EXECUTIVE REMUNERATION AND COMPANY PERFORMANCE

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Abstract

Executive remuneration has been the subject of close scrutiny, huge public outcries and criticisms in the recent past in South Africa. This has invariably attracted unprecedented research interest across different sectors of the economy. Various studies on executive remuneration versus corporate performance have been conducted across South African companies with no finite consensus. This study joins the debate with the hope of reaching common understanding on the relationship between the two variables. The study seeks to investigate the relationship between CEO remuneration and company performance on the Johannesburg Stock Exchange Listed (JSE) Companies from 2010 to 2015. In particular, the focus of the study was to determine if these two constructs were correlated and aligned with the corporate governance principles. The study, employed a deductive methodological approach, based on a longitudinal, descriptive quantitative design. Purposive sampling technique was used to select the actively listed companies that met the prescribed criteria. Secondary data, sourced from McGregor BFA database was used for the study. Data analysis took an archival quantitative research approach. Regression and time series statistical analyses were performed on secondary data on CEO remuneration and company performance metrics. The findings confirmed the existence of a positive relationship between CEO remuneration and company performance in South Africa as hinted by previous studies.

Keywords: Corporate Governance, Chief Executive Officer, Johannesburg Stock Exchange, Organisational Performance and Global Recession

1. INTRODUCTION

The primary challenge in executive remuneration and company performance relationship is becoming a mutually favourable relationship. This is however misunderstood by the lack of universally accepted understanding of the strength and significance of such a relationship. Besides, organisational performance measures are themselves subjected to the interpretation of a variety of conflicting measures cited as valid and reliable, leading to huge public outcries and criticisms about the current executive pay levels. Firms listed on the Johannesburg Stock Exchange (JSE) when compared with average employee salaries (Deysel & Kruger, 2015) sparks such cries and criticisms. Whilst emotionally, over generalisations may not be factual, South Africa consistently ranks among the highly unequal income countries in terms of the Gini index in terms of income disparities (World Bank, 2013 cited in Bradley, 2013).

Following the 2007/8 global economic recession, there has been increased research interest on the justification of the perceived high levels of executive remuneration vis a vis that of the average worker. The focus has been centered 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. Nevertheless, another school of thought believes that executive remuneration is pivotal in attracting, rewarding, motivating and retaining skilled executives for organisational success (Hough, et al., 2011). These have created conflicting conclusions on the effectiveness and efficiency of such executives,

with the possible root cause being the existence of performance measurement differences because of external and internal factors that impact on executive remuneration levels (Azim & Ahmmod, 2014). Most research in this area has, however, been focused on the performance in the financial services industry and of economies.

In a South African, research study by Bradley (2013, p.560), disputed that such a relationship is strictly influenced by the industry in which a company operates, making it imperative to expand such research beyond the financial services sector (Shaw, 2011). This has yielded a lot of results in South Africa, among which are 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 the strong link between Chief Executive Officers (CEOs) pay and mining company performance. This study has, therefore, seen the need to explore this kind of investigation of executive compensation and corporate performance in South Africa, without any bias to a specific economic sector, with a view of contributing to the national debate on the topic. The specific purpose is to explore the existence, strength, and nature of the relationship between executive remuneration and performance amongst the Johannesburg Stock Exchange (JSE) listed companies. This paper henceforth proceeds with literature review, exploring the main remuneration theories in relation to corporate performance. This is followed by the methodology, data analysis, results, discussion, the study`s limitations before providing recommendations and conclusions.

2. LITERATURE REVIEW

Raithatha and Komera (2016) examined the relationship between executive remuneration and corporate performance producing compelling evidence that suggests that CEO remuneration has an effect on corporate performance raising interesting thoughts on the agency relationship. Gopalan and Gormley (2013) in the study on executive remuneration effects argue that an improperly compensated executive may lead to agency costs when an executive is not adequately motivated to improve company profitability and boost share performance. On the other hand, Dahiya, Gete, and Ge (2017) posit that appropriate executive remuneration should be aimed at ensuring alignment of interests between executives and shareholders for the ultimate goal of organisational value maximization

Executive management plays a key role in the efficient and effective utilisation of organisational resources in pursuit of shareholder value maximisation (Bussin, 2015), and their compensation is therefore critical for investors in making investment decisions that are based on the generation of sustained market related returns (Correa, and Lel 2016). Executive remuneration is, therefore, the sum of all financial rewards and benefits that are paid to individual executives in return for their contributions to company performance (Theku, 2014).

