

**THE RELATIONSHIP BETWEEN CEO REMUNERATION AND COMPANY
PERFORMANCE IN PUBLICLY LISTED ORGANISATIONS ON THE
JOHANNESBURG STOCK EXCHANGE (JSE) FOR THE PERIOD 2008 - 2020**

by

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ABSTRACT

Orientation: Chief executive officer (CEO) remuneration in South Africa and globally has attracted increased scrutiny and debate about the magnitude of pay and the rationale underpinning its determination. Despite extensive literature, the linkage between CEO remuneration and company performance remains inconclusive and appears to vary depending on context, remuneration and company performance variables.

Research purpose: This study aims to determine whether there is a relationship between CEO remuneration and the company performance of Johannesburg Stock Exchange (JSE)-listed companies from 2008 to 2020.

Motivation for the study: This study seeks to provide a deeper understanding of CEO pay–performance linkages, contributing to existing knowledge and offering practical insights for designing an optimal CEO remuneration philosophy.

Research design, approach and method: This quantitative, longitudinal study relied on secondary data collected from company websites, published financial statements, and publicly listed organisations over a 13-year period. The sample comprised companies selected based on data availability and completeness for the study variables. Panel data analysis was used to examine the relationships between CEO remuneration and company performance. Based on the Hausman test results, a random-effects model was estimated using Panel Estimated Generalised Least Squares (EGLS) with Period Seemingly Unrelated Regression (SUR) weighting. To enhance robustness, the data were subjected to supervised cleaning, reliability checks, winsorisation at the 5th and 95th percentiles, and White diagonal standard errors were applied to address cross-sectional correlation.

Main findings/Results: The results reveal that CEO remuneration and performance alignment were selective rather than uniform across the remuneration components and company performance measures examined. Net profit was not a statistically significant predictor of CEO remuneration. RSF emerged as the most consistent predictor, exhibiting a negative relationship with fixed pay and positive relationships with STI and total remuneration. EPS positively influenced fixed pay. The interaction effects between EPS and RSF, and between RSF and net profit, were consistently negative and statistically significant across all CEO remuneration components, whereas the interaction between EPS and ROA was not statistically significant. Company size, as proxied by market capitalisation, moderated the relationship between net

profit and STI and strengthened the effects of ROA and RSF on fixed pay and total remuneration, but not on STI. Overall, the findings suggest that CEO remuneration is influenced by selected performance measures and contextual factors, rather than being uniformly aligned with all indicators of company performance.

Practical managerial implications: The study supports the development of comprehensive remuneration and reporting frameworks that promote transparency and consistency in remuneration disclosure. Boards and remuneration committees may structure remuneration structures by including performance measures that support long-term value creation while ensuring that incentive structures do not reward overlapping performance variables.

Contribution: The study contributes to executive remuneration literature by extending evidence on pay-performance relationship in South African context. By examining direct, interaction and moderation effects, it demonstrates that the pay-performance relationship is selective and more complex than direct pay-performance models alone.

Key terms:

Chief Executive Officer; Company Performance; Earnings Per Share; Fixed Pay; JSE; Net Profit; Performance-Related Pay; Remuneration; Return on Assets; Return on Equity; Short-Term Incentive; Total Remuneration; Turnover.

DECLARATION

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*I declare that **The relationship between CEO remuneration and company performance in publicly listed organisations on the Johannesburg Stock Exchange (JSE)** is my own work, and that all the sources that I have used or quoted have been indicated and acknowledged by means of complete references, and that any use of Artificial Intelligence (AI) has been fully disclosed.*

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ABSTRACT	II
DECLARATION.....	IV
ACKNOWLEDGEMENTS.....	V
LIST OF TABLES	XIII
LIST OF FIGURES	XV
ABBREVIATIONS	XVII
CHAPTER 1: BACKGROUND TO THE STUDY	1
1.1 INTRODUCTION.....	1
1.2 BACKGROUND	1
1.2.1 CEO Remuneration and the Company Performance Link	11
1.2.2 Company Performance Measures	18
1.3 SCOPE OF THE STUDY.....	20
1.4 PROBLEM STATEMENT	23
1.5 RESEARCH QUESTIONS	24
1.6 RESEARCH OBJECTIVE	28
1.6.1 General Objectives of the Research	28
1.6.2 Specific Sub-objective of the Research.....	28
1.7 RESEARCH ASSUMPTIONS, DELIMITATIONS AND PRESUPPOSITIONS.....	32
1.8 CHAPTER OUTLINE	33
1.9 CHAPTER SUMMARY	35
CHAPTER 2: LITERATURE REVIEW ON EXECUTIVE REMUNERATION.....	36
2.1 INTRODUCTION.....	36
2.2 TRANSFORMING THE ROLE OF CEO POSITIONS, THEORIES AND OTHER DETERMINANTS OF REMUNERATION.....	37
2.2.1 Historical Shifts in the CEO Role	37
2.3 THEORIES ON EXECUTIVE REMUNERATION	43
2.3.1 Agency Theory.....	44
2.3.2 Optimal Contracting and Managerial Power Theory	48

2.3.3 Stewardship Theory	57
2.3.4. Organisation Size	63
2.4 EMPIRICAL FINDINGS ON THE LINK BETWEEN CEO REMUNERATION AND COMPANY PERFORMANCE	65
2.4.1 Empirical Findings: Positive Link Between CEO Remuneration and Company Performance	66
2.4.2 Empirical Findings: Negative Link Between CEO Remuneration and Company Performance Measures	69
2.4.3 Empirical Findings: Lack of Correlation Between CEO Remuneration and Company Performance Measures	70
2.5 LEGISLATIVE REFORMS ON REMUNERATION STRATEGIES	71
2.5.1 Companies Act 71 of 2008 of South Africa.....	72
2.5.2 Income Tax Act 58 of 1962	74
2.5.3 Employment Equity Act 55 of 1998	75
2.5.4 Sarbanes-Oxley Act 2002	77
2.5.5 King IV Recommendations.....	79
2.5.6 U.S.A Securities and Exchange Commission (SEC).....	84
2.5.7 UK Prudential Regulation Authority – Buyouts of Variable Remuneration.....	85
2.5.8 JSE Remuneration Regulations.....	86
2.6 OTHER INFLUENCES ON REMUNERATION PAID TO CEOS	88
2.6.1 International Work Experience Effect on CEO Remuneration	89
2.6.2 Macroeconomic and Contextual Factors	93
2.6.3 Power of Remuneration Consultants.....	94
2.7 CHAPTER SUMMARY	99
CHAPTER 3: REMUNERATION STRUCTURES AND COMPANY PERFORMANCE MEASURES.....	101
3.1 INTRODUCTION.....	101
3.2. OVERVIEW OF CHAPTER 3	101
3.3 REMUNERATION PACKAGE COMPONENTS.....	103

3.3.1 Fixed Pay	105
3.3.2 Variable Pay	108
3.3.3 Total remuneration	111
3.3.4 Long-term Incentives	111
3.4. COMPANY PERFORMANCE MEASURES FOR THE STUDY	118
3.5 MAIN INFLUENCERS OF REMUNERATION POLICIES AND STRATEGIES	128
3.5.1 Influence of JSE Remuneration Regulations	128
3.5.2 Influence of Macroeconomic Events on JSE-listed Companies	133
3.5.3 Role of Performance Management in Remuneration	135
3.5.4 Influence of Key Stakeholders on Remuneration	138
3.6 CONTROL VARIABLE	142
3.7 MODERATOR AND INTERACTION EFFECT	143
3.7.1 Justification for the Choice of Moderating Variable	144
3.8 LIMITATIONS OF USING FINANCIAL COMPANY PERFORMANCE	146
3.8.1 Historical Focus of Financial Company Performance Measures	147
3.8.2 Beyond Financial Metrics: The Case for Incorporating Non-financial Performance Indicators	149
3.8.3 No External Benchmarking of Performance	154
3.8.4 Comparing Companies Pursuing Different Strategies	158
3.8.5 Impact of Time on Performance	160
3.8.6 Manipulation of Information	162
3.8.7 Choice of Presentation Format	165
3.9 CONCEPTUAL FRAMEWORK	169
3.10 CHAPTER SUMMARY	170
CHAPTER 4: RESEARCH METHODOLOGY	172
4.1 INTRODUCTION	172
4.2 RESEARCH OBJECTIVES, QUESTIONS AND HYPOTHESES	173
4.2.1 Research Objectives	173

4.2.2	Research Questions	175
4.2.3	Hypotheses	176
4.3	RESEARCH METHODOLOGY	179
4.3.1	Research Philosophy and Paradigm	180
4.3.2	Research Approach	182
4.3.3	Research Strategies	184
4.3.4	Research Methodological Choices	185
4.3.5	Time Horizons.....	190
4.3.6	Techniques and Procedures	191
4.4	RESEARCH DESIGN	193
4.5	TARGET POPULATION AND SAMPLING	193
4.6.	RESEARCH PROCESS	196
4.6.1	Conceptualising the Study	197
4.6.2	Planning the Study	198
4.6.3	Compilation of the Thesis	198
4.7	DATA COLLECTION	199
4.7.1	Sources and nature of the data.....	200
4.7.2	Data Collection Process.....	200
4.7.3	Data Cleaning	202
4.7.4	Data Treatment	204
4.8	DATA ANALYSIS	210
4.8.1	Descriptive Statistics	211
4.8.2	Inferential Statistical Analysis	213
4.9	VALIDITY AND RELIABILITY	223
4.9.1	Validity in the Study	224
4.9.2	Reliability in the Study	225
4.10	ETHICAL CONSIDERATION	226

4.11 CHAPTER SUMMARY	227
CHAPTER 5: RESEARCH RESULTS.....	228
5.1 INTRODUCTION.....	228
5.2 OVERVIEW OF JSE COMPANIES	228
5.3 DESCRIPTIVE STATISTICS OF COMPANY PERFORMANCE MEASURES (WINSORISED) PER ANNUM.....	228
5.3.1 Overall descriptive statistics of Company Performance Measures for the period 2008 to 2020	229
5.3.2 Descriptive Statistics of Company Performance Measures (Winsorised) Per Annum.....	232
5.4 DESCRIPTIVE STATISTICS – CEO REMUNERATION MEASURES.....	240
5.4.1 Overall Period– CEO Remuneration Measures.....	240
5.4.2 Descriptive Statistics – Fixed Pay Annual Analysis	242
5.4.3 Descriptive statistics – short-term incentive annual analysis	243
5.4.4 Descriptive Statistics: Total Remuneration Annual Analysis	244
5.5 INFERENTIAL STATISTICS	246
5.5.1 Direct Relationship Analysis – CEO Remuneration and Company Performance	249
5.5.2 Introduction – The Effect of Interaction Effects on Fixed Pay, Sti and Total Remuneration.	270
5.5.3 Interaction Effects Analysis of Company Performance on CEO Remuneration	271
5.5.4 Moderating Role of Company Size in the CEO Relationship.....	281
5.6 HYPOTHESIS TESTING	287
5.7 CHAPTER SUMMARY	290
CHAPTER 6: DISCUSSION OF RESULTS.....	293
6.1 INTRODUCTION.....	293
6.2 ANNUAL RELATIONSHIP BETWEEN CEO REMUNERATION AND COMPANY PERFORMANCE	293
6.2.1 Discussion – Earnings Per Share (EPS) Annual Analysis	294
6.2.2 Discussion – Return on Shareholder’s Funds Annual Analysis.....	296
6.2.3 Discussion - Return-On-Assets Annual Analysis	298
6.2.4 Discussion - Net Profit Annual Analysis.....	300

6.2.5	Discussion – Market Capitalisation Annual Analysis	301
6.3	DISCUSSION ON THE DIRECT RELATIONSHIP BETWEEN CEO REMUNERATION AND COMPANY PERFORMACE.....	302
6.3.1	Relationship between CEO Fixed Pay and Company Performance Measures	303
6.3.2	Relationship Between STI and Company Performance Measures.....	305
6.3.3	Relationships Between Total Remuneration and Company Performance	307
6.4	DISCUSSION ON INTERACTION EFFECTS OF COMBINED INDEPENDENT VARIABLE ON DEPENDENT VARIABLE	309
6.4.1	Discussion Earnings Per Share x Net Profit (INTEPSNETPROFIT) On CEO Remuneration.....	310
6.4.2	Discussion of Earnings Per Share (Eps) and Return on Assets (ROA) Regarding CEO Remuneration (INTEPSROA)	316
6.4.3	Discussion Earnings Per Share Eps X Return on Shareholders' Funds (INTEPSRSF) On CEO Remuneration	319
6.4.4	Discussion Return on Shareholders' Funds X Net Profit (INTRSFPROFIT) On CEO Remuneration	322
6.5	MODERATION EFFECTS DISCUSSION.....	325
6.5.1	Moderation of Company Size on Net Profit ($MC \times$ Net Profit) – Fixed Pay, STI and Total Remuneration	325
6.5.2	Moderation of Return on Assets by Company Size ($MC \times$ ROA) – Fixed Pay, STI and Total Remuneration	327
6.5.3	Moderation of Returns of Shareholders' Funds by Company Size ($MC \times$ RSF) – Fixed Pay, STI and Total Remuneration.....	330
6.6	CHAPTER SUMMARY.....	332
	CHAPTER 7: CONCLUSION	335
7.1	INTRODUCTION.....	335
7.2	SUMMARY AND REFLECTIONS ON REASONS FOR UNDERTAKING THE RESEARCH	335
7.3	RESEARCH METHODOLOGY AND DESIGN	337
7.4	SUMMARY OF RESEARCH FINDINGS	338

7.4.1	Effect of Fixed Pay on Company Performance.....	343
7.5	EMPIRICAL FRAMEWORK REFLECTING STUDY FINDINGS	347
7.6	RECOMMENDATIONS.....	352
7.6.1	Recommendations for the Remuneration Committee	352
7.6.2	Recommendations for Human Resources Practitioners	356
7.7	CONTRIBUTIONS OF THE STUDY	358
7.8	RECOMMENDATIONS FOR FURTHER STUDIES.....	360
7.9	LIMITATIONS OF THE STUDY.....	362
7.10	CONCLUDING REMARKS	363
ANNEXURE A		425
ANNEXURE B.....		427

LIST OF TABLES

Table 1.1: Summary of key research findings of previous studies	14
Table 1.2: Changes implemented - expected vs actual number of days.	22
Table 2.1: Summary of historical shifts	38
Table 2.2: Theories in CEO power research	51
Table 3.1: Comparison between stock options and restricted stock units.....	116
Table 3.2: Comparison of LTI methods	117
Table 3.3: Competitive comparison data (as of June 2024) – (<i>Reflected in US Dollars</i>)	124
Table 3.4 Top South African bank for each indicator.....	157
Table 4.1: Consolidated overview of study hypotheses.....	177
Table 4.2: Differences between quantitative and qualitative research.....	187
Table 4.3: Distribution of JSE companies by industry.....	196
Table 5.1: Descriptive statistics of company performance measures for the period 2008 to 2020 (before winsorisation)	230
Table 5.2: Descriptive statistics (winsorised) – measures of central tendency for company performance variables for the 13-year period	231
Table 5.3: Median annual company performance measures	233
Table 5.4: Mean annual company performance measures	234
Table 5.5: Descriptive statistics – measures of central tendency for remuneration variables (pre-winsorised figures).....	240
Table 5.6: Descriptive statistics -measures of central tendency for remuneration variables (winsorised).....	241
Table 5.7: Descriptive statistics – fixed pay	243
Table 5.8: Descriptive Statistics – STI.....	244
Table 5.9: Descriptive statistics – total remuneration annual analysis	245
Table 5.10: Multicollinearity results	249
Table 5.11: Fixed pay regression model	251
Table 5.12: Hausman test results.....	253
Table 5.13: Cross-sectional fixed pay (dummy variables) effect model.....	255
Table 5.14: Final regression results (fixed pay).....	256
Table 5.15: STI regression model (pooled OLS).....	259
Table 5.16: Hausman Test.....	260

Table 5.17: Cross-sectional fixed effects (STI) model	261
Table 5.18: STI Final regression model	263
Table 5.19: Total remuneration - regression model (pooled OLS)	265
Table 5.20: Hausman test result (total remuneration)	266
Table 5.21: Cross-section random effect model (total remuneration)	267
Table 5.22: Total remuneration final regression model	269
Table 5.23: Interaction effects of EPS and net profit on CEO remuneration.....	273
Table 5.24: Interaction effects of EPS and ROA on CEO remuneration.....	276
Table 5.25: Interaction effects of EPS and RSF on CEO remuneration	278
Table 5.26: Interaction effects of RSF and net profit on CEO remuneration	280
Table 5.27: Moderation effect of MC $\times$ ROA on fixed pay, STI and total remuneration	283
Table 5.28: Moderation effect of MC $\times$ net profit on fixed pay, STI and total remuneration.....	285
Table 5.29: Moderation effect of MC $\times$ RSF on fixed pay, STI and total remuneration	287
Table 5.30: Summary of hypotheses results.....	288
Table 6.1: Interaction effects of EPS and net profit on CEO remuneration.....	311
Table 6.2: Interaction effects of EPS and ROA on CEO remuneration.....	317
Table 6.3: Interaction effects of EPS and RSF on CEO remuneration	320
Table 6.4: Interaction effects of RSF and net profit on CEO remuneration	322
Table 7.1: Synthesis of hypotheses and empirical findings	339

LIST OF FIGURES

Figure 1.1: Vroom’s expectancy theory	10
Figure 1.2: The Balanced Scorecard connection to Performance Measures.....	19
Figure 2.1: Integrated theoretical framework for CEO remuneration and company performance	65
Figure 2.2: Traditional Management Structure	81
Figure 2.3: Proposed management structure	83
Figure 3.1: Executive Remuneration Components	104
Figure 3.2: Remuneration packages of highest paid CEOs in South Africa in 2023	113
Figure 3.3: S&P 500 vs JSE, All Share – 10-year investment period (2012–2022)	135
Figure 3.4: Linking performance to monetary reward	136
Figure 3.5: Regressive, progressive and mixed relationships	137
Figure 3.6: Upper Echelons Conceptual Model	152
Figure 3.7: South Africa’s Leading Bank Holding Companies Based on Performance	156
Figure 3.8: Conceptual Model.....	170
Figure 4.1: Research Onion.....	180
Figure 4.2: Deductive Process in Research Approach	183
Figure 4.3: Convergent Mixed Methods Design.....	188
Figure 4.4: Exploratory Sequential Mixed Methods Design.....	189
Figure 4.5: Explanatory Sequential Mixed Methods Design	189
Figure 4.6: Number of Companies Listed on the JSE, 2008–2020.....	194
Figure 4.7: Research Process	199
Figure 4.8: JSE ICB Classification of Industries	203
Figure 4.9: Frequencies: Company Performance Measures.....	206
Figure 4.10: Frequencies of CEO Remuneration Variables.....	206
Figure 4.11. Illustration of the Panel Data Design.....	221
Figure 5.1: Median Earnings Per Share	236
Figure 5.2: Median Return on Assets.....	236
Figure 5.3: Market Capitalisation.....	237
Figure 5.4: Median Return on Shareholders’ Funds	238
Figure 5.5: Median Profit.....	239
Figure 5.6: Fluctuation in fixed pay for the period 2008 to 2020	242

Figure 5.7: STI Annual Analysis for 2008–2020	244
Figure 5.8: Total remuneration annual analysis for 2008–2020	246
Figure 6.1: Median Earnings Per Share (Researcher’s own)	296
Figure 6.2: Typical Bonus Plan.....	316
Figure 7.1: Theoretical Foundation and Empirical Relationships Between Fixed Pay and Company Performance Measures.....	348
Figure 7.2: Theoretical Foundation and Empirical Relationships Between STI and Company Performance Measures	348
Figure 7.3: Theoretical Foundation and Empirical Relationships Between total remuneration and Company Performance Measures.....	349
Figure 7.4: Theoretical Foundation and Empirical Effects Between fixed pay and Company Performance Measures	349
Figure 7.5: Theoretical Foundation and Empirical Effects Between STI and Company Performance Measures	350
Figure 7.6: Theoretical Foundation and Empirical Effects Between total remuneration and Company Performance Measures.....	350
Figure 7.7: Theoretical Foundation and Empirical Moderating Effects Between Fixed Pay and Company Performance Measures.....	350
Figure 7.8: Theoretical Foundation and Empirical Moderating Effects Between STI and Company Performance Measures.....	351
Figure 7.9: Theoretical Foundation and Empirical Moderating Effects Between total remuneration and Company Performance Measures	351

ABBREVIATIONS

AO	Audit Opinion
CEO	Chief Executive Officer
CTC	Cost to Company
EBITDA	Earnings Before Interest, Tax, Depreciation and Amortisation
EPS	Earnings Per Share
EVA	Economic Value Add
HEPS	Headline Earnings Per Share
IFWE	Irregular, Fruitless, and Wasteful expenditure
JSE	Johannesburg Stock Exchange
LR	Liquidity Ratio
MC	Market Capitalisation
MVA	Market Value Add
OECD	Organisation for Economic Cooperation and Development
OP	Operating Profit
PwC	PricewaterhouseCoopers
RG	Revenue Generated
ROA	Return on Assets
ROCE	Return on Capital Employed
ROE	Return on Equity
ROI	Return on Investment
RSF	Return on Shareholders' Funds
SARS	South African Revenue Services
S & P 500	Standard and Poor's 500
STI	Short-Term Incentive

U.S.A	Unites States of America
VIF	Variance inflation factor

NOTES ON STYLE

This thesis follows the *Harvard referencing style* consistently throughout, in line with institutional requirements. All sources are cited in-text using the author–date format, with full details provided in the reference list at the end of the thesis. British English spelling and grammar conventions have been applied. Acronyms and abbreviations are defined upon first use and applied consistently thereafter. Headings, tables, and figures are formatted according to the university’s prescribed thesis guidelines to ensure clarity and uniformity.

CHAPTER 1: BACKGROUND TO THE STUDY

1.1 INTRODUCTION

Executive remuneration, especially at the chief executive officer (CEO) level, remains one of the most debated and focal topics in corporate governance, ethics scholars, and the public. Globally, rising CEO remuneration levels have triggered scrutiny from media, investors, and regulators, especially when such remuneration appears disconnected from company performance or economic and social realities (Siwendu, Swanepoel & Stumke, 2024). This debate is particularly pertinent in South Africa, a nation that is dealing with significant social inequalities, unstable economic conditions, and mounting demands for transparency and equity in remuneration practices. In South Africa, where the capitalist structure intersects with post-apartheid socio-economic conditions, the justification for CEO remuneration continues to be frequently debated.

This research aims to contribute to the discourse on CEO remuneration, labour regulation and the protection of worker rights by pursuing two key objectives. First, this study seeks to provide a more nuanced and empirically grounded understanding of the direct relationship between CEO remuneration and company performance within publicly listed organisations on the Johannesburg Stock Exchange (JSE) between 2008 and 2020. While the direct relationship between CEO remuneration and company performance is important, it may not fully explain how CEO remuneration is determined. The pay-performance relationship may be conditional, strengthened, altered or weakened by contextual factors. The study therefore extends the direct relationship by incorporating interaction and moderation effects to capture these conditional factors. Second, it endeavours to assess the relevance and insights provided by the literature, including key theories, surveys, and scholarly contributions that provide explanations for the link connecting CEO remuneration and company performance.

1.2 BACKGROUND

The CEO forms part of the executive team of an organisation that is overall responsible for ensuring that the organisation develops strategies and plans to deliver value for shareholders.

However, even though they are part of a team of executives, the focus of the media, public, investors, and other key stakeholders is on CEOs' remuneration. In some instances, the remuneration of CEOs is not only compared to that of other CEOs but also to the lowest positions in the industry to further emphasise the discrepancies in pay.

Employee remuneration refers to the negotiated fair payment agreed upon between an employer and an employee, reflecting the individual's skills, expertise, and experience (Pat, Okoli & Nuel-Okoli, 2020). However, what constitutes "fair" remuneration remains a subject of contention globally and in South Africa in particular.

Media attention to inequalities in remuneration between executives and lower-level employees has heightened scrutiny of remuneration practices. Boards are increasingly required to justify pay structures with defensible, evidence-based rationales. Deloitte (2021) noted that in South Africa, boards face heightened challenges following the societal and economic impact of COVID-19 and the 2021 social unrest that swept across South Africa, leading to significant damage to company property and a surge in unemployment. Consequently, boards are compelled to establish reward frameworks that incentivise executives to deliver innovative business recovery and resilience plans in the face of these adversities. The Organisation for Economic Cooperation and Development (OECD) has highlighted the severity of South Africa's skills shortage, particularly at the managerial level, which is estimated at 94.2%, despite a national unemployment rate of approximately 34.9% (Ministry of Higher Education and Training, 2022). This shortage of skills exacerbates the poor quality of education and ongoing emigration of skilled professionals (Ministry of Higher Education and Training, 2022).

Labour relations add another layer of complexity to the pay-performance relationship. South Africa's history of adversarial employer–employee dynamics continues to shape disputes over pay, working conditions, and equity (Valodia, 2021). The strategic importance of talent in driving profitability and ensuring sustainability in an increasingly competitive global market has intensified these challenges. In today's technologically challenging world, effectively engaging and retaining talent is considered a critical business imperative.

As this study focuses on CEO remuneration and its relationship with company performance, it is essential to first establish a clear understanding of the concept of remuneration and its

components. Remuneration broadly refers to the total remuneration provided to a CEO in exchange for their labour or services, encompassing both financial and non-financial rewards such as salary, bonuses, benefits, incentives and professional development (Liu & Liu, 2022).

Prior to the financial crisis of 2007 to 2009, CEO remuneration packages were predominantly tied to performance, ensuring favourable returns for shareholders (Bussin, Wöcke & Deysel, 2022). While this alignment initially produced mutually beneficial outcomes, the financial crisis, especially in the banking sector, triggered widespread criticism of high CEO pay. Research by Schriber, King and Bauer (2019), citing Francis (2016), revealed a paradoxical relationship: higher-paid CEOs were often associated with poorer company performance, with 10% of paid CEOs generating 10% less shareholder value than their industry peers. This outcome was attributed to overconfidence by these CEOs. They contrast with their less highly regarded counterparts, who conducted thorough due diligence before committing their companies to a course of action.

Post COVID-19, CEO remuneration has continued to be in the spotlight. For example, Nedbank's CEO received fixed pay of R10.1 million, a bonus of R18.27 million (cash and shares), and a R53.3 million single-figure LTI concluded as of 31 December 2023 (Business Tech, 2024). The payment in stock allows CEOs to become wealthy without commensurate wealth creation (Schriber et al., 2019). This tendency towards risky behaviour is shown in short-sighted and extremely high-risk decisions aimed at increasing company stock prices. The CEOs determine their own remuneration, which is curtailed only by the negativity against these packages. Consequently, the relationship between CEO remuneration and company performance remains controversial, particularly within emerging markets such as South Africa. This therefore creates the need for further empirical investigation into the extent to which CEO remuneration is aligned with company performance.

The concerns around CEO remuneration contributed to increase regulatory and corporate governance. Regulatory frameworks such as the Cadbury Report (1992), in the United Kingdom, the Companies Act (Act No. 71 of 2008), and the King Code and Report on Governance in South Africa (King III 2009) have sought to curtail managerial power over remuneration. Nevertheless, the effectiveness of these mechanisms remains debated, as criticism of CEO remuneration persists. Recent amendments to South Africa's Companies

Act (Act No. 16 of 2024) further strengthened disclosure obligations, requiring companies to report the total remuneration of both the highest and lowest paid employees, including the average and median salary data, as well as the calculation of the pay gap between the top and bottom 5% of earners (Webber Wentzel, 2024). However, while these legislative interventions promote transparency and fairness, they do not directly regulate how CEO remuneration should be tied to company performance (OECD, 2023). The assumption and perception created by this legislation is that pressure will be exerted on boards of directors to align CEO remuneration with company performance, thus potentially improving the connection between CEO remuneration and company performance.

The complex dynamics surrounding the evolution of CEO remuneration occur within a defined ideological environment. The ideological environment is determined by society and reflects the dominant values, beliefs and principles that guide how people think about governance, economics, ethics and power structures. Companies therefore function within this ideological environment that determines the operational approaches of the organisation. It is important to discuss this ideological environment, which plays a central role in contextualising company performance and CEO remuneration. In the global context, companies operate in different economic systems that determine how resources are managed, owned and distributed. These differing economic systems therefore impact the ownership, management and distribution of wealth practices of organisations (Goga & Valodia, 2024). The debate around CEO remuneration is influenced by broader ideological perspectives, mainly socialism and capitalism.

In a socialist economic system, labour is not regarded as a commodity to be exchanged for wages. Since there is no paid labour system in socialism, wages are not based on the worth of labour. Instead, meeting the expanding material and cultural requirements of society has become the primary focus (Institute of Economics of the Academy of Sciences of the USSR 1957). From a socialist perspective, the significant disparity between CEO remuneration and average worker wages challenges the principles of economic equality and social justice. Socialism advocates for a more equitable distribution of wealth and resources, placing collective welfare above individual profit maximisation. Within the South African context

where inequality remains a major concern, these ideological debates are particularly relevant. CEO remuneration, from being an economic issue, becomes a symbolic issue of the tensions between, on the one hand, profit-focused executives and shareholders and, on the other hand, labour unions, civil society, politicians and employees advocating for social justice and a more equitable society (Boston University, 2021). These differences underpin the ideological background of understanding how remuneration strategies are perceived and challenged in South Africa and other countries.

According to the Institute of Economics of the Academy of Sciences of the USSR (1957), two essential elements are required for capitalist economy or production to occur: first, a sufficient number of individuals who lack property must exist without access to means of subsistence, forcing them to work for capitalists; second, the accumulation of wealth to establish substantial capitalist businesses. According to Madden (2023), capitalism as a system has positive attributes. Capitalism encourages the development of knowledge, promotes competition, and enables the efficient allocation of resources, resulting in large-scale value creation. The trade unions and public perceptions of the South African public largely view the capitalist environment as exploitative for employees (Rulashe, 2024). The debate around CEO remuneration is deeply rooted in the ideological tensions between capitalism and socialism. CEO remuneration is viewed either as a legitimate reward for value creation or a catalyst of inequality. Against this ideological backdrop, the study investigates whether CEO remuneration in JSE listed companies suggests rationale alignment with organisational performance.

In summary, the remuneration of CEOs remains a complex and often contested issue within corporate governance, particularly in the South African context, which is marked by historical inequalities, economic disparities and evolving regulatory and ideological frameworks. The interplay between company performance indicators and CEO remuneration raises questions about fairness, accountability and effectiveness in leadership incentives. As companies navigate these challenges, understanding the dynamics around CEO remuneration and company performance becomes increasingly important. The next section explores the

preliminary literature that has addressed this issue both globally and within South Africa to identify gaps and inform study directions. Having contextualised remuneration within the South African setting, the following section provides a preliminary review of the key thematic areas that will be examined in greater depth in subsequent chapters.

The chapter is intended to benefit a range of stakeholders, including employers, academics, and human resource professionals. Previous sections have defined remuneration, examined its theoretical underpinnings, and discussed historical and ideological perspectives. Given that remuneration is not a static concept, it is important to explore its evolution and emerging trends. This preliminary literature review synthesises prior research, providing a logical progression from foundational definitions to theoretical frameworks, the historical context, and the critical relationship between CEO remuneration and organisational performance.

The overarching goal of organisational remuneration strategies is to attract and motivate top talent while driving company performance. However, a key challenge is identifying an appropriate theoretical foundation for developing remuneration strategies that effectively meet the diverse needs of CEOs to achieve shareholder value. Since this study centres on the connection between CEO remuneration and company performance, it was important to contextualise remuneration concepts early in the thesis. Doing so clarifies the components under examination, namely, fixed pay, STIs and total remuneration, setting the stage for the theoretical and empirical analysis. The focus shifts to the evolution of motivational theories, providing a theoretical lens for understanding CEO behaviour and remuneration structures. This approach avoids redundancy and maintains logical flow by introducing foundational concepts prior to the discussion of company performance measures.

Understanding CEO behaviour is essential for examining the link between CEO remuneration and company performance. Motivation theories provide a conceptual foundation for exploring how performance-related pay influences CEO actions, decision-making and ultimately organisational outcomes. In the context of CEO remuneration, these theories help explain whether financial incentives effectively link the goals of CEOs, shareholders and stakeholders.

Motivational theories provide insights into how remuneration can influence behaviour, performance and employee satisfaction (Papenfuß & Keppeler, 2020). Organisations aim to

develop remuneration strategies that attract and retain talent capable of driving company performance, which aligns with shareholder value. Most contemporary remuneration frameworks are rooted in behavioural theories that offer guidance on shaping behaviour to meet organisational objectives (Sirakaya, 2024). To better understand the research topic, the first point of departure is to understand the background, philosophies, theories, and psychology that have created the foundation upon which remuneration strategies are built. These theories have significantly influenced the decision-making process and reasoning behind CEOs' and worker representatives' arguments, evolving with the introduction of new perspectives.

Early theories, such as Taylorism, pioneered the link between financial incentives and work performance. Taylor (1914) advocated the scientific management of labour, suggesting that work should be broken into defined tasks with clear connections between output and remuneration (Hoxie, 1915; Merkle, 2022). Taylorism treated employees mechanistically, driven primarily by monetary incentives, and laid the foundation for performance-based pay, including CEO incentive systems (Dar, 2022).

While Taylorism contributes to efficiency and profit maximisation, its application to CEO remuneration is limited, given the strategic and complex nature of executive work. It neglects intrinsic motivation, leadership, and ethical considerations (Dar, 2022). Manual-labour-focused approaches overlook intrinsic motivation, leadership qualities, and ethical considerations essential to executive roles. Consequently, Taylorism must be complemented by human-centred motivational theories.

Earlier theorists such as Elton Mayo (1927) and Douglas McGregor (1960) introduced alternative perspectives, acknowledging that workers have complex needs beyond financial remuneration. Their research highlighted that individuals seek engaging work, recognition from colleagues and superiors, and opportunities for personal and professional growth (Robbins, 2019). In this regard, motivation is defined as an employee's readiness to invest effort in achieving organisational objectives, which is influenced by the employee's capacity to fulfil personal needs (Porter & Lawler, 1968)

Elton Mayo's human relations theory shifted attention from the mechanistic approach of Taylorism to the social and emotional dimensions of work. Mayo maintained that output

increases when individuals feel appreciated, engaged and supported by management (Emmanuel, 2021). Although initially applied to lower-level employees, these principles are relevant at the CEO level. Recognising and addressing the social and psychological needs of CEOs can significantly enhance CEO satisfaction, engagement, and overall performance. Engaged CEOs tend to develop a sense of ownership and accountability, which fosters commitment and dedication to organisation goals.

As a neo-classical theory, Mayo's approach emphasises individual and group recognition, participatory decision-making and non-financial motivators (Emmanuel, 2021). This aligns with aspects of agency theory, in that aligning agent interests with those of principles can improve company performance. The human relations theory perspective holds that effective corporate governance does not rely solely on financial incentives or strict oversight. Instead, it encourages a leadership environment where CEOs are trusted to act autonomously, collaborate with the board and be motivated not only by financial incentives but also by non-financial incentives (Emmanuel, 2021). When CEOs work in harmony with the board of directors rather than in discord, this leads to higher productivity.

However, Mayo's theory has faced criticism because of its limited scope and potential for managerial manipulation. Critics argue that the focus on psychological engagement was a tactical response to the declining effectiveness of the mechanistic approach of Taylorism (Emmanuel, 2021). Moreover, by emphasising social and emotional factors, the theory neglects structural and technical dimensions such as organisational size, sector dynamics, and their effect on company performance (Emmanuel, 2021). Company size, for example, has been shown to correlate positively with CEO remuneration (Nordlund & Patterson-Sango, 2022). Within the context of this study, Mayo's theory provides insight into the non-financial dimensions of CEO motivation and highlights the significance of relationships and psychological factors in performance.

Ali and Anwar (2021) highlighted employers' attempts at understanding how motivational theories inform incentive systems. Two significant theories are content theory and expectancy theory. Content theory aims to explain how human needs evolve over time and what motivates people. Examples of content theories include Maslow's hierarchy of needs and McGregor's X and Y theories (Rhee, 2019). Maslow's hierarchy of needs proposes that human behaviour

is structured as a pyramid of needs, with foundational physiological needs such as water, food and safety needs forming the base. These fundamental needs take precedence before higher-order needs, such as psychological and self-fulfilment needs (Maslow, 1943).

McGregor proposed two opposing management assumptions about employees and acknowledged that multiple factors influence employee motivation and that managers can impact their workers through their management approach (Emmanuel, 2021). He classified these management styles into Theory X, which represents an authoritarian approach, and Theory Y, which reflects a participative management style. According to theory X, employees are inherently indolent, lack ambition, want to avoid responsibility, must be coerced to work, and must be closely monitored (Emmanuel, 2021). Theory X assumes that employees perceive work as unappealing and show little initiative to improve performance. It also suggests that employees are self-interested and require coercion to align with organisational objectives (Touma, 2021). In Chapter 2, the researcher further explores modern theories such as agency theory, which mirrors the assumption of Theory X by asserting that CEOs' interests must be aligned with those of shareholder interests through appropriate control mechanisms.

In contrast, Theory Y assumes that employees are inherently motivated, seek responsibilities, and require minimal supervision – principles that closely align with those of stewardship theory to be explored in Chapter 2. Stewardship theory may be seen as a modern extension of Theory Y. The type of management style largely depends on employees' attitudes towards work; for example, employees who lack motivation may require an authoritarian management style (Emmanuel, 2021). Work in organisations that are managed using Theory X or an authoritarian style is usually repetitive, and the carrot-and-stick approach is used to motivate employees. Theory Y has a more optimistic outlook about people, and they use a decentralised, participatory management style. Employees take ownership of their work, seek responsibility and solve problems creatively. The Theory Y assumption is that employees are ready to use their abilities to drive company objectives; they are self-controlled, skilful, ambitious, loyal, and committed to those objectives. In the context of Theory Y, incentives such as promotions, rewards, and recognition play important roles in enhancing motivation (Touma, 2021). This approach effectively stimulates employees (CEOs) to consistently invest their efforts in pursuit of the organisation's goals. Within the context of CEO remuneration,

Theory Y could support high-performance-based remuneration structures aimed at aligning CEO interests with shareholder expectations.

Both Theory X and Theory Y have limitations. The authoritarian style of Theory X can demotivate employees, reduce cooperation, and increase staff turnover, whereas participatory methods (in Theory Y) may allow individuals to deviate from organisational objectives. Like Taylorism, both approaches can be perceived as manipulative tools to drive desired outcomes.

On the other hand, Vroom's expectancy theory explores in greater detail the complex relationship between actions and desired outcomes. This theory not only explores the factors that drive employee motivation but also quantifies the extent to which motivation can be generated (Mehboob & Othman, 2020). Figure 1.1 below illustrates Vroom's expectancy theory. Developed in 1964, Vroom's theory focuses on how motivation is formed rather than what specifically motivates individuals. It is grounded in the idea that decision makers can evaluate the probability that their activities will lead to preferred outcomes (Mehboob & Othman, 2020). It was based on the belief that one's efforts would result in the achievement of chosen performance goals (expectancy) (Halim et al., 2023). The second element suggests that once performance goals are reached, the person receives a reward (instrumentality), and the value one places on the reward (valence) (Mehboob & Othman, 2020).

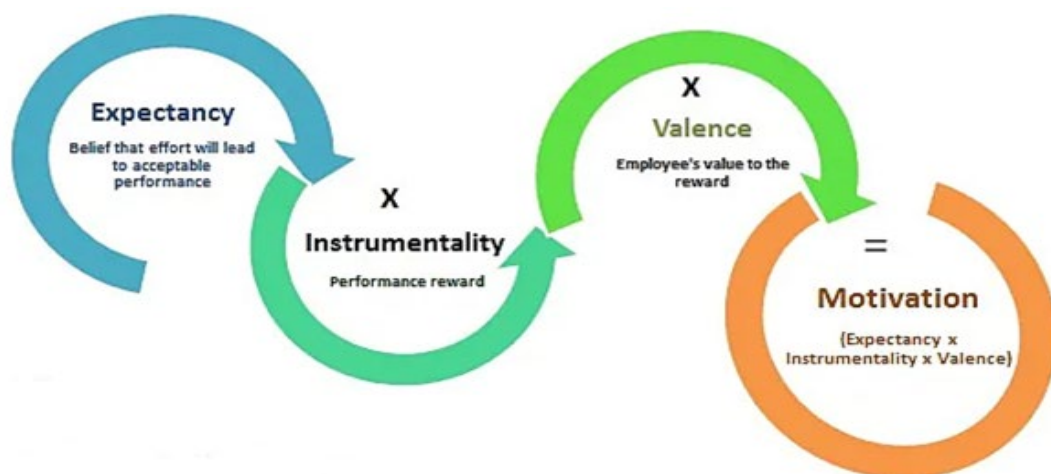


Figure 1.1: Vroom's expectancy theory

Source: Bandhu et al., 2024:6

In the context of this study, expectancy theory suggests that CEOs will be driven to perform if they believe their performance will lead to strong company performance and that this

performance will be rewarded with remuneration levels judged meaningful by the CEO. These theories form the foundational principles on which reward strategies are built, providing valuable insights into the driving forces behind shareholders' and CEOs' actions.

Meyer's (1975) incentive theory further contributes to understanding employee behaviour in relation to reward systems. He argued that when rewards are substantial, employees often focus on monetary gain rather than performance outcomes, which can reduce overall productivity. This viewpoint challenges conventional performance management approaches, which emphasise that monetary rewards should be disbursed only upon achieving predetermined output targets.

Collectively, these theoretical perspectives, including Theory X, Theory Y, Human Relations, expectancy, and incentive theories, provide a foundation for interpreting CEO decision-making, managerial behaviour, and the relationship between remuneration strategies and organisational performance. Building on this theoretical grounding, the following sections examine empirical evidence on the link between CEO remuneration and company performance. The key theoretical perspectives are relevant to understanding employee motivation and managerial behaviour, with particular emphasis on how theories such as Theory X and Theory Y explain differing assumptions about leadership and employee intent. These frameworks provide a foundation through which CEO decision making and strategic alignment can be interpreted. Building on this theoretical grounding, the following sections shift focus to the central empirical issues of this study, examining the alignment between CEO remuneration and company performance.

1.2.1 CEO Remuneration and the Company Performance Link

Having laid the theoretical foundation for understanding CEO behaviour and managerial motivation, the researcher now reviews previous research to investigate whether CEO remuneration is aligned with company performance. This study builds on earlier research that explored the relationship within the broader context of earlier research that has studied the alignment between CEO remuneration and its link to company performance. This earlier research provides a baseline of knowledge that assists in understanding concepts, theories, methodologies and findings in previous research on the relationship between CEO remuneration and company performance. The link between CEO remuneration and company

performance has been explored by various researchers, each seeking to shed light on potential relationships between these variables. These studies highlighted the specific company performance measures employed in their studies, the study focus area and the results from their analysis (Coetzee & Bezuidenhout, 2019; Maloa, 2020; Naik, Padia & Callaghan, 2020). An analysis of these past studies that focused on remuneration and performance metrics similar to those of the current study will be briefly discussed within the context of the current study's objectives. Furthermore, in Chapter 2, the researcher elaborates on existing studies that have examined the association between CEO remuneration and company performance. The current section serves as a brief overview, providing background context to frame the upcoming discussion on prior research without rendering the subsequent literature review redundant.

