides, the Companies Act 2008 and King III require that executive remuneration and company performance should be positively correlated

Based on the research findings, it can be concluded that weak to moderate correlation exists between CEO remuneration and company performance in South Africa. There was sufficient data-based evidence that the observed correlation was improving, particularly in first five years of the study period. Whilst CEO total remuneration seemed to outpace CPI over the study period, it was encouraging to to see a structural shift in remuneration towards a more performance sensitive remuneration structure which was variable pay baised.

The key findings however suggested that the pervasive discomfort and criticism of CEO remuneration may have some substance, indicating the challenge that exists in curbing the widening wage gap between CEOs and ordinary employees.

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8. APPENDICES

8.1 BIVARIATE REGRESSION SUMMARY RESULTS

Dependent Variable	Independent Variable	BIVARIATE REGRESSION RESULTS SUMMARY							
		n	r	R^2	b_o	b_1	P-value	Lower 95%	Upper 95%
FP	ROE	875	0.0141	0.0002	4359	1.9385	0.6778	-7.2153	11.0923
	ROA	890	0.0280	0.0008	4282	8.0280	0.4035	-10.8256	26.8815
	SP	875	0.3979	0.1583	3256	0.2443	0.0000	0.2069	0.2817
	EPS	893	0.3061	0.0937	3603	2.1493	0.0000	1.7098	2.5887
	P/E	870	0.0121	0.0001	4393	0.6605	0.7220	-2.9816	4.3026
VP	ROE	757	0.1111	0.0124	3553	16.5278	0.0022	5.9693	27.0863
	ROA	770	0.0515	0.0026	3577	19.1977	0.1536	-7.1879	45.5832
	SP	758	0.5561	0.3093	2007	0.3730	0.0000	0.3332	0.4128
	EPS	772	0.5333	0.3375	2154	4.4206	0.0000	3.9825	4.8588
	P/E	755	0.0057	0.0000	3843	-0.3334	0.8750	-4.4932	3.8264
TR	ROE	876	0.0884	0.0078	7372	20.9796	0.0088	5.2937	36.6656
	ROA	891	0.0707	0.0050	7271	34.9571	0.034810975	2.4998	67.4144
	PS	876	0.5691	0.3238	4902	0.6026	0.0000	0.5448	0.6604
	EPS	896	0.5333	0.2844	5359	6.4648	0.0000	5.7917	7.1380
	P/E	871	0.0048	0.0000	7718	0.451365	0.8878	-5.8269	6.7297

n	number of observations	b_o	intercept
r	correlation coefficient	b_1	slope coefficient
R^2	Coefficient of determination	P-value	Statistical level of significance

8.2 MULTIVARIATE REGRESSION RESULTS

8.2.1 Multivariate Regression Summary Output: Fixed Pay

SUMMARY OUTPUT: Fixed Pay

Regression Statistics	
Multiple R	0.428
R Square	0.183
Adjusted R Square	0.178
Standard Error	4050
Observations	843

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	5	3072402597	614480519.4	37.46019137	1.01766E-34
Residual	837	13729780226	16403560.6		
Total	842	16802182823			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*
Intercept	3378	201	16.82508253	6.12246E-55	2984.248334	3772.483963
EPS (Cents)	-1.601	0.504	-3.177396168	0.001540565	-2.590534927	-0.612125766
ROA (%)	-14.005	12.659	-1.106352947	0.268891659	-38.85228749	10.8417506
ROE (%)	-0.328	5.168	-0.063458333	0.949416689	-10.47199231	9.816069591
SP (Cents)	0.393	0.044	9.012682704	1.34155E-18	0.307498462	0.478723687
P/E (Ratio)	-0.923	1.719	-0.536682641	0.591629465	-4.297186029	2.451825704

8.2.2 Multivariate Regression Summary Output: Variable Pay

SUMMARY OUTPUT: Variable Pay

Regression Statistics	
Multiple R	0.605374307
R Square	0.366478051
Adjusted R Square	0.362120954
Standard Error	3987.280968
Observations	733

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	5	6686123488	1337224698	84.11059586	1.02066E-69
Residual	727	11558143719	15898409.52		
Total	732	18244267207			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*
Intercept	2123.839887	216.6152968	9.804662542	2.1264E-21	1698.573712	2549.106062
EPS	3.404542779	0.527795071	6.450501281	2.03358E-10	2.368358381	4.440727177
ROA	-26.77926933	13.13107966	-2.039380617	0.041773153	-52.55863072	-0.999907928
ROE	10.13930331	5.145017794	1.970703255	0.049136817	0.038437536	20.24016909
SP	0.13566242	0.046144247	2.939963873	0.003386627	0.045070537	0.226254303
P/E	-0.627229051	1.717827783	-0.365129181	0.715121176	-3.999724261	2.745266159

8.2.3 Multivariate Regression Summary Output: Total Remuneration

SUMMARY OUTPUT: Total Remuneration

Regression Statistics	
Multiple R	0.588184983
R Square	0.345961574
Adjusted R Square	0.342059197
Standard Error	6223.573294
Observations	844

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	5	17169127878	3433825576	88.65405685	7.25878E-75
Residual	838	32458140490	38732864.55		
Total	843	49627268368			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*
Intercept	5001.509794	308.3569832	16.21986874	1.16378E-51	4396.267053	5606.752536
EPS	1.743695162	0.774426564	2.251595235	0.024606131	0.223651568	3.263738755
ROA	-24.67618301	19.45218918	-1.268555574	0.204951891	-62.85691815	13.50455213
ROE	8.475831969	7.941506065	1.067282692	0.28615157	-7.111747247	24.06341119
SP	0.51305938	0.067020689	7.65523878	5.31198E-14	0.381511246	0.644607514
P/E	-1.500562708	2.641825684	-0.568002165	0.570185651	-6.685935203	3.684809787

8.3 ETHICAL CLEARANCE

9 March 2016

Mr Vuyani Derick Ndlovu 203001631
Graduate School of Business and Leadership
Westville Campus

Dear Mr Ndlovu

Protocol reference number: HSS/0211/016M
Project title: The relationship between executive remuneration and company performance in South Africa

FULL APPROVAL-NO RISK

In response to your application received 25 February 2016, the Humanities & Social Sciences Research Ethics Committee has considered the abovementioned application and the protocol has been granted **FULL APPROVAL.**

Any alteration/s to the approved research protocol i.e. Questionnaire/Interview Schedule, Informed Consent Form, Title of the Project, Location of the Study, Research Approach and Methods must be reviewed and approved through the amendment /modification prior to its implementation. In case you have further queries, please quote the above reference number.

PLEASE NOTE: Research data should be securely stored in the discipline/department for a period of 5 years.

The ethical clearance certificate is only valid for a period of 3 years from the date of issue. Thereafter Recertification must be applied for on an annual basis.

I take this opportunity of wishing you everything of the best with your study.

Yo[redacted]

.....

Dr [redacted] (Chair)
Humanities & Social Sciences Research Ethics Comittee

/pm

Cc Supervisor: Dr E Mutambara
Cc Academic Leader Research: Dr M Hoque
Cc School Administrator: Ms Zarina Bullyraj