Jensen and Meckling (1976) and Holmstrom (1979) conducted a groundbreaking study that sought to link CEO compensation to performance. Since this milestone study, it is now well understood that linking compensation to performance is a critical instrument towards alignment of the interests of company executives and shareholders. For instance, the investment decisions of under-diversified, risk averse executives may conflict with the interest of well-diversified shareholders. The former may decide to avoid risky projects with positive Net Present Value, to focus on conservative investments. Shareholders may encourage risk-taking by increasing the *vega* of their executive compensation, by including stock options in the CEO's compensation package, for example. This is the wealth effect component which has recently emerged to be of critical concern on matters of company performance. In about two and half decades ago, John and John (1993) presented a seminal paper that sought to link compensation structure and leverage. The paper studied models that incorporate a moral hazard conflict between shareholders and executives. The seminar paper showed that executive's compensation was a critical issue towards affecting corporate performance. The authors pointed that higher delta could exacerbate the executive's risk appetite leading to risk-shifting conflict between shareholders and bondholders. Thus, Gete and Gomez (2017) attempt to endogenize effort and leverage decisions in a model with the external cost of borrowing by analyzing the interaction between leverage and executive compensation in a model in which the executives' choice of effort is from within and affects the likelihood of a crisis. Making CEO's effort internal prepares an opportunity to strengthen the relationship between leverage and compensation. In particular, when the CEO is optimistic about asset prices in states of distress, there is a complementarity between effort and leverage. Optimism encourages higher leverage, and higher leverage entices higher effort to avoid the larger losses if the low state of nature is realized.

2.1. Corporate Performance

Company performance is generally operationalised into accounting and/or market-based performance indicators. It is, therefore, 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 a 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) argued 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, and 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 meaning that executives may manipulate books for their own benefit. A company is, permitted to alter accounting methods, provided they remain consistent with the financial reporting period; but this inevitably leads 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) advocated 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 which is invariably reflected on the market share price performance. 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). This argument however, is not acceptable to some researchers, one of whom is (Resnick, 2013).

Resnick believes that change in market share price is a secondary measure since an organisation's primary aim is always related to revenue targets, competitive advantage creation, accounting profits, return on assets (ROA) and so on and so forth. This position of Resnick is supported by one big criticism, which is that, it punishes executives, as share price is invariably determined by market conditions and not so much by the executives' contribution (Azim & Ahmmmmod, 2014) though management can still influence the market's reaction by providing false information to the general public (Azim & Ahmmod, 2014).

Since accounting and market performance measures are positively correlated with low covariance of less than 10%, and no evidence of convergence (Gentry & Shen, 2010), it is recommended that both measures should be used in evaluating CEO pay-company performance link (Bussin, 2015) to minimise potential bias. However, in South Africa a number of different company performance measures have been used in a lot of studies, such as: 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: return on equity (ROE), return on assets (ROA), share price (SP), earnings per share (EPS) and stock price per earnings (P/E ratio), which forms the basis of evaluation by the current study.

3. METHODOLOGY

To fulfil the objective 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. Its validity, reliability, accuracy, and credibility were therefore based on the statutory requirements that strictly govern all JSE listed entities (Larson & Farber, 2015).

CEO remuneration was divided into components of (fixed pay and variable pay, excluding equity based rewards) and company performance (ROE, ROA, EPS, SP and P/E ratio). These were analysed as the dependent variables, similar to a research approach to investigate the extent and nature of the relationship between CEO cash remuneration and firm performance among NYSE entities (Nulla, 2015). 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; Resnick, 2013).

3.1. Target Population

The study population was limited to JSE 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. For secondary data collection, McGregor BFA database was used as the primary source. Microsoft (MS) Excel 2010 was then used for data and statistical analysis.

3.2. Data Collection

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 was, hence, excluded from the study. The initial sample, 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 through the recognized databases.

3.3. Unit of Analysis

The dependent variables, were constituted as the fixed (total guaranteed) pay, and variable (short-term incentives, excluding share options) pay of the total CEO remuneration, that is, total remuneration is made up of (sum of FP and VP) as key remuneration measures of executive pay and were analysed against the 5 key company performance measures namely: ROE, ROA, SP, EPS and P/E ratio.

- ROE – a measure of shareholders' return to invested equity. It is 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 the 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.