Ramgath and Bussin (2022) examined the financial services organisations listed on the JSE from 2015 to 2019 and reported that organisational size was not a significant determinant of CEO remuneration. Contrary to expectations, larger organisations with more complex structures did not necessarily offer higher CEO pay. A possible explanation is that larger organisations often require highly skilled CEOs to manage complex operations; remuneration is therefore more closely related to the ability to navigate intricate environments than to company size alone (Edman, Gosling & Jenter, 2023). Building on these insights, the current study examines whether company size, categorised by market capitalisation, moderates the effect between company performance and CEO fixed pay in JSE-listed publicly listed companies.

When company earnings (profits) are used as a measure of organisational performance, a strong positive relationship with the cash component of CEO remuneration is observed. That is, higher profits tend to result in increased salary and bonus payments for CEOs (Edman et al., 2023). This suggests that CEO remuneration structures are designed to reward financial performance, reinforcing the view that incentives can drive CEOs to improve company profitability. Ramgath and Bussin (2022) also noted a gap in research, noting that few studies simultaneously consider both organisational size and performance relative to remuneration. The current study addresses this gap by incorporating company size as a moderating factor alongside multiple performance measures to provide a comprehensive analysis of its influence on CEO remuneration.

Bussin et al. (2022) examined South African JSE-listed companies from 2006 to 2018, focusing on how remuneration governance influences the alignment between CEO remuneration and company performance. Their findings indicated that robust remuneration governance practices such as performance-based long-term incentives and the requirement for CEOs to have minimum shareholding requirements (MSRs), enhanced the sensitivity of CEO remuneration to company performance. Remuneration governance thus moderates the alignment of CEO incentives with shareholders' interests, reducing the risk of excessive pay for CEOs. Similarly, Ntim, Lindop, Thomas, Abdou and Opong (2019) analysed corporate governance in the United Kingdom and concluded that CEO influence and governance structures moderate pay-for-performance sensitivity. Specifically, sensitivity is greater in organisations with reputable, founding, and shareholding CEOs and independent remuneration committees and lower in companies with larger boards or long-tenured, powerful executives.

Pay-performance sensitivity is greater in companies where other companies' CEOs sit on the remuneration committee, and where there are independent remuneration committees (Yang, Choi, Lee & Wright, 2025). However, Pandya and van Deventer (2023) indicate that research by Chhochharia & Grinstein (2009), notes that pay for performance sensitivity is decreased in companies with larger. While these studies emphasise governance mechanisms such as long-term incentives, shareholding requirements, board independence, and CEO power, the current study extends the literature by examining structural characteristics, specifically the moderating effect of company size on the link between CEO fixed pay, STIs, total remuneration and company performance in JSE-listed publicly listed companies. By shifting the focus from governance-specific moderators to structural company characteristics, such as company size, this study offers a complementary perspective on contextual variables that potentially influence the remuneration–performance link.

Studies from Malaysia further illustrate regional variation in the CEO remuneration–performance relationship. Zandi et al. (2019) analysed 96 non-financial companies across sectors such as construction, hospitality, health care, utilities, and plantation from 2011 to 2016. They reported a strong, positive, and significant correlation between CEO remuneration and both ROA and ROE, whereas the relationship with profit margin was weak. Alarussi (2021) examined 360 observations from 120 companies over three years and reported that

ROE influenced CEO remuneration, but company efficiency (total asset turnover) did not. The study highlighted additional variables, including company visibility (shareholder base) and net worth (total equity), reflecting the challenges faced by Malaysian companies operating in competitive, emerging markets. Similarly, Ghasemi and Ab Razak (2020) reported no significant relationship between CEO salary and profitability (ROA and ROE) across 267 companies from 2006 to 2014. These findings, although they are based on Malaysian firms, are relevant to the South African context, given that both countries are classified as emerging markets. Comparative insights thus provide a valuable understanding of CEO remuneration dynamics across similar economic environments. Despite extensive research, consensus remains elusive regarding the primary drivers of CEO pay (Maloa, 2020). Apanpa and Farimade (2017), cited in Maloa (2020), reported that single-location, single-line-of-business organisations can implement standardised remuneration strategies, whereas complex organisations with multinational operations or subsidiaries require sophisticated, context-specific strategies to ensure alignment with local market and industry practices.

Table 1.1: Summary of key research findings of previous studies

Researcher(s)	Publication year	Focus Area	Period of Study	Findings	Company performance measures utilised for the study
Bussin M.H.R & Carlson C.	2020	An analysis of how the financial results of South African state-owned entities relate to the remuneration awarded to executives	8 years	A weakly positive correlation was discovered while evaluating the financial performance metric of net profit or loss. As a result, no definitive relationship was observed connecting CEO remuneration and the organisation's financial performance, reinforcing the view that agency-related challenges are present within South African state-owned entities	Net profit Revenue ROE ROA Solvency
Ahmed, AD., Bahamman, SM., & Abdulkarim, H.	2020	Examines how directors' remuneration (pay) relates to the financial performance of insurance companies in Nigeria.	2012-2017	The financial performance of the organisation increases in tandem with higher directors' remuneration, indicating a positive and significant association.	Board independence Size of Board Size of Firm ROE

Researcher(s)	Publication year	Focus Area	Period of Study	Findings	Company performance measures utilised for the study
Coetzee, J.H. & Hall, W.J.	2020	An analysis of CEO remuneration and company performance measures among companies listed on the JSE	2006–2015	The interaction among CEO remuneration and company performance shows significant variation based on the chosen performance measure. CEO remuneration was found to have the largest negative connection (-0.79) with ROA, and the strongest positive correlation (0.89) with EPS.	EPS ROA ROI
Padia N., Naik M. & Callaghan C. W.	2021	Exploring the link between variable executive remuneration and company performance: Evidence from the Johannesburg Stock Exchange, South Africa	2011–2014	The results show that variable remuneration is significantly negatively associated with total revenue and weakly negatively associated with total assets (the gross performance measures). Variable remuneration, by contrast, demonstrates a weak positive association with Tobin Q, highlighting its closer alignment with shareholder value compared to gross accounting measures	Total revenue Total assets
Rehman, A. ur, Ali, T., Hussain, S., & Waheed, A	2021	Corporate governance and executive remuneration as determinants of firm performance: insights from China	2004 - 2018	Empirical evidence demonstrates a positive and statistically significant link between company profitability and executive pay.	ROE Ownership concentration
Wijeweera, A., Rampling, PN., & Eddie, IA.	2021	Executive remuneration and financial performance: Lessons from Australian Listed companies for APEC members		The fixed portion of executive salary does not have a statistically significant effect on organisational performance. In contrast, long-term incentives (LTI) show a strong and positive association with company performance.	EBIT (Earnings Before Interest & Tax) MC NPAT (Net Profit After Tax)

Researcher(s)	Publication year	Focus Area	Period of Study	Findings	Company performance measures utilised for the study
Van Wyk, LM, & Wesson, N.	2021	Investigating the association between executive long-term remuneration and core performance metrics	2010–2016	CEO remuneration rose, and LTIs gained prominence. CEO LTI goals are moderately aligned with company KPIs.	Financial capital as a proxy for company performance objectives
Ahamed, F.	2021	Examining how CEO remuneration relates to bank performance.	2010 - 2020	CEO pay exhibits the strongest positive and statistically significant association with bank performance	ROE
Nkwadi, R. & Matemane, R.	2022	Company performance and executive remuneration: evidence from the periods before and after the Marikana uprising	2007–2018	Between 2007 and 2012, prior to the Marikana incident, EVA, share price, and total assets significantly accounted for differences in executive remuneration. In contrast, during the post-Marikana period (2013–2018), earnings per share (EPS) and total assets (TA) were the only factors statistically significant in accounting for variations in executive compensation	ROA ROE MVA Total Assets Revenue Growth
Lagat, H.	2023	Assessing the performance, and the relationship between directors' remuneration in the Kenyan commercial banks	2015 - 2021	Return on assets had a positive and significant impact on directors' remuneration, while capital adequacy and liquidity exerted a negative and significant effect: return on equity and credit risk were not statistically significant	ROA ROE
Abubakar, Y. & Simeon, O.	2023	Examining the impact of Directors' pay on the financial performance of selected Listed Companies in Nigeria	2012 - 2021	In selected public listed firms in Nigeria, directors' remuneration is positively and significantly associated with financial performance	ROE

Researcher(s)	Publication year	Focus Area	Period of Study	Findings	Company performance measures utilised for the study
Siwendu et al.,	2023	Executive remuneration and performance in South African Mining Companies: An empirical analysis	2015 - 2021	Executive remuneration exhibits a weak-to-strong association with company financial performance	ROE HEPS (Headline Earnings Per Share) Δ SP (Change in Share Price) MC PE Ratio (Price Earnings)
Höglström, E. & Olausson, V.	2023	Evidence from Scandinavia: Pay-Performance link	2018 - 2021	Variable remuneration is significantly and positively linked to both performance indicators, and total remuneration is significantly associated with total investment return. However, the positive relationship between total remuneration and return on assets does not reach statistical significance.	ROA Total Investment Return
Khan, M.I., Mehmood, K.A. & Nazeer, N.	2023	CEO's Remuneration and its impact on Performance of Firm: Evidence from Emerging Economy.	2008 - 2018	Company size is positively and significantly linked, but negatively and significantly related to debt ratio	ROA Tobin's Q Firm Size Debt Ratio
Kieviet, S., Scholtz, HE., & Pietersen, LA.	2024	Linking CEO pay to company performance: insights from the South African Banking Sector.	2009-2021	In the South African banking sector, CEO total remuneration demonstrates a significant long-term relationship with company performance, while neither short short-term nor long-term remuneration alone shows a statistically significant link	ROA
Lee, J. & Pati, N.	2024	Determinants of CEO remuneration in major US companies: A benchmarking study.	2016-2020	Executive remuneration is significantly influenced by company size (as measured by ROA and Tobin's Q), and CEO attributes such as (age, tenure, stock ownership and MBA degree.	ROA Tobin's Q

Source: Researcher's own

In conclusion, the literature review of prior research testing the link concerning CEO remuneration and company performance has produced inconsistent findings. While some analyses suggests a positive correlation, others suggest a negative association. Additional factors, such as board influence and company size, further complicate this relationship. Consequently, there is a need for continued research and the development of innovative frameworks to establish clear and defensible parameters for remuneration policies that are closely aligned with company performance.

Having examined the outcomes of prior studies, the current focus shifts to the company performance variables to be utilised in this research. The discussion of remuneration components was deliberately positioned earlier in the study to contextualise these elements within the broader discourse on remuneration. Building on this foundation, the next section will turn to an examination of the company performance measures employed in the current study, thereby establishing the critical evaluative criteria against which the link connecting remuneration and performance will be assessed.

1.2.2 Company Performance Measures

The other key metric for the study is financial performance indicators. The research posits that the remuneration paid to CEOs is aligned with the achievement of predetermined company goals. The financial performance of a company is determined using several percentages, equations and ratios. When evaluating business performance in terms of achieving company goals, the choice of methods and criteria becomes a pivotal consideration (Farida & Setiawan, 2022). Various techniques can be employed to measure company performance. These include objective (quantify) and subjective (judge) approaches, financial (profit, sales), and operational measures (customer satisfaction, quality), and the utilisation of both primary (from organisations) and secondary (from databases) data sources (Venkatraman & Ramanujam, 1986).

In response to the limitations of traditional financial performance indicators, Kaplan and Norton (2005) proposed a more integrated framework for assessing company performance. As depicted in Figure 1.2, managers should be allowed to assess multiple facets of the organisation simultaneously. They should focus on a selected set of organisation performance

measures while preventing information overload that could arise from excessive measures (Kaplan & Norton, 2005).

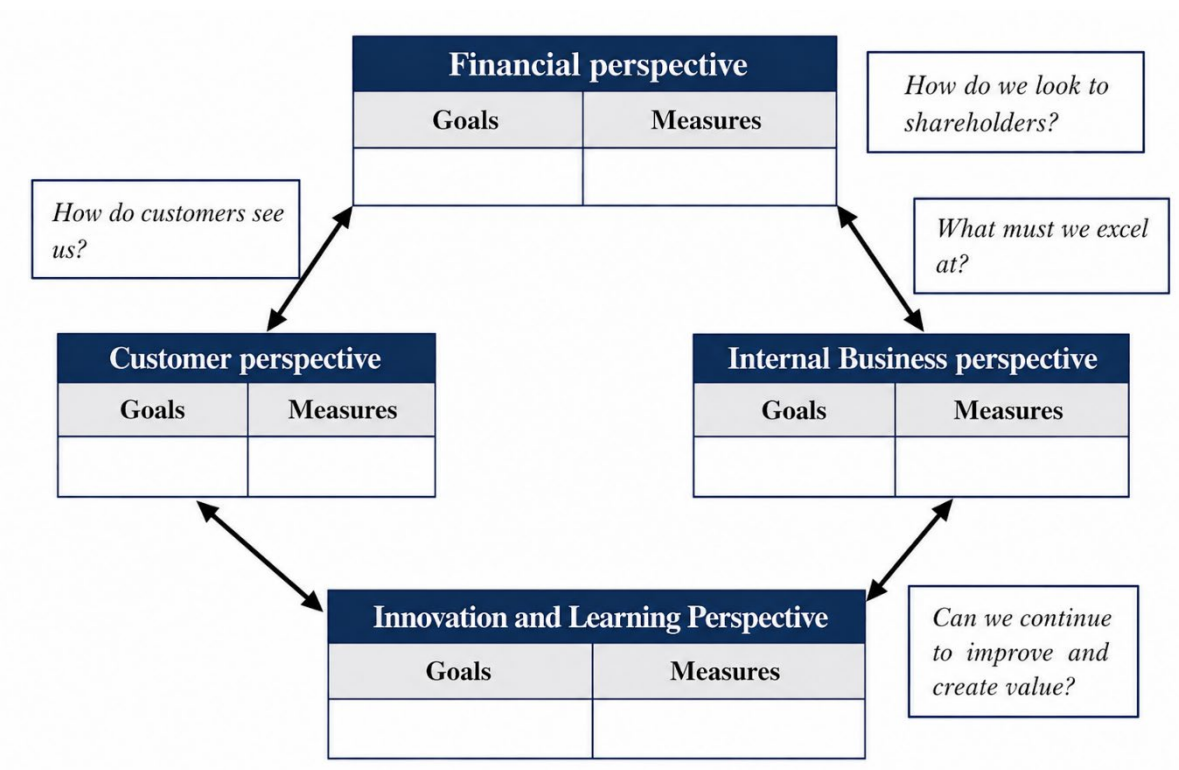


Figure 1.2: The Balanced Scorecard connection to Performance Measures

Source: Kaplan & Norton, 2005:174

Several empirical studies, as illustrated in Table 1.1, have made efforts to establish a clear connection between the remuneration of executives and company performance. However, the findings remain inconclusive, with some studies showing no significant link connecting CEO remuneration and organisational performance. Srivastava, Ahmad and Tiwary (2024) noted the methodological challenges of isolating the impact of individual variables on executive pay due to their correlations. For example, executive age, tenure, and company size often coexist, creating a risk of confounded results. Importantly, company performance alone does not account for variations in CEO remuneration. Factors such as company size, market conditions, industry competitiveness, and growth trajectories also play a substantial role in shaping CEO remuneration structures (Srivastava et al., 2024). This suggests a complex interplay between CEO remuneration and company performance, with no consensus emerging on the definitive predictors of CEO pay.

The financial performance variables for this investigation include both accounting (EPS, net profit, ROA, RSF and turnover as a control variable) and market-based performance measures (MC). Specifically, the independent variables are as follows:

- Earnings Per Share (EPS)
- Market Capitalisation (MC)
- Net profit
- Return on assets (ROA)
- Return on Shareholders' Funds (RSF)
- Turnover (control variable)

In addition, market capitalisation (MC) is included as a moderator variable. The moderating role of MC is particularly relevant given its strong association with organisational size and market valuation, both of which may influence the strength and direction of the connection between company performance and CEO remuneration.

The selection of these variables is influenced by their established relevance in measuring company performance and their use in prior research on CEO remuneration (Bussin et al., 2023; Ohidoa & Kolade, 2024; Lawrence, 2020;). An in-depth discussion of these variables is given in Chapter 3.

1.3 SCOPE OF THE STUDY

The analysis in this study examines the period between 2008 and 2020, selected to capture significant economic and corporate dynamics with both local and global implications and to enable a meaningful 13-year longitudinal analysis. This period encapsulates events that profoundly influenced CEO remuneration and company financial performance in South Africa and beyond. Collectively, these dynamics created a challenging environment for businesses and remuneration committees.

The key events during this period included the following:

- Global financial crisis (2008 -2009). Following the collapse of the U.S. mortgage market, the crisis caused stock market declines and corporate failures worldwide

(Hollander & Havemann, 2021). South Africa, integrated into global markets, faced reduced exports, declining business confidence, subdued GDP growth, and increased corporate governance scrutiny. Studying this period provides valuable insights into how South African companies recalibrated CEO remuneration in response to systemic shocks (Hollander & Havemann, 2021).

- South African Economic slowdown (2010-2015). Post-crisis recovery was sluggish, with GDP growth averaging 2% annually, insufficient to drive job creation or wage expansion (Statistics South Africa, 2021). Structural challenges, political instability, labour unrest, credit rating agency downgrades, and high unemployment constrained performance and influenced CEO remuneration practices (Baxter, 2021).
- Marikana massacres (2012). The death of 34 protesting miners ignited public outrage over pay disparities, intensified investor concerns around labour relations, and triggered calls for greater ethical leadership and stakeholder accountability. CEO remuneration became a focal point in debates about fairness and corporate responsibility (Bhattacharya, 2022).
- Credit Rating Downgrades (2017). The sovereign credit rating of South Africa was reduced to junk status, increasing capital costs and forcing companies to reassess business strategies and remuneration approaches (Omarjee, 2019).
- King IV code implementation (2018). The King IV Code of Corporate Governance provided a new benchmark for remuneration governance. It emphasises fair, responsible, and transparent pay aligned with strategic objectives, stakeholder outcomes, and ethical leadership (Kilian, 2020). Crucially, it introduced the requirement for a board subcommittee to oversee executive remuneration and the non-binding shareholder advisory vote on remuneration policy (Cliffe Dekker Hofmeyr, 2024). The King IV has thus become a critical framework shaping remuneration practices during the study period.
- COVID-19 pandemic (2020). The pandemic caused unprecedented global disruptions, leading to revenue declines, production halts, and widespread CEO pay cuts. Many executives voluntarily forfeit bonuses and salary increase, reflecting the broader hardships faced by employees (Deloitte, 2022). Simultaneously, firms restructured remuneration strategies to prioritise fairness, resilience, and alignment with shareholder value creation. Beyond remuneration, the pandemic accelerated digital

adoption, automation, and remote work. According to O'Toole et al. (2020), organisations advanced digital transformation at speeds 40 times faster than anticipated pre-pandemic, with CEOs reporting significantly faster turnaround times in strategic execution. O'Toole et al. (2020) similarly highlighted how initiatives that previously required months were implemented within days, underscoring the heightened demands for agility and resilience on CEOs. These shifts have enduring implications for company performance measures and executive remuneration.

Collectively, these events justify the chosen timeframe, allowing for an examination of CEO remuneration across varied economic cycles, governance reforms, and social pressures. Analysing this period enhances the understanding of pay-performance sensitivity across fluctuating macroeconomic and governance environments. Table 1.2 summarises these events and their potential influence on CEO remuneration structures.

Table 1.2: Changes implemented - expected vs actual number of days.

Type of Change	Estimated Days	Actual Days
Growth in remote work and collaborative practices	454	10.5
Rising consumer preference for digital purchasing and service platforms	585	21.9
Rising integration of cutting-edge technologies in operational processes	672	26.9
Increased use of innovative technologies to support business decisions	635	25.4
Evolving customer demands and preferences	511	21.3
Growing shift of assets to cloud infrastructure	547	26.6
Shifts in ownership of last-mile delivery	573	24.4
Growing adoption of nearshoring and insourcing strategies	547	26.6
Rising investment in data security	449	23.6
Inclusion of redundancies in the supply chain	537	29.6

Source: O'Toole et al. (2020): paragraph 3

The significance of global and local events in shaping the link connecting CEO remuneration and company performance has also been highlighted in prior empirical research. For instance, Siwendu et al. (2024) analysed the period 2015-2021, covering both the King III and King IV

corporate governance regimes. Nkwadi and Matemane (2022) focused on the period 2007 to 2018, capturing both pre- and post-Marikana uprising in the mining sector. Similarly, Bezuidenhout (2021) investigated state-owned enterprises (SOEs) from 2006 to 2015, thereby incorporating the pre- and post-global financial crisis periods. Additionally, Bhuyan et al. (2020) studied the insurance industry from 2001 to 2016, spanning the periods before and after the global financial crisis. Collectively, these studies highlight the relevance and precedent for selecting a multi-year period that reflects significant economic, social and governance milestones.

While the current study acknowledges the significant influence of the post-COVID-19 era on CEO remuneration and company performance, such developments fall outside its data scope. Nonetheless, the inclusion of 2020 allows the initial impact of COVID-19 to be captured, providing a robust foundation for understanding trends leading up to that point. Future research may benefit from incorporating post-2020 data to evaluate whether CEO remuneration practices have changed in response to the pandemic's longer-term implications.

1.4 PROBLEM STATEMENT

There is a requirement for a balance between the CEO's pay and organisational performance. Persistent misalignment and a significant gap in empirical clarity remain regarding the pay-performance link, especially regarding conditional and moderated relationships in emerging markets such as South Africa's JSE-listed companies (Bussin et al., 2023; Siwendu et al., 2024; Van Wyk & Wesson, 2021). Empirical evidence on this alignment remains inconclusive, with some studies finding significant and others insignificant relationships between CEO remuneration and company performance.

These factors have influenced the present study to consider more complex relationships between CEO remuneration and company performance. These factors suggest that the relationship is more complex than a linear link between remuneration and company performance outcomes. Influences such as company size, board structure, market conditions, and CEOs' personal bargaining power often blur the causal path (Finkelstein & Hambrick, 1988). Recent legislative reforms, including proposed amendments to the Companies Act 16 of 2024, have introduced new disclosure requirements aimed at addressing transparency and fairness in pay structures (Cliffe Dekker Hofmeyr, 2026). Ibrahim, Li, Yan and Zhao (2020)

highlighted the effectiveness of regulatory frameworks, underscoring their role in promoting accountability and controlling CEO remuneration. While these regulatory interventions are intended to promote accountability and pay-performance alignment, they also add complexity to the study of CEO remuneration. They introduce governance compliance considerations, which may influence remuneration outcomes, independently of company performance.

The researcher acknowledges that while researching the direct impact of CEO remuneration and company financial performance provides valuable insights, it does not fully capture the intricacy of this relationship. CEO remuneration is often related to the performance of a company, but the inconsistent results of empirical studies suggest that the relationship is not linear or consistent across different contexts (Van Wyk & Wesson, 2021). These inconsistencies may suggest the influence of other moderating variables in ways that may not be apparent when analysing direct relationships alone. Interactions and mediators enable the researcher to extend understanding of CEO remuneration by identifying conditions that influence the strength, weakness, or direction of the relationship. The interacting effect of the dependent variables (CEO remuneration components such as fixed pay, bonus, and total remuneration) is influenced by combinations of multiple independent variables. Including moderation and interaction effects in this study is challenging because it identifies new and complex relationships that require adequate explanation (Söderlund, 2023).

This study, therefore, endeavours to develop a more comprehensive understanding of the multifaceted relationship between CEO remuneration and company performance by including moderating and interaction variables to provide a more nuanced perspective on the factors influencing CEO remuneration in the South African context. This will significantly contribute towards the development of a robust model linking CEO remuneration to company performance.

1.5 RESEARCH QUESTIONS

The primary research question informing this quantitative study is: What is the relationship between CEO remuneration and company accounting performance among publicly listed companies on the JSE in South Africa from 2008 to 2020?

The secondary research questions are outlined below:

Research question 1:

What is the relationship between CEO fixed pay and the company accounting performance of publicly listed companies on the JSE for the period 2008 to 2020?

Sub-question 1.1: What is the relationship between CEO fixed pay and earnings per share (EPS)?

Sub-question 1.2: What is the relationship between CEO fixed pay and net profit?

Sub-question 1.3: What is the relationship between CEO fixed pay and return on assets (ROA)?

Sub-question 1.4: What is the relationship between CEO fixed pay and return on shareholders' funds (RSF)?

Research question 2:

What is the relationship between CEO STI and the company accounting performance of publicly listed companies on the JSE for the period 2008 to 2020?

Sub-question 2.1: What is the relationship between CEO STI and EPS?

Sub-question 2.2: What is the relationship between CEO STI and net profit?

Sub-question 2.3: What is the relationship between CEO STI and ROA?

Sub-question 2.4: What is the relationship between CEO STI and RSF?

Research question 3:

What is the relationship between CEO total remuneration and the company accounting performance of publicly listed companies on the JSE for the period 2008 to 2020?

Sub-question 3.1: What is the relationship between CEO total remuneration and EPS?

Sub-question 3.2: What is the relationship between CEO total remuneration and net profit?

Sub-question 3.3: What is the relationship between CEO total remuneration and ROA?

Sub-question 3.4: What is the relationship between CEO total remuneration and RSF?

Research question 4:

How does the interaction effect of company accounting performance measures (EPS and net profit) influence CEO remuneration in JSE-listed companies from 2008 to 2020?

Sub-question 4.1: How does the interaction between EPS and net profit influence CEO fixed pay?

Sub-question 4.2: How does the interaction between EPS and net profit interact to influence CEO STI?

Sub-question 4.3: How does the interaction between EPS and net profit influence CEO total remuneration?

Research question 5:

How does the interaction effect of company accounting performance measures (EPS and ROA) influence CEO remuneration in JSE-listed companies from 2008 to 2020?

Sub-question 5.1: How does the interaction between EPS and ROA influence CEO fixed pay?

Sub-question 5.2: How does the interaction between EPS and ROA interact to influence CEO STI?

Sub-question 5.3: How does the interaction between EPS and ROA influence CEO total remuneration?

Research question 6:

How does the interaction effect of company accounting performance measures (EPS and RSF) influence CEO remuneration in JSE-listed companies from 2008 to 2020?

Sub-question 6.1: How does the interaction between EPS and RSF influence CEO fixed pay?

Sub-question 6.2: How does the interaction between EPS and RSF interact to influence CEO STI?

Sub-question 6.3: How does the interaction between EPS and RSF influence CEO total remuneration?

Research question 7:

How does the interaction effect of company accounting performance measures (RSF and net profit) influence CEO remuneration in JSE-listed companies from 2008 to 2020?

Sub-question 7.1: How does the interaction between RSF and net profit influence CEO fixed pay?

Sub-question 7.2: How does the interaction between RSF and net profit interact to influence CEO STI?

Sub-question 7.3: How does the interaction between RSF and net profit influence CEO total remuneration?

Research question 8:

How does company size, as measured by MC, moderate the relationship between net profit and CEO remuneration in publicly listed companies on the JSE for the period 2008 to 2020?

Sub-question 8.1: To what extent does company size, as measured by MC, moderate the relationship between net profit and CEO fixed pay?

Sub-question 8.2: To what extent does company size, as measured by MC, moderate the relationship between net profit and CEO STI?

Sub-question 8.3: To what extent does company size, as measured by MC, moderate the relationship between net profit and CEO total remuneration?

Research question 9:

How does company size, measured by MC, moderate the relationship between ROA and CEO remuneration in publicly listed companies on the JSE for the period 2008 to 2020?

Sub-question 9.1: To what extent does company size, as measured by MC, moderate the relationship between ROA and CEO fixed pay?

Sub-question 9.2: To what extent does company size, as measured by MC, moderate the relationship between ROA and CEO STI?

Sub-question 9.3: To what extent does company size, as measured by MC, moderate the relationship between ROA and CEO total remuneration?

Research question 10:

How does company size, measured by MC, moderate the relationship between RSF and CEO remuneration in publicly listed companies on the JSE for the period 2008 to 2020?

Sub-question 10.1: To what extent does company size, as measured by MC, moderate the relationship between RSF and CEO fixed pay?

Sub-question 10.2: To what extent does company size, as measured by MC, moderate the relationship between RSF and CEO STI?

Sub-question 10.3: To what extent does company size, as categorised by MC, moderate the relationship between RSF and CEO total remuneration?

1.6 RESEARCH OBJECTIVE

The research objectives below articulate the study's broader aim, followed by the specific objectives to be addressed.

1.6.1 General Objectives of the Research

This study aims to examine CEO remuneration in relation to company performance among publicly listed companies on the JSE from 2008 to 2020. Additionally, it seeks to explore the moderating effect of company size (measured by MC) on this relationship and to evaluate the combined influence of multiple company accounting performance measures on CEO remuneration. The moderating and interaction effects constitute secondary, more nuanced objectives that extend the understanding of the broader CEO remuneration–performance nexus.

1.6.2 Specific Sub-objective of the Research

The specific objectives and sub-objectives of the research are outlined below:

Research objective 1:

To examine the relationship between CEO fixed pay and company accounting performance (EPS, net profit, ROA and RSF) in publicly listed companies on the JSE between 2008 and 2020.

Sub-objective 1.1: To examine the relationship between CEO fixed pay and EPS.

Sub-objective 1.2: To examine the relationship between CEO fixed pay and net profit.

Sub-objective 1.3: To examine the relationship between CEO fixed pay and ROA.

Sub-question 1.4: To examine the relationship between CEO fixed pay and RSF.

Research objective 2:

To investigate the relationship between CEO STI and company accounting performance measures (EPS, net profit, ROA and RSF) in publicly listed companies on the JSE from 2008 to 2020.

Sub-objective 2.1: To examine the relationship between CEO STI and ESP.

Sub-objective 2.2: To examine the relationship between CEO STI and net profit.

Sub-objective 2.3: To examine the relationship between CEO STI and ROA.

Sub-objective 2.4: To examine the relationship between CEO STI and RSF.

Research objective 3:

To determine the relationship between CEO total remuneration and company accounting performance (EPS, net profit, ROA and RSF) in publicly listed companies on the JSE for the period 2008 to 2020.

Sub-objective 3.1: To assess the relationship between CEO total remuneration and EPS.

Sub-objective 3.2: To evaluate the relationship between CEO total remuneration and net profit.

Sub-objective 3.3: To examine the relationship between CEO total remuneration and ROA.

Sub-objective 3.4: To explore the relationship between CEO total remuneration and RSF.

Research objective 4:

To examine the interaction effect of company accounting performance measures (EPS and net profit) on CEO remuneration in JSE-listed companies (2008 to 2020).

Sub-objective 4.1: To determine the interaction effects of EPS and net profit on CEO fixed pay.

Sub-objective 4.2: To analyse the interaction effects of EPS and net profit on CEO STI.

Sub-objective 4.3: To assess the interaction effects of EPS and net profit on CEO total remuneration.

Research objective 5:

To examine the interaction effect of company accounting performance (EPS and ROA) on CEO remuneration in JSE-listed companies (2008 to 2020)

Sub-objective 5.1: To determine the interaction effects of EPS and ROA on CEO fixed pay.

Sub-objective 5.2: To analyse the interaction effects of EPS and ROA on CEO STI.

Sub-objective 5.3: To evaluate the interaction effects of EPS and ROA on CEO total remuneration.

Research objective 6:

To examine the interaction effect of company accounting performance measures (EPS and RSF) on CEO remuneration in JSE-listed companies from 2008 to 2020 compared with their individual effect.

Sub-objective 6.1: To determine the interaction effects of EPS and RSF on CEO fixed pay.

Sub-objective 6.2: To analyse the interaction effects of EPS and RSF on CEO STI.

Sub-objective 6.3: To evaluate the interaction effects of EPS and RSF on CEO total remuneration.

Research objective 7:

To determine the interaction effect of company accounting performance measures (RSF and net profit) on CEO remuneration in JSE-listed companies for the period 2008 to 2020.

Sub-objective 7.1: To determine the interaction effects of RSF and net profit on CEO fixed pay.

Sub-objective 7.2: To determine the interaction effects of RSF and net profit on CEO STI.

Sub-objective 7.3: To determine the interaction effects of RSF and net profit on CEO fixed pay, CEO's total remuneration.

Research objective 8:

To investigate how company size (MC) moderates the relationship between company accounting performance, net profit, and CEO remuneration in JSE-listed companies for the period 2008 to 2020.

Sub-objective 8.1: To assess the moderating role of company size (as categorised by MC) on the relationship between net profit and CEO fixed pay.

Sub-objective 8.2: To examine the moderating role of company size (as categorised by market capitalisation) on the relationship between net profit and CEO STI

Sub-objective 8.3: To analyse the moderating role of company size (as categorised by MC) on the relationship between net profit and CEO total remuneration.

Research objective 9: To determine how company size (MC) moderates the relationship between company accounting performance, ROA, and CEO total remuneration in JSE-listed companies for the period 2008 to 2020.

Sub-objective 9.1: To determine the moderating role of company size (as categorised by MC) on the relationship between ROA and CEO fixed pay.

Sub-objective 9.2: To analyse the moderating role of company size (as categorised by market capitalisation) on the relationship between ROA and CEO STI

Sub-objective 9.3: To assess the moderating role of company size (as categorised by MC) on the relationship between ROA and CEO total remuneration.

Research objective 10:

To determine how company size (MC) moderates the relationship between company accounting performance, RSF, and CEO total remuneration in JSE-listed companies for the period 2008 to 2020.

Sub-objective 10.1: To determine the moderating role of company size (as categorised by MC) on the relationship between RSF and CEO fixed pay.

Sub-objective 10.2: To analyse the moderating role of company size (as categorised by market capitalisation) on the relationship between RSF and CEO STI

Sub-objective 10.3: To assess the moderating role of company size (as categorised by MC) on the relationship between RSF and CEO total remuneration.

In line with the study's quantitative and deductive approach, the research sets out to empirically examine the relationship existing between CEO remuneration and company performance among JSE-listed companies. While the research objectives and questions provide a broad investigative framework, the study also formulates hypotheses to test the relationships among variables statistically. The research hypotheses make predictive assumptions about the direction and strength of relationships, allowing for verification through quantitative analysis. These hypotheses are grounded in relevant theories, particularly agency theory, and supported by prior empirical studies. Statistical methods were used to test for direct, moderating and interaction effects. The researcher formulated a hypothesis for each subobjective, which is outlined comprehensively in Chapter 4.

The primary hypotheses are outlined below:

H₁: There is a statistically significant relationship between CEO remuneration, namely fixed pay, STI and total remuneration, and company performance indicators EPS, net profit, ROA and RSF among JSE-listed companies for the period 2008 to 2020.

H₂: The interaction between company performance indicators, namely EPS, net profit, ROA and RSF, has a statistically significant influence on CEO remuneration types, namely fixed pay, STI and total remuneration, beyond the individual effects of each measure among JSE-listed companies for the period 2008 to 2020.

H₃: Company size, measured by market capitalisation, significantly moderates the relationship between company performance indicators, namely EPS, net profit, ROA and RSF, and CEO remuneration, measured through fixed pay, STI and total remuneration among JSE-listed companies for the period 2008 to 2020.

1.7 RESEARCH ASSUMPTIONS, DELIMITATIONS AND PRESUPPOSITIONS

This research sought to assess whether CEO remuneration is associated with the performance of JSE-listed companies during the 2008 to 2020 period. For a study to be conducted, the

researcher must make assumptions, address limitations, and make presuppositions to successfully execute the research (Dawadi, Shrestha & Giri, 2021). These facets not only underpin the current study but also provide valuable insights for future researchers, offering an understanding of the constraints, assumptions, and adjustments made to navigate the research landscape.

The general assumption is that remuneration and company performance will remain of public interest during the study, as they have in the last few decades. This assumption implies that these factors will continue to drive research efforts to formulate justified, innovative recommendations that align remuneration strategies with company performance.

The limitations in defining the study's scope and boundaries include choices related to the research questions, objectives, variables of interest, and theoretical frameworks (Bhosale, 2024). The researcher acknowledges that while other sectors could be studied, the focus is exclusively on JSE companies. This was largely driven by considerations such as time constraints, data accessibility, and the need to realistically manage the study's scope. By concentrating on specific independent and dependent variables, the study obtains clarity and a focused direction (Bhosale, 2024).

The research title presupposes a relationship between CEO remuneration and company performance, suggesting that CEO remuneration may contribute to favourable company performance outcomes. However, the study recognises that company performance is a collective effort involving employees and CEOs, extending beyond the CEOs' contributions. While the CEO is accountable for the company's vision and business model, this study's limitation lies in its focus on the CEO's contributions, thereby excluding broader organisational dynamics.

In summary, the study's assumptions, delimitations, and presuppositions guide the analytical journey. While the research is geared toward exploring the impact of CEO remuneration on company performance, it is important to acknowledge the multifaceted nature of organisational success, wherein the CEO is among many contributors.

1.8 CHAPTER OUTLINE

The study is organised into the following chapters:

Chapter 1 – Introduction and background

This chapter sets the stage by introducing the research topic and its context.

Chapter 2 – Literature review on CEO remuneration

Chapter 2 provides an in-depth review of the literature on CEO remuneration, both international and South African, and its link to company performance. It covers theoretical foundations, empirical findings, types of CEO remuneration, the significance of labour movements and legislation, historical trends, and other key factors shaping remuneration practices.

Chapter 3 – Remuneration structures and company performance measures

This chapter explores the intricacies of remuneration structures, their evolution, and their connection to economic, political, and social contexts. It defines and explains various components of remuneration, discusses their calculation and presentation in financial statements, and elucidates their impact on the study's final analysis. Furthermore, the chapter outlines the company performance measures employed in the study and their role in the analytical process.

Chapter 4 – Research design and methodology

Chapter 4 provides a comprehensive overview of the research design and methodology. This includes the research method, the target population, the sampling approach, the data collection tools, the data management, and the chosen data analysis methodology.

Chapter 5: Research findings and discussion

The research outcomes are presented and thoroughly discussed. This chapter summarises the main research findings and offers recommendations for a potential framework that could be utilised to provide guidelines linking remuneration and performance. The implications of the findings are explored, and their practical relevance is discussed.

Chapter 6: Discussion of results

Within the framework of the literature review, this chapter presents a comprehensive overview of the empirical findings. The foremost aim of this chapter is to relate the results from Chapter 5 with those of previous investigations on similar area of focus. The key similarities and

differences between this study's findings and those of previous investigations are highlighted to advance the existing literature.

Chapter 7: Conclusion

This chapter concludes the research study by revisiting the research questions, discussing, and evaluating the contribution of this research to the literature, and providing ideas for future research.

1.9 CHAPTER SUMMARY

Chapter 1 provided a structured introduction to the study by situating CEO remuneration within both its historical development and contemporary debates. It traced the evolution of remuneration practices, highlighted emerging trends, and outlined the South African context, where persistent inequalities between executives and employees remain shaped by the legacy of apartheid and broader socio-economic imbalances.

The chapter established the rationale for the study by identifying the research problem, objectives, and hypotheses and by reviewing the theoretical and empirical literature linking CEO remuneration and company performance. The discussion focused on early approaches such as Taylorism and Mayo/McGregor's theories X and Y, as well as more contemporary frameworks such as agency theory, stewardship theory, and optimal contracting theory. These theories provide the analytical foundation for examining the dynamic relationships among CEO remuneration, shareholder interests, and performance outcomes.

The primary aim of the study was to contribute to debates on the relationship between CEO remuneration and company performance, with particular attention to moderating and interaction effects. Market capitalisation was introduced as a proxy for company size, whereas combinations of performance indicators were identified as key to capturing the complexity of remuneration dynamics.

Finally, the chapter emphasised the practical and theoretical significance of the research. The findings are expected to inform multiple stakeholders – including organisations, remuneration committees, labour representatives, and human resource professionals – by offering insights into effective remuneration design and broader corporate governance implications. Chapter 2 examines the evolving role of CEOs and the theoretical underpinnings that shape remuneration practices.

CHAPTER 2: LITERATURE REVIEW ON EXECUTIVE REMUNERATION

2.1 INTRODUCTION

The relationship between CEO remuneration and company performance continues to generate debate among policymakers, remuneration consultants, unions, and the broader society. At the centre of this discourse lies the question of whether executive pay reflects performance outcomes or whether it is shaped by broader structural and institutional dynamics.

The aim of this chapter is to investigate the evolution of the CEO's role and its implications for remuneration practices. The chapter traces how changing responsibilities and expectations of CEOs have influenced both the structure and the levels of remuneration, situating these developments within theoretical perspectives on executive pay. In addition, the analysis considers the role of legislation and governance reforms in shaping remuneration practices, particularly within the South African context. The chapter concludes by examining other contextual factors that continue to influence CEO pay, thereby laying the conceptual foundation for understanding the remuneration–performance nexus explored in the study's empirical sections.

The debate around CEO remuneration and its relationship to company performance has been of interest to private individuals, remuneration consultants, unions, and governments worldwide. The central purpose of this research is to determine the relationship between CEO remuneration and company performance. The remuneration trends of CEOs have evolved over time to the current structure and level. How this evolution of CEO responsibilities and perceived role within the company has changed has a bearing on CEO remuneration. This chapter will discuss in detail the evolution of this role and its impact on remuneration. Theories have also been espoused, which further clarify the development of CEO remuneration. This chapter continues with a discussion on how legislation has influenced remuneration. It will conclude with an overview of other factors that affect CEO remuneration.

2.2 TRANSFORMING THE ROLE OF CEO POSITIONS, THEORIES AND OTHER DETERMINANTS OF REMUNERATION

To fully evaluate the relationship between CEO remuneration and company performance measures, it is necessary to first examine how CEOs' roles and responsibilities have evolved over time. CEOs today are not only the highest-ranking executives, but also the individuals held directly accountable for organisational results (Skarlicki et al., 2023). Their accountability extends beyond internal company goals to include diverse external standards and stakeholder expectations. CEOs therefore act as a bridge between internal capabilities and external demands, balancing resources and market pressures while being closely scrutinised by stakeholders, particularly regarding their remuneration (Bai & Mkrtchyan, 2023; Maloa, 2020).

This evolution has not been linear. Early contributions, such as Mintzberg (1973) and Hart and Quinn (1973), questioned the assumption that CEOs are long-term strategic planners directly responsible for financial outcomes. Instead, they highlighted the role's fragmented and visionary nature, suggesting that remuneration tied solely to financial performance may lack justification. These arguments remain relevant, particularly where unions, employees, and the public view CEO pay as disproportionate to measurable contributions.