4. DATA ANALYSIS

The statistical analysis of bivariate and multivariate regressions (Appendix) to determine the most appropriate predictors of the dependent variable (executive remuneration) within a model of explanatory variables (company performance measures) was undertaken. 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).

A correlation coefficient (r) determines if a relationship exists, whilst measuring its strength and direction (Larson & Farber, 2015). It ranges from -1 to +1, wherein (+) is indicative of a positive correlation and (-) implying the existence of a negative correlation. Table 1 illustrates the correlation coefficient limits for the strengths' interpretation (Modau, 2013).

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.

5. RESULTS

5.1. Descriptive Statistics - CEO Remuneration

Table 2 contains a summary of the descriptive statistical analysis for guaranteed fixed pay awarded to CEOs in the period between 2010 and 2015.

Table 2. 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 1 illustrates a graphical trend of the descriptive statistics for CEO guaranteed fixed pay component over the study period, 2010 to 2015.

Figure 1. CEO guaranteed fixed pay trend analysis
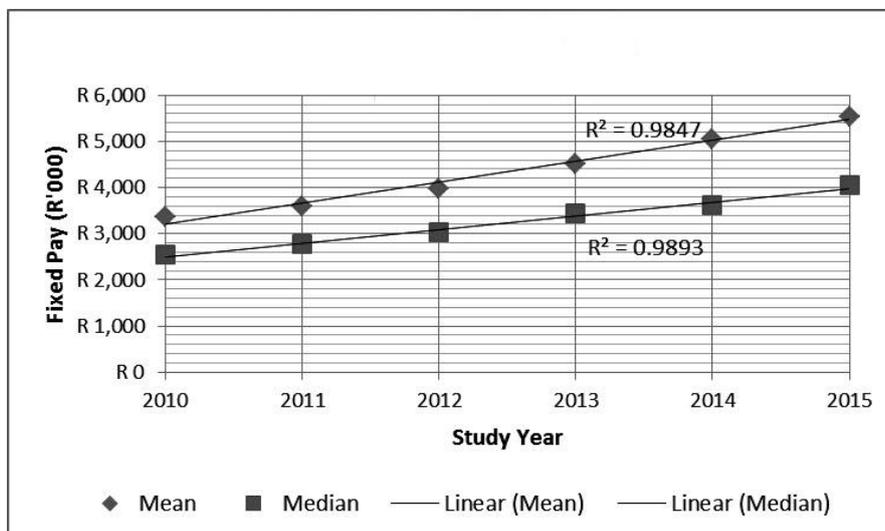
The trajectory for both the mean and median FP is indicative of an upward trend. Both mean and median scatter plots of CEO FP in Figure 1 can be approximated by linear equations with the coefficients of determination (R^2) at 0.9845 and 0.9893, respectively. Based on the measured standard deviation and 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 3 summarises the descriptive statistical analysis for the variable pay awarded to CEOs in the same period between 2010 and 2015.

Table 3. 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 2 shows a graphical representation of the descriptive statistics for CEO variable component of total remuneration over the study period.

Figure 2. CEO variable pay trend analysis
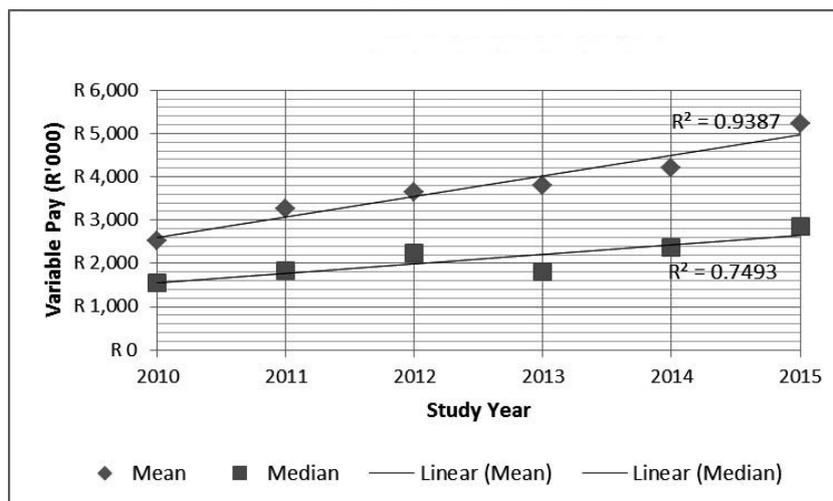
A similar upward trend as in Figure 1 for FP was observed. Based on the time series analysis and the respective coefficients of determination, the mean variable pay trend can be approximated by a linear equation with an R^2 of 0.9387. Moderate approximation strength at 0.7493 coefficient of determination 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 about 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.

5.2. Descriptive Statistics – Company Performance

Table 4 summarises numerical descriptive statistical analysis of corporate performance measures that were analysed for the study.

Table 4. 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 was 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 5 indicates the median variables over the study period for each of the selected company performance measures:

Table 5. Median corporate performance measures

Company Performance Measure	2010	2011	2012	2013	2014	2015
ROE (%)	13.4	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.

5.3. 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.

6. DISCUSSION

6.1. Fixed pay

As respectively illustrated in Table 2 and Figure 1, 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 the growth rate in terms CEO variable pay component of the total remuneration.

6.2. 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 the CEO remuneration components that is expected to be strongly linked to company performance.

As respectively illustrated in Table 5 and Figure 2, 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 3, demonstrating a structural shift from fixed pay-dependant CEO remuneration of 61.5% in 2010 to 55.1% in 2015.

6.3. Total remuneration

Table 6 summarises the descriptive statistical analysis for the 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%. The 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 and is indicative of the magnitude of variability in terms of how companies incentivise their CEOs for their contributions to company performance.

Figure 3 illustrates a graphical descriptive statistical trend for total CEO annual remuneration over the study period, 2010 to 2015.

Figure 3. Total CEO remuneration trend
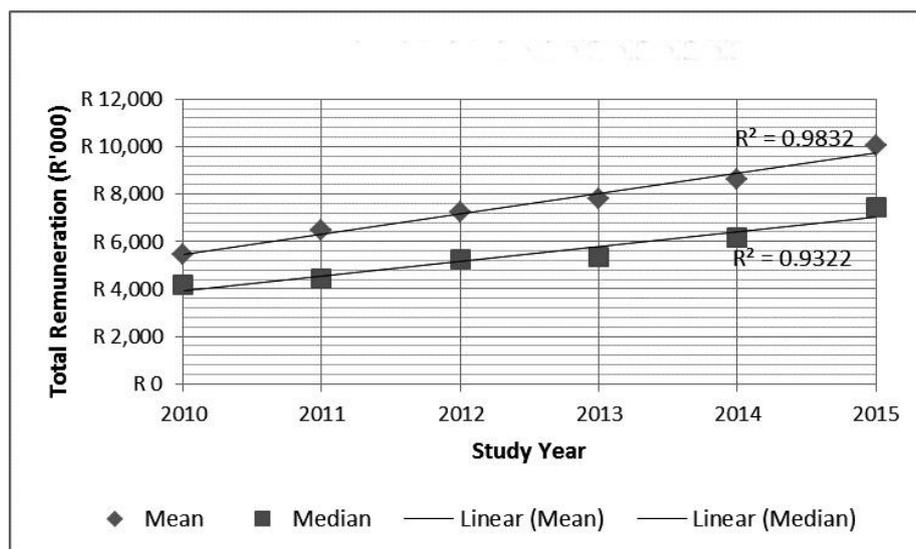
Total CEO remuneration trends analysis reflects a similar trajectory to that of both fixed and variable pays, respectively. Both the mean and median total remuneration plots are indicative of an upward trajectory that can be accurately approximated by linear equations with the coefficients of determination (R^2) at 0.9832 and 0.9322, respectively.

6.4. Bivariate Regression Analysis (Existence, Strength, and Nature)

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

6.5. Fixed Pay and Company Performance Measures

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 results indicated correlations 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.

6.6. Variable Pay and Company Performance Measures

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 the variation in VP could be predicted from EPS variations.

6.7. 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 5/7 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.

7. STUDY LIMITATIONS

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 a common acknowledge 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. Again, executive remuneration was only assessed against limited, but commonly cited accounting and market-based company performance measures which have the ability to limit the findings. Thirdly, accounting based performance reports are inevitably historic in nature, and therefore, backward looking, which may not accurately predict future performance.

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).

8. RECOMMENDATIONS AND CONCLUSIONS

8.1. Key Recommendations

It is recommended that remuneration committees 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. These study results suggest that companies that seek to utilise executive remuneration as a mechanism to mitigate the conflict of interests between executives and shareholders should be meticulous in their approach. Companies may either need to modify their remuneration structures (in order to strengthen an existing correlation) or consider alternative performance metrics to align these interests. These findings of this research study warn against unabatedly increasing executive remuneration with the hope that it will address agency problems, without due consideration of the relevant value drivers for a particular agency relationship.