2.2.1 Historical Shifts in the CEO Role

This historical evolution suggests that remuneration has progressively shifted from salary-based remuneration toward performance-linked incentives tied to shareholder value. However, early critiques and ongoing controversies suggest that the justification for such remuneration remains contested. In the South African context, which is characterised by legacy inequalities and public scrutiny, these debates are particularly salient. Understanding the trajectory of CEO roles and remuneration thus provides a critical context for analysing whether current practices are defensible and whether pay–performance linkages are empirically valid.

The historical trajectory of CEO roles and remuneration is summarised in Table 2.1, which highlights the progression from managerial professionalism to entrepreneurial leadership, alongside corresponding shifts in remuneration structures.

Table 2.1: Summary of historical shifts

Era/Context	CEO role characteristics	Remuneration characteristics	Implications for pay-for-performance
1945–1973: Managerial Capitalism	CEOs as professional managers; focus on production efficiency and societal responsibilities (Bresser-Pereira, 2023).	Modest pay differentials: loyalty and tenure valued; salaries financed from retained earnings.	Weak or no explicit pay-performance link; remuneration seen as professional remuneration.
1970s–1980s: Rising Complexity	CEOs as strategic leaders facing economic stagnation, inflation, and foreign competition (Ha et al., 2022).	External labour markets and education influenced pay (Cappelli et al., 1997; Katz & Krueger, 1991).	Early moves toward performance-based pay; loyalty is less rewarded.
1980s–1990s: Shareholder Value Era	CEOs as agents of shareholders; focus on wealth maximisation (The Business Roundtable, 1981; 1997).	Increasing use of equity-based pay, especially stock options (Jensen & Murphy, 1990).	Explicit attempt to align CEO and shareholder interests.
1990s–2000s: Entrepreneurial CEO	CEOs reframed as entrepreneurial leaders and co-owners (Boatright, 2009; Englander & Kaufman, 2004;).	Stock options and incentive schemes dominate remuneration.	Pay is increasingly framed as profit-sharing, blurring lines between salary and ownership returns.
Contemporary Context (e.g., South Africa)	CEOs balancing internal capabilities with external stakeholder demands (Bai & Mkrtchyan, 2023; Skarlicki et al., 2023).	Large, often controversial packages (e.g., Business Tech, 2024; Sibanye Stillwater, 2021).	Raises ongoing questions about fairness, legitimacy, and true performance alignment.

Source: Researcher-generated synthesis

As summarised in Table 2.1, the evolution of CEO roles reflects a clear trajectory from managerial professionalism to entrepreneurial leadership, with the latter increasingly tied to shareholder value. Each era introduced new expectations, pressures, and remuneration structures, culminating in contemporary debates around the fairness and legitimacy of CEO pay. This historical context is critical for situating the present study, as it highlights the shifting rationales behind CEO remuneration and underscores why examining the link with company performance remains a contested yet essential area of inquiry. The next section, therefore,

turns to the theoretical frameworks that provide explanatory insights into these developments and their implications for remuneration practices.

The role and responsibilities of a CEO have evolved over time as a response to major events and philosophies. These events and philosophies have largely shaped perceptions of a CEO's expected duties and responsibilities. These impactful events will be discussed in further detail, and how this role has also influenced the evolution of CEOs' remuneration practices will be determined.

Mintzberg (1973) challenged the notion of the CEO as a long-term strategic planner, arguing that the nature of their role, marked by constant interruptions, limits their capacity for long-term strategic planning (Carlson, 1951). Similarly, Hart and Quinn (1973) saw the role of the CEO as setting the vision and driving organisational effectiveness rather than directly influencing financial performance. Assertions such as these, therefore, may lend credence to arguments from key stakeholders, such as unions, staff, and the public, that there is no justification or rationale for CEO remuneration, particularly with reference to the financial results of organisations in their published annual reports. These early perspectives raise important questions about the justification for CEO remuneration levels, especially when remuneration is often publicly defended on the basis of financial performance indicators reported in annual financial statements. In the context of this study, these early views highlight the importance of interrogating whether remuneration structures accurately reflect CEO contributions to measurable organisational outcomes.

There is a historical continuum of the changing role of CEOs within the United States of America (U.S.A), which closely mirrors what has been observed in other countries. According to Bresser-Pereira (2023), the era from 1945 to 1973 was the golden age of managerial capitalism. The managers adopted the role of professionals with specialised skills, with the mandate and interests of the public in mind and motivated by ethical considerations instead of individual gain. The managers controlled the vast resources of corporations, which they distributed fairly among all interested parties. They saw their role as a counterbalance to the political power of governments (Bresser-Pereira, 2023). During this period, expansion was largely financed through retained earnings. Competent managers were employed to ensure the delivery of production results. Salary differences between the various levels were modest.

Katz and Krueger (1991) noted that the external labour market was an influential factor in determining pay in the 1980s more than in the 1970s. In the 1980s, more than in the 1970s, there was also a decline in the differentials of salaries on the basis of years of loyalty to employers (Cappelli et al., 1997). In the 1980s, there was also a pay difference based on educational level. There was more premium placed on brains than physical capabilities (Capelli et al. 1997). Satyenra (2022) noted that the CEO's role shifted toward a more strategic focus as the business environment became more complex in the 1970s and early 1980s. According to the 1981 Business Roundtable Statement on corporate responsibility, the role of corporate CEOs was to balance shareholder expectations for maximum returns against other priorities confronting CEOs (The Business Roundtable 1981). The Roundtable Statement of Corporate Responsibility (1997:3), however, reviewed this notion of the board's role.

The notion that the board of directors should reconcile the interests of shareholders and other stakeholders fundamentally misconstrues the role of directors (Satyenra, 2022). Additionally, this approach is impractical because it fails to provide the board with a clear framework for addressing conflicts between shareholders' interests and those of other stakeholders, or among stakeholder groups.

According to Ha et al. (2022), the 1970s and 1980s saw slow growth and inflation, which caused economic hardships and increased competition from foreign markets. This created an era of attempting to help CEOs adopt strategies that usher companies into more aggressive business practices that would counter foreign investments, encourage CEOs to enter new industries and adopt measures to streamline their production. The focus was on wealth creation for the shareholder. In the 1990s, CEOs were encouraged to make decisions to create shareholder wealth. The interests of CEOs and shareholders were aligned, incentivising the use of stock options (Ha et al., 2022).

This historical overview and development demonstrate that the role of CEOs has progressively evolved from being operationally focused professionals to strategic leaders navigating complex stakeholder expectations and competitive market forces. This evolution has, in turn, influenced how CEOs are remunerated. The transition from modest salary differences in the post war period to performance-based pay structures in the 1980s and beyond reflects a shift in expectations, with remuneration tied to performance. This evolution reflects a shift from

operationally focused professionals to strategic leaders navigating complex stakeholder expectations and competitive markets. The transition from modest post-war salary differences to performance-based pay highlights the growing linkage between remuneration and organisational performance, establishing the foundation for this study.

The next era saw the strengthening of the partnership between capital owners and CEOs.

In the 1990s, it was widely argued that the separation of ownership and control meant that shareholders, as principals, delegated the management of the company to professional managers, who act as their agents in running the business (Segrestin, Johnston & Hatchuel, 2019). A key challenge arising from this separation, however, is whether it truly acts in the best interests of shareholders, fulfilling their role as agents of principals (Segrestin et al., 2019).

Boards mitigate agency challenges by appointing, monitoring, and, if necessary, replacing CEOs, imposing fiduciary duties to serve shareholders' interests. This period transformed CEOs from bureaucratic managers to entrepreneurial leaders. Englander and Kaufman (2004) identify several distinguishing characteristics:

- From “honest broker” to “shareholder partisan” – CEOs were once seen as neutral intermediaries, tasked with fairly distributing wealth generated from business activities across all stakeholders. This approach was rooted in the socialist principle of resource allocation based on need, as discussed in Chapter 1. Over time, however, the role evolved, with the CEO's loyalty now being exclusively directed toward one group: the shareholders. This marked a fundamental shift in their function within the company.
- An exclusive fiduciary duty to shareholders – traditionally, CEOs owed their fiduciary duty to both the company and its shareholders. However, this responsibility gradually became exclusive, with the CEO's role being redefined to prioritise the interests of shareholders above all else.
- A solitary competitor – from an egalitarian company leader to a leader – is concerned with building a top position with the promise of great fortune. From being a corporate citizen to being less concerned about corporate social responsibility – by making managers more concerned about company profitability and enhancing the wealth of

shareholders – the managers became more concerned with the obligation of utilising the company's resources to increase its profit. This was in line with their new role as entrepreneurs.

- From technocrat to entrepreneur, Boatright's (2009) explanation of the role of CEO was that during the 1990s, United States of America (U.S.A) corporations changed. This was from being bureaucrats or technocrats to being entrepreneurs. This was due to changes in CEO remuneration, with pay largely tied to share option schemes. Jensen and Murphy (1990) recommended that shareholders and directors remunerate CEOs with stock options. These authors contend that granting stock options to CEOs serves as a mechanism by which shareholders can secure value for their investments. They argued that offering substantial remuneration through stock options helps address the agency problem arising from the separation of ownership and control in modern corporations. According to their view. The management of companies and the generation of wealth would be more effective if CEOs were considered co-owners of the business rather than merely external hires working for a salary. Jensen and Murphy (1990) argued that payment in stock would overcome the problems of separating ownership from the control of organisations. With managers as co-owners of the business, this would ensure alignment of interests. As bureaucrats, CEOs do not behave like value-adding individuals (Jensen & Murphy, 1990).

This evolution redefined how CEOs are perceived and remunerated. If CEOs become co-owners, remuneration increasingly reflects profit sharing rather than traditional employee remuneration (Jensen & Murphy, 1990).

Although the evolving role of the CEO has changed over time to include part ownership through share schemes, this has not evolved in many instances to control or substantial ownership of the organisation. Share ownership has given the CEO an interest in the organisation. Such share ownership provides CEOs with a moderate equity stake, allowing them a personal financial interest in the organisation's performance. These long-term incentives are typically designed to align the CEO's interests with long-term company performance rather than to grant majority ownership rights. While CEO ownership is not included as a performance metric in this study, this contextual understanding helps explain certain behaviours, performance patterns, and remuneration outcomes observed in the results,

which may be attributable to stronger incentive alignment and lower agency costs. The remuneration of CEOs, therefore, as share owners, mirrors how actual owners are compensated, not through higher salaries when profits increase; instead, their rewards are obtained through dividends or long-term incentives.

2.3 THEORIES ON EXECUTIVE REMUNERATION

The previous section highlighted the evolution of the CEO role, the changing contexts within which CEOs operate, and the corresponding shifts in remuneration strategies. This section examines various theories on executive remuneration, drawing from diverse management perspectives. Despite the emergence of multiple explanatory frameworks, no single, universally accepted theory comprehensively accounts for the complexity of CEO remuneration.

Adam Smith, one of the foundational thinkers in economic theory, argued that wealth is generated through productive labour, with individuals motivated by self-interest to allocate resources efficiently (Davlembayeva & Alamanos, 2023). According to this view, profits arise from capital investments, and capital is directed towards areas where it is expected to produce the highest returns (Douglas, 1927). CEO remuneration, both in South Africa and globally, has risen significantly, eliciting widespread societal concerns and attracting substantial academic interest. Researchers have applied various theories to explain CEO remuneration and its determinants (Ramgath & Bussin, 2021; Shabbir et al., 2024). While these theories offer valuable insights into CEO remuneration, none fully capture its complexity or provide a universally accepted rationale (Zhang, 2023). Relevant theories could assist in interpreting the study findings by providing a lens through which to assess whether the principles they propose are supported by the observed direct, moderated or interaction effects between CEO remuneration and company performance.

A spectrum of theories explains labour motivation and organisational dynamics. The first is agency theory, which conceptualises the organisation around the conflict between the CEO and the principal, emphasising control systems and intrinsic managerial motivations (Till & Yont, 2019). On the other hand, stewardship theory assumes alignment between the interests of the CEO and the principal and emphasises intrinsic incentives to promote CEO self-actualisation. Among these extremes, perspectives such as stakeholder theory—which

contrasts shareholder value maximisation with broader stakeholder value creation—and resource dependency theory—which expands the role of the board of directors beyond traditional oversight—enrich the conceptual framework (Bridoux & Stoelhorst, 2022).

Empirical studies indicate that agency theory remains the most frequently applied framework for analysing the correlation between CEO remuneration and company performance (Marimuthu & Kwenda, 2019; Siwendu et al., 2023). However, Klettner (2021) challenges the dominance of agency theory, proposing that principal-agent theory, stewardship/stakeholder theory, and CEO power theory collectively offer a more nuanced explanation of executive remuneration dynamics.

This study draws primarily on agency theory, managerial power, optimal contracting, and stewardship theories, while also incorporating additional relevant theoretical perspectives discussed in subsequent sections to examine the relationship between CEO remuneration and company performance. Unpacking and critically comparing these theories will reveal their strengths and weaknesses, thereby identifying gaps and potentially offering insights into scholarly discourse. The theoretical concepts will be outlined, and illustrations of the practical application and limitations of these theories will be provided to advance our understanding of CEO remuneration strategies within companies.

2.3.1 Agency Theory

With the growth of production and the increasing demands on business owners, management responsibilities have been transferred to professionals with the time and expertise needed to run the business effectively. JSE-listed companies exemplify the separation between the ownership of assets (principals) and the management of assets (agents), a structural distinction that underpins many challenges in modern organisations. This separation necessitates delegation of decision-making from principals to agents, forming the foundation of the principal–agent relationship (Zhao & Yang, 2019). Jensen and Meckling (1976) formalised this relationship in agency theory, wherein shareholders (principals) appoint CEOs (agents) to manage their interests (Jensen & Meckling, 1976). With the development of production and the demands made on owners by the business, there is a need to transfer the management of the business to professionals with the time and ability to manage the business. JSE companies are characterised by the separation of ownership of assets and the management of assets. This

separation between ownership (principal) and management (agent) has created the challenges of modern-day organisations. The management of a company is performed through the delegation of decision-making by principals to agents. This, therefore, led to the development of the principal and agent relationship (Zhao & Yang, 2019). A theory proposed by Jensen and Meckling (1976) to clarify the relationship between shareholders and CEOs is agency theory. Shareholders, referred to as principals, appoint CEOs known as agents to manage their interests in companies (Jensen & Meckling, 1976). In terms of JSE-listed companies, the principal is considered to be a shareholder, whereas the agent is considered to be a company CEO.

Agency theory defines organisations by the inherent conflict between principals and agents. Shareholders aim to maximise company profitability, while agents may pursue personal interests. To mitigate this conflict, agency theory proposes mechanisms such as monitoring CEO behaviour and designing contracts to align incentives (Zhao & Yang, 2019).

Principal agent theory and positivist agency theory are the two types of agency theory that Eisenhardt (1989) distinguishes. Positivist agency theory focuses on situations in which principals and agents are likely to have conflicting goals and the governance mechanisms adopted to manage these conflicts (Eisenhardt 1989). The positivist agency theory may provide theoretical insight into the origins of the current performance contracting arrangements between CEOs and organisations. The principal-agent model serves as the principal theoretical foundation for paying CEOs bonuses, stock, and options rather than a fixed wage (Zogning, 2022). Outcome-based contracts reduce agent risk, incentivising CEOs to act in shareholders' interests. Human resources professionals contribute by developing formal performance management structures for CEO evaluation and contracting. According to positivist agency theory, the likelihood that an agent will act in the principals' interests increases if the contract is outcome-based. The contribution of human resources professionals is the development of a performance management mechanism that provides a formal structure for performance contracting and evaluation between the CEO and the company.

The second control mechanism is information transparency. The argument of positivist theory is that when the principal has access to information systems, these provide the principal with the means to monitor the agent and therefore curb agent self-interest (Alhammadi et al., 2023). However, this mechanism may be ineffective, as the CEO could manipulate the disclosed

information to advance their personal interests. Auditing practices, grounded in agency theory principles, were developed to ensure accurate reporting from agents to principals (Institute of Chartered Accountants England and Wales, 2005). Therefore, audits of company financials regarding remuneration packages and incentives are mechanisms put in place by shareholders to address concerns about the agent's trustworthiness (Al-Faryan, 2024). Khumalo and Masenge (2015) also identified a misalignment between the agent and the principal. According to agency theory, it is reasonable to expect a correlation between certain company-specific parameters and CEO remuneration. However, Khumalo and Masenge (2015), in their study on the relationship between CEO remuneration and the performance of South Africa's five largest commercial banks, reported findings that do not fully support the hypothesis that bank-specific performance measures are related to CEO remuneration.

The second stream of agency theory, as outlined by Jensen (1983), is principal-agent research. This approach analyses the most optimal contract type across varying levels of outcome uncertainty, risk aversion, and information asymmetry (Eisenhardt, 1989). Principal-agent theory focuses on determining the optimal contract between the principal and the agent, balancing the agent's behaviour with expected outcomes. Scenario one assumes that the principal knows the agent's behaviour, making outcome-based contracts optimal. In scenario two, the principal may not always have full visibility of the behaviour of the agent (i.e., the CEO) (Zhou, 2023). The agent's pursuit of self-interest can place the principal at risk. As a result, the principal must invest in mechanisms to monitor the agent's actions. These can include reporting systems, budgeting frameworks, audits to assess financial performance, and the appointment of a board of directors to oversee and ensure appropriate CEO conduct (Eisenhardt, 1989). These mechanisms serve to link the interests of the CEO (agent) with those of the shareholders (principal). Within this context, short-term incentives, such as deferred remuneration, act as tools for risk sharing between agents and principals. The agent, therefore, assumes part of the risk involved in achieving the outcome. By deferring payments based on performance outcomes, shareholders can partially mitigate agency risk while incentivising the COE to act in the company's interests. This risk sharing mechanism directly supports the objectives of this study, which seeks to examine whether a relationship exists between CEO STI and company performance in JSE-listed companies. The structure and use of STIs therefore provide insight into how remuneration strategies may drive or reflect company performance outcomes (Van Wyk & Wesson, 2021)

Critics of agency theory have noted that these monitoring and contracting mechanisms are expensive and complex and may outweigh their benefits (Al-Faryan, 2024). In some instances, these mechanisms may interfere with and restrict the CEO's efforts to realise shareholder value. Agency theory also assumes that CEOs are driven solely by financial incentives, whereas behavioural research has indicated that individuals are, for example, driven by status, reputation, and the need for self-fulfilment (Zogning, 2022). Eisenhardt (1989), citing Perrow (1986), criticised agency theory because it seldom explains actual events and does not consider the possible exploitation of workers. Gindis and Micheler (2024) noted that agency theory focuses only on two stakeholders (agents and principals), thereby excluding other important stakeholders key to achieving company objectives, such as employees, the community, and customers. The focus on shareholders is best illustrated in practice by the 1919 Dodge versus Ford Motor Company case in the U.S.A. This case exemplifies the application of agency theory by reinforcing the notion that CEOs must prioritise shareholder interests over those of other stakeholders, including employees, customers and communities (Lee, 2022). This is referred to as the "shareholder primacy" principle, where CEOs have fiduciary and legal responsibilities to shareholders. Lee (2022:12).

Lee (2022) highlighted that while agency theory upholds shareholder interests, divergent shareholder interests can complicate CEO decision-making. CEOs who aim to increase long-term shareholder value may pursue investments intended to increase future value, an objective not shared by some shareholders who demand a short-term focus and returns.

Zwalf (2022) highlighted that much of the literature's assumptions of agency theory involve a single figure as a principal and a single figure as an agent. There is therefore an underdevelopment in the literature on multiple principals, and more focus has been placed on how to control the agent and align interests with the principal. The agency theory literature has also focused mostly on the economic contractual relationships between parties. Applying agency theory to non-economic sectors such as political science is still a challenge, as this is not deemed an economic relationship. Zwalf (2022) noted that the relationship between politicians and the electorate is similar to that of an agent-principal, in which the electorate delegates authority to politicians to advance their interests. However, because the relationship between politicians and their constituents is not purely economic, agency theory is not suitable for explaining it (Zwalf, 2022).

Despite its limitations, agency theory provides a robust theoretical foundation for understanding CEO–shareholder relationships, the rationale for performance-based contracts, and the regulatory and governance mechanisms employed by JSE-listed companies (Matemane, 2022). Its limitations in assuming rational alignment through incentives highlight the value of complementary viewpoints, such as optimal contracting theory and managerial power theory, which further explore how CEOs may influence their own remuneration and governance structures.

2.3.2 Optimal Contracting and Managerial Power Theory

Jensen and Murphy (1990) reported that the key issue in executive remuneration is not total pay but the method of pay. While agency theory positions remuneration as a mechanism to align CEO interests with shareholder objectives, managerial power theory highlights that remuneration itself can become part of the problem (Matemane, 2022). Two contrasting perspectives on executive remuneration have emerged: optimal contracting and managerial power.

According to the optimal contracting perspective, the board’s structure of CEO remuneration is to furnish efficient incentives for maximising shareholder value (Abdou et al., 2019). The optimal contracting theory posits that CEO remuneration does not differ greatly from the remuneration committee process. Optimal contracting theory suggests that high CEO remuneration reflects CEO abilities and skills (Ozgen, Mooney & Zhou, 2024). Optimal contracting further asserts that the remuneration of CEOs is rationally designed by boards to link the interests of the CEO with those of shareholders. The governance structure envisaged under optimal contracting theory is assumed to be effective and optimal (Ozgen et al., 2024). Optimal contracting theory aligns with the objectives of this study, as it provides a framework to assess whether the structure and design of CEO remuneration among JSE-listed companies from 2008 to 2020 are intended to enhance company performance. By evaluating the direct, moderated, and interaction effects of CEO remuneration on company performance outcomes, this study examines whether remuneration contracts function as effective tools for aligning CEO incentives with shareholder interests, a core tenet of optimal contracting theory.

The challenge for the effectiveness of optimal contracting for JSE companies is that CEOs do not directly contract with shareholders, who are the owners of the business and are the ultimate

owners of the business; instead, contracts are mediated through the board of directors, who may be subject to the influence of the very CEOs they are meant to oversee (Martimort, Poudou & Thomas, 2025). Instead, this contracting is carried out by boards of directors that act as intermediaries. Unless the board's interests are directly linked to those of shareholders, final contracts may differ from those proposed by optimal contracting (Barron, Georgiadis & Swinkels, 2020). Develay, Giamporcaro, and Wang (2023) found that shareholders are more likely to vote against the CEO's remuneration package as the CEO-to-worker pay gap widens, despite optimal contracting recommendations. This implies that investors are becoming more aware of the impact of CEO remuneration and are concerned about the harm that significant salary differences may cause to workers, rather than about offering optimal contracts.

In contrast, managerial power theory suggests that CEO remuneration may reflect rent extraction, in which pay increases without corresponding contributions to company performance (Majaski, Boyle & Perez, 2024). Management refers to the people responsible for the organisation of daily production, the operational activities of a company and the formulation of strategies, with the central figure being the CEO (Zhao & Yang, 2019). The ability of management to organise operations according to its own thinking, with limited regulatory oversight and influence beyond its control, is management power (Zhao & Yang, 2019). Managerial power posits that the board, rather than acting in the best interests of shareholders, is aligned with CEOs; therefore, negotiated contracts are likely to reflect CEOs' optimal rent extraction rather than optimal contracting (Ozgen et al., 2024).

Managerial power further suggests that remuneration decisions made by boards often stray from optimal contracting due to various factors. These include the influence or capture of directors by CEOs, directors' sympathy towards CEOs, or the general ineffectiveness of boards in overseeing remuneration arrangements (Siwendu et al., 2024). Like agency theory, this theory acknowledges the friction in relations between the CEO and shareholders. Managerial theory builds on the friction challenges highlighted by agency theory by introducing an additional source of tension, not CEO self-interest but CEO power. In addition to the typical principal-agent conflict, CEOs may exert undue influence over boards, further impacting effective corporate governance (Nel, Jachi & Scholtz, 2024). This power enables CEOs to design their own remuneration structure, avoiding any prescriptions that hinder their pay. As a result, CEO remuneration is not always aligned with shareholder value creation.

Balogh, Wright and Zein (2024) supported this view by noting that at the onset of the COVID-19 pandemic, some companies in Australia announced reductions in their CEOs' total remuneration. However, the reality was that the remuneration was restructured into less transparent components to avoid scrutiny, a practice common in companies where CEOs were powerful and governance was weak.

Agency theory suggests that conflicts of interest arise between the CEO and shareholders and that these misaligned interests can be managed through control and monitoring mechanisms such as boards of directors, which implement optimal contracts to align conflicting interests (Nel et al., 2024). Managerial power theory, conversely, acknowledges the rationale behind control mechanisms but urges caution against fully relying on them, as they can be susceptible to manipulation or influence by the CEO and potentially undermine their effectiveness (Joura et al., 2025). Managerial power theory raises real-world concerns about the effectiveness of control and monitoring mechanisms as safeguards for shareholder interests. This challenges the notion that boards and contracts function as intended. Yahaya (2025) studied CEO power and company performance, examined the mediating role of board independence, and reported that CEO power positively affects company performance, mediated by board independence.

Lovelace, Bundy, Pollock and Hambrick (2022) provided another dimension of how CEOs use their power to demand high remuneration. In their study of the consequences of CEO celebrity, they noted that the media's focus on featuring intriguing CEOs to garner public interest provides CEOs with the impetus to demand increased remuneration as a result of the publicity generated for the company. As journalists are increasingly familiar with the CEO, a handful of CEOs are likely to receive repeated favourable media attention. Some CEOs, as part of their self-promotion strategies, may actively seek media attention by frequently serving as sources for journalists' stories or by providing information packs to help journalists write their stories (Lovelace et al., 2022). The performance of the organisation takes a backseat to the CEO's celebrity status. Lovelace et al. (2022) reported that a key drawback of media attention is that it subjects CEOs to heightened expectations, making them vulnerable to public backlash when corporate strategies fail. Boards of directors must oversee the actions and impact of the CEO's celebrity status and self-promotion efforts as part of their governance role, ensuring that CEO evaluations are based on performance objectives rather than their public profile (Nel et al., 2024).

There are great opportunities for companies directly related to the CEO's media presence to interact with and engage key stakeholders, such as customers, to build customer loyalty and brand recognition (Raymond, 2024). Raymond (2024) illustrated the positive influence of CEO celebrity status by noting that Tim Cook, the Apple CEO's social media account, has over 13.5 million followers, approximately 7.5 million more than the Apple company account. The CEO's account features upcoming products as part of the marketing strategy. Microsoft CEO shares business updates and technology and communicates key messages expediently. Social media, the internet, mobile applications, and other digital communication technologies are now the norm for billions of people worldwide (Dwivedi et al., 2020). The opportunities for brand awareness, marketing, sales, and engagement provided by this digital technology are immense for companies and CEOs alike. Within the context of this study, it remains unclear whether the high profile of CEO remuneration, even in the cases cited, is a response to external scrutiny or a function of self-promotion aimed at legitimising higher remuneration packages. There is potential for research into how CEOs leverage these platforms to enhance company performance and drive shareholder value, or use these as a mechanism to inflate their remuneration without commensurate company performance.

Ozgen et al. (2024) synthesise these insights, summarising how managerial power challenges the assumption of optimal contracting. Table 2.2 below outlines the core assumptions of key remuneration theories and demonstrates how managerial power theory counters these assumptions.

Table 2.2: Theories in CEO power research

Theory	Theoretical assumptions and representative applications	Dependent variables
Agency	ASM*: Principals delegate authority to executives to act on their behalf. Executives pursue self-interest that may conflict with the interests of shareholders. To align interests, principals establish incentives, and boards monitor executives. CEO power may curtail board monitoring, leading powerful CEOs to prioritise self-serving activities over shareholder interests and resulting in poor performance.	Firm performance Compensation
Stewardship	ASM: Executives act as stewards, prioritising the firm's best interests and safeguarding shareholder wealth, with governance structures providing support. Power can enable CEOs to make decisions that enhance firm performance	Firm performance

Managerial Power	ASM: Executives have significant effect over their pay. Executive pay is a result of CEO power. The more the power, the greater the ability to extract rents	Executive compensation
Optimal Contract	ASM: Compensation contracts are the result of arm's length bargaining that provides efficient incentives to overcome agency problems. High pay represents a market for CEOs and their skills (and not their power).	Executive compensation
Stakeholder	ASM: Organisations have different stakeholder groups, each with unique interests. Executives need to effectively balance these interests to achieve organisational success. Power increases self-interest and reduces attention to diverse stakeholders or enables CEOs to influence decision-making to benefit all stakeholders.	Attention: CSR
Institutional	ASM: Emphasises the pressures and constraints of the institutional environment and highlights adherence to rules and norms. External pressures can deinstitutionalise certain practices and limit CEO power. The extent to which firms will acquiesce to external pressures depends on CEO power.	Power stability: via external forces

*(ASM: Assumption)

Source : Ozgen et al. (2024:141)

Bebchuk and Fried (2004) argued that the arm's length approach exercised by shareholders over CEO remuneration does not fully explain the determinants of executive pay. This approach presumes that boards of directors faithfully represent shareholder interests during remuneration negotiations. Managerial power theory, however, challenges this assumption by highlighting that boards often lack the capacity to negotiate independently with CEOs. CEOs, along with other executive team members, exert significant influence over the board, whereas directors, constrained by limited time and incentives, may find it difficult to effectively counterbalance CEO demands.

The South African telecommunications sector provides illustrative examples of this dynamic. Over a ten-year period, Vodacom's CEO, Shameel Joosub, saw his remuneration increase by 376%, from R13 million to R62 million, despite the company's share price declining from R132.58 to R98.55 (MyBroadband, 2024). Similarly, MTN's CEO salary increased by 67% between 2013 and 2023, whereas the company's share price fell by 44% over the same period. Menziwa and Lilian (2023), in their study of six JSE-listed telecommunications companies

from 2016 to 2020, suggested potential irregularities in CEO remuneration. These patterns may align with managerial power dynamics, in which CEO remuneration trends appear decoupled from company performance metrics.

Empirical research on the correlation between CEO power and company performance has produced mixed findings. Yahaya (2025) noted that while powerful CEOs may enhance strategic decision-making and stabilise companies during crises, excessive CEO power can lead to entrenchment, weakened operational efficiency, and decisions that prioritise personal interests over shareholder value. Within such power dynamics, CEOs may prefer strategies that reduce their exposure to risk while expecting higher remuneration, often delinking pay from company performance. Gox and Hemmer (2020) further emphasised that the magnitude of CEO remuneration is influenced by a company's ownership and governance structures; the more powerful a CEO is, the greater his or her capacity to secure higher pay.

Despite strengthened corporate governance mechanisms and more active shareholder engagement, CEO remuneration has continued to rise over recent decades, highlighting the practical limitations of control mechanisms in restraining executive power (Bognanno, 2019). Management power theory provides insight into these dynamics, illustrating how CEO influence can undermine the effectiveness of governance structures and contractual arrangements intended to align remuneration with performance.

Beyond remuneration itself, managerial power theory recognises the broader influence of CEOs on organisational and public perceptions. Lovelace, Bundy, Pollock, and Hambrick (2022) noted that media attention to high-profile CEOs can enable them to demand increased pay, as publicity benefits the company's image while simultaneously enhancing the CEO's personal leverage. Similarly, digital platforms provide CEOs with opportunities to engage directly with stakeholders, promote the company, and potentially bolster remuneration claims, as exemplified by Tim Cook, the CEO of Apple, whose social media exceeds that of the company's official account (Raymond, 2024). While these interactions may create strategic opportunities for brand recognition and shareholder value, they also underscore the potential for remuneration to reflect personal influence and visibility rather than direct organisational performance.

In conclusion, managerial power theory complements agency theory by highlighting that, although control and monitoring mechanisms exist to align CEO actions with shareholder interests, they are not immune to manipulation. The theory elucidates how CEOs may leverage power to influence remuneration structures, sometimes at odds with shareholder value creation, while also recognising instances where CEO authority can contribute positively to organisational outcomes. This perspective provides a nuanced comprehension of the interplay between CEO power, remuneration, and company performance, which is critical for evaluating executive pay in JSE-listed companies. Furthermore, managerial power theory contrasts with stewardship theory, which positions the CEO as a guardian of organisational interests, prioritising the welfare of shareholders and other stakeholders and thereby highlighting the spectrum of executive behaviour and governance implications.

Bebchuk and Fried (2004) argued that the arm's-length approach to CEO remuneration, in which shareholders exert influence over remuneration decisions, does not fully explain its determinants. This approach assumes that the board of directors faithfully acts in the best interests of shareholders during negotiations. However, managerial power theory challenges this assumption by suggesting that boards are often unable to negotiate independently with the CEO. CEOs, along with other members of the executive team, wield significant influence over board decisions. The incentives for directors to prioritise shareholders' interests are relatively low, given the limited time they have to fulfil their responsibilities. As a result, boards often fail to dedicate sufficient time or effort to resisting CEO remuneration demands. Ferris, Kim, Kitsabunnarat, and Nishikawa (2007), in their study of stock option grants to executives in Japanese companies, found evidence supporting the managerial power theory, observing the influence of managerial power on the design of executive remuneration, particularly stock options. Lu, Harper and Sarkar (2025) noted that companies that have powerful CEOs set fewer challenging targets when setting their performance-vested stock option (PVSO) plans. However, adopting such a PVSO does not increase shareholder value.

In South Africa, Mybroadband (2024) illustrated the ineffectiveness of board directors in aligning CEO remuneration with company performance in the telecommunications industry in South Africa over a ten-year period:

- Vodacom CEO Shameel Joosub's salary increased 376% over the last 10 years from R13 million to R62 million despite the Vodacom share price dropping from R132.58 to R98.55 over the ten-year period.
- CEO of MTN's salary increased by 67% between 2013 and 2023, whereas the MTN share price declined by 44% over the same period.

The significance of the share price is that it reflects financial returns and market perceptions of the company's health and value of the investment for shareholders. In a study of 6 JSE-listed companies within the telecommunications sector in South Africa for the period from 2016 to 2020, Menziwa and Lilian (2023) suggested that there may be irregularities in the remuneration of CEOs in the telecommunications sector. CEO power, therefore, extracts more value from companies without commensurate self-sacrifice to obtain this value.

Yahaya (2025) reported that empirical research has yielded mixed findings regarding the relationship between CEO power and company performance. Some studies note that powerful CEOs enhance strategic decision making, whereas others argue that excessive CEO power leads to management entrenchment and weaker performance, leading to operational inefficiency. During crises, such as economic downturns, powerful CEOs stabilise companies by making decisive interventions (Yahaya 2025). The disconnect caused by CEO power poses the risk that CEOs who contract to act in the interests of shareholders end up working against the owners of the business (Winter & Michels, 2018). Within these management power arrangements, CEOs prefer strategies that reduce their risk exposure and the pressure to generate shareholder value, while expecting more money for less effort. Their performance is as much as possible decoupled from company performance to fulfil their self-serving strategies, which may run counter to building shareholder value. The level of CEO remuneration is influenced by the company's ownership and governance structures. A stronger concentration of power in the hands of the CEO tends to correlate with higher levels of remuneration, as CEOs with greater authority are more likely to influence remuneration decisions in their favour (Winter & Michels, 2019; Gox & Hemmer, 2020).

Understanding this dynamic between CEO power and the impact on remuneration contributes to understanding real-world dynamics beyond the statistical findings of research. There remains a challenge in explaining the rise in CEO remuneration over the preceding decades,

despite strengthened corporate governance structures and more active shareholder engagement with CEO power (Bognanno, 2019).

Murphy's (2002) study of Standard & Poor 500 companies in the U.S. in the 1990s sought to analyse managerial power theory assertions that executives unduly influence boards through bonds of interest and affinity. Murphy (2002) aimed to empirically assess the managerial power theory by comparing the remuneration of CEOs appointed from outside the organisation, who typically lack preexisting ties to the board, with that of those appointed from within, who are assumed to have stronger connections to board members. The findings revealed that externally hired CEOs received approximately 22% less cash remuneration than their internally appointed counterparts. The reduced remuneration may be a factor in the inability to extract rent from unfamiliar boards. However, when total remuneration is considered, outside hires earn 96% more through stock option grants than inside CEOs do, which is inconsistent with managerial power theory.

Gabaix, Landier and Sauvagnat (2013) argue that the theory of managerial power does not fully explain the rise in CEO salaries. Instead, they propose that the increase in CEO salaries is largely driven by the corresponding rise in companies' market value rather than by agency-related factors. They argue that countries with slower growth in company value, such as many European nations, would have seen more modest increases in executive pay, as opposed to the more substantial increases observed in the United States of America.

In conclusion, managerial power theory provides insight into the complexities of the relationship between CEO remuneration and company performance, emphasising the adverse behaviour of CEOs, which can undermine the effectiveness of corporate governance mechanisms. Managerial power theory challenges the assumption of agency theory that control mechanisms can effectively align CEO actions with shareholder interests. In addition to the negativity surrounding the theory, managerial power theory highlights the strengths and contributions of CEO power to the organisation. While managerial power draws attention to the self-interests of CEOs, stewardship theory highlights that the CEO, as a guardian of the organisation, is focused primarily on acting in the best interests of shareholders.

2.3.3 Stewardship Theory

Building on the preceding discussions of agency and managerial power theories, stewardship theory offers an alternative perspective on executive behaviour by positioning CEOs as inherently aligned with shareholder and organisational objectives. While managerial power theory focuses on the potential for executives to exploit their positions for personal gain, stewardship theory argues that executives are fundamentally motivated to serve the organisation's best interests (Chrisman, 2019; Donaldson & Davis, 1989). This theoretical lens provides a counterbalance to agency and managerial power perspectives, highlighting the potential for ethical, responsible, and long-term-oriented leadership.

At its core, stewardship theory asserts that CEOs derive fulfilment from achieving organisational goals rather than from financial incentives, which contrasts sharply with the extrinsic-motivation focus of agency theory (Kolawole, Igbekoyi & Alabi, 2025). Trust, autonomy, accountability, job fulfilment, tenure, and goal alignment are among the inherent incentives that drive stewards. By fostering alignment between the CEO and organisational objectives, stewardship theory reduces the need for intensive monitoring and formal controls, which are central to agency theory (Donaldson & Davis, 1989). This emphasis on intrinsic motivation also promotes long-term, sustainable organisational objectives, aligning with contemporary expectations for responsible and ethical leadership (Kolawole et al., 2025).

The stakeholder-centric nature of stewardship theory extends beyond shareholders to encompass employees, customers, communities, and other relevant stakeholders (Kolawole et al., 2025). In the South African context, mining companies exemplify stewardship in practice. These firms integrate corporate social responsibility (CSR) initiatives and comply with the Minerals and Petroleum Resources Development Act (2002), which mandates the development of social and labour plans to foster collaboration among companies, communities, and the government. Such initiatives are designed to ensure that the benefits of mineral development are shared with local communities (Serfontein-Jordaan & Dlungwane, 2022).

However, the practical implementation of stewardship theory faces limitations. Nkomo (2020, 2024) critiqued CSR initiatives in the Northern Cape mining sector, noting that despite substantial investments (R1.2 billion between 2012 and 2017), communities continued to experience high youth unemployment, low educational attainment, and elevated child

mortality rates. These findings suggest that CSR initiatives may serve more as regulatory compliance or strategic branding mechanisms than as genuine manifestations of stewardship. Consequently, while stewardship theory emphasises intrinsic motivation and ethical leadership, its assumption may not always reflect real-world practice, especially in contexts where organisational or regulatory pressures shape executive behaviour.

Stewardship theory supposes that CEOs' objectives naturally link with those of shareholders, reducing the perceived necessity of formal controls and incentive mechanisms. In contrast, managerial power theory highlights the risks posed by powerful CEOs, who may exploit their authority for personal gain (Lo & Shiah-Hou, 2022). Furthermore, the efficacy of stewardship-based governance structures is contingent upon contextual factors such as regulatory frameworks, economic pressures, and cultural norms, which may influence the practical adoption and outcomes of stewardship principles (Kolawole et al., 2025).

The theory also presumes homogeneity in the backgrounds, experiences, and capabilities of stewards. Chrisman (2019) noted that the alignment between CEOs and organisational goals may be affected by individual differences, including prior experience, skills, and personal values. Adverse selection, a concept from agency theory, arises when boards are unable to assess these factors during recruitment, potentially resulting in misalignment despite a CEO's steward-like disposition (Eisenhardt, 1989). Thus, stewardship theory assumes an initial disposition of trust between the principal and CEO, with the expectation that the CEO will prioritise organisational goals over personal ambitions (Torfing & Bentzen, 2020).

Rather than viewing stewardship theory as mutually exclusive from agency theory, scholars advocate an integrated perspective that combines intrinsic motivation with accountability mechanisms (Davis et al., 1997b). As Torfing and Bentzen (2020) argue, executive behaviour exists along a continuum; CEOs may act altruistically in some contexts while pursuing self-interest in others. In practice, organisations often blend elements of agency, managerial power, and stewardship theories to create hybrid governance models that balance ethical leadership, long-term strategic decision-making, and oversight mechanisms (Kolawole et al., 2025; Mwamba, 2024;).

In conclusion, incorporating agency, managerial power, and stewardship theories offers a multifaceted framework for analysing the relationship between CEO remuneration and company performance. Agency theory illuminates conflicts of interest and justifies

performance-based incentives. Managerial power theory highlights the risks associated with executive influence over remuneration and governance structures. Stewardship theory emphasises intrinsic motivation, ethical leadership, and stakeholder-inclusive decision-making. The interplay of these theories is particularly relevant when diverse organisations across multiple sectors are examined, as CEO behaviour and remuneration practices may reflect a hybridisation of theoretical principles rather than adherence to a single model.

Building on the assumptions posited by managerial power theory, which emphasises CEOs' rent-extraction behaviour, stewardship theory offers a different view of CEOs as naturally aligned with shareholder goals. The following section extends the analysis and discussion, drawing from agency and managerial power theories, to introduce stewardship theory. This section will illustrate their differences, interdependencies, and the ways in which these theories build upon one another, diverge, and provide unique perspectives.

Stewardship theory, introduced by Donaldson and Davis (1989), suggests that CEOs, when given autonomy, act in the best interests of the organisation and manage resources responsibly (Chrisman, 2019). The theory also emphasises a significant link between employee satisfaction and organisational performance, highlighting the positive outcomes that can arise when executives are trusted and empowered to lead without undue interference.

According to Donaldson and Davis (1989), CEO performance does not depend on incentive and control schemes, as agency theory proposes. Unlike agency theory, which emphasises external incentives, the stewardship theory's core principle is intrinsic motivation, implying that CEOs are better able to achieve organisational goals than with financial incentives (Kolawole et al., 2025). Stewards are driven by intrinsic rewards such as trust, enhanced reputation, reciprocity, tenure, and alignment with organisational goals. To address the short-term focus on financial incentives noted as an agency problem, stewardship theory prioritises long-term, sustainable objectives, making corporate governance easier and aligning CEOs more naturally with organisational goals, thereby requiring less monitoring and control. The current economic environment emphasises the implementation of sustainable, ethical leadership practices, which stewardship theory addresses by providing a framework for fostering responsible, ethical leadership (Kolawole et al., 2025). By promoting a responsible, inclusive leadership style, stewardship theory, unlike agency theory, which prioritises shareholder values, and managerial power, which prioritises CEO interests, motivates a

stakeholder-focused approach. This approach incorporates all relevant stakeholders, such as communities, employees, and customers, into a company's decision making (Kolawole et al., 2025).

The practical implementation of this stakeholder-centric approach is applied in the mining sector in South Africa. Mining companies act as stewards, prioritising long-term, mutually beneficial, and sustainable value creation not only for shareholders but also for broader stakeholders in local communities. Stewardship theory leadership aligns with CSR initiatives that align business with society and the environment. The South African Minerals and Petroleum Resources Development Act, 2002, requires that mining companies develop and submit a Social and Labour Plan as part of the application for a mining licence. The Act advocates for a "collaborative, trusting, and respectful relationship" between the company's community and the government. This approach aims to prevent or reduce any negative impacts while ensuring that the benefits of mineral development are shared with local communities (Serfontein-Jordaan & Dlungwane, 2022:4).

The altruistic motivation promoted by stewardship theory is critiqued by arguments noting that this stakeholder-focused approach and initiative are, in reality, a means for mining companies to comply with regulations and secure an operating licence in their quest for financial gains and brand promotion. Nkomo (2020), in his study of Northern Cape Manganese mining companies in South Africa, supported this argument by noting that mining companies are seen as thriving at the expense of communities, and that CSR projects are perceived by mining companies as tactics for addressing strategic challenges. Therefore, these initiatives support stewardship theory to a lesser extent and are more closely aligned with agency theory. Nkomo (2024) reported that despite a substantial CSR investment of R1.2 billion by four mining companies in South Africa's Northern Cape Province between 2012 and 2017, the region still faces critical socio-economic challenges. These include the lowest educational attainment in the country, a youth unemployment rate of 45%, and a child mortality rate of 45 per 1,000 children under five. This reality contradicts the optimistic outcomes often envisioned by stewardship theory.

According to stewardship theory, formal controls and monitoring mechanisms are unnecessary and possibly ineffective, as CEOs' objectives are assumed to already coincide with those of the principal. Managerial theory highlights the risks posed by powerful CEOs

who use their leadership control to make decisions beneficial to themselves at the expense of shareholders (Lo & Shiah-Hou, 2022). Governance structures based on the stewardship model are susceptible to regulatory, cultural, and economic influences, resulting in variations in effectiveness and adoption across regions (Kolawole et al., 2025). The stewardship model, for example, fails to realistically recognise potential challenges and impacts the ability of steward CEOs to navigate regulatory frameworks, market volatility and competitive pressures, leading to mismanagement, corruption and inefficiencies. The stewardship model undervalues the importance of monitoring mechanisms and performance-based incentives in aligning interests and ensuring CEO accountability (Chrisman 2019). The assumption of the perpetuity of altruistic tendencies overlooks the risks posed by the CEO's personal ambition and the complexity of human behaviour. Companies may need to introduce agency-theory mechanisms, structures, and systems to streamline the relationship between CEOs and principals (Chrisman 2019).

As noted by Chrisman (2019), the backgrounds, experiences, intellects, and knowledge of agents and principals differ. Given the changing environment and the challenges organisations face, the lack of a structured system for setting CEO goals may cause naturally aligned stewards to become misaligned with the principal's goals. The experiences, skills, attitudes and abilities of CEOs prior to joining the organisation are particularly important and can determine whether they become agents or stewards after joining the organisation (Chrisman, 2019). Adverse selection, a concept from agency theory, arises when boards cannot assess CEOs' abilities before hiring them (Eisenhardt, 1989). The agent may misrepresent their skills, values, or abilities, leading to a failed hiring decision. Stewardship theory, on the other hand, assumes that CEOs are inherently trustworthy, capable and aligned with organisational interests, thereby reducing the need for control mechanisms.

At the core of stewardship theory lies the foundational trust between the principal and the steward (Chrisman, 2019). According to this theory, CEOs are expected to prioritise organisational objectives over personal interests, placing the goals of the organisation above individual gains (Torfing & Bentzen, 2020). However, rather than viewing stewardship theory as a direct alternative to agency theory, exploring how the two theories can complement and potentially integrate may be more fruitful (Davis et al., 1997).

Some scholars argue that categorising a CEO's behaviour strictly within the confines of agency theory or stewardship theory is an oversimplification. People often act selflessly or altruistically depending on the situation, making it difficult, if not impossible, to find an individual who behaves exclusively as either a steward or an agent (Torfing & Bentzen, 2020).

Although stewardship, managerial, and agency theories are conceptually distinct, in practice organisations integrate elements from each (Mwamba 2024). Kowalo et al. (2025) propose a hybrid governance model that merges stewardship principles with agency mechanisms, effectively combining accountability frameworks with trust-based ethical leadership. This model balances ethical, long-term strategic decision-making with oversight mechanisms that safeguard shareholders' interests. In practice, stewardship theory manifests in the adoption of strategic goals, shifting the organisation's focus beyond profit-chasing to encompass social responsibility and ethical leadership (Mwamba 2024).

In conclusion, the introduction of agency, stewardship and management power theories provides a different and valuable perspective and framework for analysing the relationship between CEO remuneration and company performance. Agency theory illuminates the conflict between agents (CEOs) and principals (shareholders), thereby rationalising the need for strategies to align CEOs' individual self-interests with those of shareholders. Managerial power theory cautions against CEO power and influence over remuneration, often in ways that do not align with shareholder interests. Agency theory supports the basis for performance-based incentives to ensure CEO–shareholder alignment. Stewardship theory promotes the value of intrinsic rewards, ethical leadership, and sustainable long-term outcomes that are inclusive of all stakeholders. This study incorporates a diverse range of companies across sectors, introducing variability in the sample. Given the inclusion of diverse organisations from various sectors of different sizes, the current study provides a unique opportunity to observe how different theoretical perspectives, such as agency theory, stewardship theory, human relations theory, equity theory, and managerial power theory, may manifest across contexts. The varied organisational environments, strategic priorities and governance structures suggest that elements of one or more of these theories may be reflected in the relationship between CEO remuneration and company performance. As such, the findings may not align exclusively with a single theoretical model but may indicate a blend of theory principles in practice.

Another dimension that encapsulates all the companies that might impact CEO remuneration, and company performance, is organisational size. As CEO remuneration practices are informed or explained by various theoretical frameworks, organisational size, measured by market capitalisation, may serve as a critical factor that shapes how these theories are operationalised in practice. The next section introduces organisational size, incorporating it into the study as a key element in the analysis of CEO remuneration and company performance.

2.3.4. Organisation Size

Organisation size is mainly determined using different measures and is difficult to define consistently, as various metrics are used depending on the context. Different size measures yield contrasting company rankings. For example, a company may be considered large in terms of market capitalisation but small in terms of workforce size. All measures of company size are theoretically different and capture different aspects of size (Hashmi et al., 2020). The company size is usually measured using a specific metric or proxy. Hashmi et al. (2020) proposed that the mixed results of past research on the relationship between organisational size and CEO remuneration are a result of the different proxies employed by these studies. Research has used the proxy either as an explanatory or a control variable. The proxy most closely related to CEO remuneration and company performance should be used (Hashmi et al., 2020). There are several proxies for company size that have been used in prior research, namely total sales, total assets, market capitalisation, revenue, and the number of employees (Blanes, de Fuentes & Porcuma, 2019; Luo, Lee, Chiu & Lee, 2023; Hashmi et al., 2020).

Various researchers have also included organisation size in their studies. Ramgath and Bussin (2022) reported that in the financial services sector of companies listed on the Johannesburg Stock Exchange (JSE) between 2015 and 2019, organisation size, as measured by assets, revenue and number of employees, did not significantly influence CEO remuneration. They noted mixed results in the literature regarding the impact of company size on overall CEO remuneration. The relationship between company size and CEO pay appeared to vary depending on the specific proxy used for organisational size and the component of CEO remuneration being examined. While some evidence suggests that CEOs tend to receive higher remuneration in larger companies, the assumption of a positive correlation between company size and CEO remuneration does not always hold universally across studies.

CEO remuneration is influenced by organisation size, justifiably, as complexity, increased responsibilities, greater visibility to stakeholders, and the need for high-quality CEOs with a broad range of skills are associated with larger companies (Luo et al., 2023). CEOs prefer to link their remuneration to company size, as they exert more control over the growth of a company through mergers and acquisitions, which potentially justifies higher remuneration (Blanes et al., 2019). Blanes et al. (2019), in archival research on remuneration, reported that company size has the highest correlation with CEO remuneration, although it is more sensitive to variations in performance variables for both accounting and marketing ratios than to changes in company size.

Organisational size was used in this study as a moderator that could strengthen or weaken the relationship between CEO remuneration and company performance. According to Randy & Nielsens (2002), cited by Högstrom and Olausson (2023), market capitalisation is the superior measure for company size, as size varies by industry; hence, market capitalisation will be used as a moderator variable in this study. Lemming & Sherman (2021), in their article on the CEO effect and the value of leadership, argued that CEOs are responsible for at least 25% of a company's market value once industry effects have been accounted for. This highlights the significant influence that CEOs can have on company performance. Additionally, their findings emphasise the importance of incorporating market capitalisation as a moderating variable in studies of CEO remuneration and organisational outcomes, as it can affect both remuneration levels and a company's performance.

According to Weenders (2019), the size of an organisation may enhance the relationship between CEO remuneration and company performance. The greater the productivity, capabilities and knowledge a CEO has obtained, the more willing a company is to remunerate and retain the CEO, considering the value added to the organisation (Weenders, 2019). Market capitalisation is computed by multiplying the current share price by the total number of outstanding shares. Because company owners are shareholders, the value of the company as perceived by investors is important. It is hypothesised that market capitalisation moderates the relationship between CEO remuneration and company performance, with the relationship being stronger in companies with higher market capitalisation. Figure 2.1 illustrates the integration of the afore-mentioned theories, showing their relevance to CEO remuneration and company performance.

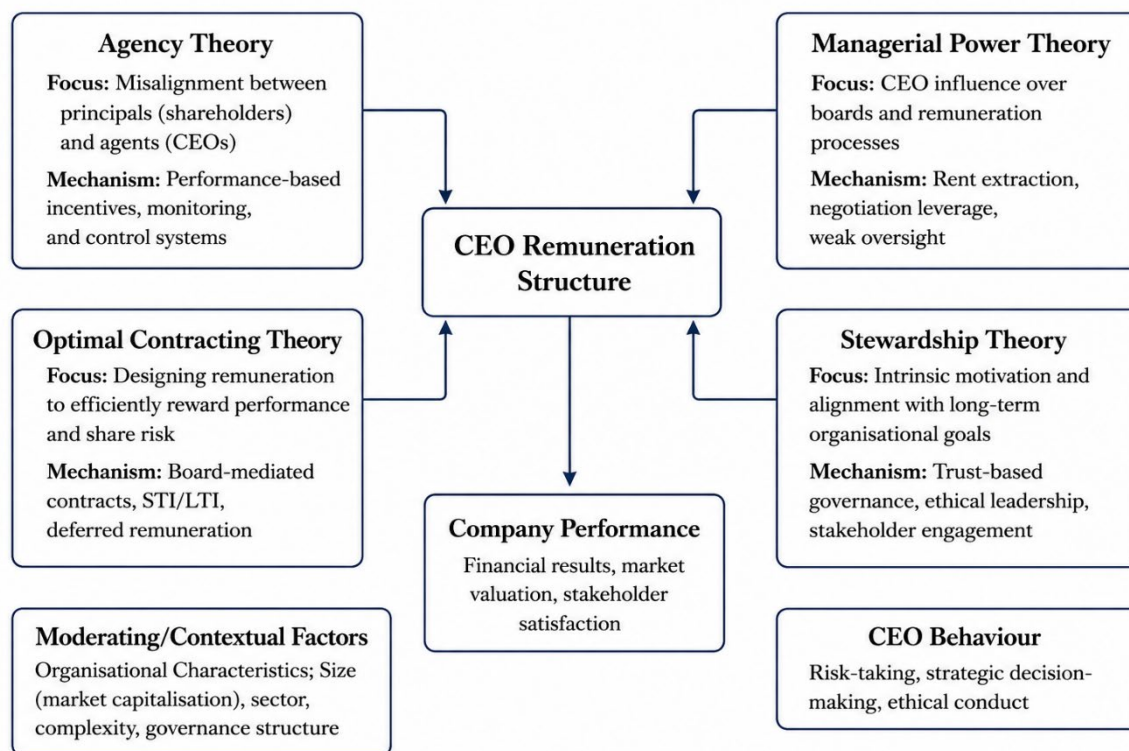


Figure 2.1: Integrated theoretical framework for CEO remuneration and company performance

Source: Author's own compilation based on Jensen & Meeling (1990), Donaldson and Davis (1989) and Majaski et al. (2024)

2.4 EMPIRICAL FINDINGS ON THE LINK BETWEEN CEO REMUNERATION AND COMPANY PERFORMANCE

One of the primary goals of this research is to contribute to the wealth of literature and understanding of the relationship between CEO remuneration and company performance. Reviewing earlier studies provides an essential context for situating the present study within existing debates and highlighting consistencies and deviations across findings. This review also reveals how moderating and interaction effects have been incorporated into the analysis of remuneration–performance dynamics.

Despite extensive empirical work over the past several decades (Ahmed, Bahamman & Abdulkarim, 2020; Carlson & Bussin, 2020; Ramgath, 2021; Shabbir et al., 2024; Yadav, Pahi & Gangakhedkar, 2022), the results remain inconclusive. Broadly, findings fall into four

categories: (1) a positive link, (2) a negative link, (3) no significant correlation, and (4) mixed or conditional outcomes.

2.4.1 Empirical Findings: Positive Link Between CEO Remuneration and Company Performance

In the study examining the relationship between CEO remuneration and company performance, a positive correlation would imply that CEO remuneration tends to rise in tandem with improvements in company performance. The sub-objective of the current study is to note the relationships between different elements of CEO remuneration and each type of performance measure. This section introduces the results of previous research findings related to the link between each type of performance measure and the type of remuneration.

Several researchers have observed a positive correlation between CEO remuneration and company performance. In a study of mining companies for the period from 2015-2021, Siwendu et al. (2024) reported a strong correlation between CEO remuneration and ROA. For the period from 2015–2018, Spoor (2020) studied the relationships between CEO STI and LTI and ROA, ROS, RET and Tobin's Q for companies listed on Amsterdam Euronext. Spoor (2020) reported a significant and positive correlation between CEO STI and ROA. Weenders (2019), from 2014-2016, also reported a significant positive relationship between CEO remuneration and ROA, like Hemsink (2020). Lagat (2023) reported a weak positive and significant relationship between ROA directors' remuneration in Kenyan commercial banks. Similarly, in the same country but in broader industries,

Nzungu, Koori and Kimutai (2022) examined the relationship between CEO remuneration and company performance across 65 publicly listed companies on the Nairobi Securities Exchange, Kenya. Their study also explored whether inflation acted as a moderating factor in this relationship. The findings indicated a significant correlation between CEO remuneration and ROA, with inflation having a notable moderating effect relationship between CEO pay and financial performance. Similarly, Yadav et al. (2022) conducted a study on Asia Pacific markets from 1995-2016, employing a panel dynamic fixed effects model to investigate the moderating role of company size on growth and profitability. By categorising companies into small, medium and large categories on the basis of total assets, net sales, and market capitalisation, they found a positive relationship between company growth and profitability,

suggesting that as companies grow, their profitability tends to increase. This approach emphasises the importance of company size as a conditional factor that may influence company performance, thereby justifying its use as a moderating variable in this study. The categorisation of company sizes explores how the relationship between CEO remuneration and company performance may vary depending on the size (MC) of the company. ROA is an accounting measure rather than a market measure, is less volatile and less influenced by investor sentiment and is a more stable measure for linking CEO remuneration; hence, there are positive correlation findings in this research.

Högstrom and Olausson (2023), who studied Scandinavian companies, reported that the variable remuneration has a positive relationship with ROA. In addition, Wijeweera et al. (2021) reported a positive relationship between the long-term component of CEO remuneration and company performance, suggesting that higher returns on assets (ROA) are effectively rewarded through incentive-based remuneration, reflecting an association between shareholder value creation and CEO remuneration in line with agency theory.

Khaled (2020), in his study of Jordanian public companies, reported a statistically significant positive relationship between net profit margin and financial performance. In a similar vein, Al-Shammari and Akram (2021) examined the link between CEO remuneration and company performance in 204 U.S. manufacturing companies, focusing on the intervening effect of CEO risk-taking behaviour. Their research revealed a strong positive relationship between CEO option pay and a company's strategic risk, stock returns, and income stream risk. Additionally, the study indicated that a company's strategic risk, as measured by research and development expenditures, acts as a mediator in the relationship between CEO remuneration and company performance.

Barde and Zik-Rullah (2020) analysed the impact of CEO remuneration, bank performance, and share ownership on the financial performance of listed Deposit Money Banks in Nigeria over the period from 2007 to 2018. Their study revealed a significant positive effect of CEO remuneration on the financial performance of these banks. As share ownership is payable for the successful delivery of performance targets, a positive relationship is expected since higher performance leads to the vesting or payment of these share-based incentives. Since shares are contingent on the achievement of predetermined performance targets, they would not be

awarded if those targets were not met. This condition on share remuneration logically leads to a positive correlation between CEO remuneration and company performance, as remuneration increases only when performance meets the required threshold.

Carlson and Bussin (2020) conducted research on South African Schedule 2 SOEs for the period 2009 to 2016. The study focused on total executive remuneration as the primary remuneration measure, whereas company performance was assessed using revenue, operating profit or loss, net profit or loss, ROE, ROA and the solvency ratio. Their findings indicated a very strong relationship between net profit or loss and total executive pay for three out of the fourteen SOEs. Conversely, when considering the entire dataset, only net profit or loss demonstrated a significant positive relationship with total executive pay. The study suggests that the relatively low correlation between CEO remuneration and company performance in SOEs could be attributed primarily to their responsibility for providing public services rather than focusing purely on financial performance.

Chukwuma et al. (2021) examined the moderating effect of state-owned enterprise reforms on the relationship between company performance and CEO remuneration. A total of 1265 non-financial companies listed on the China Stock Market from 2010-2016 were included in the sample. Both current and past company performance positively influence CEO remuneration. The Chinese Communist Party policy reform period positively moderated the relationship between company performance and CEO remuneration.

Several studies have reported a positive relationship between CEO remuneration and company performance, a key focus of the current study. Coetzee and Hall (2020) reported strong positive correlations between CEO remuneration and financial performance indicators such as EPS, PE, and EBITDA. Similarly, Ramgath and Bussin (2022), in their study of the financial services sector, reported a positive correlation between CEO fixed remuneration and EPS. In support of these findings, Siwendu et al. (2024) reported that EPS significantly explained variations in CEO remuneration between 2013 and 2018. The metrics used by these researchers align closely with the current study's objectives of assessing whether performance, measured through accounting and market-related indicators, influences CEO remuneration among JSE-listed companies. These results reinforce the relevance of exploring

EPS and similar performance measures in relation to CEO remuneration, as indicated in the study's research questions.

Using an archival, desktop study, Van Wyk and Wesson (2021) evaluated the link between the key performance indicators (KPIs) of mining companies listed on the JSE and the long-term incentive (LTI) targets of their CEOs for the period 2010-2016. The study revealed a weak to moderate alignment between CEO LTI objectives and company KPIs. Notably, the analysis excluded the impact of the global financial crisis of 2008/2009, instead focusing on the period starting in 2010, the year when integrated reporting was introduced, and ending just before the implementation of the King IV Report in 2016.

The traditional measures, such as EPS, ROA and RSF, are a mark of value creation that is important to shareholders and investors to assess the performance of companies. According to Delves (2024), traditional measures are easy to understand and allow for ease of comparison over a period between industries and companies.

2.4.2 Empirical Findings: Negative Link Between CEO Remuneration and Company Performance Measures

In some instances, findings may show a negative correlation between the two variables, where CEO remuneration increases even as company performance decreases.

In the South African context, Marimuthu & Kwenda (2019) reported a negative relationship between CEO remuneration and ROA/RSF in SOEs, attributing this relationship to political interference, corruption and the service-oriented mandate of such entities. Similarly, Bezuidenhout (2021), who studied SOEs in South Africa from 2006–2014, reported a strong negative relationship between total remuneration and net profit, noting that the misalignment reflected persistent poor performance in the sector.

Broader analysis revealed negative associations. Coetzee and Hall (2020), examining the top 40 JSE-listed companies between 2006 and 2015, reported negative correlations between CEO remuneration and multiple performance indicators, including ROA, total shareholder return (TSR) and RSF. Similarly, Kieviet et al. (2024) reported a significant negative relationship between long-term incentives and RSF for the South African banking sector over a twelve-year period. The results of this study suggest that executives are awarded higher levels of short- and long-term remuneration when ROE and HEPS decrease (Lawrence, 2020).

Mnyandu (2024) reported that CEO tournament incentives were negatively associated with RSF in a study of 76 listed companies from 2014–2023. Wijeweera et al. (2021) also reported a negative relationship between long-term incentives and company performance.

Examining the Kenyan banking industry, Mohamed (2020) reported a negative but statistically significant association between executive remuneration and earnings management.

Siwendu et al. (2024) reported that short-term incentive payments increased while fixed salaries as a percentage of CEO remuneration decreased. Matemane (2022) suggested that executives may use their positional power to reduce fixed pay and increase incentive pay, thereby manipulating remuneration structures to their advantage.

Having discussed the empirical studies showing a negative link between CEO remuneration and company performance, the next section discusses research findings with a negative correlation.

2.4.3 Empirical Findings: Lack of Correlation Between CEO Remuneration and Company Performance Measures

Several studies have reported no significant correlation between CEO remuneration and company performance measures, directly linking to this study's investigation of whether a relationship exists within South African and global contexts.

In Australia, Wijeweera et al. (2021) analysed 60 publicly listed companies across three phases of the global financial crisis: the pre-crisis period (2001–2007), the crisis years (2008–2009) and the post crisis phase (2010–2012). They found no significant relationship between the fixed component of CEO remuneration and company performance, which is consistent with the expectation that fixed pay is linked more to company size, responsibilities and benchmarks than to variable performance.

Similarly, Högstrom and Olausson (2023) examined 71 leading Scandinavian companies from 2018 to 2021, using ROA and total investment return as performance measures. By employing ordinary least squares (OLS) regression, they found no significant relationship between total remuneration and ROA. This approach, which uses Thomson Reuters Eikon for data collection, parallels the current study's use of Group Profile data, underscoring methodological consistency.

Other emerging market studies echo this pattern. Lagat (2023) reported no significant link between RSF and directors' remuneration in Kenyan commercial banks, whereas Nkwadi and Matemane (2022) reported no relationship between CEO remuneration and ROA or RSF in 28 South African mining companies.

These results contrast with those of Siwendu et al. (2024), who studied South African mining companies from 2015 to 2021 and reported a positive correlation between CEO remuneration and ROA. The differences may reflect study periods, sample selection and external shocks such as the global financial crisis and commodity price cycles, which heavily influence the mining sector.

CEO remuneration and company performance research has generated mixed outcomes, showing a mix of positive, negative and no relationship results. The literature on empirical studies has revealed that the debate on whether CEO remuneration is linked to company performance has not been definitively answered. Different studies have reached different conclusions, which may be the result of different factors.

The next section discusses legislative responses aimed at addressing the complexities surrounding CEO remuneration, examining developments both within South Africa and internationally.

2.5 LEGISLATIVE REFORMS ON REMUNERATION STRATEGIES

With growing concerns regarding the remuneration of CEOs around the world, governments and professional institutions have recommended and adopted legislation to govern the remuneration strategies and responsibilities of CEOs of organisations. These largely have, in most instances, been reactive in nature and have been instituted in reaction to events. The laws and regulations imposed by governments and professional bodies have provided a framework and have influenced how companies design CEO remuneration (Matemane & Moloi, 2024). Legislation provides a legal basis for enforcing a level of accountability and responsibility for CEOs and boards of directors in the interests of shareholders. The guidelines provided by King IV recommend good governance practices for companies to influence corporate behaviour and practices. The previous section discussing the evolution of CEO responsibilities and theories on remuneration provided a different lens through which to understand the relationship between CEO remuneration and company performance. It is probable that

legislation and regulations on good corporate governance may impact the design of the relationship between CEO remuneration and company performance. Legislation is part of the regulatory framework that shapes the broader operating environment within which JSE-listed companies' function (Matemane & Moloi, 2024). Legislation provides rules, standards and responsibilities that guide CEO behaviour. Consequently, as legislation shapes CEO behaviour, it is important to discuss key aspects of legislation that are connected to remuneration. As the study includes companies operating in South Africa and global markets, legislation from South Africa and other countries will be discussed.

2.5.1 Companies Act 71 of 2008 of South Africa

The functions of directors and their responsibilities to their companies are becoming increasingly prominent on a global scale. Providing assurance that businesses consistently make the right decisions is one of the reasons behind this. Since a company's board of directors oversees and manages its business and affairs, if a board of directors or CEOs fails to have a proper understanding of their responsibilities, they may be subject to harsh criticism and, at worst, held personally liable for the company's losses (Werksman Attorneys, 2021). Section 76 of the Companies Act relates to the standard of behaviour expected from the board of directors, including the CEO, compelling them to act in good faith and in the best interests of their companies.

The Companies Act Section 30(4) of Companies Act 71 of 2008 requires that each company must have audited annual financial statements, including specifics displaying the remuneration and benefits paid to each respective director or individual occupying any prescribed office in the company (Statucor, 2024). Section 30 (6) of The Companies Act 71 of 2008 gives clarity on what is regarded as remuneration. These include director fees for services provided to the company, salaries, bonuses, performance-based incentives, expense allowances, pension scheme contributions, the worth of options or rights, financial support for option or security subscriptions, securities purchases, loans or financial aid from third parties to any individual, and any deferred, waived, or forgiven interest. The disclosure requirements of Companies Act 71 of 2008 have provided transparency around CEO remuneration. The availability of remuneration data and company performance has provided critical information to enable an analysis of CEO remuneration by different interested parties. However, despite the efforts of the Companies Act to ensure transparency around the remuneration of

executives, the Companies Act does not compel companies to disclose performance targets related to CEO remuneration (Van Wyk & Wesson, 2021).

Section 30 (8 and 9) stipulates that, unless otherwise specified in the Memorandum of Incorporation, a company is permitted to compensate its directors for their directorial duties only through a special resolution sanctioned by shareholders within the preceding two years.

Pursuant to Section 30 (6) of Companies Act 71 of 2008 (p.76), liability arises for any individual involved in the drafting, authorising, or distribution of any financial statements, including the annual financial statements outlined in Section 30, and they are aware that these statements materially fail to comply with the requirements specified in subsection (1). Furthermore, the individual can also be held liable if the financial statements are materially false or misleading, as described in subsection (2). This section of the Companies Act is important in highlighting the serious consequences of breach of protocols by companies, especially considering the importance of such financial statements to research studies that rely on the published data provided in the annual financial statements. Importantly, the data are credible to ensure that fellow researchers accept findings as credible and trustworthy, contributing to further studies.

Having previously discussed the theories that influence remuneration, it is important to also show how theory interrelates with legislation. Principal–agent theory highlights the need for the principal to employ mechanisms to monitor and regulate the agent's behaviour effectively.

As the principal (shareholder) is no longer involved in the daily management of company operations, this responsibility is delegated to the board of directors. According to Section 66 of the Companies' Act, the board of directors is tasked with overseeing and managing the company's operations. This section enhances the accountability of the board to shareholders, ensuring that the directors are responsible for the company's performance and decisions. By clearly defining the board's role, the Companies Act reinforces the duty of directors to act in the best interest of shareholders, making them more accountable for their actions (Werkmans Attorneys, 2021). Managerial power theory provides insight into the challenges faced by shareholders in that powerful CEOs may influence the decision-making of boards of directors. Therefore, the stipulations of the Companies Act, such as Section 76, provide a level of protection of shareholders from managerial control. Stemming from this, the assumption is

that, by reinforcing directors' fiduciary duties and promoting transparency, this enhances the governance framework and potentially the alignment between CEO remuneration and company performance, which the current study aims to examine.

The Companies Act gives some recourse for the principal should the agent fail to observe their fiduciary duties towards the company. Section 162 of the Companies Act provides remedial action for companies for delinquent directors (Werksmans Attorneys 2021). The act offers companies the option of declaring the director's delinquency in circumstances, for instance, where they have failed to discharge their duties and grant leave to claim damage from such directors for losses incurred because of the director's conduct (Werksmans Attorneys 2021).

Although the Companies Act broadly defines the duties of directors, it is not specific to employment matters. In contrast, the King IV Code elaborates on directors' responsibilities and duties as they relate to employment matters (Cliffe Dekker Hofmeyr, 2024).

2.5.2 Income Tax Act 58 of 1962

The Income Tax Act of 1952 of South Africa was enacted to consolidate various aspects of taxation, providing a legal framework on how individuals and companies are taxed. The income tax provisions outline the tax to be deducted from employees by the employer from the remuneration earned by employees. The process of deducting or withholding taxes from remuneration as it is earned by an employee is commonly referred to as Pay as You Earn. Of particular relevance to executive remuneration strategies is Section 8c and paragraph 11A of the Fourth Schedule to the Act, which governs the tax treatment of share incentive schemes. These provisions specify that employees' tax is only withheld once the share options vest, not on the grant date. This has implications for how remuneration is structured, particularly in the use of long-term incentives such as stock options. As with the Companies Act, the Income Tax Act also outlines what is regarded as remuneration for purposes of taxation.

These legislative provisions directly impact the current study in that they determine when and how certain types of remuneration are taxed. The act, by determining when and how remuneration is taxed, can shape the design and timing of CEO remuneration packages.

Taxation policy in the U.S.A. has similarly been used as a tool to curb excessive CEO remuneration. In the U.S.A., legislative proposals such as the Curtailing Executive Over Compensation Act of 2023 and the Tax Excessive CEO Pay Act of 2021 have sought to

address escalating CEO remuneration levels. Both Acts propose an excise tax on U.S. companies – both public and private – that reports average annual gross revenue of at least \$100 million over a three-year period in cases where the ratio of CEO remuneration (including STIs, stock awards and options) to median employee remuneration is 50 to 1 or greater (Lee, 2023). Between 1978 and 2022, CEO remuneration in the U.S.A. increased by approximately 1,200% compared with the far lower wage growth for the average worker (Bivens, 2023). However, such policy interventions have had unintended consequences. In efforts to circumvent higher tax brackets, some CEOs have restructured their remuneration to minimise taxable income. Notably, CEOs Elon Musk, Mark Zuckerberg and Jeff Bezos all reported earning \$0 in remuneration, instead relying on capital gains from previously awarded stock options, which are taxed at lower rates than ordinary income (Bivens, 2023).

These dynamics underscore the relevance of taxation policy in shaping remuneration strategies, which are important for this study. By exploring the relationship between CEO remuneration and company performance, this research is grounded in an understanding of how legislative frameworks, both in South Africa and internationally, influence remuneration structures of their respective companies. The next section looks at legislation that attempts to address inequity between different levels of employees.

2.5.3 Employment Equity Act 55 of 1998

With glaring differences in income, South Africa is one of the least equitable societies in the entire globe (Statistics South Africa 2020). There is a large salary disparity between the highest earners, CEOs in particular, and lower-level workers; CEOs receive incomes that are disproportionately higher than those of the general workforce. Historical circumstances, economic systems, and low social mobility all contribute to this disparity, which widens social and economic divides throughout the nation (PwC, 2020).

In addition to the Companies Act 71 of 2008, CEO remuneration is also governed by the Employment Equity Act (EEA) 55 of 1998. The primary aim of the EEA is to eliminate all forms of discrimination, promote workplace diversity, and foster equality within the employment environment. Specifically, the Act strives to ensure fair and equal treatment for employees by combating discrimination and applying affirmative action measures to rectify the employment inequities experienced by designated groups. Ultimately, the objective is to

ensure equitable representation across all occupational categories and levels within the workforce.

Furthermore, the EEA imposes additional reporting obligations on employers, who are required to submit an employment equity report. This report mandates transparency regarding the remuneration of employees at various levels and within different categories within the company. It is intended to ensure that employers disclose pay disparities, if any, and take necessary steps to address any unequal remuneration practices.

The researcher observes that the focus on remuneration-related issues is consistently emphasised across multiple legislative frameworks, highlighting their significance in promoting transparency, fairness, and alignment with corporate governance principles. South Africa's Companies Amendment Act 2024 highlights the government's attempts to address the country's income disparities, a concern also addressed in the EEA. The Amendment Act mandates that companies provide detailed disclosure regarding the remuneration and benefits granted to each director or individual occupying a prescribed office within the company. This provision aims to increase transparency, particularly in the context of pay disparity. For example, in 2023 Woolworths reported a significant pay ratio between its highest-paid employee (the CEO) and its lowest-paid employee. The CEO earned R122,5 million, whereas a shop-floor employee received R93,600, resulting in a pay ratio of 1.308:1 (Crotty, 2024).

Crotty (2024) noted that such discrepancies may be defended by economists, remuneration committees and consultants as justifiable under the laws of supply and demand. There is a significant oversupply of potential employees at the shopfloor level, resulting in low demand for their skills, whereas the limited availability of CEOs creates a high demand for their expertise. Another factor contributing to the pay discrepancy is that shopfloor pay is determined by the government, whereas the CEO's remuneration has no statutory ceiling (Crotty 2024).

The Act compels the employer to develop plans to eliminate unfair and discriminatory practices and to ensure that transparency and equity are audited, discussed with employees and addressed. Similarly, the EEA provides transparency around employment practices, aligning with King IV recommendations (Cliffe Dekker Hofmeyr, 2024). In response to these

legislative mandates, many businesses are adopting a proactive stance towards addressing pay discrimination in the workplace. This includes engaging in consultations with employees prior to the implementation of processes such as pay disclosures, conducting pay audits, and granting employees the right to access information regarding pay data (Baker McKenzie 2023).

However, there is some evidence that increased disclosure requirements for executive pay can lead to peer comparisons and subsequent pay increases rather than the intended restraint on executive pay. Woolworth's Chair of the Remuneration Committee, David Kneale, defended the R122 million paid to the CEO as being benchmarked against JSE-listed retailers and other comparably sized companies (Business Live 2024).

The EEA has contributed to transforming South Africa's unequal pay landscape, albeit incrementally. SDF Corp Group (2023) noted that transformation is not a linear process with an identifiable beginning and endpoint. In some cases, companies approach the EEA as a compliance exercise, potentially circumventing legislative intent and keeping CEO remuneration a focal concern for stakeholders. The oversight and governance principles expounded by South African legislation are also mirrored in other countries, as outlined in the subsequent section.

2.5.4 Sarbanes-Oxley Act 2002

Although the current study focuses on JSE-listed companies, as some of these companies are part of international organisations, it is also important to look at some international legislation. The Sarbanes-Oxley Act mandates compliance for all publicly listed companies, including wholly owned subsidiaries and publicly traded foreign entities that operate within the U.S.A. (Anastasiades & Fritchie, 2024). In the U.S.A, the post-Enron era saw a move to try and curtail the power of CEOs and concentrate more on corporate governance. Public outrage was sparked by scandals involving companies such as Citigroup, Bank of America, and Royal Bank of Scotland, as well as by governments' responses that used taxpayer dollars to support bankruptcies without holding their CEOs accountable (Bouteska, Sharif & Abedin, 2024). The Sarbanes-Oxley Act, enacted in July 2002, introduced new and expanded regulations for publicly listed company boards, management and public accounting firms in the U.S.A. This legislation, along with various stock exchange regulations, emphasises the corporate board's

primary responsibility for overseeing shareholders' interests. It called for the board's independence from management, requiring that the majority of board members be independent external directors who have no business ties to the company or personal relationships with its management (Kaufman & Englander, 2005).

The principles embedded in the Sarbanes-Oxley Act closely mirror those in the South African Companies Act and the King IV Report, all of which aim to reinforce accountability and transparency, particularly regarding executive remuneration. Similar reforms have occurred internationally; for example, the United Kingdom Cadbury's Report (1992) recommended the formation of an independent remuneration committee (REMCO) to oversee executives' remuneration and ensure alignment with clear performance targets (Giles, 2022). These reforms were put in place to limit the probability of boards being complicit in management misconduct, and the introduction of REMCO and performance-linked remuneration represents a regulatory effort to align CEO remuneration with company performance.

Despite these governance mechanisms outlined by such legislation, challenges remain. In the Indian context, Soni and Singh (2020) examined two key governance factors – board size and the proportion of independent directors – and found that only board size had a statistically significant positive relationship with directors' remuneration. Their study indicated that larger boards may struggle to effectively challenge excessive executive pay, likely due to coordination difficulties or diminished individual accountability among board members. Notably, their study also revealed a significant increase in executive remuneration among sampled companies following the Companies Act of 2013. The structure of remuneration also changed, with the proportion of fixed salaries increasing, and the STI declined.

These insights are highly relevant to the present study, which investigates whether CEO remuneration in JSE-listed companies aligns with company performance. While South Africa's governance reforms, such as King IV, promote transparency and independent oversight, it remains unclear whether these reforms meaningfully curbed excessive CEO remuneration or ensured alignment with performance-based metrics.

Legal provisions alone, however, may not achieve the intended outcomes. Some company practices may be embedded to such an extent that legal frameworks or regulations may not fully address them. The independence of non-executive directors is an issue that may still

create challenges in controlling CEO remuneration. Managerial power theory posits that non-executive directors who oversee executive remuneration are often indebted to CEOs for their appointment, leading to loyalties that favour executive shareholders (Rehman et al., 2021). Decisions perceived as adverse to management may jeopardise a director's board nomination or related benefits, whereas management may influence directors' nominations to other boards through referrals.

However, one can argue that shareholders may influence managers' decisions. This may be a direct result of CEOs' interest in maintaining a favourable outlook around their business principles and practices. If market investors perceive a company's management to be out of control, their investment interests will be adversely affected. Therefore, CEOs' efforts to attract investor interest will be undermined. Bebchuk and Fried (2004) argue that these investors have insufficient power to align their interests with those of shareholders.

Perceptions play a crucial role in shaping attitudes towards remuneration policies, prompting consultants to employ various strategies to mitigate external criticism. Often, directors rely on information provided by human resource executives and remuneration consultants to inform their decisions. However, Jackson's (2023) investigation into the relationships between executive remuneration consultants and company stakeholders suggests a potential bias towards CEOs, which may lead to inflated remuneration packages or lenient performance metrics. These consultants are typically hired as impartial experts to aid remuneration committees in setting executive pay (Grosse, Ma & Scott, 2020). Consequently, remuneration packages are often intricately designed to conceal their true value, making them appear justifiable at face value. It may seem, therefore, from this conclusion that the transparency required by legislation may have been circumvented by companies.

The outcry in public opinion, such as unions over CEO salaries, therefore, seems outrageous and unfair if such packages are well modelled and justified when put under scrutiny. Within the context of these challenges, the assumption that legislation alone improves alignment between CEO remuneration and company performance is not straightforward.

2.5.5 King IV Recommendations

Legislation establishes standards that stakeholders must adhere to, but additional frameworks have been proposed to guide business operations with recommended best practices and

principles. The King IV Code was developed to provide such principles and practices for organisations seeking to achieve good governance (Cliffe Dekker Hofmeyr, 2024).

In addition to considering executive remuneration, it is important to recognise the growing significance of governance within the South African context. With the advent of proponents for more accountable business practices, corporate governance has become a central focus of business operations (Ruwanti, Chandrarin, & Assih, 2019). Corporate governance concerns how businesses operate with respect to rules, principles, practices, and how authority is exercised within the organisation. Modern business philosophy emphasises three key elements: leadership, sustainability, and effective cooperation (Ruwanti et al., 2019). Good governance is therefore synonymous with effective and ethical leadership.

A committee chaired by Judge King, commissioned by the Institute of Directors of South Africa (IoDSA), was tasked with developing governance guidelines for business operations in South Africa. The outcome was the King reports and associated codes, which outline principles on how corporate leaders should guide companies toward achieving sustainable economic, social and environmental outcomes. Sustainability is emphasised as both a moral and economic imperative for the 21st century. Among its key principles, the King report emphasises transparency and disclosure regarding executive and non-executive directors' remuneration. Similarly, the Sarbanes-Oxley Act, The Companies Act 71 of 2008 of South Africa, and the JSE listing requirements reinforced King IV's emphasis on transparency, accountability and clear disclosure of CEO remuneration.

Figure 2.2 illustrates the traditional management structure in which an organisation is managed by a CEO. The traditional approach to managing the organisation and reporting to the board involved a reporting line from the CEO to the board, as well as the CEO's oversight of the executive team. In this structure, the CEO was fully empowered by the board and was the only executive invited to attend board meetings. This structure consumed the CEOs' time in reporting to the board on all the elements of the organisation and was subsequently responsible for the operational oversight of the organisation. This structure limits the board's interaction with and access to other members of the management team, who can offer their expertise and guidance.

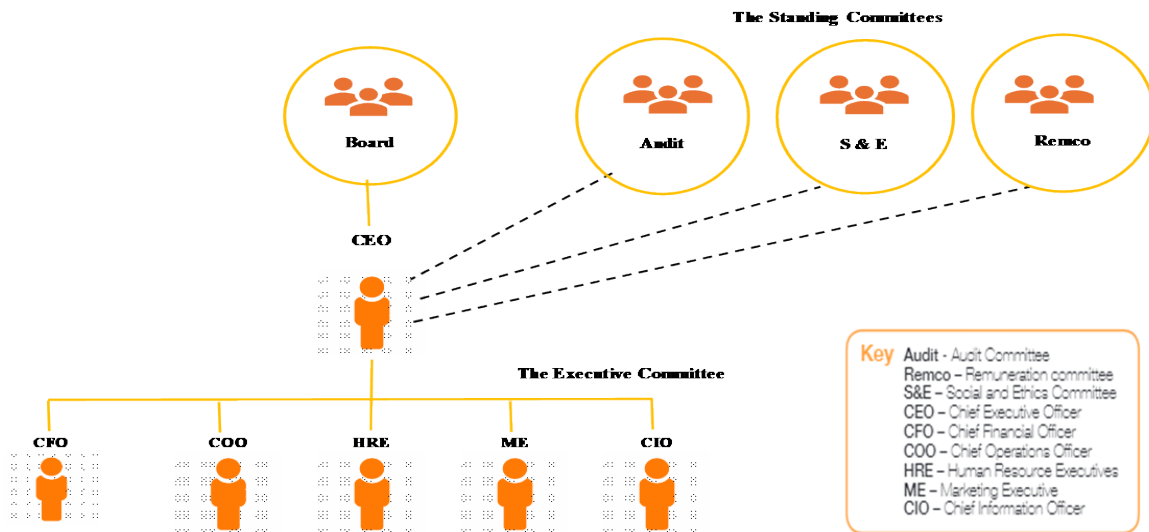


Figure 2.2: Traditional Management Structure

Source: Thomson, 2017

The King IV Report (2016) highlighted the necessity for board committees to provide enhanced oversight, expert guidance, and strategic input to the management team. This structure allows the CEO to leverage board expertise effectively and focus more on operational management. The report further recommends that remuneration committees assume greater responsibility for ensuring transparency in directors' remuneration and providing clarity on remuneration strategies and expectations.