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 when determining 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.

9. 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 combined with challenges encountered during the 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 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 small sample size could address the issue of subjectivity. Dimitrova & Hartman (2015) believe that persuading companies to disclose their rationale for making executive remuneration decisions could be invaluable for investors and researchers in broadening the overall understanding of the executive remuneration field.

10. KEY RESEARCH CONCLUSIONS

Contrary to generalised sentiments that the link between CEO remuneration and corporate performance is non-existent (de Wet, 2012), the JSE listed entities were found to have weak to moderate relationship between these constructs. 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.

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 see a structural shift in remuneration towards a more performance sensitive remuneration structure which was variable pay biased.

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APPENDIX

Table 1. Bivariate regression summary results

Dependent Variable	Independent Variable	Bivariate Regression Results Summary							
		n	*r*	*R²*	*b₀*	*b₁*	*P-value*	*Lower 95%*	*Upper 95%*
FP	ROE	875	0.0141	0.0002	4359	1.9385	0.6778	-73153	11.0923
	ROA	890	0.0280	0.0008	4282	8.0280	0.4035	-10 3256	263815
	SP	875	0.3979	0.1583	3256	03443	0.0000	03069	03817
	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
YP	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	-7.1379	45.5832
	SP	758	0.5561	0.3093	2007	03730	0.0000	03332	0.4133
	EPS	772	0.5333	03375	2154	4.4206	0.0000	3.9825	43588
	P/E	755	0.0057	0.0000	3843	-03334	03750	-4.4932	33254
TR	ROE	876	0.0884	0.0078	7372	20.9796	0.0088	53937	36.6656
	ROA	891	0.0707	0.0050	7271	34.9571	0.034310975	2.4993	67.4144
	PS	876	0.5691	03238	4902	0.6026	0.0000	0.5448	0.6604
	EPS	896	0.5333	03834	5359	6.4648	0.0000	5.7917	7.1380
	P/E	871	0.0048	0.0000	7718	0.451365	03873	-53269	6.7297

Note: n - number of observations, b_0 - intercept, r -correlation coefficient, b_1 - slope coefficient, R^2 - coefficient of determination, P-value - statistical level of significance.

Table 2. Multivariate regression summary output: fixed pay

Regression Statistics					
Multiple R	0.428				
R Square	0.183				
Adjusted R Square	0.178				
Stamdard Error	4050				
Observations	843				
ANOVA	*df*	*SS*	*MS*	*F*	*Signiricance F*
Regression	5	3072402597	614480619.4	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(Cetnts)	-1.601	0.504	-3.177396168	0.001540565	-2.590534927	-0.612125766
ROA (%)	-14.005	12.659	-1.106352947	0.2688916689	-38.85228749	10.8417506
ROE (%)	-0.328	5.168	-0.063258333	0.9494416689	-10.47199231	9.816069591
SP (Cents)	0.393	0.044	9.012682704	0.307498462	0.307498462	0.478723687
P/E (Ratio)	-0.923	1.719	-0.536682641	-4.297186029	-4.297186029	2.451825704

Table3. Multivariate regression summary output: variable pay

Regression Statistics					
Multiple R	0.605374307				
R Square	0.366478051				
Adjusted R Square	0.362120954				
Stamdard Error	3987280968				
Observations	733				
ANOVA	*df*	*SS*	*MS*	*F*	*Signiricance 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(Cetnts)	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 (Cents)	0.13566242	0.046144247	2.939963873	0.003386627	0.045070537	0.226254303
P/E (Ratio)	-0.627229051	1.717827783	-0.365129181	0.715121176	-3.999724261	2.745266159

Table 4. Multivariate regression summary output: total remuneration

Regression Statistics					
Multiple R	0.588184983				
R Square	0.345962574				
Adjusted R Square	0.342069197				
Stamdard Error	6223.573294				
Observations	844				
ANOVA	*df*	*SS*	*MS*	*F*	*Signiricance F*
Regression	5	17169127878	3433825576	88.654056685	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	1.166378E-51	4396.267053	5606.752536
EPS(Cetnts)	1.743695162	0.774426546	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 (Cents)	0.51305938	0.067020689	7.65523878	5.31198E-14	0.381511246	0.644607514
P/E (Ratio)	-1.500562708	2.641825684	-0.568002165	0.570185651	-6.685935203	3.684809787