The King IV Report also recommends that executive and board remuneration be disclosed comprehensively, highlighting the following elements:

- A background statement outlining the context and key considerations informing remuneration decisions.
- A summary of the fundamental elements of the organisation's remuneration policy.
- An implementation report providing a detailed account of all remuneration awarded to individual governing members and executive management during the reporting period.

Furthermore, King IV advises that the remuneration policy and the implementation report should be presented separately at the Annual General Meeting each year for a non-binding

advisory vote by shareholders (Planting, 2017). In cases where 25% or more shareholders vote against the policy or implementation report, the remuneration policy must outline the steps the board will take to address the dissent (JSE, 2017). The implementation of these King IV recommendations commenced on 1 April 2017 (Lamprecht, 2017).

The Companies Amendment Bill (2023) proposes further alignment with these principles by requiring JSE-listed companies and state-owned enterprises (SOEs) to obtain shareholder approval for their remuneration policies by majority vote. The Bill also requires disclosure of the pay gap between the highest- and lowest-paid employees, including both average and median total remuneration figures, a provision that is also reflected in the Employment Equity Act. Given that the JSE requires compliance with the King IV, these recommendations are directly relevant to this study, as they may influence corporate strategies and decisions regarding CEO remuneration and its alignment with company performance.

As noted earlier, many JSE-listed companies operate globally, warranting consideration of international legislative frameworks governing CEO remuneration. One of the aims of this study is to provide insights for key stakeholders and to compare South African practices with international regulations, highlighting potential areas for policy improvement and revealing similarities in governance and remuneration practices across jurisdictions.

The management structure recommended by the King IV Report, depicted in Figure 2.3, enables the CEO to prioritise operational management while non-executive directors focus on specific functional areas. For example, the remuneration committee is responsible for overseeing labour relations and developing remuneration policies. Through the board and its committees, specialised oversight and expertise are provided to each manager responsible for operational functions, thereby allowing the CEO to deliberate on broader strategic objectives.

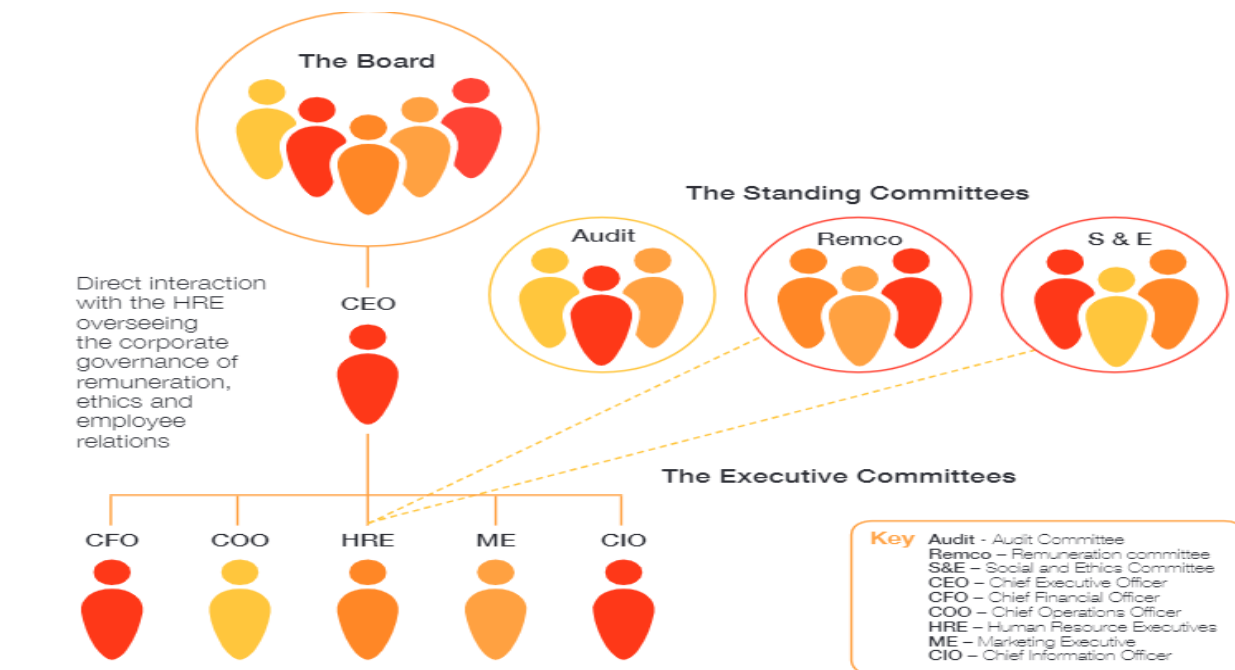


Figure 2.3: Proposed management structure

Source: Thomson, 2017:31

These recommendations align with Section 72 of the Companies Act, which mandates the formation of board committees and permits the delegation of any board authority to such committees. By formalising these structures, King IV reinforces the principles of accountability, transparency, and effective governance within organisational leadership.

Notably, the IoDSA released the King V Code on 24 February 2025 for public comments. While this study primarily references the King IV Report to analyse governance, board oversight, and executive remuneration practices, the release of King V signals an ongoing evolution of South Africa's corporate governance framework. King V is expected to build on the principles of King IV, potentially refining board committee responsibilities, transparency requirements, and remuneration governance. Although the full implications of King V remain to be evaluated, its release highlights the dynamic nature of governance standards and suggests avenues for future research into the alignment of CEO remuneration with company performance.

2.5.6 U.S.A Securities and Exchange Commission (SEC)

The U.S.A introduced an independent agency, the Federal Government (the SEC), to regulate public capital markets. The authority of the SEC also includes prescribing content from financial statements filed with the SEC (Deloitte, 2024).

2.5.6.1 Listing standards for the recovery of erroneously awarded remuneration.

The U.S. Securities and Exchange Commission (SEC) has proposed draft regulations concerning the recovery of remuneration awarded in error. These regulations apply to all publicly listed companies, irrespective of their size, which offer incentive-based remuneration to employees. Companies are strongly encouraged to adopt and adhere to a policy that includes a provision requiring the recovery of any remuneration paid erroneously if financial statements previously issued are amended to rectify a material error. According to the draft regulations, the company must reclaim any improperly awarded incentives from current or former executive officers who were remunerated during the period affected by the financial correction (Miller, 2022). This regulation's presence highlights the possibility of inaccurate financial statement reporting, thus challenging the assumption that these statements are credible sources of data for research. Therefore, inaccuracies may exist in some of the research findings. On the other hand, the provisions for recovering unjustly rewarded incentives may deter CEOs from manipulating financial statements and from risking the loss of their incentives, thus reducing the risk of research being compromised by inaccurate data.

2.5.6.2 Securities and Exchange (SEC)-Incentive-based remuneration arrangements

The SEC has published draft regulations to ensure that incentive-based remuneration balances risk and reward, particularly within financial institutions with assets of US\$1 billion or more. The regulation highlights that aligning the interests of shareholders and key stakeholders with those of employees is crucial for safeguarding the organisation's long-term stability and soundness. To this end, the regulations require that both financial and non-financial performance indicators be integrated into incentive structures. Non-financial measures may take precedence over financial measures when necessary, ensuring a more holistic evaluation of performance. Additionally, incentives are subject to adjustments in response to factors such as actual financial losses, inappropriate risk-taking, compliance shortcomings, or other performance-related issues. The aim is to promote alignment with the long-term interests of

both shareholders and other stakeholders. Moreover, a significant portion (40–60%) of incentive-based remuneration is deferred for a period of one to four years, with provisions for clawbacks and downwards adjustments designed to mitigate potential risks (White & Case, 2022).

Additionally, the SEC amended its pay ratio disclosure rules in October 2015, requiring clear reporting of executive remuneration relative to company financial performance (Baker McKenzie, 2022).

2.5.7 UK Prudential Regulation Authority – Buyouts of Variable Remuneration

In January 2016, the UK Prudential Regulation Authority (PRA) published a consultation paper addressing the regulation of buyouts of variable remuneration for banks (Ligere, 2024). The driving force behind this paper was influenced by U.S. regulations on incentive pay and measures to recover incentives paid to executives from financial results with material errors. When executives find alternative employment, part of their contract of employment helps them compensate for the loss of incentives that would have been payable to them had they retained employment with their previous employer (Goode & Saunders, 2021).

When organisations recruit staff, they may offer to buy out deferred bonus awards that were previously cancelled by the employee's former employer. However, if this contracted incentive is paid out by the new employer, it could be based on inaccurate financial results, potentially benefitting the employee at the expense of the new employer (Goode & Saunders, 2021). The UK Prudential Regulation Authority (PRA) argues that such buyouts can undermine the effectiveness of clawback provisions, as they allow incoming executives to avoid adjustments to bonuses made by their former employers. In response, the PRA recommends that new employment contracts include provisions for potential clawbacks, which could be triggered by decisions made by previous employers. This will require the previous employer to inform the new employer if they determine that incentives were paid in error, enabling clawbacks to be applied to the employee's deferred variable remuneration (Goode & Saunders, 2021). These regulations, in the context of CEO remuneration, serve as a mechanism to better align CEO pay with company performance.

Previous regulations have introduced and discussion of the regulatory environment impacting companies, which influences the purpose of the study. As the study focuses on JSE-listed

companies, the next section introduces the regulations that are specific to JSE-listed companies.

2.5.8 JSE Remuneration Regulations

Ranked 19th in the world, the JSE is the largest stock exchange on the African continent (JSE, 2017). In alignment with King IV recommendations, the JSE requires comprehensive disclosure of remuneration policies and implementation reports in annual reports. While the remuneration of CEOs has been subject to public debate, the adoption of transparency measures for JSE-listed companies is considered prudent and aligns with principles of responsible corporate governance. The JSE adopted the recommendations outlined in the King IV Report, which call for comprehensive disclosure of both remuneration policies and implementation reports in annual reports. This approach is aimed at promoting greater transparency and accountability in executive remuneration practices. The JSE has not been immune to the debate regarding the remuneration paid to the CEOs of companies but acknowledges that the adoption of transparency around the remuneration of JSE-listed company employees is prudent.

According to King IV, compliance requires the following:

- The board of directors approves the remuneration policy of the company, which outlines the company's process and philosophy pertaining to responsible and transparent remuneration.
- The remuneration policy incorporates what comprises remuneration and the mix of these components of the remuneration paid to employees. These include cash and noncash parts of remuneration.
- The fees paid to nonexecutive directors of the company are disclosed, including the remuneration of executive members for the reporting period (Deloitte, 2017).

Since 2002, JSE-listed companies have been mandated to disclose executive directors' remuneration packages. This transparency, while previously confidential, has drawn attention to instances of perceived excessive pay (Institute of Directors, 2022). Baker et al. (2019) reported that, in response to negative public opinion between 1992 and 2008, companies reduced stock option grants in favour of salaries, bonuses, and restricted stocks. However, this restructuring did not reduce total remuneration, and the link between CEO pay and share price

performance was weakened. Organisations tend to adjust remuneration types in response to public scrutiny without materially altering total compensation (Chang, Dambra & Schonberger, 2022).

The intention behind disclosure is to enable shareholders to evaluate the value generated by executives and act as a deterrent to excessive pay. However, De Vaan, Elbers, and DiPrete (2019) note that public disclosure often fuels benchmarking practices, whereby executive pay is compared to peers rather than assessed relative to company size, performance, or sector norms. This benchmarking effect has contributed to upwards pay trends independent of value creation.

These dynamics illustrate how company responses to disclosure requirements influence remuneration patterns over time, adding complexity to studies examining the relationship between CEO remuneration and company performance. By contextualising the regulatory environment, this discussion underscores the relevance and significance of the research problem and situates the study within the broader governance and remuneration landscape.

Since 2002, listed companies have been required to divulge the remuneration packages of their executive directors. This requirement has resulted in the public disclosure of information previously considered private and confidential, inadvertently drawing attention to instances of excessive executive remuneration (Crotty & Bonorchis, 2006; Institute of Directors, 2022). Baker et al. (2019) noted that with negative public opinion between 1992 and 2008, organisations reacted by reducing their stock option grants and increasing less contentious pay types such as salaries, bonuses, and restricted stocks. This, however, did not change the overall remuneration paid. A reduction in stock option pay was more prevalent in organisations that were more concerned about their reputation. Overall, however, with all the negative public opinion, CEO remuneration did not decline. The restructuring of CEO remuneration to other pay types only served to reduce the link between CEO remuneration and share price performance. As long as public opinion focuses on a particular remuneration type, organisations react by reducing that type of pay (Chang et al., 2022).

The disclosure of remuneration was intended to enable shareholders to assess whether they are receiving value for their investment from executives and to act as a deterrent to excessive awards of pay. Crotty and Bonorchis (2005), however, argued that the quality of the disclosure

made it difficult to ascertain whether value for money was being received by shareholders. According to De Vaan et al. (2019), publicly disclosed pay packages only fuelled the trend of benchmarking salaries, where executives' salaries were compared to those of their peers and pressure was exerted on companies to make payments as per their peers. This upwards spiralling of pay occurred without the commensurate comparison of value through assessing the executives against the size of their company, company performance, or the market sector (De Vaan et al., 2019). The reactions of companies to disclosure requirements impact remuneration trends and patterns over a period, further complicating the study of the relationship between remuneration and company performance.

Writing academic research entails more than merely selecting a topic, gathering information, and evaluating it. The purpose of this research is to find solutions to practical problems and contribute to the human resources field. The purpose of the research was to formulate a sound research question around which the researcher would design a study and develop an appropriate scope of work that includes selecting the appropriate study population, determining the methodology, collecting and analysing data and drawing conclusions on the basis of the results. The significance of the discussion around the regulatory environment provides context for the research problem and suggests its relevance in the context of remuneration.

2.6 OTHER INFLUENCES ON REMUNERATION PAID TO CEOs

Various theories and empirical evidence have explored how CEOs worldwide have gained power and the corresponding remuneration throughout history. The preceding sections of this chapter detail the different theoretical underpinnings, legislative frameworks, and JSE regulations that influence CEO pay. In addition to these structural and formal mechanisms, other factors, particularly the role of external actors, also significantly shape CEO remuneration.

One of the most prominent influences is the engagement of remuneration consultants. These external advisers are typically contracted by boards of directors to provide expert guidance on structuring CEO pay packages, benchmarking remuneration against industry comparators, and aligning pay with company performance. Remuneration consultants translate governance principles, regulatory requirements, and market expectations into actionable remuneration

strategies. Their involvement ensures that CEO pay remains competitive, both locally and globally, which is particularly relevant for multinational corporations with geographically dispersed operations seeking to attract and retain executives with international experience.

However, the effectiveness of remuneration consultants in mitigating agency problems has been contested. While they are expected to support boards in designing fair and performance-aligned remuneration, their recommendations can sometimes reinforce existing market trends or CEO preferences, potentially contributing to upwards spirals in pay unrelated to company performance. The interplay between governance frameworks, such as the King IV, the Companies Act, and JSE disclosure regulations, and the guidance of remuneration consultants highlights the complex environment in which CEO remuneration is determined. Legislative and governance codes provide formal structures for accountability, transparency, and alignment with shareholder interests, whereas remuneration consultants operationalise these frameworks, influencing practical outcomes within organisations.

Understanding CEO remuneration, therefore, requires an integrated perspective that considers legal mandates, governance principles, market forces, and the strategic input of external advisers. This multilayered approach underscores the importance of examining how these influences converge within JSE-listed companies to shape remuneration practices and their alignment with company performance.

2.6.1 International Work Experience Effect on CEO Remuneration

Although the study focuses on South African companies, the findings of this research may have broader implications for research in other markets, especially in emerging markets, as these markets share similar economic and regulatory environments. The study's insight may be applicable beyond the South African context. To also rationalise the decision to incorporate insights into global variables and research studying CEO remuneration in other countries, the profile of JSE companies is important. According to Müller, Ferreira-Schenk, Jansen van Rensburg, Sgammini and Mokatsanyane (2022), approximately 5% of JSE-listed companies are dual listed, meaning that they have another listing in addition to the JSE. A company's decision to list on more than one stock exchange may be motivated by the opportunity to generate more money by connecting with more investors. An increasing number of multinational companies listed on the JSE, such as British American Tobacco (BAT), Naspers

AB InBev and Glencore, generate more than 80% of their revenue and income from markets outside South Africa (Kutisker-Jacobson, 2024). Although these companies are listed in South Africa, their economic performance is largely detached from the South African economy. It can therefore be assumed that such companies are more likely to appoint CEOs with international work experience who possess the ability to navigate the complexity of global markets.

On the other hand, some South African CEOs emigrate to work abroad for better career opportunities, more stable economies, or better remuneration. MyBroadband (2021) notes several South Africans who have emigrated abroad, such as Rob Shuter, former MTN CEO, now BT Enterprise CEO in the United Kingdom (UK), and Mark Taylor, former Reunert and Nashua executive, now CEO of Ricoh International in the UK, who have emigrated abroad to take prominent positions internationally. Therefore, it is important to discuss the potential influence of international work experience on CEO remuneration. Given that the study aims to explore the relationship between CEO remuneration and company performance in JSE-listed companies in South Africa, it is crucial to explore the impact of international exposure on CEO remuneration.

In the context of CEO remuneration, human capital posits that factors such as advanced education, specialised training, and industry-specific experience can justify higher remuneration. These attributes are believed to enhance a CEO's ability to create value for shareholders, thereby warranting higher pay (Rothomi & Rafif, 2023). The investment that CEOs make in attaining qualifications, training, and work experience, especially international experience, serves as a form of capital to be traded for higher remuneration (Rothomi & Rafif, 2023). The basic assumption is that a CEO's international experience is linked to his or her capacity to perform specific tasks or roles effectively. Such experiences are thought to influence CEOs' values, attitudes, beliefs and behaviours (Schmid and Baldermann, 2021). According to Schmid and Baldermann (2021), international work experience is characterised by factors such as its duration, timing, and range of international exposure. They emphasise that international experience is multifaceted and cannot be attributed to just a single factor. International experience provides skills, knowledge, and competencies that are essential for navigating diverse environments (Schmid and Baldermann, 2021). Notably, the explanation of human capital theory for differences in CEO remuneration is not applicable in all instances.

In some cases, CEO remuneration may not directly reflect differences in human capital attributes, as remuneration can also be influenced by company size, market conditions or board decisions. Schmid and Baldermann (2021) argued that the way boards determine CEO remuneration can be viewed as a process of assessing the value of a CEO's capabilities, which are represented by their human capital. This implies that those responsible for setting executive pay evaluate CEOs' characteristics and associate these traits with the human capital they bring to the company. This evaluation can lead to positive outcomes, such as improved firm performance, if the CEO's experience and skills are deemed valuable.

The assumption is that CEOs who have increased their human capital investment in attaining not only local experience but also international experience, provide important capabilities, especially to multinational companies, thus justifying higher remuneration (Schmid & Baldermann, 2021). It is therefore important, in the context of CEO remuneration, to consider the possible influence of international work experience on CEO pay. The inclusion of international experience in this study represents an advancement in knowledge of CEO remuneration compared with existing studies (Khan, Hassan & Afzal, 2023; Lovett, Rasheed & Hou, 2022; Yahaya, 2025).

Schmid and Baldermann (2021) noted that Schmid and Baldermann (2021) reported that specialised human capital acquired during later international assignments may be valuable; evidence suggests that the general purpose of human capital gained through early international work experience has a stronger effect on CEO remuneration. These observations were also supported by Schmid & Baldermann (2021), who observed higher remuneration for CEOs with international experience. The general-purpose human capital experience is associated with strategic thinking, cross-cultural competence and adaptability, which are all key for the CEO role. They further noted that international experience serves as a catalyst for entry into international jobs at a high entry level and influences mostly fixed and variable remuneration. CEOs with international experience are expected to contribute positively to company performance. Machado et al. (2023) examined the impact of international experience on CEO remuneration across 230 Brazilian companies between 2010 and 2018. Their study revealed that executives with international academic experience tended to receive lower salaries, whereas those with practical international work experience were compensated more generously. These results align with the findings of Schmid and Baldermann (2021), who

identified a significant relationship between the timing and diversity of international education and experience and CEO pay. They observed that earlier and more diverse international exposure had a particularly strong influence on executive remuneration. These findings may suggest that companies may place greater value on practical international experience and academic qualifications gained abroad by CEOs when determining remuneration.

Nevertheless, Schmid & Baldermann (2021) caution that they do not suggest that all international experience holds the same value. They argue that international experience, which is directly relevant to the tasks being performed and reflects hands-on learning, may be more valuable and is often linked to a specific occupation or role. General purpose skills, competencies and knowledge are valuable, accumulate over a lifetime and are not specific to an organisation or job. The reason for remunerating CEOs with international experience at a higher rate is that, as proposed by dependency theory, companies want to reduce the uncertainty caused by complex environments with competent CEOs to navigate challenging work environments. For example, multinational companies hire CEOs with international experience to enhance their competitive advantage in international markets (Schmid & Baldermann, 2021).

In conclusion, as the central objective of this study is to understand the relationship between CEO remuneration and company performance, international experience emerges as a potentially important factor. CEOs with international experience may contribute valuable global perspectives, strategic insight and the ability to navigate complex cross-border environments. These attributes can significantly enhance organisational performance. International experience may not only affect the level of CEO remuneration but also moderate the relationship between CEO pay and company performance. Future studies could examine this moderating effect in greater detail, across various industries, to determine whether industry-specific dynamics influence the relationship between CEO remuneration and company performance.

Having examined the influence of international experience, an attribute personally attributable to a CEO, we now turn our focus to another key driver of CEO remuneration: macroeconomic and contextual factors.

2.6.2 Macroeconomic and Contextual Factors

While international experience has been recognised as an individual characteristic that can influence CEO remuneration, reflecting the value placed on global expertise and strategic insight, such personal attributes do not operate in isolation. CEO remuneration is also shaped by broader external and contextual factors beyond the control of the CEO. Performance outcomes are not solely based on CEO behaviour; other factors may influence the outcome.

The economic catastrophe in the wake of the COVID-19 pandemic was more severe than any financial crisis since the great depression of 1930, which resulted in whole economies shutting down, affecting company performance, especially in the real estate and basic materials industries, owing to a reduction in export demand in South Africa (Muthu & Wesson, 2022). Konigsburg and Finzi (2020), in a survey involving CEOs, remuneration committee chairs and institutional investors, reported that all stakeholders acknowledged significant changes in the landscape of CEO remuneration, driven either by the impact of COVID-19 or a shift away from an exclusive focus solely on maximising shareholder value. Whether these sentiments around CEO remuneration are temporary or permanent remains to be determined (Konigsburg & Finzi, 2020). However, for the time being, principles of fairness and empathy have gained prominence. Konigsburg and Finzi (2020) noted that the respondents acknowledged the increasing link between leadership and social responsibility and how this might ultimately affect CEO remuneration. Although the current study explores the relationship between CEO remuneration and company performance, it does not analytically assess the impact of the COVID-19 pandemic, as the dataset extends only to 2020, the year of its onset. This long-term effect of COVID-19 on CEO remuneration and corporate governance thus presents a valuable area for future research.

Another challenge facing South African companies is electricity shortages. Beginning in 2007, rolling scheduled power outages, often known as load shedding, became more severe starting in 2022. In 2023, there were 289 days of total outages due to rotating load shedding, up from 48 days in 2021 and 157 days in 2022 (World Bank, 2024). Each outage lasted between two and four hours. The prolonged power outages significantly disrupted company operations and increased operating costs, particularly for businesses reliant on expensive diesel generators (World Bank, 2024). Like the effects of the COVID-19 pandemic, the long-term impact of these challenges is beyond the scope of this study. Nevertheless, it is important

to acknowledge these factors, as they may act as moderating variables in the relationship between CEO remuneration and company performance. Considering such factors further supports the study's focus on examining interaction and moderating effects, which will offer a more comprehensive understanding of the factors influencing CEO remuneration in South Africa.

These external factors suggest that poor performance does not necessarily indicate poor CEO decision making, nor does strong performance always reflect superior decision making (Qin & Yang, 2022). Instead, external economic and infrastructural challenges may moderate the relationship between CEO remuneration and company performance, possibly explaining the lack of statistical correlation in some studies (Nkwadi & Matemane, 2022; Rampling & Eddie, 2021; Wijeweera, 2021).

The influence of other factors on the direct relationship between CEO remuneration and company performance justifies including moderating and interaction effects in this study. By incorporating moderating and interaction effects, this study accounts for other influences on CEO remuneration and company performance, offering a more nuanced understanding of the complex factors shaping CEO remuneration. Another key influence on CEO remuneration is remuneration consultants. Positioned at the forefront of designing remuneration strategies on behalf of organisations, these remuneration consultants play a pivotal role in shaping CEO remuneration. Their approach, as previously discussed, takes into account various factors influencing CEO remuneration to develop and recommend remuneration strategies to the board of directors.

2.6.3 Power of Remuneration Consultants

Despite being the company's owners, shareholders rarely have direct involvement in setting CEO remuneration. The responsibility for designing remuneration strategies for CEOs is usually carried out by the board of directors through its remuneration committee. The technical expertise needed to design remuneration strategies is usually outsourced to remuneration consultants. A remuneration consultant is an experienced professional who advises organisations on multiple facets of remuneration (Jackson, 2023). These experts are aware of industry standards, market trends, legal requirements, and best practices for designing remuneration for CEOs (BBIZ Compensation Consultants, 2024).

The role of remuneration consultants can be interpreted through various perspectives and theories related to executive remuneration. They may be viewed as part of the solution to agency problems by providing valuable services to boards of directors in aligning agency interests with principal interests (Jackson, 2023). In contrast, managerial power theory suggests that companies acquire the services of remuneration consultants to camouflage or facilitate rent extraction, resulting in sub-optimal CEO remuneration. To avoid managerial power challenges, remuneration consultants need to genuinely act as advisers to the board of directors, and it is crucial that CEOs maintain their distance in recruiting and continued partnerships with remuneration consultants.

To understand the influence that remuneration consultants may have on CEO remuneration, their roles and responsibilities will be unpacked. The remuneration consultants, upon engagement, should clearly establish the roles, responsibilities and expectations of the remuneration consultant with the board of directors of the company client. To determine CEO remuneration, the board of directors considers the mix and quantum of fixed and variable remuneration (Dias, Paiva & Carvalho, 2024). The subject of remuneration can be complex and technical and beyond the capabilities of the board of directors (Remuneration Consultants Group, 2023). Remuneration consultants do not make remuneration decisions but offer advice and expertise based on market knowledge, industry insight, and professional capabilities. The advice given by remuneration consultants is designed to offer robust and informed decision making by the board of directors while considering the company's pay philosophy, strategic vision, financial situation, opinion of key stakeholders, regulatory framework, industry practice and market dynamics (Remuneration Consultants Group, 2023).

In most instances, the remuneration consultant provides an analysis of remuneration trends, industry practices and best practices on behalf of the board of directors to determine the CEO remuneration strategy (Jackson, 2023). Therefore, industry-specific company performance measures may exist that enable effective comparison of CEO performance with peers in the market. Industry analysis often involves the development of a peer group of comparable companies against which CEO remuneration can be benchmarked. This process is important for ensuring that CEO remuneration is aligned with industry standards and the company's retention strategy. For example, Mr Price Group, in its 2023 Remuneration Report, indicated that it had engaged the services of external remuneration consultants PwC, REMchannel (Pty)

Ltd. and the 21st Century to assist in benchmarking executive director remuneration and in enhancing remuneration disclosures. The company confirmed the independence of the consultants throughout the process, underscoring the objectivity and credibility of the process (Mr Price, 2023).

The next process, once the remuneration design has been completed, is the approval of the remuneration by shareholders. In this next phase of the process, remuneration consultants significantly influence the preparatory work of assessing and forecasting shareholder sentiment ahead of non-binding vote so shareholders. They thereby equip the board with strategic insights to mitigate potential opposition and enhance shareholder alignment (Novick, 2019).

From an agency theory perspective, the shareholder is the ultimate client of a remuneration consultant, entrusting the board of directors to act in their best interests in overseeing remuneration. However, a key challenge arises when the board-appointed consultants conduct preparatory work to anticipate and manage shareholder reactions ahead of the non-binding vote on remuneration (Novick, 2019). These dynamic risks enable pre-emptive or predatory behaviour, in which consultants shape disclosures and strategies to secure shareholder approval, potentially diluting genuine accountability and weakening the intended checks on CEO remuneration. The challenge Schein (1997) noted is that although consultants speak about their “client,” the identification of who this is not always clear and can be ambiguous. In most companies, there is a primary client that is the ultimate owner of the services and finances the project. The other is the ultimate client that the consultant values and whose interests must be considered, such as a specific group or individual within the company (Schein, 1997). The client type may change as the consultant engages in the work and becomes mindful of the lines of influence, power relations and networks. In distinguishing the different types of clients, Schein (2017) highlights the complexity of client identification:

Bachman, Rasool, and Spiropoulos (2024), in their study of Australian Stock Exchange companies from 2005-2019, concluded that companies that appointed Big 4 accounting firms (Deloitte, PwC, KPMG, Ernst & Young) recommended remuneration packages aligned with explicit targets for CEO STI. For LTI, the Big 4 accounting firms are also more likely to incorporate market-based performance targets aligned with shareholder wealth creation and less likely to incorporate metrics outside the CEO’s control. Their analysis indicates that larger

multiservice consulting companies with heightened reputation concerns and less reliance on repeat business from remuneration advisory services are less susceptible to and less inclined to recommend obscure remuneration practices that could result in excessive CEO remuneration. These findings have important implications for corporate governance and regulatory bodies, as they draw attention to the potential role of consulting company size and service diversity in promoting objectivity and transparency in remuneration practices.

There is potential research on the moderating impact of consulting company size and services on CEO remuneration and company performance. Within the context of this study, it is assumed that most JSE-listed companies, as in many global markets, utilise the remuneration consultants of the Big Four accounting organisations (Deloitte, PwC, KPMG, Ernst & Young) and, possibly, are part of these. The board of directors draws on expertise and extensive databases for benchmarking remuneration. Their involvement is seen as a way to ensure objectivity, alignment with best practices and with company performance measures. However, their dual role as both auditors and remuneration consultants raises potential conflicts of interest and their effectiveness in addressing agency problems. The relationship between CEO remuneration and company performance, which this study aims to examine, may be impacted by remuneration consultants.

In accordance with good governance principles, consultants are supposed to be independent and offer legitimate advice (Remuneration Consultants Group, 2023). However, the advice and services provided to executives and boards raise potential conflicts of interest. The Remuneration Consultants Group (2023) asserted that this conflict of interest may arise if one consulting company provides a range of services to one company, increasing the degree of interest caused by providing this wide range of services. Also of interest is, whether these services are provided directly to independent board members or to the executive team. Jackson (2023) argued that as consultants and clients work together over a prolonged period, their worldviews start to merge, and their interpretations become more standardised. Jackson (2023) highlighted that the main challenge is not remuneration consultants' ability to advise remuneration committees, but whether remuneration committees are willing to listen to their recommendations.

Such prolonged working relationships between consultants and clients with mutual understanding and shared views create a social relationship between the two parties. The

consultant perceives these long-term relationships with clients as providing an opportunity to increase their market dominance, and the client becomes a prominent professional network contact with whom such a relationship provides status (Jackson, 2023). For the client, the relationship with the consulting company is opportune when a strategic partnership that can be utilised to exploit resources is offered.

The shareholder and investor discontent around CEO remuneration has resulted in remuneration committees being requested to account for their decisions (Jackson, 2023). The remuneration consultants who have been at the forefront of remuneration design, however, have not been called to account for their recommendations. Remuneration consultants are governed by the Code of Conduct in the UK, which stipulates that remuneration consultants should provide objective advice to remuneration committees but does not stipulate how the activities of consultants should be monitored to ensure that they discharge their duties in accordance with the Code of Conduct (Jackson, 2023). Consultants may therefore offer recommendations that are in line with the expectations of CEOs, who have the power to offer follow-up work, thus increasing CEO remuneration (Jackson, 2023). In conclusion, in this section, the researcher has analysed the power and role of remuneration consultants in determining CEO remuneration. It can be argued that the competency level of board directors may require the general knowledge and skills reasonably expected of a director in this role. Companies appoint reputable remuneration consultants with specialised skills to design CEO remuneration packages and conduct preparatory work to secure an affirmative vote from shareholders (Bachman, Rasool & Siropoulos, 2024). The benchmarking of salaries, although on the surface, seems to be a rational choice for determining competitive market-related remuneration, inadvertently drives remuneration upwards (Schneider, 2021). It can be posited that the upwards trend in CEO remuneration is not attributable to the power of remuneration consultants but rather to the legislative requirements to publish remuneration figures. Such legislative requirements have enhanced transparency and enable widespread access to remuneration data, thereby facilitating benchmarking practices across companies. Therefore, there may be merit in the argument that the remuneration of CEOs is not determined by remuneration consultants, but by what the market determines they should be paid (Schneider, 2021).

The influence and importance of remuneration consultants in the relationship between CEO remuneration and company performance cannot be taken lightly. The argument that remuneration consultants are conflicted and serve only to drive up the remuneration of CEOs, thus negating their usefulness, may in some instances have merit. However, developing a remuneration strategy is a technical process requiring professional expertise, which, in most cases, remuneration committees do not possess.

2.7 CHAPTER SUMMARY

CEO remuneration has become a key focus for stakeholders, including governments, unions, the public, and the media. Research has sought to determine whether rising CEO pay reflects legitimate concerns or misperceptions. The literature shows that while boards attempt to align CEO pay with company performance, the results often fail to justify the alignment.

CEO remuneration is shaped by a complex interaction of factors, including economic conditions, CEO power, shareholder objectives, and regulatory frameworks. A notable trend has been the adoption of guaranteed pay structures, sometimes prioritising executive security over long-term strategic objectives. Remuneration consultants play a pivotal role in designing these packages, but their involvement raises concerns about potential conflicts of interest and symbiotic relationships with executives.

Heightened oversight through legislation, governance codes, media scrutiny, and professional bodies, however, creates opportunities to strengthen the pay-for-performance link. The study's longitudinal focus from 2008 to 2020 enables assessment of these mechanisms over time.

The literature review in Chapter 2 integrates theoretical perspectives, empirical findings, and regulatory insights to provide context for understanding CEO remuneration and its relationship with company performance. Factors such as evolving CEO responsibilities, remuneration practices, regulatory requirements, and the advisory role of consultants are explored to illuminate the complexity of pay decisions.

This foundation prepares the reader for Chapter 3, which details the specific measures of remuneration and company performance, their key drivers and limitations, and forms the basis for the quantitative analysis that follows.

CHAPTER 3: REMUNERATION STRUCTURES AND COMPANY PERFORMANCE MEASURES

3.1 INTRODUCTION

The previous chapters laid the foundation for understanding the theoretical and contextual background of CEO remuneration in South Africa and globally. Chapter One introduced the objectives of the study, particularly the examination of the relationship between CEO and company performance among JSE-listed companies in South Africa from 2008 to 2020. The reality of CEO remuneration and South African legacy challenges were also discussed as key elements shaping the CEO remuneration environment. Chapter 2 built on this discussion by exploring the theoretical underpinnings of CEO remuneration and the legislative and regulatory environment designed to maintain and control it. Extensive research has been conducted on this topic, markedly showing mixed results, as the researcher illustrated in Chapter 2. Empirical studies have not conclusively answered the question of the relationship between CEO remuneration and company performance. The media attention to CEO remuneration to date has illustrated that this topic is still at the forefront of key stakeholders.

3.2. OVERVIEW OF CHAPTER 3

This chapter begins by examining the components of CEO remuneration packages, distinguishing between fixed pay, short-term incentives, and long-term incentives. Understanding the structure of remuneration, the rationale underpinning it, and findings from prior research is essential for exploring the relationship between CEO remuneration and company performance. CEO remuneration extends beyond a simple salary; it is a strategic tool employed by boards to attract highly skilled executives, retain them, and incentivise performance (Paula, Gaspar, Leatherman & Williamson, 2023). The discussion of remuneration components is framed within motivational theories to elucidate their behavioural significance.

The chapter then explores the key factors influencing remuneration policies and strategies. These factors provide insight into why remuneration packages vary across organisations and

how such packages are justified both internally and externally. Following this, a review of empirical studies contextualises the current research within the broader academic literature. The review highlights the mixed findings of studies examining the link between CEO remuneration and company performance, underscoring the need for further research, particularly in the South African context.

Finally, the chapter outlines the financial performance measures employed in this study, including EPS, MC, net profit, ROA and RSF. While these measures offer important insights, they do not fully capture the direct impact of CEO actions on company performance; their limitations are therefore critically considered.

Overall, this chapter provides a robust theoretical and empirical foundation for the subsequent analysis, ensuring that the study of CEO remuneration and company performance is both conceptually grounded and contextually relevant.

This chapter commences with an examination of the components comprising remuneration packages, distinguishing between fixed pay, short-term incentives and long-term incentives. To understand the relationship between CEO remuneration and company performance, it is necessary to examine the remuneration structure, the rationale behind it, and prior research on the topic. CEO remuneration is more than just a salary; it is a tool used by boards to attract top CEOs, retain them in the job, and encourage them to perform well (Paula et al., 2023). The remuneration components are discussed within the framework of motivational theories to understand their behavioural significance. Subsequently, the chapter delves into the key factors influencing remuneration policies and strategies. These factors help explain why remuneration packages differ across organisations and how they are justified internally and externally. Following this, the chapter provides a review of empirical studies to contextualise the current research within broader academic research. The review highlights the mixed findings from different empirical studies examining the relationship between CEO remuneration and company performance, further justifying the need for further research on the topic, particularly within the South African environment. Finally, the financial performance measures employed in the current study are outlined. To balance the arguments for why these performance measures were suitable for the current study, the researcher will discuss their limitations. The performance measures, EPS, net profit, ROA and RSF do not

always highlight the impact of CEOs on company performance; therefore, it is important to keep their limitations in mind.

This chapter presents a clear foundation for the empirical analysis that follows, ensuring that the study's exploration of CEO remuneration and company performance is theoretically grounded and contextually relevant.

Furthermore, it provides an outline of findings from prior studies concerning the relationship between CEO remuneration and company performance.

3.3 REMUNERATION PACKAGE COMPONENTS

CEO remuneration has attracted considerable attention in both global debate and scholarly inquiry. At this stage, it is important to examine the specific components that constitute these remuneration packages in greater detail. While Chapter 1 provides a general overview of remuneration, this section unpacks its structure and composition more comprehensively.

CEO remuneration typically encompasses a range of elements, including base salaries, benefits, allowances, performance bonuses, share purchase plans, share option plans, and other incentives that may be challenging to quantify (Chatterjee, Jia, Nguyen, Taylor & Duong, 2023). These components can be broadly categorised into fixed pay and variable pay. Fixed pay, which is usually disbursed monthly, represents the guaranteed income of the CEO. In contrast, variable pay is contingent on performance outcomes and is designed to incentivise desired behaviours and results. Collectively, fixed and variable pay constitute the CEO's total earnings or total cost to the company.

The rationale for distinguishing between these components is supported by prior research. Nkwadi and Matemané (2022), for instance, recommended that future studies disaggregate executive remuneration into fixed and variable elements to better understand how these components individually influence the relationship between remuneration and company performance. A practical illustration of this breakdown is shown in Figure 3.1.

CEO remuneration has been the subject of extensive global debate and numerous scholarly articles. It is important at this juncture to discuss the specific components that constitute these remuneration packages. Chapter 1 briefly describes remuneration, and this section unpacks remuneration in greater detail. The remuneration for CEOs includes a wide range of elements,

such as basic salaries, benefits, allowances, bonuses, share purchase plans, share option plans, and additional incentives that can be challenging to quantify. This remuneration can be classified either as fixed pay or variable pay. Fixed pay, typically provided monthly, represents the CEOs' guaranteed income. In contrast, variable pay, often used to incentivise employees, is not a fixed amount. Both methods of payment comprise the CEOs' total earnings or total cost to the company. The rationale for separating the components of remuneration is justified by insights gained from previous researchers, such as Nkwadi and Matemane (2022). They recommended that future studies separate components of executive remuneration, for example, by breaking down the executive remuneration figures into fixed and variable portions to understand how the relationship would differ. In 2014, 21st Century Pay Solutions presented a summary of remuneration, which is depicted in Figure 3.1.

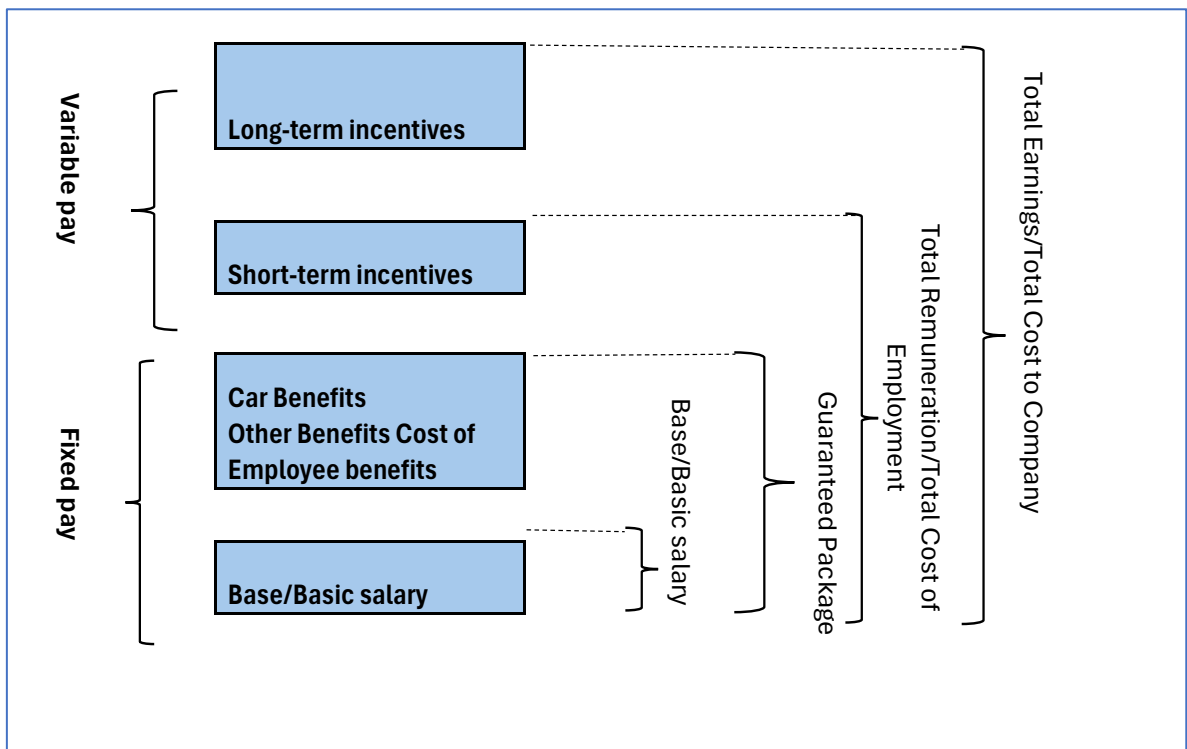


Figure 3.1: Executive Remuneration Components

Source: Adapted from Bussin (2015:234) cited in Carlson & Bussin (2020)

Ramgath (2020) identifies two primary categories of CEO remuneration: fixed pay and variable pay. Fixed pay comprises basic salary and benefits, representing the guaranteed portion of CEO remuneration. Variable pay is performance-based and subdivided into STIs and LTIs. For this study, the analysis includes fixed pay, STI, and total remuneration; LTI are

excluded from statistical testing but **are** briefly overviewed to contextualise remuneration types.

3.3.1 Fixed Pay

The study investigates the relationship between CEO fixed pay and the performance of publicly listed companies on the JSE between 2008 and 2020. A detailed statistical analysis follows in Chapter 4; here, the construct and typical determinants of fixed pay are outlined to frame the inquiry.

To better answer this question, an understanding of fixed pay is important. A statistical analysis of the relationship between fixed pay and company performance measures is presented in Chapter 4. Before the statistical analysis is conducted, other possible determinants of fixed pay are also discussed to provide a holistic answer to this question. Fixed pay, also known as base pay, is a non-discretionary, component of remuneration. In most cases, it is not directly influenced by employee performance and represents the guaranteed remuneration for work performed (Benuyenah, 2024). Fixed pay is one component of the total remuneration awarded to the CEO and is largely dependent on market pay.

Fixed pay is the most reliable component of remuneration for benchmarking purposes; as such, remuneration is guaranteed regardless of performance (21st Century, 2023). Benchmarking metrics, such as company size, market capitalisation, industry type and geographic location, guide boards in structuring competitive remuneration packages. Since the remuneration of CEOs listed on the JSE is publicly disclosed, it is easily accessible for CEOs to compare their package and may raise expectations for equitable remuneration compared with peers across the labour market. Differences in fixed pay typically reflect varying levels of skills, qualifications, and responsibilities of the position (21st Century Pay Solutions, 2015; Kang, 2023). The determination of fixed pay is usually grounded in the organisation's overall remuneration philosophy and structure (Lozano, 2025). A remuneration philosophy articulates how employee contributions are valued and establishes principles for consistent, transparent, and strategically aligned remuneration decisions. Its objective is to ensure that remuneration practices support organisational strategy while considering factors such as financial position, organisation size, market competitiveness, industry standards, and organisational values (Lozano, 2025). Consequently, while benchmarking provides external reference points, the final determination of fixed pay levels is guided by the organisation's

remuneration philosophy. According to Benuyenah (2024), fixed pay is often set at a level intended to attract and retain competent CEOs. In this context, attracting and retaining talented CEOs is a strategic imperative, with appropriate fixed pay levels reinforcing desirable behaviour (Kissoonduth, Webb & Kahn, 2019). As a guaranteed component, fixed pay provides CEOs with financial security and stability and is commonly associated with experience, skills, and knowledge, all of which are essential to achieving business objectives. The assumption that more capable and experienced CEOs are more likely to drive superior performance underpins this study's inclusion of fixed pay in the examination of the relationship between fixed pay and company performance. The higher the fixed pay, the stronger the correlation with company performance.

CEOs also seek assurance that their remuneration is competitive relative to that of their peers and reflective of their value and contributions to the organisation (Malhatra, 2021). Adam's (1963) equity theory of motivation provides a useful framework for understanding this assurance (Davlembayeva & Alamanos, 2023). This theory posits that CEOs evaluate fairness by comparing their input–outcome ratio with that of their peers performing similar work. When discrepancies in fixed pay are perceived, especially when one's input exceeds those of others, but the remuneration does not, the motivation of the may CEO declines (Davlembayeva & Alamanos, 2023). The theory posits that individuals are motivated when they perceive that they are being treated equitably. A practical example is the case of the CEO of Sibanye-Stillwater, who defended his 2021 R300 million remuneration package by noting that it was benchmarked against his peers (Business Tech, 2022). Despite the union criticism, the CEO highlighted his role in increasing the company's market capitalisation from R15 billion in 2013 to R150 billion in 2021. His remuneration was justified by performance and benchmarks (Business Tech, 2022). This response aligns with the principles of equity theory, which suggests that perceptions of fairness are shaped not only by internal contributions but also by comparisons with external peers.

Adam's equity theory is therefore applicable to the current study because it provides a psychological perspective on how CEOs assess and react to their fixed pay. Within the South African context, this finding suggests that CEOs are likely to evaluate their pay not only in absolute terms but also relative to others in similar positions across JSE-listed companies.

When fixed pay is perceived as equitable, it may enhance motivation and alignment with shareholder interests, potentially improving company performance.

Building on Adam's equity theory, the remuneration landscape of South Africa provides a compelling context for analysis. Fixed pay practices across sectors vary significantly and are shaped by industry norms, economic disparities and organisational characteristics such as size, geographic spread and business maturity. In particular, the mining sector presents a stark example (Jay & Nemcova, 2025). As Goss (2024) noted, employment in mining spans from manual labourers to executive leadership. The CEO's fixed pay is influenced by factors such as the type of mineral or metal extracted, mine location, and demand for specialised skills. Compared with other sectors such as telecommunications and banking, CEOs in the mining industry often command substantially higher fixed pay. This disparity reinforces the core principles of Adam's equity theory, in which perceptions of fairness are influenced not only by CEOs' internal contributions but also by external benchmarking (Goss, 2024).

Given this background, exploring how CEO fixed pay relates to company performance becomes particularly compelling when multiple factors that may influence this relationship are taken into account. Various elements at work may influence this relationship. The CEO's fixed pay may be shaped by a combination of individual attributes (e.g., skills and experience), structural factors (e.g., benchmarking), and efforts by the board of directors to ensure equity in fixed pay. However, PwC (2020) criticises benchmarking, noting that it is often conducted against predetermined comparator organisations. These comparators are not independently selected, as CEOs often provide input into comparators. In some instances, companies include higher ranked benchmarking comparators to draw talent from these companies, thus inflating the benchmark salaries and ultimately the remuneration for the CEO. Not all the comparator companies being benchmarked are at the same level of maturity, with the business life cycle of the company being benchmarked, thus influencing the benchmark results significantly.

Importantly, since CEO remuneration is publicly available, boards may feel pressure to match peer fixed pay, even if this does not directly relate to performance (Edmans, Gosling & Venter, 2023). As such, fixed pay may function primarily as a mechanism for appealing to and retaining talented CEOs rather than driving performance outcomes. This raises an important question for the study, in that if fixed pay is largely determined by structural and individual attributes rather than organisation outcomes, what implications does this have for the

relationship between CEO fixed pay and company performance? One possible outcome is that fixed pay may show weak or no correlation with company performance, thereby reinforcing the idea that fixed pay is more of an attraction and retention tool than a driver of strategic objectives. On the other hand, as fixed pay is a tool to motivate the CEO to perform, the results may show a positive correlation with company performance. This contrasts with variable pay, which is typically designed to reward goal-oriented behaviours and align the CEO's interests with the company's success. The use of fixed pay as a remuneration metric in this study is supported by prior research that has employed the same measures (Carlson & Bussin, 2020; Coetzee & Bezuidenhout, 2019; Högström & Olausson, 2023; Yahaya, 2025).

In summary, fixed pay represents the guaranteed component of CEO remuneration, offering stability, reflecting the CEO's qualifications, experience and complexity of the role. Through the lens of equity theory, it is essential that fixed pay be competitive and perceived as fair relative to comparable roles within and beyond the company. However, its guaranteed nature may limit its motivational effect, which has led to performance-linked pay being discussed in the next section.

3.3.2 Variable Pay

Variable pay, often classified into short-term and long-term incentives, plays a key role in aligning CEO efforts with organisational goals (Zhu, Guo, Jiang & Chen, 2023). As the expectations placed on CEOs expand to encompass a broader set of stakeholders, including shareholders, employees, regulators and communities, the structure of CEO remuneration continues to evolve. Designing effective and fair performance-related pay remains a complex task. Nonetheless, theoretical frameworks have offered valuable insights into the challenges of variable pay design and have guided the development of strategies that attempt to balance motivation, fairness and performance accountability.

3.3.2.1 Short-term incentives

Short-term incentives, alternatively termed STI, are one component of remuneration and are designed to align CEO performance with short-term company targets, typically over a period of not more than 12 months (Ramgath, 2020). Unlike fixed pay, which is guaranteed and based on the CEO's role and responsibilities, STIs are variable pay, contingent on achieving specific

objectives and intended to motivate. STIs are designed to motivate and reward CEOs beyond the scope of their regular job duties (Zhu et al., 2023).

Originally, STIs served as substitutes for direct supervision, reducing CEOs' self-interested behaviour, protecting shareholder value, and aligning CEOs' interests with those of shareholders to mitigate agency conflicts (Zhu et al, 2023). By prioritising short-term goals with instant rewards, STIs reinforce desired behaviour through a short feedback loop, allowing CEOs to consider the impact of their actions (Willow, 2024). Incentive theory suggests that CEOs are motivated by the anticipation of rewards explicitly tied to performance outcomes (Willow, 2024; Bandhu et al., 2024). Agency theory similarly supports STI, which advocates for performance-linked incentives to mitigate agency problems, with behaviour shaped by the presence or absence of incentives (Bandhu et al., 2024).

The theoretical rationale for STIs is further supported by Clark Hull (1943), who posits that the size and immediacy of variable pay can influence behaviour, and by B.F. Skinner's behavioural reinforcement theory, which posits that positive outcomes, such as variable pay, increase the likelihood of repeating behaviours, whereas negative outcomes reduce them (Leeder, 2022). Linking variable pay to measurable performance indicators allows boards to guide CEO behaviour towards outcomes aligned with shareholder interests. In the context of this study, STIs provide a measurable link between CEO contributions and company performance, assessed using financial metrics such as EPS, MC, net profit, ROA and RSF.

However, STI has limitations. They can encourage CEOs to prioritise short-term goals at the expense of long-term sustainability and may lead to the manipulation of results, such as through earnings management, in which CEOs use accounting techniques to manipulate financial results (Bansal, 2023). Additionally, the focus on external rewards can reduce intrinsic motivation (Warje, 2025), and repeated short-term rewards fail to sustain long-term shareholder value. Kohn (1998) noted that reward systems are ineffective in delivering long-term enhancements in work quality. These limitations are particularly relevant over the 13-year period studied, which covers multiple economic cycles and regulatory shifts.

Despite these challenges, there is ongoing debate regarding the effectiveness of variable pay in achieving principal-agent alignment (Gayle, Li, & Miller, 2020). This study focuses exclusively on STIs attributable to one-year performance and payable within a 12-month

period, excluding long-term incentives. Clarity in this scope is essential for research replicability.

Organisations determine the proportion of variable pay relative to total remuneration and may offer it at the individual, group, or both levels (Arnold, Sender & Allen, 2023). Expectancy theory supports this practice, highlighting the importance of clear links between behaviour and reward to motivate desired outcomes (Kuvaas, Buch & Dysvik, 2020; Vroom, 1964). Well-designed incentive plans establish clear, achievable goals, enhance motivation and promote accountability. Effective plans require (Dell’Erba & Gomtsyan, 2023):

- Clearly, identified organisation metrics to measure CEOs’ performance.
- Transparent, easily understood goals and rewards.
- Mechanisms to link performance management processes and targets to remuneration

The balanced scorecard (BSC) proposed by Kaplan and Norton (1992) offers guidance for designing such mechanisms (Kaplan & Norton, 1992, 2001a:). By integrating financial, customer, internal processes and organisational capacity perspectives, the BSC enables organisations to measure and manage performance comprehensively. For this study, the financial perspective is central, tracking the company’s adeptness to generate shareholder value, whereas other perspectives provide context for balanced performance evaluation (Masden, 2025).

According to Hughes (1989), research is a product of assumptions. The prediction of the outcome of the study into the relationship between CEO STI and company performance is captured by the hypothesis presented for the study in Chapter 1. The hypothesis developed provides a statement or answer for predicting the outcome of the relationship between CEO STI and each component of company performance.

Transparency in variable pay is also critical. While organisations may publicise CEO remuneration to enable peer comparisons, excessive transparency can be demotivating if pay differences are large or if subjective criteria are used (Arnold et al., 2023). The study utilises publicly available financial statements and third-party data sources, acknowledging that limited transparency can hinder research and stakeholder understanding of CEO pay-performance alignment.

Companies publicising CEO remuneration enable comparisons of pay between CEOs. Insight into how peers are remunerated may make it difficult for shareholders to hire and retain CEOs, especially if other competitors offer more pay. This is relevant to the current study because it raises the question of whether CEO remuneration was driven by the need to attract and retain CEOs rather than by the CEO's achievement of their objectives. If the relationship between CEO STI and company performance is negative or non-existent, the drive to offer competitive remuneration relative to peers may be one reason for the misalignment.

Finally, CEO remuneration design is influenced by broader factors beyond financial performance, including economic conditions, legislation, professional standards and public sentiments (Edman et al., 2023). Understanding these influences is essential for contextualising the link between STIs and company performance in the South African JSE-listed company context.

3.3.3 Total remuneration

Total remuneration refers to the aggregate financial reward received by the CEO in exchange for services rendered to the organisation. As depicted in Figure 3.1, total remuneration typically comprises fixed pay, benefits and STI, thereby reflecting both guaranteed and short-term performance-based components of CEO remuneration (Coetzee & Hall, 2020). For this study, however, total remuneration refers to the operationalised cash-based measure consisting of fixed pay and STI only and should not be interpreted as representing total costs to the company or the full spectrum of CEO remuneration (Bussin, 2015:234 cited in Carlson & Bussin, 2020). Long-term incentives (LTIs) are explicitly excluded from the operationalised measure and, consequently, from the empirical analysis. Therefore, unless otherwise stated, all references to total remuneration in this study refer to the operationalised cash-based measure and not the broader conventional Definition of CEO total remuneration, which typically includes LTIs.

3.3.4 Long-term Incentives

It is acknowledged that LTIs are a common and often substantial component of CEO remuneration, with their realised value in some cases exceeding fixed pay and STI (Van Wyk & Wesson, 2021). However, LTIs are excluded from the empirical analysis in this study, which is confined to the cash-based remuneration components of fixed pay, STI, and the

operationalised measure of total remuneration. LTIs are discussed to provide a holistic overview of CEO remuneration to acknowledge their theoretical and practical relevance in the broader remuneration literature. Their exclusion from the empirical analysis reflects the complexities associated with consistently valuing LTIs across companies and reporting periods.

The foremost purpose of a company is to create long-term value for its shareholders (Hall, 2024). LTIs are the vehicle that enables companies to remunerate CEOs to achieve their long-term goals. LTIs are rewards or incentives earned over multiple years and tied to performance targets or time periods (Zhu et al., 2023). LTI acts as a retention tool since the benefit of the incentive is typically not realised until later, which motivates the CEO to remain committed to the company and focused on the performance goals to be accomplished.

For shareholders, LTIs serve as a mechanism linking CEOs' interests to both share performance (market-based equity instruments) and the organisation's long-term strategic direction (Zhu et al., 2023). When CEOs hold equity, they are motivated to increase the firm's value because improvements in shareholder outcomes translate into increases in their own remuneration.

LTIs frequently constitute the largest component of CEO remuneration, with fixed pay and short-term incentives comprising the remainder. To illustrate the components of remuneration, the remuneration of the highest-paid CEOs in South Africa for 2024 is shown by the relative contribution of each component. Figure 3.2 presents the remuneration of the highest-paid CEOs in South Africa for 2024. The notably high remuneration figures reported in the media are largely attributable to LTI payouts, as shown by the green-shaded segment of the figure. Van Wyk and Wesson (2021), in their analysis of 34 mining companies between 2010 and 2016, found that LTIs accounted for a growing share of total CEO remuneration toward the latter part of the study period. They observed only a weak-to-moderate degree of alignment between the LTI goals set for the CEO and the company's key performance indicators.

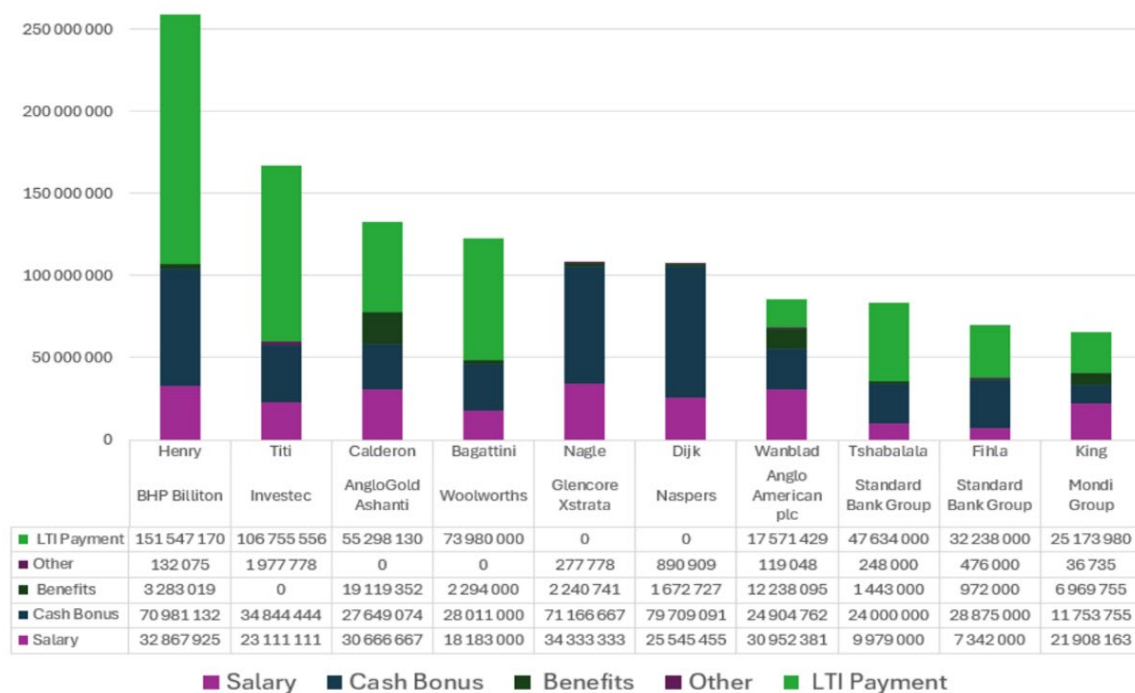


Figure 3.2: Remuneration packages of highest paid CEOs in South Africa in 2023

Source: Teuteberg (2025)

Long-term incentives can generally be divided into three categories (Altstady, 2023):

- i. **Appreciation-based:** These provide value only if the company's underlying value increases, which is typically reflected in the share price for companies listed on the JSE. For each unit granted, the CEO receives the difference between the unit's value at vesting and its value at the time the stock options or stock appreciation rights (SARS) are awarded.
- ii. **Share-based:** These deliver value in the form of company shares. Although the payout can be tied to specific performance conditions, the CEO ultimately receives an allocation of the organisation's shares (Altstady, 2023). In some cases, companies issue "phantom shares," which mirror the movement of the actual share price but settle in cash rather than equity.
- iii. **Cash-based:** These provide value through a cash payout and are not linked to share performance. Payments are typically determined by the length of service, the achievement of predetermined performance criteria, or a combination of both.

There are different methods for rewarding CEO through long-term incentive plans (LTI):

3.3.3.1 Stock Options

Through stock options, a CEO is permitted to acquire shares at a preset price (exercise price) once a specified vesting date is reached (Lovett, Rasheed & Hou, 2022). Full ownership occurs only once the CEO fulfils the stipulated conditions, including ongoing employment or meeting specified performance goals. This LTI allows CEOs to purchase shares at the initial grant price, potentially profiting if the market value increases. Shares are held in trust until they are paid for; if the share price is below the grant price, the options are considered “underwater” and hold no value. CEOs may choose to sell or retain shares upon exercise, benefitting from any increase in the share price (Lovett et al., 2022).

3.3.3.2 Restricted Stock Units (RSUs)

RSUs are awarded contingent upon meeting conditions such as continued tenure or fulfilling performance criteria (Aran, 2023). Unlike SARS, RSUs do not require the CEO to purchase shares upon vesting. The CEO may retain or sell shares when they vest. From an agency theory perspective, RSUs align CEO interests with shareholders by providing a financial stake in company performance and serve as a retention mechanism. However, potential agency conflicts exist; CEOs may sell shares upon vesting, diluting the intended alignment of interests. Bebchuk and Fried (2009) noted that this could lead to an undue focus on short-term share price movements, potentially compromising long-term company value. LTIs linked to performance targets, particularly those tied to share performance, are effective in aligning CEO remuneration with company outcomes. The key metrics include earnings per share (EPS), return on equity (ROE) and total shareholder return (TSR).

3.3.3.3 Stock Appreciation Rights (SARS)

SARS provides the CEO with the right to be awarded the cash equivalent of the increase in stock price without acquiring the shares themselves. This method directly ties incentives to company value, motivating the CEO to increase shareholder wealth (Cohn, 1979).

Stock options—these instruments allow the CEO the right to acquire (exercise) company shares at a preset price (the exercise price) on a specified future date (Lovett, Rasheed & Hou, 2022). Full ownership of stock options occurs only when the CEO has fulfilled the terms agreed upon with the company, such as continued employment over a certain period or the achievement of performance targets (Lovett et al., 2022). This type of LTI enables the CEO

to acquire company shares at a later date, at the price established when the stock options were first granted, potentially yielding a profit if the market value of the shares increases over time (Lovett et al., 2022). The shares purchased are held in trust until the purchase price has been paid. If the share price is below the price at the grant date, these shares are considered “underwater” and therefore of no value to the CEO. The CEO has the choice to sell or hold on to shares. If the value of the shares is higher, the CEO is then able to benefit from the increased share price.

Restricted Stock Units (RSUs): As part of a long-term incentive scheme, CEOs are awarded RSUs as a component of their overall remuneration. RSUs symbolise a company’s pledge to deliver shares to the CEO at a future date, contingent upon the fulfilment of specific conditions (Aran, 2023). These conditions often include continued employment over a defined vesting period or the achievement of performance targets (Aran, 2023). Unlike SARS, RSUs do not require the CEO to purchase shares upon vesting. The CEO has the option to retain or sell their shares upon vesting (Aran, 2023). From an agency theory perspective, RSUs are designed to link CEOs' priorities with those of shareholders by providing CEOs with a direct financial claim tied to company performance. This also serves as a retention mechanism.

However, concerns have been raised regarding potential agency conflicts. Aran (2023) reported that CEOs frequently sell their shares upon vesting, thereby diluting the intended alignment of interests. In such cases, shareholders may be compelled to issue new RSUs to maintain long-term incentive alignment. Further criticism by Bebchuk and Fried (2009) highlights that CEOs may become overly focused on short-term share price movements, particularly if they intend to sell their vested shares, potentially leading to decisions that inflate stock prices in the short term at the cost of the company’s long-term value. It is therefore assumed that since LTIs are often payable upon the achievement of specific performance targets, a positive correlation may exist between LTIs and company performance measures. Performance targets directly linked to share performance are particularly well-suited to aligning CEO remuneration with company performance. Among these, total shareholder return (TSR) is a key metric that captures the return to shareholders through capital gains (share price appreciation) and dividends. Earnings per share (EPS) is determined by dividing a company’s net profit by the total number of shares in circulation. The return on equity

(ROE), another indicator of financial performance, is calculated by comparing net income with shareholders' equity.

Table 3.1 presents a synopsis of the similarities and contrasts between stock options, restricted stock options (RSU) and stock appreciation rights (SARs), both of which are commonly used in LTI schemes to incentivise CEOs.

Table 3.1: Comparison between stock options and restricted stock units

Feature/Aspect	Stock Options	Restricted Stock	Stock Appreciation Rights (SARs)
Cash outflow	No immediate cash payment required	No immediate cash payment required	May require cash if cash-settled; no dilution if cash-settled
Equity dilution	Yes, increases shares outstanding	Yes, increases shares outstanding	Only if shares are issued, cash-settled SARs do not dilute
Ownership stake	Potential ownership after exercise	Actual ownership upon grant	Potential wealth but no immediate ownership until exercise
Retention effect	Vesting encourages CEO retention	Vesting encourages CEO retention	Vesting encourages retention
Wealth implications	Potential wealth only	Real wealth immediately	Potential wealth only, like stock options
Dividends	Not eligible	Eligible	Not eligible, like stock options
Voting rights	No	Yes	No
Liquidity	Moderate, depends on vesting	Typically, less liquid due to longer vesting	Similar to stock options, liquidity depends on vesting
Incentives for high-risk investments	Encourages high-variance strategies	Discourages high-variance strategies	Encourages high-variance investments
Incentives for low-risk investments	Moderate effect	Encourages low-variance investments	Moderate effect; tied to stock appreciation rather than ownership
Relative value vs cash salary	Requires a higher perceived value to attract CEO	Requires a higher perceived value to attract CEO	Requires a premium similar to stock options to attract a CEO
Magnitude of CEO investment	Encourages larger investments	Encourages larger investments	Encourages moderate to larger investments, depending on payout

Source: Adapted from Han & Yunfei, 2021; Lovett, Rasheed and Hou (2022:117); Aran 2023:15)

Table 3.2 presents a comparative overview of three LTI methods commonly employed in executive remuneration: stock options, RSUs, and SARS. Each mechanism differs in structure, risk distribution, and alignment with organisational objectives.

Table 3.2: Comparison of LTI methods

METHOD	DEFINITION	FEATURES	ADVANTAGES	DISADVANTAGES
Stock options	Right to acquire a set quantity of company shares within a specified period at a predetermined price.	Rights are granted (not actual shares); the CEO may exercise or forfeit the option.	1. The CEO can exercise when prices rise and forfeit when prices fall (no loss). 2. Potentially higher value than cash bonuses if the company performs well.	1. Weak motivational effect if poorly structured. 2. Worthless if the share price does not increase. 3. Dilution of shareholder equity. 4. Requires administrative resources to manage and report.
Restricted Stock Units (RSUs)	Shares granted subject to vesting conditions, typically linked to tenure or performance.	The CEO owns stock upon vesting, with shareholder rights, but cannot sell before vesting.	1. Aligns the CEO with long-term company goals. 2. No upfront cash cost. 3. Lower risk, as vested stock retains some value.	1. Cash flow pressure on the company. 2. Difficulty in setting rational performance targets. 3. Tax liabilities upon vesting. 4. Forfeited if the CEO leaves before vesting.
Stock Appreciation Rights (SARS)	Entitlement to a cash (or share) payout equivalent to the increase in the share price over a specified period.	The CEO benefits from the share price increase but does not own shares.	1. Simple to administer, no equity dilution. 2. No upfront cash cost for the CEO.	1. Share price may not fully reflect company performance. 2. Creates cash payment obligations for the company.

Source: Adapted from Han and Yunfei (2021:1); Lovett et al. (2022:117)

Collectively, these instruments highlight the trade-offs organisations face in designing long-term incentives. Whereas stock options prioritise potential upside options with higher risk, RSUs provide a more secure alignment mechanism, and SARS balances administrative simplicity with cost considerations. The choice among these methods is therefore contingent upon organisational strategy, governance structures, and prevailing market conditions.

3.4. COMPANY PERFORMANCE MEASURES FOR THE STUDY

An important component of this study is the selection and justification of the independent variables that serve as potential influences on CEO remuneration. Bhandari (2023) explained that independent variables are termed explanatory variables, as they explain the outcome of CEO remuneration. The independent variable is presumed to influence or explain changes in CEO remuneration but is not, in this case, directly affected by fixed pay, STI, or total remuneration (Okoye & Hosseini, 2024). It is crucial for this study to delve deeper into company performance measures, the independent variables, to establish a clear understanding of the metrics that represent a company's capacity to accomplish its economic objectives and advance shareholders' and agents' interests.

The choice of performance metrics selected by a company's CEOs and boards of directors reflects the context, priorities and areas of focus for the business. Performance metrics for companies provide a means through which to monitor, evaluate and judge the performance of a business (Coetzee & Hall, 2020). To provide useful information to stakeholders, companies' performance metrics are best viewed or analysed over time to show performance trends, i.e., whether performance has improved, stagnated, or worsened over time (PwC, 2024). As shareholders' investments are usually for the long term, the timeline of performance provides an indication of the success of the business strategies of CEOs. Covering the period 2008 to 2020, this study also adopts the stance that information is useful when analysed over time.

A deliberate choice of performance metrics has been made in this study to ensure these research findings are comparable with those of other studies. There are numerous studies that have used similar company performance measures as the current study does, allowing for ease of comparison of results for the purpose of advancing knowledge (Carlson & Bussin, 2020; Coetzee & Hall, 2020; Emokpae, 2023; Kieviet et al., 2024; Lee & Pati, 2024; Siwendu et al., 2024). Furthermore, these performance measures were chosen because they represent a good

mix of financial and market measures. By understanding how one variable influences another, a researcher can make assumptions about the relationships among the variables. For the current study, the independent variables are not just potential predictors but may also be moderators or interact with other independent variables to influence CEO remuneration.

The following section describes the indicators that served as the basis for the study's analysis:

- ***Net profit***

The primary objective of companies listed on the JSE is to maximise profits for their shareholders. Net profit is the earnings of a company generated from revenue after deducting expenses incurred during a period. Net profit represents the company's revenue after all expenses incurred during a specific period have been deducted (Corporate Finance Institute, 2024). These expenses include the cost of goods sold, operating costs, depreciation and amortisation, interest charges, and taxes for a given accounting period. Known as the bottom-line figure, it appears as the final line on the income statement and is a direct indicator of overall profitability (Corporate Finance Institute, 2024). Net profit is one of several key indicators of a company's financial performance: the following sections discuss additional metrics used in the study.

Net profit in this study is particularly important, as it directly affects shareholder returns and is commonly used to determine CEO remuneration. Other researchers, such as Coetzee and Hall (2020) and Bussin and Carlson (2020), have also used net profit as a variable, thereby justifying its inclusion in the present study and facilitating the comparison of results using net profit in their research. The formula for net profit is as follows (Jayathilaka 2020):

$$\text{Net Profit} = \text{Total Revenue} - \text{Total Expenses}$$

In principle, a higher net profit may justify increased CEO remuneration, whereas low profits could indicate underperformance. However, net profit may be influenced by other external factors. Political factors can significantly impact profitability. For instance, elections often introduce uncertainty, potentially due to anticipated policy changes; regulatory adjustments such as taxation, trade agreements or labour laws; and shifts in government spending priorities, such as infrastructure development (Resolve, 2024). This uncertainty may lead

companies to delay investment decisions, thereby reducing leading profitability. Therefore, such external factors can affect net profit and, subsequently, CEO remuneration.

The performance of a company is contingent upon how successfully it manages its resources. Success is usually affected by both company-specific factors and macroeconomic factors. In other words, to make a company more profitable, all resources must be efficiently allocated and managed to increase profitability (Budiyaanti, 2021). The CEO's critical value lies in their ability to identify and leverage factors that drive profitability and ensure sustained financial growth (Hazzaa, Abdullah & Sadaa, 2024). Nanda and Panda (2019), cited in Budiyaanti (2021), reported that companies show significant differences in profitability due to factors such as export earnings, company size, asset turnover and exchange rate volatility. These findings are significant to the current study, as company size is introduced as a moderating variable in examining the relationship between CEO remuneration and company performance. Furthermore, the study sample includes companies with geographically diverse operations, which are likely to be affected by fluctuations in foreign exchange.

To contextualise the company performance measures applied in the current study, particularly net profit, it is important to provide an overview of national trends in corporate profitability in South Africa during the period of this study. These national trends and broader economic conditions may have influenced company performance and remuneration outcomes. Net profit may be reinvested into the business as retained earnings or redistributed to shareholders as dividends. Statistics South Africa (2020) reported that, for the period spanning 1 July 2019-30 June 2020, the net profit before tax across all South African industries declined by 33.4% in the 2020 financial year compared with 2019, with the business services and manufacturing sectors experiencing the most significant impact. Manufacturing businesses reported a R13.9 billion increase in interest payments, further contributing to the reduction in net profit (Statistics South Africa, 2021). The decline in net profit for business services (including business and management consulting, as well as property ownership and leasing) and the manufacturing sector was driven primarily by increased asset losses, the recognition of expenses under International Financial Reporting Standards (IFRS) 16, and an increase in acquisition profits (Statistics South Africa, 2021). In addition to critical services, whole economies were shut down in the global response to COVID-19, which meant that many

sectors would inevitably record low levels of production and income in 2020 and beyond (Muthu & Wesson 2023).

Net profit in isolation may not provide comprehensive insights for investors. Evaluating the profitability or performance of a company using only net profit can vary across industries and company sizes (Muthu & Wesson, 2023). For example, companies may decide to decrease their prices to penetrate the market, thus decreasing their net profit in the short term but improving their net profit in the long term (Rao, 2023). Shoprite offers low prices to its customers in line with its long-term strategy to provide affordable products and is evidenced by its increased market share (Shoprite, 2020). As with any information, using net profit also has challenges. Financial statements can be manipulated to serve the interests of CEOs, ultimately impacting net profit. One of the methods of manipulating financial statements is incorrectly recording revenue. Recording of revenue prematurely occurs through recording revenue before the completion of services, before product shipment or recording of products not required to be purchased, to increase revenue figures and ultimately net profit (Adkins, 2024). Another way companies may distort their results is by Recognising revenue that does not exist, for example, by booking sales that never occurred, classifying investment returns as operating revenue, or treating other forms of income as sales. Companies may also inflate profits by disposing of assets and reporting the proceeds as revenue. In addition, financial statements can be manipulated by accelerating future expenses into the current reporting period (Adkins, 2024).

Therefore, companies should be wary of linking CEO remuneration too heavily with net profit, as this may encourage unethical business practices to inflate profitability. Although net profit is an important metric, it is sensitive to external factors and should be used alongside other performance metrics to assess company performance accurately. To mitigate the limitations of net profit, the current study also includes other financial metrics (EPS, ROA, and RSF) to investigate the relationship between CEO remuneration and company performance.

- ***Return on Shareholders' Funds (RSF)***

RSF is a profitability ratio that indicates the return generated for shareholders presented as a percentage of the equity invested in the company (Wardhani, Awaluddin & Reniati, 2019). The RSF ratio is calculated as follows (Corporate Finance Institute, 2025):

$$RSF = \frac{\text{Net profit after taxation and preference dividend (if any)}}{\text{Ordinary share capital plus reserves}} \times 100$$

RSF provides investors with insight into a company's ability to produce income from the equity available to management (Wardhani et al., 2019). By comparing the RSF results across periods, investors can assess a company's profitability trends over time.

However, RSF should be interpreted with caution. A high RSF does not always equate to sustainable performance, especially if profits are heavily leveraged or not invested in long-term growth (Adkins, 2024), critiquing RSF as a misleading measure of company financial performance, as earnings can be falsified through changes in accounting policy, in much the same way as was illustrated when discussing net profit. This potential for earnings manipulation highlights corporate governance and remuneration concerns, as CEO remuneration may be linked to RSF. When remuneration is tied to RSF, CEOs may prioritise short-term profit maximisation over long-term shareholder value. Over time, this focus can lead to increased earnings management as CEOs attempt to sustain RSF and associated remuneration (Omar & Owusu-Amoako, 2023).

Nevertheless, RSF remains relevant to this study, as it has been widely used in prior research examining the relationship between executive pay and company performance (Amba, 2023; Carlson & Bussin, 2020; Emokpae, 2023; Hampskink, 2020; Hlidberg, 2020; Siwendu et al. 2024; Spoor, 2020). The inclusion of RSF thus allows meaningful comparisons with prior findings while providing insight into the extent to which CEO remuneration reflects shareholder profitability outcomes.

- ***Return on assets (ROA)***

Return on assets (ROA) is a crucial financial measure used to evaluate how effectively a company utilises its assets to generate profit (Indeed, 2024). Assets, such as property, equipment, inventory, and cash, represent the economic resources available for management,

and ROA serves as an indicator of the efficiency with which these resources are employed. ROA is expressed as a percentage, computed by dividing profit after tax by total assets (Corporate Finance Institute, 2025). A higher ROA signals more efficient use of assets to generate earnings, whereas a lower ROA may reflect underutilisation, poor investment decisions, or declining revenue streams. Assets are valuable objects utilised by companies to create revenue and product profits. These assets may include buildings, stock, raw materials, cash and office equipment. To assess a company's performance in relation to its assets, it is important to understand the performance metric ROA (Indeed, 2024). ROA is a financial metric that indicates how successful a company is in generating revenue from its assets (Indeed, 2024). It is therefore seen as an indicator of the efficiency with which the management of the company uses the available economic resources. ROA is expressed in percentages, and generally, the higher the number is, the more positive the company performance. A lower ROA may mean that companies use more assets to generate profit, and the higher the ROA is, the fewer assets used to generate profits. When analysed over time, an increase in ROA suggests that the company is generating higher profits for every rand invested in its total assets. Conversely, a downwards trend in ROA may signal weakening profitability, which could stem from falling sales or revenue or from ineffective investment decisions. can vary significantly across industries and should only be used to compare companies in the same industry. The ROA is calculated as follows (Corporate Finance Institute, 2025):

$$ROA = \frac{\text{Profit after tax}}{\text{Total assets}}$$

For retailers, an ROA above 5% is generally considered favourable. In contrast, banks typically have an ROA closely aligned with their interest spread, which is generally much lower, often below 2% (Gurufocus, 2024). For net income, fluctuations in business cycles and events may affect ROA. Table 3.3 reflects the MC and ROA of competitive companies in the same industry (Banks) that investors and CEOs may utilise for investment prospects or to benchmark remuneration against competitors, respectively.

Table 3.3: Competitive comparison data (as of June 2024) – (Reflected in US Dollars)

Company	Market capitalisation (Million)	ROA%
Capitec Bank Holdings Ltd	\$ 20,939.17	5.85
Standard Bank Group Ltd	\$ 20,691.37	1.49
Absa Group Ltd	\$ 8,984.33	1.04
Nedbank Group Ltd	\$ 7,428.89	1.31
Investec Ltd	\$ 1,766.55	2.05
Sasfin Holdings Ltd	\$ 50.34	-0.45
RMB Holdings Ltd	\$ 34.74	7.24

Source: Gurufocus (2024)

The current study employs ROA to explore its direct relationship with CEO remuneration and its role in interactions with other company performance measures. The timeframe over which ROA is assessed is an important consideration in this study. For example, if a company recently made a substantial investment in equipment, its ROA may appear temporarily reduced. This short-term decline does not necessarily indicate poor performance but rather the timing of capital expenditure relative to returns.

ROA as a company performance ratio has also been utilised by other researchers (Bello, Agbi & Mustapha, 2022; Bouteska & Mefteh-Wali, 2021; Hall & Coetzee, 2020; Hampsink, 2020; Högstrom & Olausson, 2023; Nkwadi & Matemane, 2022; Siwendu et al., 2024).

- ***Market capitalisation (MC)***

The JSE (2024) explains MC as the total value of a company's outstanding shares. As a company is divided into a fixed number of shares, multiplying the share price by the number of shares in issue provides an estimate of the company's overall market value. A company's MC is insufficient to determine its value because the market price upon which it is based does

not always indicate the value of a specific portion of the company (Permata & Alkaf, 2020). The market price simply reflects the amount the market is willing to pay for its shares, as shares are frequently overpriced or undervalued (JSE, 2024).

The MC measures the cost of purchasing all of the company's shares but does not determine the purchase price of the company in a transaction. A significant portion, approximately 45 companies as of 30 June 2024, of the JSE South African equity market is made up of secondary listings of international companies, which account for the largest stocks by market capitalisation on the JSE (South African Reserve Bank, 2024). Secondary listed companies are established outside South Africa and have listed their shares on the JSE (JSE, 2024). The reasons for listing on the JSE are to access investors in what is considered the most advanced financial hub in Africa, and the ease of transferring foreign asset allowances under South Africa's foreign exchange regulations (Welzen & Bulose 2021). Shares, as one of the key securities traded in the capital market (JSE), are subject to fluctuations driven by various market forces. Therefore, before a company purchases shares, investors will first conduct an analysis of the company before it invests (Permata & Alkaf, 2020). This may be a historical performance analysis of share price and trade volumes. An analysis of fundamental factors that affect the value of company shares, such as macroeconomic conditions, industry sector conditions and micro-conditions controlled by the company, is needed (Permata & Alkaf, 2020). To gain a comprehensive understanding of a company's financial development, an investor analyses and interprets financial data as presented in the company's financial statements. This approach sheds light on the company's value, its market performance, and the quality of the CEO's decisions.

According to Keynes' theory, investor behaviour is usually driven by short-term profit expectations rather than long-term expectations (Vianna, 2023). This speculative behaviour can potentially influence share prices, which in turn affects a company's market capitalisation. During periods of economic uncertainty, such as the COVID-19 pandemic, Keynes highlighted that reduced consumer confidence and declining demand may lead investors to reassess company valuations, causing fluctuations in MC (Vianna, 2023). These changes may be beyond the company's performance and may be driven by investor sentiment and macroeconomic expectations. Thus, MC can reflect broader economic cycles or conditions and investor behaviour, both of which Keynes emphasises as critical factors in understanding

market dynamics (Vianna, 2023). Since MC is often used as a performance indicator of an organisation, such fluctuations can influence how boards assess CEO performance and determine remuneration. This dynamic is relevant to the current study, which aims to explore the relationship between CEO remuneration and company performance. The influence of MC as a moderating variable on CEO remuneration and company performance is especially important. According to Chan (2020), empirical researchers in corporate finance also consider company size an important characteristic, and its effect influences the empirical results.

Having highlighted the importance of MC as a measure of company value, an indicator of investor perceptions and a key market-based measure derived from trading of shares, it is appropriate to use this variable as a proxy for company size. Therefore, rather than using MC variable as a conventional performance indicator comparable to EPS, net profit, ROA or RSF, MC will be utilised as a proxy for company size in the moderation models. Its purpose is therefore to examine whether company size alters the strength or direction of the relationship between CEO remuneration and company performance.

$$MC = \text{Number of shares} \times \text{current share price}$$

Ramgath and Bussin (2022) and Siwendu et al. (2024) also used MC in their studies.

Using MC as a moderating variable helps contextualise how market perceptions and external economic conditions may influence or alter the strength of the pay–performance relationship, aligning with the study’s objectives of assessing the robustness of this relationship across multiple metrics and conditions. Complex organisational structures and diversified revenue streams may obscure the direct relationship between MC and CEO remuneration in larger companies. Conversely, in smaller companies, CEO decisions may have a more direct and measurable impact on MC.

In summary, MC serves as an important indicator of investor sentiment and of a company's perceived value. It not only reflects external market conditions and strategic investor responses but also moderates the relationship between CEO remuneration and company performance. Another important metric of financial performance is EPS, which is another commonly used indicator by investors and boards, reflecting how effectively a CEO is generating earnings for its shareholders and is often linked to CEO remuneration.

- ***Earnings Per Share (EPS)***

When making an investment, every investor wants to turn a profit. Thus, before deciding on an investment, a financial ratio analysis must be performed (Permata & Alkaf, 2020). EPS indicates how much of the net profit can be distributed to each shareholder (Lestari, Mareta, Yolifiandri, Suryadi & Barus 2023).

The EPS is determined by dividing the net profit earned over a specific period by the number of shares outstanding during that same timeframe. It indicates how much profit is attributable to each share held by investors. The JSE requires all listed companies to report EPS in their financial statements (JSE, 2023). Companies are required to report increases or decreases in EPS compared with the previous corresponding period (JSE, 2023).

The formula for calculating the EPS is as follows (Corporate Finance Institute, 2025):

$$EPS = \frac{\text{Net income} - \text{preferred dividends}}{\text{Weighted average common shares outstanding}}$$

All companies listed on the JSE are required to disclose EPS in their financial statements (JSE, 2023). Companies are required to report increases or decreases in EPS compared with the previous corresponding period (JSE, 2023).

EPS is widely regarded as one of the most important indicators of CEO success, shareholder satisfaction, investment attractiveness, and the viability of the organisation (Gharaibeh, et al., 2022). Investors generally buy shares to receive dividends and to gain from any future increase in the share price. As the CEO's effectiveness influences the organisation's ability to generate profits, the EPS becomes a meaningful indicator of how company performance is converted into value for shareholders (Gharaibeh, 2022). A higher EPS reflects greater profit earned per share. Various factors can affect EPS. Share buybacks are a way for companies to reduce the number of common shares outstanding. Buybacks of shares occur when companies buy back their own shares from investors and cancel the shares purchased. For example, Naspers' CEO Van Dijk sold R1.6 billion in shares in 2022, when the company was conducting a buyback of its shares (Greyling, 2023). The Naspers' decision to buy back shares signalled to investors that the shares were trading at a discount, to the point that the company was investing its own money to buy back the shares (Greyling, 2023). This buyback decreases the number of

outstanding shares available, resulting in the EPS increasing. Share buybacks are relevant to this study, as they can artificially enhance performance indicators such as EPS and MC, both of which are key metrics in CEO remuneration. In contrast, companies can issue new shares, thus increasing the number of outstanding shares and causing the EPS to decrease. The limitations of EPS are its vulnerability to manipulation through buybacks or the issuance of new shares.

The interaction effect between CEO remuneration and EPS examines how the relationship between CEO remuneration and company performance may change when moderated by EPS. In this study, the inclusion of interaction effects helps determine the impact of EPS on CEO remuneration.

EPS is a critical indicator of a company's profitability from a shareholder perspective, reflecting its ability to generate earnings per share. Its relevance to the current study is its direct link to shareholder value, which upholds agency principles. By examining EPS in relation to CEO remuneration, the study explores whether CEO remuneration is associated with improved earnings performance.

3.5 MAIN INFLUENCERS OF REMUNERATION POLICIES AND STRATEGIES

The debate around CEO remuneration and its relationship to company performance has been an area of interest worldwide from private individuals, remuneration consultants, unions, and governments. The previous chapter discussed the theories proposed by different authors in an attempt to explain the influences on the remuneration packages of CEOs. The previous section provided insight into what remuneration components are and what their structuring is. What is important at this juncture is to outline the other influences, beyond theories, that have shaped how and why remuneration is structured, presented, and explained. According to Bussin (2023), regulations have helped improve the relationship between CEO remuneration and performance. As the study focuses on JSE-listed companies, a discussion and review of the impact of JSE regulations on remuneration should form part of the study.

3.5.1 Influence of JSE Remuneration Regulations

The current research focuses on JSE-listed companies and the remuneration of their CEOs. Therefore, it is important to provide an overview of how this listing has influenced companies'

remuneration regulations. As part of governing the companies listed on the JSE, specifically relative to remuneration, the JSE adopted the recommendations of King IV.

3.5.1.1. Disclosure requirements

The JSE has not been immune to the debate with respect to the remuneration paid to CEOs of companies, but acknowledges that the adoption of transparency around the remuneration of JSE-listed company CEOs is prudent. Since 2002, listed companies have been obliged to disclose the remuneration packages of their executive directors. This has lifted the lid on information once regarded as private and confidential and has the unintended consequence of focusing public attention on excessive executive remuneration (Cliffe Dekker Hofmeyr, 2024). The publication of JSE-listed companies' CEO remuneration has enabled current and former studies to examine the relationship between CEO remuneration and company performance measures.

As good corporate governance is a significant aspect of running a company, the JSE adopted the recommendations of King IV. According to King IV, JSE-listed companies are meant to comply with its recommendations mainly:

- The board of directors approves the remuneration policy of the company, which outlines the company's process and philosophy about responsible and transparent remuneration. Therefore, CEOs' remuneration needs to be justified by the remuneration policy.
- The remuneration policy incorporates what comprises remuneration and the mix of these components of the remuneration paid to employees. CEO remuneration should therefore reflect the mix of pay components. In this study, which examines the relationship between CEO remuneration and company performance, understanding the structure and disclosure of these components is essential. These include cash and noncash parts of the remuneration. As the researcher noted above, although companies are obliged to divulge their remuneration, remuneration components may not be fully transparent, potentially affecting how accurately the relationship between the variables can be assessed.
- The fees paid to nonexecutive directors of the company are disclosed, including the remuneration of executive members for the reporting period.

The King IV also recommends that the remuneration policy and its implementation report be presented each year at the Annual General Meeting for a separate, nonbinding advisory vote

by shareholders to maintain transparency and improve governance over remuneration (Bugeja, Rosa, Shan & Yermack, 2024). Importantly, the adoption of a pay policy or an implementation report is not legally affected by a nonbinding advisory vote by shareholders (South African Reward Association, 2021). This, therefore, questions the validity of voting in regulating the pay practices of CEOs. However, within the purview of the JSE, remuneration voting is mandated rather than optional. This JSE regulatory requirement reinforces the enforcement of sound corporate governance with regard to CEO remuneration. This JSE rule is important for ensuring that there is alignment between CEO remuneration and shareholder value. The vote also enables the organisation's CEOs and remuneration committee to assess shareholder sentiment towards its provisions. Despite all the governance advancements, managerial power theory, which suggests that powerful CEOs may influence their own remuneration, may still contribute to a disconnect between CEO remuneration and company financial performance (Siwendu et al., 2024). The theoretical tensions highlight the complexities surrounding the pay-performance relationship. The study will therefore contribute to determining whether the provisions of JSE regulations and the King IV Code have effectively fostered better alignment between CEO remuneration and company performance.

In addition, the King IV requires a remuneration policy to specify the actions the board will take if 25% or more shareholders vote against either the policy or the implementation report or both (South African Reward Association, 2021). King IV recommendations were implemented from 1 November 2016 (Van Zyl & Mans-Kemp, 2020). The binding vote requires directors to strictly comply with the conditions of the approved policy and prohibits them from exercising discretion to modify the terms of the policy without obtaining approval from shareholders. The adoption of the King IV recommendations by the JSE is important considering the perceptions that CEO remuneration is out of control (Johnson, 2022). The King IV recommendations were implemented from 1 April 2017, towards the end of the period of the current study from 2008 to 2020. The impact of the King IV regulations may have been limited during the study period, as companies may have staggered the adoption of the recommendations after 2017.

3.5.1.2 Consequences of the disclosure of remuneration

The disclosure of CEO remuneration has developed into a key element of corporate governance, driven by the increasing demands for transparency, accountability and shareholder engagement. Publicly listed companies, such as those of the JSE, are obliged to reveal CEO remuneration in their annual reports. The primary objective of remuneration disclosure is promoting responsible remuneration practices; however, it has and can lead to unintended consequences. On the one hand, disclosure has enabled stakeholders to scrutinise CEO remuneration structures, assess links with company performance and the pay gap with ordinary employees, and hold boards accountable for their decisions on remuneration.

The disclosure of remuneration was originally intended to enable shareholders to assess whether they are receiving value for their investment and to act as a deterrent against excessive pay. However, research suggests that disclosure has unintended consequences. Maclean and Price (2020) argued that the weak relationship between CEO remuneration and company performance indicates that factors other than shareholder oversight exert greater influence on pay-setting practices. Harvey et al. (2020) explain that in an informationally efficient executive labour market, it is unrealistic to expect close alignment between executive pay and firm performance measures. Instead, for motivational, recruitment, and retention purposes, compensation committees feel compelled to ensure that their executives are remunerated at least in line with prevailing market benchmarks.

This market-referential logic has been exacerbated by disclosure requirements. As Harvey et al. (2020:6) note, no organisation is willing to signal that its CEO is “below average” in the market. Consequently, remuneration committees are inclined to benchmark CEO pay at or above industry norms, thereby fuelling an upwards ratcheting effect. In this way, disclosure, intended to curb excessive pay, paradoxically contributes to its escalation.

From a governance perspective, the disclosure of CEO remuneration was intended to reinforce the involvement of institutional investors, such as pension funds and asset management companies, in holding companies accountable for excessive CEO remuneration. The underlying assumption was that transparency would enable investors to challenge remuneration practices and ensure stronger alignment between CEO remuneration and long-term shareholder value creation (Harvey et al., 2020). However, the effectiveness of this mechanism varies by ownership structure. In companies with concentrated ownership,

dominant shareholders are more inclined to intervene directly, producing stronger pay-performance sensitivity. In contrast, in widely held companies, shareholder influence is diluted, and the link between remuneration and performance is weaker.

Institutional investors, particularly pension funds, typically hold shares in hundreds of companies, making direct oversight of CEO performance both difficult and costly (Harvey et al., 2020). These investors may prioritise short-term financial returns and rely on buy-and-sell strategies rather than long-term governance engagement. In some instances, the chain of intermediaries between company owners and CEOs, such as when a pension fund delegates investment management to actuaries, further weakens direct accountability mechanisms. Such short-termism results in disengaged investors, undermining the basic premises of agency theory, which relies on the notion of active principals monitoring and influencing agents. As this study explores the relationship between CEO remuneration and company performance, these institutional investor behaviours and ownership structures may reflect some JSE-listed companies. Therefore, this study investigates whether, despite these institutional investor behaviours and structures, CEO remuneration in JSE-listed companies remains appropriately linked to company performance measures or whether structural and market-related factors limit effective oversight.

A further consequence of CEO remuneration disclosure is increased media and public scrutiny of JSE-listed companies, scrutiny that would otherwise not occur without such transparency. Once disclosed, remuneration data becomes accessible not only to investors but also to journalists, analysts, and civil society organisations. This has intensified reputational risk for firms, especially when pay practices appear misaligned with performance or ethical leadership standards. High-profile corporate failures, such as the Steinhoff scandal, underscore this tension. Despite Steinhoff's compliance with JSE listing requirements, its collapse revealed that formal adherence to disclosure regulations does not necessarily ensure effective governance. The scandal not only damaged the company's reputation and financial position but also eroded public trust in the broader corporate governance framework.

For the current study, which relies on annual reports within the prevailing regulatory environment, the consequences of remuneration disclosure directly impact the credibility and reliability of findings. The Steinhoff Group case illustrates how substantial fraudulent CEO remuneration can occur even in the context of disclosure and financial regulation, raising

questions about the effectiveness of performance-based remuneration structures and governance mechanisms intended to align remuneration with genuine company performance.

In the context of this study, the unintended consequences of remuneration disclosure are particularly relevant. While disclosure was designed to enhance transparency and strengthen the alignment of CEO pay with performance, evidence suggests that it may instead contribute to pay escalation, inconsistent governance oversight, and reputational vulnerabilities. For JSE-listed companies, these dynamics raise important questions regarding whether CEO remuneration is genuinely linked to company performance or whether disclosure, ownership structures, and market benchmarking practices undermine this alignment. This finding reinforces the need for empirical analysis of the pay–performance relationship within the South African context, which is the core focus of the present study.

3.5.2 Influence of Macroeconomic Events on JSE-listed Companies

Studying the relationship between CEO remuneration and company performance may reveal that these two metrics work in a vacuum. Confining the research on the interaction between these two metrics provides only a myopic view of the topic. The researcher noted the importance of legislation, theories, stakeholder interests and remuneration design in providing a comprehensive and holistic view of the topic. Part of this holistic analysis of the relationship between CEO remuneration and company performance must examine the macro environment's impact on JSE companies. The profile of the companies that are registered on the JSE has changed over time. As an important economic indicator, the stock market is expected to mirror a country's macroeconomic fundamentals to support growth and development.

3.5.2.1 Macro environment impact on investment returns for JSE-listed companies

Politics and economics affect stock market accomplishments, indicating the risk outlook of specific businesses and stock exchanges (De Beer, Keyser & Van der Merwe, 2022). The aim of shareholders is to ensure that the investment made in a particular company realises returns that exceed those available in other investment portfolios. By investing in a company, shareholders realise returns on their investment through the acumen and competency of CEOs. Legislation and guidance are provided by governments, professional bodies and the JSE to ensure that investments are properly managed. JSE-listed companies are the only investment

option for shareholders. The remuneration paid to CEOs is a form of investment made by shareholders to align the CEO's interests with those of shareholders. As shareholders' primary focus is profit, they do not unreasonably remunerate CEOs beyond what is justifiable. Therefore, there is an argument that shareholders are keen to ensure that the remuneration paid to CEOs is justified by the returns delivered by CEOs through company performance.

According to microeconomics, opportunity cost is the value of the next-best alternative forgone when choosing one activity over another with a higher return (O'Connell & Schmidt, 2021). By investing in JSE-listed companies, owners forgo alternative investment opportunities. Over the past 10 years, the R100 invested in the S&P 500 would have grown to R365.34, compared with R199 for the JSE (Daily Investor, 2022). Greyling (2022) noted that sluggish economic growth and subdued inflation have made it increasingly difficult for South African enterprises to achieve annual returns on capital investment exceeding 14%. Thus, South African companies cut spending, investment, and wages. Over the past decade, S&P 500 index profits per share in U.S. dollars have increased 11.7% annually compared with the 1.46% realised for shareholders on the JSE (Daily Investor, 2022).

With respect to other stock market opportunities, the S&P 500 produced an increase in index earnings per share in U.S. dollars of 11.7%13.8% annualised returns over the past 10 years from 2012 to 2022. Conversely, the JSE resulted in an increase in index dollar earnings per share of just 7.11% annualised return over the same period, as indicated in Figure 3.3. Over the last 10 years, R100 invested in the S&P 500 would have grown to R365.34, compared with R199 in the JSE All Share index. The rand weakened from R6.62 in 2010 to R18.88 in 2024 against the dollar. Thus, for most shareholders, the question is why invest in JSE companies that offer lower returns than in other, more lucrative markets?



Figure 3.3: S&P 500 vs JSE, All Share – 10-year investment period (2012–2022)

Source: Greyling (2022)

It is envisaged that these returns would be reflected in the performance ratios of companies and impact the remuneration of CEOs. The expected results could be comparable growth in CEO remuneration as company returns increase. In addition to the investment returns realised by companies, the human resources professional body has also provided input into the alignment between CEO remuneration and company performance.

3.5.3 Role of Performance Management in Remuneration

Companies use performance management processes and tools to align CEO remuneration with organisational goals. The selected performance indicators are intended to reflect strategic objectives and to assist in translating them into measurable outcomes (Van de Ven, Machado, Athanasopoulou, Aysolmaz & Turetken, 2023). This study, therefore, examines whether CEOs' remuneration is genuinely aligned with company performance measures. As previously discussed, legislation and regulatory frameworks aim to promote accountability and transparency in determining CEO remuneration. From the viewpoint of principal-agent theory, CEO remuneration should be closely linked to a company's strategy and performance objectives. This alignment is achieved primarily through formal performance management processes.

Pat et al. (2020) emphasise that employee performance is often evaluated in terms of the financial value an individual contributes to the organisation, including profitability, growth, and overall returns. These contributions are commonly assessed through financial indicators such as EPS, MC, net profit, ROA and RSF, all of which are applied in this study. Research further suggests that CEOs tend to respond positively to remuneration structures that are directly tied to performance-based rewards. Moreover, rising global competition and volatile economic conditions have intensified pressure on CEOs to consistently deliver measurable outcomes (Kissoonduth et al., 2019).

The attainment of a specified performance target percentage may be tied to an incentive bonus calculated as a proportion of fixed pay. An example of a progressive structure is presented in Figure 3.4. In this model, a CEO's guaranteed salary amounts to £50,000. If 90% of the performance target is achieved, an additional £3,000 is awarded, bringing the total remuneration to £53,000. At 100% achievement, the bonus increases to £10,000, raising total earnings to £63,000. Thereafter, every 1% of overperformance above the target yields an additional £1,000. This approach incentivises CEOs not only to meet but also to exceed agreed-upon targets, thereby aligning their efforts with organisational objectives (Franco-Santos & Bourne, 2008).

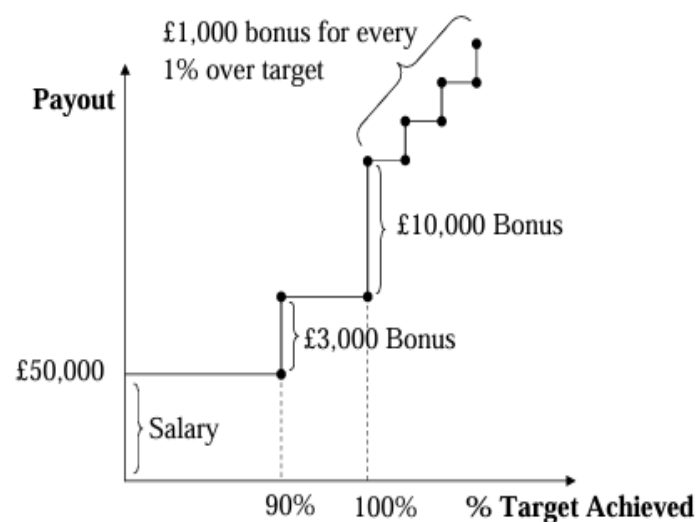


Figure 3.4: Linking performance to monetary reward

Source: Franco-Santos & Bourne (2008:28)

Franco-Santos & Bourne (2008) noted another option for linking performance to pay based on a mathematical function. In the first method, the progressive function rewards CEOs with a higher bonus as the percentage of the performance target increases. The second, regressive function, pays a lower bonus as the percentage of the performance target achieved increases. Finally, the mixed function combines both higher and lower incentives as the performance target percentage increases. Figure 3.5 illustrates the regressive, progressive and mixed function model of rewarding CEOs.

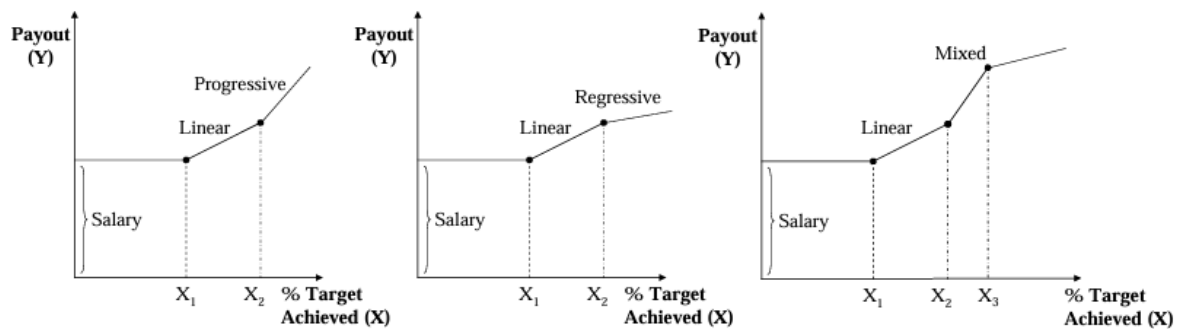


Figure 3.5: Regressive, progressive and mixed relationships

Source: Franco-Santos & Bourne (2008:29)

Franco-Santos and Bourne (2008) illustrated that linking performance to pay is an intricate exercise that assumes that performance targets are set appropriately. Several performance measures can be utilised to link CEO performance; however, not all are appropriate for performance target and remuneration alignment. Xu, Zhang, Wang and Iqbal (2022) noted that the responsibilities and objectives of shareholders and CEOs are not consistent. CEOs prefer to target short-term investments for short-term gains rather than long-term gains. For businesses to invest in innovation, they need a long-term strategy, financial investment, and the realisation of future profits, which may conflict with the CEO's short-term priorities. Balancing the long-term strategic goals of the organisation with a short-term CEO focus is challenging. The establishment of appropriate CEO incentives aligned with organisational strategic priorities is needed (Xu et al., 2022).

Performance management aims to provide an official, rational, and systematic evaluation of the CEO's performance against set performance targets. The performance measurement system of organisations must be constantly developed to remain relevant in today's changing

environment. Currently, companies are expected to evaluate all parts of their operations, which entails incorporating various financial and nonfinancial performance indicators into their performance measurement frameworks. There has been a mix of performance measures utilised by different companies, all attempting to identify the ideal metrics for measuring CEO performance. As discussed in Section 2.4, existing studies have yielded inconclusive evidence on the most effective performance measures for linking CEO pay with company performance.

Ultimately, the development of an optimal performance management system and of remuneration strategies that reinforce it is highly complex. Key stakeholders, including shareholders, boards of directors and regulators, play a pivotal role in performance management by setting expectations, defining performance metrics, regulatory frameworks and influencing the design of the CEO remuneration package to ensure alignment between CEO actions and the company's objectives.

3.5.4 Influence of Key Stakeholders on Remuneration

Clarke (2020) noted that the modern corporate environment has an unparalleled number of stakeholders with vested interests in its operations. Thus, identifying stakeholder interests and translating them into CEO performance indicators is challenging. The researcher has discussed the widespread interest among many stakeholders in CEO remuneration in Chapter 1. The stakeholders' opinions around CEO remuneration, although not part of the official performance evaluation of the CEO, in this context will be discussed, as some of these stakeholders have instituted actions that have impacted organisation recruitment strategies as well as operating procedures (Clark, 2020).

These opinions may be shaped by factors such as stakeholders' roles, interests, ethical considerations, legal frameworks, and economic or social standing. As noted by Clarke (2020), the researcher acknowledges the large number of stakeholders, but in this context, the researcher will discuss in depth a selection of key stakeholders whose perceptions of CEO remuneration may be representative of other stakeholders. The researcher will focus on the government, the media, and the public as stakeholders and on how they perceive CEO remuneration. Shareholders, while central to the discussion, have already been examined in detail in earlier sections of the study.

The government's role in society may be defined as a regulator and enabler (Viviers, Mans-Kemp, Kallis & McKenzie, 2019). A strong regulatory environment is fundamental to creating nations where people can live, work, and do business in prosperity while protecting the environment and the well-being of all societal groups. High-performing government structures are key to achieving these objectives, fostering innovation, enhancing productivity, and supporting sustainable growth (Viviers et al., 2019). Companies play a vital role in promoting the well-being and prosperity of nations. The government increasingly requires companies to be held accountable for their contribution to social uplift, especially in the unequal society of South Africa (PwC, 2024).

The global failure of companies is mostly attributed to CEO mismanagement, and the impact these failures have had on society (failure of companies such as Enron and the adverse impact on workers, investors and suppliers) has escalated the interest of governments in how companies operate and are managed. As regulators of the country, governments have imposed legislation that enforces good corporate governance principles. As regulators, the government imposes mandatory legislation on a broad range of private and public sector activities to protect the rights of individuals and institutions. In Section 2.5, the researcher introduced and discussed key legislation instituted by governments to enforce and regulate company behaviour. The government introduced reforms meant to tighten corporate governance and financial disclosure, mainly holding the CEO and board of directors accountable for the operations of the companies. The global failure of some companies, despite the high remuneration paid to their CEOs, has triggered more control mechanisms to address CEO remuneration (Siwendu et al., 2023).

Governments generally adopt regulatory and public interest roles regarding CEO remuneration, especially if corporate governance standards, economic fairness and public interest are put at risk. For example, in the U.S.A., the Sarbanes-Oxley Act of 2002 was a government response to address financial scandals such as those at Enron. Measures such as the clawback provision required companies to demand repayment of incentives paid to CEOs owing to incorrect statements of financials. The "say on pay" confers rights to shareholders to take a non-binding vote on CEO remuneration in their companies. In the USA, shareholders have articulated their concerns around seemingly excessive CEO remuneration, leading to the "say on pay" regulation (Viviers et al., 2019). The Companies Act 71 of 2008 of South Africa

signed into law by the government obliges companies to reveal the wage disparity between the highest paid 5% of employees and the lowest paid 5%. The government's concern around CEO remuneration is reflected in amendments to the Companies Act to address public concerns around high levels of inequality in society through transparency and disclosure around CEO remuneration. The directors of companies have a fiduciary relationship with the companies and must therefore act in good faith, avoid conflicts of interest between the interests of the companies and exercise their powers for the benefit of the companies. These duties set the standard for directorial behaviour and are meant to protect the company and its shareholders.

The government's role and responsibilities may lead it to take different stances on CEO remuneration, depending on its objectives. In addition to acting as a regulator that enforces rules in the private sector, the government's role is that of an enabler. The role of the government as an enabler is to provide and support an environment conducive to businesses operating effectively and contributing to social and economic development (Enaifoghe et al., 2023). The South African government's policy position is to reduce wage inequality. Section 27 of the Employment Equity Act requires disclosure of pay ratios and requires measures to address income differentials. In May 2018, the government of South Africa reviewed the minimum wage for lower-level employees, which would benefit approximately 6 million employees. This decision has enabled some companies to make inroads to support this initiative by increasing their minimum salaries. Investec increased the minimum monthly salary to R21,000 per month from 1 June 2023; FirstRand raised its minimum pay to R15,400 a month in August 2024; Discovery increased its minimum pay to R16,600 per month effective October 2024 (Khumalo, 2024). As enablers, the government's views on CEO remuneration have not stopped it from forming alliances with CEOs; both parties have pledged to work together to address South Africa's challenges.

In the UK, a survey conducted by Equality Trust (2024) noted that 74% of respondents agreed that the government should take measures to ensure an equitable distribution of pay between CEOs and average workers. Seventy-three percent of the respondents agreed that the pay gap between CEOs and average workers in the UK was too wide. Sixty-four percent of respondents agreed that the government should set a maximum salary for executives (Equality Trust, 2024). In the U.S.A, according to American public survey research conducted by

Larcker and Tayan (2019), CEO remuneration is often viewed negatively, partly because it is widely held that CEOs bear little to no responsibility for the success and value generation of their organisations. The public in America is aware that CEO remuneration is and ought to be correlated with the size, growth, and worth of businesses. However, they disagree on how much more, or how much, pay should increase with size (Larcker & Tayan, 2019).

The media play a pivotal role in shaping public perceptions of CEO remuneration, functioning as both a critical observer and a platform for societal debate. Across various publications, executive pay is frequently scrutinised in relation to social equity, organisational accountability, and perceived ethical standards. Media narratives often emphasise the stark contrast between CEO remuneration and the earnings of average employees, framing executive pay as a moral issue. Cohen (2022) exemplified this discourse, highlighting the disparity between multimillion-rand CEO packages and the low earnings of most South African workers, which resonates with broader public concern about social inequality. This perspective aligns with the sentiments reported by Sommer (2024) and De Wet (2024), who similarly articulate societal outrage at disproportionate executive pay, underscoring public expectations for fairness and proportionality in CEO remuneration.

However, media scrutiny also incorporates an economic and performance-based lens, reflecting a relativistic evaluation of executive compensation. Cohen (2022) illustrates this complexity through the example of MTN's CEO, whose remuneration in 2021 totalled R84.2 million. While this figure may appear excessive when viewed solely through a moral lens, it coincided with substantial shareholder value creation, including a 176% increase in the MTN's share price and a doubling of the company's market capitalisation from R150 billion to R300 billion. This framing demonstrates how media discourse can simultaneously question the ethical justification of pay while recognising its alignment with organisational performance, echoing a nuanced understanding of remuneration as both a social and economic construct.

The media also influence corporate governance indirectly by affecting public perception and executive behaviour. Coverage of executive pay provides transparency, which can pressure boards to justify remuneration decisions and benchmark packages against industry norms. As Aabo, Jacobsen, and Stendys (2022) note, media attention can serve as a negotiating tool,

particularly when executives exhibit narcissistic tendencies and seek publicity, although O'Reilly, Doeer, Caldwell, and Chatman (2014) argue that such executives often pursue high remuneration for the prestige it confers. Thus, media scrutiny both exposes potential excesses and reinforces the visibility and perceived value of CEOs within organisational hierarchies, shaping remuneration norms across industries.

Importantly, media accounts can also provide a balanced and contextualised view of executive pay. Theunissen (2024) highlights the case of the Discovery Bank CEO, whose 2024 remuneration of R57.65 million was reported alongside detailed organisational achievements, such as exceeding client recruitment targets and improving operational performance. By situating CEO pay within the context of performance outcomes and company strategy, the media can move beyond emotive critique, offering stakeholders a more informed assessment of the rationale behind remuneration decisions (Shortland, 2025). This demonstrates that media coverage can simultaneously act as a critical lens and a source of performance transparency, influencing both public perception and executive accountability.

By integrating stakeholder perspectives and media scrutiny with formal performance metrics, the complex landscape of CEO remuneration emerges as both an internal governance and an external accountability issue. The preceding discussion in Chapter 3 illustrates that determining optimal performance metrics, designing transparent pay structures, and aligning remuneration with strategic objectives are multidimensional challenges. Research into the relationship between CEO remuneration and company performance not only evaluates the effectiveness of corporate governance mechanisms but also provides an empirical basis for assessing theoretical explanations and for developing new theoretical frameworks. The next section will present the differing empirical findings regarding the link between CEO remuneration and company performance, with particular reference to JSE-listed companies.

3.6 CONTROL VARIABLE

The inclusion of control variables is a common practice in business and social science research to account for factors that may influence the relationships among key variables of interest. Although turnover (gross revenue or income) was initially considered an independent variable to be tested, it is treated as a control variable in this study. A control variable is one that is held constant or statistically accounted for to isolate the effect of the main independent

variables (Memon et al., 2024). This approach allows the researcher to control for company characteristics that could otherwise distort the relationship between CEO remuneration and company performance. (Memon et al., 2024).

Given that company size is a well-established determinant of CEO remuneration, turnover serves as a suitable proxy to control this effect (Ramgath & Bussin, 2022). Large companies typically exhibit more complex operations, broader stakeholder demands, and heightened strategic requirements, often resulting in higher CEO remuneration (Leal & Anjos, 2024). Consequently, the study anticipates a positive correlation between company size (MC) and CEO remuneration.

Turnover is the total revenue a company receives from customers or clients in exchange for goods or services (Accounting Tools, 2022). It reflects the overall scale of operations and can indicate business growth over time. Unlike profit-based measures, turnover excludes expenses or any other unforeseen fees, making it a straightforward indicator of company size.

Prior research examining the pay–performance link has employed various control variables, including total assets, market capitalisation, company age and CEO tenure (Ma, 2025; Bussin et al., 2023; Högstöm & Olausson, 2023). In such cases, these variables act as proxies. Proxies represent numerical measures that capture the underlying construct, that is, company size, when it cannot be directly observed (Krause, 2020).

By including turnover as a control variable, this study aligns with established practice and ensures that the observed relationships between CEO remuneration and company performance are not confounded by company size.

3.7 MODERATOR AND INTERACTION EFFECT

The discussion around the history of remuneration, motivational theories, governance and legal frameworks, along with the opinions of different stakeholders, underscores the complexity of the relationship between CEO remuneration and company performance, shaped by dynamic influences. There is no consensus on a definitive model, variable choice, or a consistent perspective in identifying the optimal independent variables that influence CEO remuneration across organisations or industries (Ramgath & Bussin, 2022).

The relationship between CEO remuneration and company performance is complex and influenced by multiple factors beyond direct performance outcomes.

The moderating effects of various factors, such as Chinese Communist Party reforms in SOEs (Chukwuma et al., 2021), CEO risk-taking behaviour (Al Shammari, 2021), CEO power and governance structure (Ntim et al., 2019), and financial constraints (Kwehet al., 2022), illustrate that the relationships between dependent and independent variables can be strengthened, weakened or altered under certain conditions. (Hair et al., 2021).

Additional insight into the relationship between CEO remuneration and company performance may be gained by researchers studying the combined effect of two independent variables on the dependent variable. Interaction effects occur when the influence of one independent variable on the dependent variable depends on the level of another independent variable, called the moderator variable (Cotter et al., 2024). Conceptually, investigating interaction effects allows researchers to understand whether combinations of factors jointly influence outcomes in ways that differ from their individual contributions.

3.7.1 Justification for the Choice of Moderating Variable

The selection of company size as a moderating variable is supported by both theoretical reasoning and empirical evidence. Prior research has shown that the determinants of CEO remuneration are complex and influenced by multiple factors, including company size, industry sector, and job functions (Maloa, 2020). Empirical studies frequently use company size, proxied by the market value of a company's common shares, to explain variations in CEO pay (Wakil, 2020).

Nguyen and Ngo (2022) noted that larger boards tend to link CEO remuneration more closely to company size rather than performance metrics. CEOs often have greater influence over a company's size and, consequently, may prefer remuneration structures on the basis of company size. Bebchuk and Fried (2004), as cited in Gox and Hemmer (2020), reported that CEO-favourable boards can inflate pay levels at the expense of shareholders by endorsing inefficient remuneration contracts that are weakly linked to company performance. Managerial power theory reinforces this, suggesting that CEOs may exert influence over

boards to align remuneration with company size, a proxy for organisational complexity, rather than with shareholder value creation (Gox & Hemmer, 2020).

Shabbir et al. (2024), in a study of nine Asian companies, reported a positive correlation between company size and the need for highly skilled CEOs due to complex operations. Larger organisations often carry out more varied and complex business activities, requiring a broader range of skills and strategic thinking from the CEO. Accordingly, CEOs are paid higher remuneration in recognition of these responsibilities (Shabbir et al., 2024).

Anne, K'obonyo and Muindi (2021) studied the moderating role of company size and CEO remuneration on listed companies on the Nigerian Stock Exchange. The research revealed there was a significant and positive relationship between company size and CEO remuneration. Anne et al. (2021) found that it is possible to estimate the CEO's remuneration flexibility to company size at 0.25, meaning that a 10% increase in the company's size will result in a 2.5% increase in CEO remuneration. The requirement that CEOs of larger companies receive remuneration commensurate with the greater economic impact of their actions justifies the progression of this relationship. Empirical evidence showing a positive relationship between CEO remuneration together with evidence linking pay increases to company performance, provides the rationale for examining company size as a moderating variable in this study. (20

Large companies also tend to benefit from economies of scale and greater operational and financial efficiency, which help reduce uncertainty and enhance performance (Costa, Lisboa & Marzinzik, 2023). Moreover, Finkelstein and Hambrick (1989) reported that larger companies typically have more hierarchical structures, resulting in broader managerial spans of control and increased complexity, which may justify higher levels of CEO remuneration. This complexity reinforces the rationale for examining company size as a moderating variable, as it may influence the strength and direction of the relationship between CEO remuneration and company performance.

Given the inconsistencies in prior findings on CEO remuneration and performance (Boayke et al., 2020; Kieviet et al., 2022; Siwendu et al., 2024; Swanepoel & Stumke, 2024), testing company size as a moderator provides an opportunity to clarify whether size strengthens,

weakens, or has no effect on this relationship. Furthermore, this study incorporates interaction effects, examining whether the combined influence of company size and performance differs from their individual impacts. Regression analysis will therefore proceed in three stages: first, testing direct relationships between independent and dependent variables; second, assessing the moderating effect of company size; and third, analysing interaction effects to determine whether the joint influence of size and performance alters CEO remuneration outcomes (Bussin et al., 2023).

The relevance of proxies is supported by signalling theory, which posits that market stakeholders, to overcome information asymmetries, use observable factors, such as prices, as proxies for unobservable factors, such as performance (Sandberg & Anderson, 2022). In his study, Sandberg and Anderson (2022) further noted that extenuating variables may influence results; for example, the level of CEO remuneration may indirectly affect company wealth by signalling talent and performance quality to the market, thereby shaping investor perceptions.

Additionally, this study explores interaction effects to assess whether the combined influence of two independent variables differs from their individual effects. This multifaceted approach aims to provide deeper insights into the determinants of CEO remuneration and improve the understanding of how various factors interact to shape CEO remuneration structures.

3.8 LIMITATIONS OF USING FINANCIAL COMPANY PERFORMANCE

Financial analysis tools provide financial analysts with the information needed to assess and understand companies' financial positions and cash flows (English, 2023). It is important to note the limitations of using financial performance measures. Some of the literature describes the use and relevance of accounting ratios in the interpretation of financial accounts without providing insight into what assumptions are utilised to make these ratios relevant (Whittington, 1980). Contemporary performance measures advocate using both financial and nonfinancial measures. The following outlines the limitations of using financial company performance measures. While the limitations of financial performance indicators will be outlined, merely identifying these shortcomings is inadequate unless the discussion relates to the current study and how these limitations are managed.

3.8.1 Historical Focus of Financial Company Performance Measures

Several variables are used to measure company performance. Financial performance measures are usually divided into accounting-based measures and market-based performance measures. To study the relationship between CEO remuneration and company performance, researchers have generally used accounting-based, market-based measures or both (Bouteska & Mefteh 2021; Siwendu et al. 2024). Accounting ratios are more relevant to CEOs' ability to support their decision making, and market measures are more relevant to investors (Cost, Lisboa & Marzinzik, 2023). Traditional financial measures are better at measuring the results of past actions than at projecting future performance (Abdullahi et al., 2021). Financial statements focus primarily on past performance and provide an overview of what transpired during the annual reporting period. As financial measures are historically focused, they provide limited extrapolative qualities, which would allow them to proactively respond to the external challenges facing an organisation (Abdullahi et al., 2021).

Accounting ratios are static and fixed in nature; they do not always predict future relationships. Accounting ratios are inadequate for assessing a company's performance, especially in the current competitive business environment (Abdullahi et al., 2021). Accounting-based measures (ROA, ROE, and net profit) are criticised as backwards looking. Despite this criticism, Bawa (2019) in Höskisson et al. (1994) noted that although accounting measures are backward looking, they are good predictors of future performance. Market-based measures (EPS, MC, TSR), on the other hand, are characterised by forward-looking aspects and align with shareholder expectations regarding the company's future performance. In today's fast-paced and dynamic macroeconomic environment, the use of historical figures to predict future performance may lead to inaccurate projections (Skarica, 2025).

For example, the dot-com bubble, also known as the internet bubble, highlights the risks associated with relying solely on historical financial metrics. This era, marked by accelerated expansion beginning in 1980 and culminating in a stock market crash in the early 2000s, saw widespread bankruptcies among tech companies (Zhao & Hall, 2023). During this period, stock valuations, particularly in the U.S. tech industry, rose irrationally. For example, the Nasdaq index rose from less than 1,000 to more than 5,000 between 1996 and 2000, then collapsed by nearly 77% by 2020. (Zhao & Hall, 2023). MicroStrategy, a dot-com company,

illustrates this disjunction: its stock grew from \$20 to \$300 per share despite no material change in its operations or revenues, only to plummet to \$1 per share shortly thereafter. This example is important to the current study, which examines CEO remuneration in relation to company performance, often measured through financial indicators such as EPS and ROA. It illustrates how market performance and CEO remuneration may reflect inflated or outdated valuations that do not align with actual operational value creation. The reliance on historical financial data, while necessary for standardised performance measurement, may fail to capture the volatility or market irrationality that influences company evaluations in real time.

Notably, historical financial metrics offer the means through which analysts and investors build their forecasts and strategies and provide trends and financial health information for the company (Fastercapital, 2025).

While audited financial statements provide a credible and standardised approach to evaluating company performance, their rear-view, or retrospective, nature and the flexibility in the presentation of financial information introduce inherent limitations. These include potential manipulation and distortion through selective accounting practices, such as the use of asset evaluation methods that may not accurately reflect market conditions. Financial statements, being historically focused, do not capture real-time events or a company's current status, thereby influencing the perceived link between CEO remuneration and company performance. Despite these challenges, the study mitigates risks and limitations by relying on audited financial statements.

The preceding section highlighted the limitations existing in the choice of presentation and rear-view focus of financial metrics. The next section uses a different method of discussing the limitations by focusing the discussion on alternative metrics and highlighting their added value, which financial metrics lack. The alternatives to be discussed in the next section are non-financial indicators.

Although financial ratios are based on past performance, they are still useful for rewarding CEOs for it. Therefore, these factors are still relevant for utilising in the current study.

3.8.2 Beyond Financial Metrics: The Case for Incorporating Non-financial Performance Indicators

The preceding section highlighted the limitations existing in the choice of presentation and retrospective focus of financial metrics. In contrast, the next section adopts a different approach to discussing limitations by shifting the focus to alternative performance indicators. This section expands the performance discourse by critically examining the limitations of relying solely on financial indicators, such as EPS, net profit, ROA and RSF, as measures of company performance.

While these company performance measures provide quantifiable and comparable data, they often fail to capture long-term strategic priorities, stakeholder interests, and intangible drivers of value such as innovation, sustainability and ethical leadership (Subaciene et al., 2025). As a result, financial indicators can present a narrow and at times misleading picture of performance, especially in complex or rapidly changing environments (Dimes & de Villers, 2024). Considering these limitations, this section explores non-financial indicators, especially environmental, social and governance factors, and CEO attributes, not as complementary tools but as essential dimensions of performance that are often overlooked. By juxtaposing these non-financial metrics with traditional indicators, the discussion aims to highlight what is forfeited when performance is evaluated solely from a financial perspective.

Having served as a primary indicator for assessing company performance and justifying CEO remuneration, this narrow focus has increasingly come under scrutiny. Rooted in agency theory, these metrics assume that aligning CEO incentives with shareholder wealth will drive optimal performance (Matemane et al., 2023). However, this approach overlooks the broader responsibilities that companies have toward a wider group of stakeholders. In today's context, companies are held accountable not only by shareholders but also by investors, the media, non-governmental organisations, consumers, and regulators (Zarzycka & Krasodomsa, 2022). Frameworks such as the 2015 Paris Agreement on Climate Change and the 2015 United Nations' Sustainable Development Goals emphasise that long-term sustainability requires more than financial returns. Some South African companies, such as Nedbank, have adopted ESG strategies and reported their progress in integrated reports, demonstrating how non-financial metrics are increasingly viewed as essential to business success. According to the

Nedbank Group's Integrated Report (2023), the bank acknowledges its exposure to climate-related risks because its operations are largely concentrated on the African continent. The report highlights commitments to align lending and investment activities with a net-zero economy by 2050, including a phased withdrawal from fossil fuel financing by 2045. In addition, Nedbank has set interim targets to reduce financed thermal-coal emissions by 47% and oil and gas emissions by 26% by 2030, supporting a structured transition to a low-carbon economy. Matemane et al. (2023) highlighted that for companies to succeed in each context, they require not only a legal licence but also a social licence granted by society. Society has become increasingly vocal and influential in shaping how companies operate. Stakeholder theory emphasises cooperation and collaboration between companies and their various stakeholders to achieve mutual benefits (Nnadi & Mutyaba, 2023). The growing influence of stakeholders has prompted calls for companies to prioritise not only profits but also non-financial outcomes, such as environmental, social, and governance (ESG) considerations. ESG has been considered a proxy for social responsibility, advocating for ethical and sustainable business practices (Signori et al., 2021).

Recent studies support the relevance of these measures (Cho & Ibrahim, 2022; Gan, Park, Suh, 2020; Matemane et al., 2023). Matemane et al. (2023) reported that ESG performance is statistically significant in explaining the variability of CEO remuneration. Singori et al. (2021) highlighted a significant shift in corporate purpose, referencing the 2019 pledge by a group of CEOs from major U.S. companies who asserted that the objective of companies is no longer solely shareholder maximisation but rather the creation of value for a broader range of stakeholders.

Kaplan and Norton's (2005) balanced scorecard approach proposes that more than financial data are required to measure performance. The adoption of additional strategic nonfinancial performance measures, in addition to financial metrics, gives managers and executives a clearer, more rounded view of organisational performance. Kaplan and Norton (1992) argued that performance measurement should address measures addressing customer perceptions of the company, measures to improve the company through innovation and learning, and measures to excel at internal business processes.

Although this more comprehensive perspective is becoming increasingly pertinent, this study focuses on financial performance metrics to maintain alignment with its stated objectives and ensure measurability, comparability and data reliability across a sample of JSE-listed companies. As they are publicly published, audited and based on standardised accounting standards (such as IFRS), financial measures such as EPS, MC, net profit, ROA and RSF offer a strong foundation for empirical research (Nurmamedova, 2021). Nonetheless, the study recognises that this approach presents limitations, particularly in capturing long-term value creation and ethical leadership dimensions (Matemane et al., 2023). These limitations are acknowledged and discussed to enhance the transparency, validity and contextual interpretation of the study's findings.

While ESG metrics underscore the importance of evaluating company performance through environmental, social, and governance considerations, understanding CEO decision making also requires attention to the cognitive and information limitations faced by CEOs and boards (Bekos & Chari, 2024). Bounded rationality theory, introduced by Simon (1990), recognises that decision makers function under constraints such as limited information, restricted time and finite cognitive capacity. This theoretical lens highlights that CEOs may not always make fully rational decisions based solely on financial metrics, as their decision-making is often shaped by incomplete information and environmental complexity. The strategic view of CEOs is therefore an interpretation rather than objective knowledge (Bekos & Chari, 2024). Bounded rationality theory helps explain potential reasons for the lack of, or even negative, links between CEO remuneration and company performance. In interpreting the pay–performance relationship findings in this study, bounded rationality theory offers a realistic perspective on the decision-making processes of CEOs and boards of directors and will be referenced in this interpretation.

Focusing on financial accounting metrics also limits the consideration of other potentially important drivers of company performance. As indicated by the upper echelons theory (UET) developed by Hambrick and Mason (1984), a company's CEO's cognitive foundation and personal values, expressed through observed traits such as age, educational background, and career experience, play a significant role in explaining or predicting how they interpret and react to strategic events, thereby influencing organisational performance, as depicted in Figure 3.6. UET acknowledges that the strategy development process involves highly complex and

ambiguous information that complicates decision-making. CEOs make sense of strategic challenges by relying on cognitive shortcuts and drawing on their prior experiences, which guide them in formulating possible courses of action (Bekos & Chari, 2024).

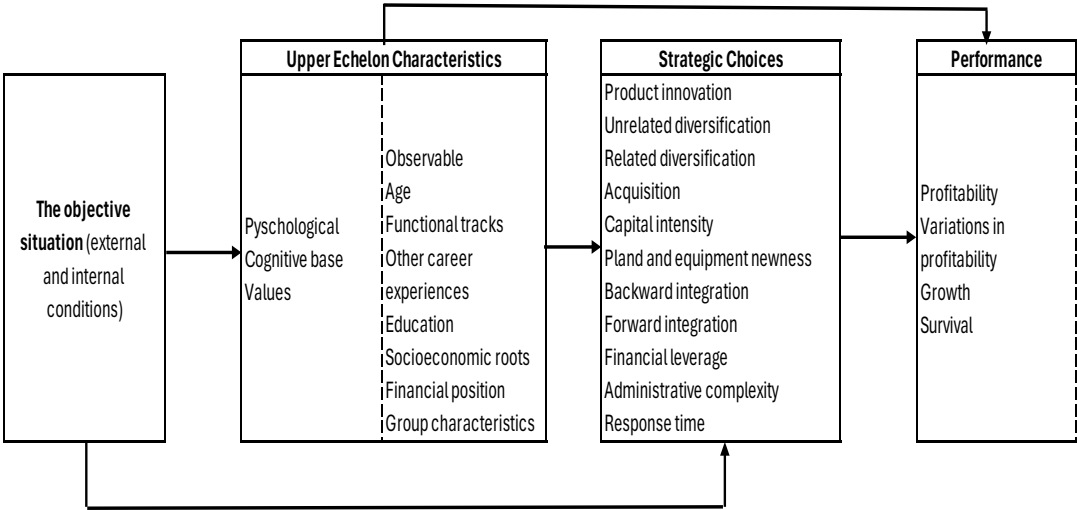


Figure 3.6: Upper Echelons Conceptual Model

Source: Bekos & Chari (2024:3)

However, following the seminal contributions of UET, other scholars have included moderating variables between upper-echelon characteristics and performance outcomes. Managerial discretion as a moderator posits that some CEOs have greater control over what happens in their companies than others do. The organisation's strategy is dependent on whether the CEO has latitude of action, which in turn impacts organisational performance. Within the current study, CEOs with higher levels of discretion, such as those operating in companies with fewer shareholder checks and fewer regulatory constraints, may exert more influence on company outcomes. This suggests that the objectives of this research may be impacted not only by external factors but also by the degree to which the CEO is afforded strategic freedom.

While nonfinancial indicators are recognised as important, they are beyond the scope of this study. For example, Kaplan and Norton’s (2005) balanced scorecard approach incorporates financial and non-financial instruments, but this framework is not applied here. Instead, in line with previous research (Bouteska et al., 2024; Coetzee & Hall, 2020; Siwendu et al.,

2024), the current study relied on financial indicators, which, despite their limitations, have consistently produced a meaningful understanding of the link between CEO remuneration and organisational performance.

Financial indicators remain a cornerstone in performance evaluation, as they provide a clear and systematic method for summarising the extensive data contained in financial statements (Panchenko, Balaziuk & Portovazar, 2024). Similarly, Carlson and Bussin (2020) emphasise that accounting ratios are the most widely used and understood measures of company performance. The shareholders of companies' main objective is the monetary return on their investments. Since the primary objective of shareholders is monetary return on investment, financial measures are particularly relevant. Moreover, non-financial metrics, while useful, are often criticised for their subjectivity (Alves & Lourenço, 2022). Their role is generally seen as complementary, enhancing rather than replacing financial measures in assessing company performance.

The reliance on financial indicators is further highlighted by cost considerations. According to the U.S. Bureau of Labour Statistics, salaries account for 69.1% of total organisational costs. The high cost of labour highlights the need for companies to generate profits to sustain their human resources, thereby reinforcing the importance of financial metrics that track profitability. Different stakeholders prioritise different financial ratios: lenders focus on debt and liquidity ratios, whereas investors emphasise profitability and market-based ratios (Alqam, Ali & Hamshari, 2021).

Thus, while financial metrics such as EPS, MC, net profit, ROA and RSF remain essential tools for assessing company outcomes and guiding CEO remuneration decisions, they offer a relatively limited view of organisational effectiveness. Their strength lies in standardised accounting principles, which ensure reliability and validity; they often fail to capture broader contributions such as environmental, social responsibility, governance practices or leadership characteristics (Akpan & Oluwagbade, 2023). Although this study focuses on financial metrics, it acknowledges the growing relevance of non-financial metrics and recognises that excluding them may limit the holistic assessment of company performance (Akpan & Oluwagbade, 2023). Future research would benefit from integrating both financial and non-

financial measures to offer a broad understanding of how CEO remuneration aligns with company success.

Since financial ratios are important to various stakeholders, the mark of a company's success is usually judged in comparison to other financial metrics of other organisations (Rashid, 2021). The next section will discuss the limitations of external benchmarking to assist with having a holistic approach to evaluating the effectiveness of different metrics in the relationship between CEO remuneration and company performance.

3.8.3 No External Benchmarking of Performance

One significant limitation of assessing the success of an organisation is examining the organisation in isolation. The true mark of an organisation's success is meaningful only compared with industry peers. Benchmarking is the process of searching for best practices or conducting a comparison against other companies, which contributes to exceptional performance to meet the objectives of the company (Erdil & Erbiyik, 2019). Benchmarking includes the evaluation of products, services, business processes and performance metrics, helping companies identify best practices and assess competitiveness (Horváthová, Mokrišová & Vrábliková, 2021). Without external benchmarking, a company's financial position may appear either strong or weak in isolation, obscuring the true reflection of the pay-performance outcomes compared with peers in the market. In response to this risk, the current study adopts a broader sample of 61 companies listed on the JSE rather than a company-level or sector-specific analysis. This approach aims to reduce the bias associated with examining individual companies or sector-focused studies and instead offers a macrolevel assessment of the correlation concerning the CEO remuneration and company performance of 61 companies within the JSE.

Traditional accounting measures tend to focus on internal variables such as costs and revenues without adequately accounting for the external environment. However, strategic methodologies such as strengths, weaknesses, opportunities and threats analysis demonstrate the importance of understanding both internal and external contexts in strategic decision making (Kumar & Praveena, 2023). Effective performance measures should similarly account for how a company performs in comparison to its peers (Barnes, 1987). Corporations often

engage in benchmarking exercises as a precursor to setting internal performance goals and determining CEO incentives.

Reviewing a company's financial ratios in isolation, without benchmarking against comparable companies or industry standards, restricts the ability to meaningfully assess performance and may lead to misleading conclusions about the effectiveness of CEO remuneration. Without external benchmarking, evaluating whether company performance has been exceptional or subpar is challenging (Horváthová et al., 2021). For example, a high ROA during an economic boom may be a result of favourable market conditions rather than exceptional CEO performance. Without benchmarking, such performance may be misattributed, potentially resulting in inflated CEO remuneration and misaligned incentives. Therefore, benchmarking introduces an essential context, allowing investors, boards, and other stakeholders to distinguish genuine outperformance from sector-wise trends (Nurhikmawaty & Widiyanti, 2020).

When benchmarking a company against its competitors, another important factor is to ensure that the company is matched against companies within the same sector with the same business plan or strategy. For instance, within the financial services sector, banks and investment companies normally use different ratios as yardsticks. Banks typically utilise liquidity and debt ratios, in contrast with investment companies that characteristically use market indices, such as the S&P 500 (Ross, 2022). Even within the same business sector, different business models can necessitate distinct performance metrics.

A practical example from the South African banking industry highlights the nuances of benchmarking. Standard Bank is widely acknowledged as one of the top performing banks in South Africa in terms of total assets. However, this ranking does not necessarily imply superior performance across all key performance indicators. Benchmarking enables Standard Bank Group to assess its overall effectiveness relative to industry peers, facilitating a more balanced evaluation that extends beyond a single metric such as the asset base.

As illustrated in Figure 3.7, Standard Bank Group ranks highest overall and in categories such as profitability and liquidity, but it lags in terms of operational efficiency and asset quality. This demonstrates how reliance on a single metric can produce incomplete or inaccurate assessments of both organisational performance and CEO effectiveness.



Figure 3.7: South Africa's Leading Bank Holding Companies Based on Performance

Source: Adapted from: Business Tech (2024)

To further explore the differences illustrated in the figure above, Table 3.4 identifies the top banks for each performance indicator, providing a comparative perspective on where each institution shows relative strengths or weaknesses.

Table 3.4 Top South African bank for each indicator

Performance Indicator	Top Bank	Second	Third
Growth	FirstRand	Standard Bank	Absa
Profitability	Standard Bank	FirstRand	Nedbank
Operational Efficiency	FirstRand	Nedbank	Standard Bank
Asset Quality	Investec	FirstRand	Standard Bank
Return on Risk	Standard Bank	FirstRand	Nedbank
Liquidity	Standard Bank	Nedbank	Absa
Soundness	Absa	Standard Bank	Nedbank
Leverage	Absa	Standard Bank	Nedbank
Overall	Standard Bank	FirstRand	Nedbank

Source: Business Tech (2024)

The data in Table 3.4 reinforce that no single bank consistently outperforms across all categories, underscoring the importance of benchmarking multiple indicators to gain a balanced view of overall company performance and, by extension, a more accurate assessment of CEO effectiveness.

To mitigate the limitations of relying solely on financial metrics, this study adopted a broader analytical approach by examining and comparing CEO remuneration and company performance across all 61 JSE-listed companies included in the sample. By analysing results across multiple years, the study offers a broader analytical approach, enabling the identification of patterns, trends, and deviations among companies within the same operating environment (Ganbat et al., 2026). This enhances contextual understanding of performance outcomes and mitigates the risk of drawing narrow conclusions based on individual company data.

In summary, benchmarking demonstrates that financial performance metrics, when used in isolation, provide an incomplete and potentially misleading view of a company's true standing. Strong financial ratios may suggest success, but without peers or industry comparisons, it remains unclear whether performance is genuinely competitive or merely

average. In line with managerial power theory, a further limitation of financial indicators is their susceptibility to selective interpretation or manipulation to support CEO-driven narratives. Another limitation of using financial company performance is that it may lead to unfair comparisons across companies pursuing different strategic models, resulting in misleading conclusions about the pay–performance relationship. The next section elaborates on these limitations when companies follow different strategies.

3.8.4 Comparing Companies Pursuing Different Strategies

As the business landscape becomes increasingly competitive, CEOs must continually adopt strategies to remain relevant and drive growth in their industries. Strategic decisions are influenced by internal factors such as structure and resources and external factors such as industry dynamics and macroeconomic conditions (Farida & Setiawan, 2022). One key limitation of using financial metrics in isolation is the risk of oversimplifying comparisons – evaluating one company’s performance against another without accounting for strategic differences can distort conclusions, particularly in CEO pay–performance assessments.

Business strategies can operate at three distinct levels: corporate, business, and functional (Ahsan, 2024). At the corporate level, strategy sets the overarching mission and long-term goals. At the business level, the emphasis shifts to competitive positioning and differentiation within specific markets (Ahsan, 2024). Finally, at the functional level, strategies translate broader objectives into departmental priorities, ensuring alignment across functions such as human resources, production, and finance (Ahsan, 2024).

Comparing the financial performance of companies pursuing distinct business strategies can be misleading. For example, in the beverage sector, Coca-Cola has primarily focused on non-alcoholic drinks, whereas PepsiCo has diversified into snacks and foods, creating fundamentally different business models (Maverick, 2024).

In the tech sector, Apple and Samsung are often viewed as direct competitors; however, Apple’s strategy centres on premium product differentiation, sleek design, and a user-centric interface, primarily through outsourcing hardware production (Dan, 2023). In contrast, Samsung pursues a broader market-penetration strategy across various product categories and employs vertical integration, owning parts of its supply and distribution chains (Partyka &

Paiva, 2024). Comparing their overall financial performance without accounting for these differences in scope and strategy may result in inaccurate interpretations of effectiveness or CEO contribution.

IBM is another example. Formerly a hardware company, IBM reinvented itself in the 1990s, pivoting from AI and cognitive computing with its Watson platform. This strategic shift enabled it to offer data-driven solutions in healthcare, finance, and retail, reinforcing its image as an innovative leader (CliffsNotes, 2024). Comparing IBM's financials with those of companies with traditional product models would ignore their long-term investment horizon and solution-based value proposition. These examples underscore why using financial ratios or performance measures without considering the strategic context may lead to flawed assessments of CEO performance. Companies that adopt unique, long-term strategies, particularly those involving innovation or market positioning, may not yield immediate financial returns but are still on strong performance trajectories (Fernandez & Oliver, 2025). Such nuances are critical when evaluating CEO remuneration and ensuring alignment with both short- and long-term organisational goals.

While the research objective is to evaluate the association between CEO remuneration and organisational performance among JSE-listed organisations, it is important to recognise that these companies pursue different business strategies, operate in different industry sectors and respond to distinct market dynamics. Such strategic variations affect the selection and interpretation of financial indicators (Farida & Setiawan, 2022). For example, companies focused on growth, such as newly registered organisations, may prioritise short-term profitability, whereas others may prioritise efficiency or shareholder returns (Muslim, 2025). These differences can distort comparative assessments if not contextualised. To address this challenge, the current study adopts a cross-sectional design, analysing a broad sample of 61 companies over a 13-year period. While it is impossible in the current study to control for every strategic difference, the inclusion of a large, diverse sample mitigates the risk of drawing conclusions from outlier cases. Interpretation of the results will be performed cautiously and potentially acknowledge the performance outcomes as a reflection of strategic choices rather than CEO effectiveness. The current study, which acknowledges this limitation, aligns with other studies (Bouteska et al., 2024; Coetzee & Hall, 2020; Siwendu et al., 2024) that also rely

on financial indicators despite similar constraints. These studies still yielded valuable perspectives into how CEO remuneration connects to company outcomes.

In conclusion, while financial performance metrics remain essential tools for evaluating company outcomes, their effectiveness is significantly diminished when used without context, particularly when comparing companies with fundamentally different business strategies. The strategic objectives, operating models, and investment horizons of companies such as Apple, Samsung, IBM, Coca-Cola and PepsiCo vary, making direct financial comparisons potentially misleading. Such comparisons risk undervaluing or misrepresenting CEO performance, especially when remuneration decisions are tied to traditional financial ratios alone. When evaluating CEO contributions and company success, performance evaluations must consider strategic intent, industry context, and non-financial metrics. This holistic approach aligns more closely with the objectives of this study, which seeks to understand the complex connection between CEO remuneration and company outcomes.

This study aims to move beyond simply churning out statistics and instead to provide a more meaningful understanding of CEO remuneration in relation to the broader strategic and organisational landscape. The next section will further elaborate on the limitations of using financial company performance measures by discussing how time affects performance.

3.8.5 Impact of Time on Performance

Inflation may distort a company's balance sheet. Therefore, a comparison of companies over a period must consider these determining factors (Patjoshi, 2020). Seasonal factors also affect the results of the ratio analysis. The cash conversion cycle may be affected by seasonal factors. A company may stock large quantities of inventory in anticipation of seasonal changes in customer needs (Mendeley & Ndiaye, 2023). Its return on assets will therefore be low. These seasonal changes must therefore be understood to interpret the financial results correctly (Mendeley & Ndiaye, 2023). This critique of the impact of time is important; hence, the researcher analysed the data over a longer period to address the challenges of annual and seasonal factors.

One of the major limitations of using financial ratios is that the underlying financial statements are primarily based on historical costs, which means that they may not accurately represent

the company's current operating reality. Investors, therefore, use these historical figures to predict future performance (Walters & Fernbach, 2021). Financial ratios provide one way of determining the financial performance of a company (Carlson, 2022). Li (2020) also noted the limitations of time regarding financial statement disclosure. The JSE requires listed companies to release a publication of their annual financial statements (condensed or summary) no later than three months following the close of each financial year (Baker McKenzie, 2026). Therefore, there is no publicly available financial information on a company's performance during the lag period between annual reports. In today's fast-moving digital era, the value of information and the highly competitive environment in which companies operate make timely and frequent publication of the performance of a company important for different stakeholders (Settembre-Blundo, Gonzalez-Sanchez, Medina-Salgado & Garcia-Muina, 2021).

As accounting ratios are based on annual financial reports, they are also affected by time lags. This time lag limits real-time assessment of the CEO's performance. Remuneration decisions by the board are based on outdated financial information (Settembre-Blundo et al., 2021). This study examines the link between CEO remuneration and organisational performance; therefore, the data used to determine the link between the variables are based on old data. The delayed availability of performance information raises concerns about the accuracy of performance assessments linked to CEO remuneration. Even though CEO remuneration is paid in arrears, in a fast-paced economic environment, performance linked to the past year's conditions may fail to reflect the CEO's current effectiveness or strategic direction.

Companies may have different financial year ends, complicating the direct comparisons in performance for benchmarking purposes. If companies with different financial year ends are compared, macroeconomic and seasonal factors may affect their performance differently at any given reporting period.

As noted above, the historical nature of the financial ratios is not a limitation for this study, as the remuneration chosen is payable in arrears based on these historical ratios. Fixed pay, STI and total remuneration are all paid in arrears after work has been done or certain goals have been achieved. To mitigate the distorting effects of time and seasonality, the study adopts a longitudinal approach, analysing data over a 13-year period. This extended timeframe allows for the smoothing of seasonal anomalies. While this approach cannot completely eliminate

the impact of timing-related limitations, it enhances the robustness of the analysis by placing individual data points within a broader context.

3.8.6 Manipulation of Information

Financial data can be misrepresented in various ways to align the figures used for ratios more closely with management strategies and goals within the statutory disclosure rules (Adelberg, 1979). The manipulation of financial data influences the end users of the reports (Adelberg, 1979). Flynn and Li (2023) noted that many companies postpone settling their trade creditors at year-end to show an inflated cash balance and extend their reporting creditor days. The manipulation of information extends to the collection of financial information using different methods during each period, so that the ratio analysis between different periods cannot be compared adequately. Companies may manipulate information to portray the results as more positive than reality does. The Steinhoff and Tongaat-Hulett cases represent two of the most significant corporate fraud scandals in South Africa. In Steinhoff's work, accounting misconduct involves inflating revenue figures and concealing losses through off-balance sheet entities. These accounting irregularities led to a decline in the share price from R45.65 on 6 December 2017 to R6.00 as of 8 December 2017 (Rossouw & Styen 2019). In the 2018 Tongaat-Hulett scandal, the company was found to have significantly overstated its revenue and assets, while expenses increased by approximately R4.5 billion (Muzata & Marozva, 2022). According to PwC (2020), financial statements reflect a company's performance at a specific point in time and cannot track the movement of its assets in real time. On the non-balance sheet date, a CEO may transfer company assets for other nefarious purposes and then transfer them back to the company before the balance sheet date. For example, Enron made use of shell entities to shift assets and liabilities off its balance sheet, allowing the company to hide its actual condition (Bondarenko, 2025). This, therefore, limits analysts' ability to assess a company's situation at any given time (Li, 2020).

Identifying fraudulent practices or transactions through traditional methods such as manual audits and inspections is often time-consuming and costly. Financial fraud involves deceptive practices, including the illegal manipulation or misrepresentation of financial information, with the intent to obtain undue financial benefits (Ashtiani & Raahemi, 2022). According to Du Toit (2024), the most common instance of financial statement fraud in South Africa is

irregular accounting practices due to bad cash flow patterns. This is also due to the need to stay ahead of competitors and a lack of processes (Du Toit, 2024). Financial statements are company documents, for JSE-listed companies, published quarterly and annually, that describe business activities; financial performance, including revenue, expenses, profits, liabilities and potential concerns that may emerge later; and management comments on business performance and further information regarding particular items in financial statements (Ashtiani & Raahemi, 2022). Some examples of financial statement fraud may include falsifying profits, increasing stock prices, avoiding the payment of taxes or misrepresenting expenses (Ashtiani & Raahemi, 2022). The lack of inspections or unsuccessful controls provides a favourable occasion for committing fraud. When companies are faced with financial turmoil, they are inclined to employ creative or fraudulent accounting practices to improve financial performance (Murineanu, 2024).

It is important to acknowledge the limitations posed by the potential manipulation of financial information. Financial fraud, such as misrepresentation of revenue, inflation of asset values or concealment of liabilities, undermines the integrity of financial performance metrics commonly used to evaluate CEO effectiveness and remuneration (Soltani, Kythreotis & Roshanpoor, 2024). When remuneration is linked to financial measures such as EPS, net profit, ROA, or RSF, the risk of distorted figures poses a challenge to accurately assessing the CEO's contribution. Cases such as Enron, Steinhoff and Tongaat Hullette illustrate how manipulated financial information can mislead shareholders and result in unjustified CEO remuneration (Sandyona, 2020; Thambi, 2025). This study hence recognises the limitations of the financial measures used to examine the correlation linking CEO remuneration and company performance.

The implication of such manipulation is the introduction of stricter regulations and the governance of companies. The Enron scandal, where the accounting firm Arthur Anderson was found to have committed accounting fraud, was key in precipitating new regulations, including the Sarbanes-Oxley Act of 2002, to regulate financial reporting (Deb & Deb 2023). Murineanu (2024) cautions that increased regulations create more loopholes and increase creative ways for fraudulent accounting activities.

As reported by the Global Economic Crime and Fraud survey conducted by PwC (2020), South Africa ranks third highest globally in terms of the occurrence of economic crime (Marais, Vermaak & Shewell 2023). Only 58% of South African companies reported conducting investigations into serious fraud incidents, and in 59% of these cases, the company never communicated with the board of directors (Marais et al., 2023). The inability of investors and other stakeholders to detect misrepresented financial statements poses a challenge for assessing the true performance of an organisation and, subsequently, its alignment with CEO remuneration (Zakaria, 2025). As scrutiny intensifies from various stakeholders, CEOs may face increasing pressure to engage in adverse behaviours, such as deliberately manipulating accounting methods to portray a more favourable financial position, with the aim of influencing their remuneration, which could affect a company's long-term performance (Brennan, 2021).

One of the challenges posed by earnings management is unusually high financial data, such as high ROA, sudden increases in profitability that may signal potential manipulation of accounting figures or drive short-term strategies aimed at enhancing company performance. These anomalies in the statistical analysis present as outliers, making it difficult to draw accurate conclusions about a CEO's effectiveness. According to Barnett and Lewis (1980), outliers are observations within a dataset that deviate noticeably from the overall pattern of the data. Outliers can distort the sample's mean, variance, and coefficients of regression variables, leading to results that do not accurately reflect the underlying data (Barnett & Lewis, 1980). Identifying and examining outliers is important not only for improving the robustness of the research analysis but also to flag potential governance issues and earnings management. The current study uses statistical tools to ensure that outliers do not unduly influence the overall findings. Chapter 4 outlines the process utilised to address the outliers that could cause significant bias in the results. Manipulation of financial information signals agency problems and provides arguments against relying on financial indicators exclusively to assess the performance of CEOs.

This study acknowledges the limitations associated with the use of potentially manipulated financial information as a measure of financial information. To manage this limitation, the researcher relies on the JSE rules that published financial statements be approved by a reputable auditing company, thus limiting the chances of manipulating the information for the

current study (Baker McKenzie, 2026). The use of audited financial statements in this study mitigates the risk typically associated with relying solely on financial data for performance assessment. The current research, therefore, bases the reliability and validity of the data on the strict accounting and reporting regulations IFRS, the JSE and auditors (Mangwiro, 2020). This, therefore, enhances the credibility of the financial data used to assess the relationship between CEO remuneration and company performance, as the statements' audited nature ensures greater accuracy and reliability (Heller, 2023). Having discussed the manipulation of information as a key concern, especially for the current study, which relies on this information to examine the relationship between CEO remuneration and company performance, another area to consider and manage is the choice of how financial information is presented.

3.8.7 Choice of Presentation Format

The presentation of financial information is the process by which financial data are organised, disclosed, and structured in financial statements to ensure that they are clear, accurate and useful to stakeholders (Republic of South Africa, Department of Trade and Industry, 2020). This includes how key elements such as income, expenses, assets, liabilities and equity are calculated, captured, classified, summarised and reported in compliance with relevant accounting rules, such as IFRS or GAAP. As the current study relies on the validity and credibility of financial information, the presentation of such information is important. The way financial data are structured and disclosed in audited financial statements ensures that performance measures are presented consistently and transparently, thereby enhancing the reliability of the results in evaluating CEO remuneration.

In some cases, the parties that utilise the financial ratios to examine company performance are not accounting experts or financial, and financial information presented in an overly complex and technical format may confuse stakeholders. Using ratios for financial analysis has become more important for analysing the performance of companies (Alqam, et al., 2021). Similarly, ratios that are presented without context, such as comparator results and historical performance, may also limit the understanding and usefulness of financial ratios.

The process of compiling and presenting financial statements is susceptible to human error, which can impact the accuracy and reliability of financial information. The current study utilises financial information presented as ratios, specifically EPS, ROA and RSF, to explore

the correlation between CEO remuneration and company performance. Financial ratios are mathematical expressions comprising a numerator and a denominator, offering a simplified way to interpret complex financial data (Di Lonardo Burr, Xu, Li, Si, LeFrevre & Wang, 2022). These financial ratios are important for businesses, stakeholders and regulators, as they guide decision-making processes, inform investors and boardroom strategies and provide oversight for regulatory compliance (Alqam, et al., 2021). However, human errors in financial reporting, such as the transposition of figures (for example, recording 16 instead of 61), omission of data, application of outdated financial standards or miscalculation, can distort the calculated ratios (Zakaria, 2025). Inaccurate ratios may misrepresent company performance, leading to flawed conclusions and decisions by stakeholders relying on these data.

In addition to technical errors, the format in which data are presented can influence perception. For instance, in terms of profit and loss, companies may opt between the nature of the expense system and the cost of the sales approach for reporting costs (Upmeier & Vatrenjak, 2022). The cost of the sales approach expects companies to display expenses matching their function. It affords more detailed insights into operational costs, which is important information to stakeholders. It reveals the share of expenses in the cost of goods and services sold, and on the other hand, it discloses the costs incurred to control and sell those goods and services (Upmeier & Vatrenjak, 2022). Applying the nature of expenses approach can allow companies to obscure unfavourable cost structures across different activities. This, in turn, may distort key financial ratios such as EPS, ROA and RSF, which are used in this study, potentially affecting the accuracy of the analysis of the relationship between CEO remuneration and company performance (Upmeier & Vatrenjak, 2022). Furthermore, accounting policies and classifications adopted by companies shape the resulting financial ratios. When these practices vary across organisations or change over time, comparability may be challenging (Shopify, 2024).

While IFRS aims to standardise reporting, they still allow some latitude in application. This latitude may compromise consistency across different reporting periods and among peer businesses (Mesioye & Bakare, 2024). As companies and shareholders compare their performance to that of their competitors, differences in accounting practices can reduce companies' confidence in replicating the financial success of their peers, as each company's process for turning innovation into profit can vary significantly (Tseng & Zhong, 2024). When

producing balance sheets for financial statements, companies are required to value assets on their books (Cheeseman, 2025). There are restrictions on how financial statements may be analysed and used because they do not precisely and completely represent the information of a company's assets. For example, in the real estate industry, the process of preparing financial statements includes the historical cost method and the fair value approach (Li, 2020). The historical cost method dictates that the measurement and valuation of assets should be based on the acquisition or original purchase cost and is depreciated annually (Cheeseman, 2025). This method is easy to compute and less time consuming to compute. The fair value, on the other hand, reflects the current market conditions and represents the value of the asset if it is sold. Notably, fair value is impacted by certain factors, including market trends and inflation or technology advancements, which can cause asset value to fluctuate (Cheeseman, 2025). The historical cost method is not affected by these factors. When accounting for the book value of an asset, if the book value of an asset is less than the market value, the asset will be devalued (Li, 2020). On the other hand, if the market value is higher than the book value of the asset, the value is not increased. Therefore, while the assets of a company increase through a range of factors, the book value remains constant and therefore does not truly display the true value of the company (Li, 2020). The fair value of an asset adds extra value on the balance sheet. Cheeseman (2025) noted that the fair value approach, especially in companies with significant investments in plant and machinery, enhances the business's financial reporting and overall value.

The current study utilises financial performance measures such as ROA and RSF, which incorporate asset values, either directly or indirectly, into their calculations. Thus, the accounting methods applied in the valuation and reporting of assets can materially affect the resulting performance metrics. This, in turn, may influence the observed relationship between CEO remuneration and company performance.

Book-based total assets may not fully capture the market performance of a company. In the context of CEO remuneration, company performance is often assessed using financial indicators such as ROE, which may not fully capture the true market value or growth potential of an asset (Coetzee & Hall, 2020; Ramgath, 2020; Siwendu et al., 2023). For CEOs whose remuneration is linked to ROE, their actual contribution to company performance may not be fully recognised, as ROE can be influenced by accounting policies and financial structuring

decisions rather than operational effectiveness. This finding reinforces the importance of carefully selecting and interpreting performance measures when determining or evaluating CEO performance. As a result, the pay–performance relationship may not accurately capture the CEO’s true impact, potentially leading to misalignment between CEO remuneration and actual value creation.

While the use of accounting methods, such as fair value and historical accounting methods, poses limitations, the current study has taken steps to manage these limitations and ensure the validity and reliability of its findings. CEO remuneration and company performance indicators are sourced directly from audited financial statements. These statements are produced under established reporting frameworks, IFRS in South Africa and GAAP in the U.S.A, which set out when fair value or historical cost should be applied (PwC 2026). This ensures a degree of uniformity and comparability between companies. By using audited financial information prepared under IFRS, the study relies on data that are recognised as trustworthy and generally accepted by users for assessing organisational performance. This approach enhances data validity and strengthens the reliability of the calculated performance metrics.

Li (2020) noted that financial statements reflect a company’s position at a specific point in time, meaning that real-time transactions and developments occurring after reporting are not captured. For example, large-scale accounting fraud at Steinhoff International went undetected until 2017, highlighting the limitations of relying solely on historical financial statements to assess a company’s true performance and risk profile.

In conclusion, while the presentation format of financial statements, guided by frameworks such as IFRS, provides structure and improves comparability, it introduces limitations. These include sensitivity to human error and inconsistencies in accounting policies. The use of different presentation methods, such as historical cost versus fair value, can materially affect asset valuation and, consequently, the financial ratios used to evaluate CEO performance and remuneration. For a study like the current one, which relies heavily on financial metrics, these limitations are important to acknowledge. They emphasise the need for cautious interpretation of study findings and provide justification for complementing financial metrics with non-financial metrics, which provide an alternative perspective to accurately assess CEO effectiveness and value creation.

3.9 CONCEPTUAL FRAMEWORK

To better understand the relationship between CEO remuneration and company performance, a conceptual framework provides insight into the envisaged relationship. A conceptual framework illustrates how the variables should relate to one another (Van Der Waladt, 2020). Given that remuneration is one of the instruments used to reduce agency problems, it is expected that CEO remuneration will be positively correlated with company performance (Ramgath & Bussin, 2022). According to agency theory, conflicts of interest between shareholders and CEOs require shareholders to monitor and contract with CEOs to provide optimal outcomes. To align the interests of CEOs with those of shareholders, shareholders provide CEOs with incentives to exhibit the required behaviour. Figure 3.8 illustrates the presumed outcome of aligning CEO remuneration with company performance, thereby grounding the study in theory. The conceptual framework (Figure 3.8) will clarify how CEO remuneration and company performance interact to explain the relationship, considering both direct and indirect effects.

The framework recognises several independent variables representing company performance, namely EPS, net profit (a measure of profitability), MC (a proxy for company size and market valuation), ROA, and RST (measures of efficiency). The framework will therefore provide an overview that organises the concepts and ideas and guides how these elements connect to answer the research questions.

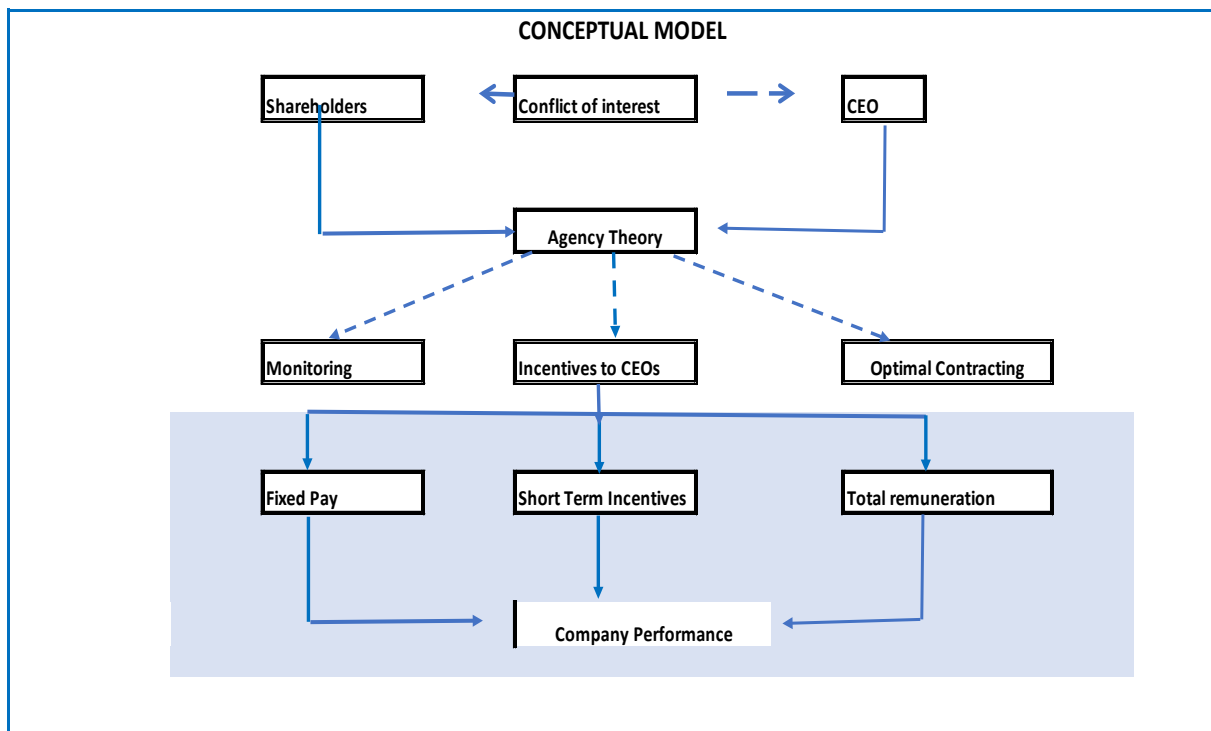


Figure 3.8: Conceptual Model

Source: Inspired by: Azim, Mei & Rahman (2011)

3.10 CHAPTER SUMMARY

The chapter highlighted the challenges companies face in selecting effective performance measures that cater to the interests of key stakeholders. It is essential to structure remuneration to balance variables and fixed pay. Fixed pay is important because it serves as the foundation of CEO remuneration, provides stability, and promotes pay competitiveness in the market. Variable pay is important in incentivising CEOs to perform at the level required by shareholders. While attempts have been made to align executive remuneration with company performance, these efforts often lack comprehensiveness; hence, companies attempt to find the optimal solution. In conclusion, the goal of companies is to create wealth for shareholders over the long term. However, as the global context changes and differing considerations arise, the influence of various stakeholders has necessitated the review and adoption of additional metrics, in addition to the creation of financial wealth for shareholders. Long-term sustainability and stakeholder value can be highlighted by non-financial measures such as customer loyalty and environmental, social, and governance (ESG) scores. Companies can ensure a more thorough assessment of their performance by integrating these alternative

metrics, which help them better balance financial aims with more general objectives. Ratios such as EPS, ROA and RSF serve as valuable indicators of a company's performance and are expected to remain important tools for assessment. However, inaccuracies in financial statement preparation, variations in reporting formats, and differing accounting practices among companies can affect both the reliability and comparability of these metrics. These factors introduce potential risks in the interpretation of the relationship between company performance and CEO remuneration. The current study recognises these limitations and mitigates them by using audited financial data.

The next chapter provides a detailed description of the research design and methodology, covering aspects such as the research approach, target population, sampling method, data collection tools, data management and data analysis methods.

CHAPTER 4: RESEARCH METHODOLOGY

4.1 INTRODUCTION

Chapter 3 provided a detailed discussion of the relationship between CEO remuneration and company performance by examining the key variables, reviewing previous research, and establishing the theoretical foundation for the current study. It delved into the fact that CEO remuneration does not operate in isolation but is influenced by multiple internal and external factors.

Building on this foundation, Chapter 4 outlines the research methodology employed to research the relationship between CEO remuneration and company performance among JSE-listed companies from 2008 to 2020. This chapter is structured around the layers of Sanders, Lewis, and Thornhill's (2019) research onion, encompassing the research philosophy, approach to theory development, methodological choices, research design, data collection methods, variable measurement, and data analysis techniques. By presenting a systematic and transparent account of the methodological decisions made, Chapter 4 enhances the replicability, rigour and credibility of the current study.

This study outlines the philosophical assumptions, research approach, and methodological framework guiding it. The chapter further outlines the research design, data collection procedures, variable measurement and statistical techniques used for data analysis. This chapter ensures the study's transparency, replicability and alignment with the research objectives and questions outlined in the preceding chapters. The chapter concludes by outlining the ethical considerations and limitations of the study.

The methodology is designed not only to address the research problem effectively but also to contribute to academic knowledge by developing a comprehensive, logical flow for the study, enabling future researchers to replicate or build on it.

As Winter (2020) noted, methodology concerns the tools and strategies researchers use to interpret the world around them. Academic research applies these techniques systematically to extend knowledge and bridge past literature with current inquiries and future exploration (Song, 2021). This chapter, therefore, serves as a blueprint for how the current study was designed and executed to address its research questions, objectives and hypotheses.

4.2 RESEARCH OBJECTIVES, QUESTIONS AND HYPOTHESES

The following section outlines the research objectives, questions, and hypotheses that guide the empirical investigation into the relationship between CEO remuneration and company performance among JSE-listed companies from 2008 to 2020.

4.2.1 Research Objectives

The research objectives of this study are closely aligned with the research problem and research questions. The research objectives fulfil the need to explore different dimensions of CEO remuneration, mainly fixed pay, STI and total remuneration, and company performance measures, including financial ratios and market-based indicators. The objectives of this study are to provide insights not only into direct relationships but also into moderating and interaction effects over the period 2008 to 2020 within the South African context.

It is important to distinguish between testing moderation and interaction effects, as they are often confused. In this study, the direct, interaction and moderation effects are examined to understand how company performance influences CEO remuneration. Although the terms are often used interchangeably in research, a subtle distinction exists between interaction and moderation.

The primary goal of the study was to determine the correlation between CEO remuneration (dependent variable) and organisational performance (independent variable) amongst JSE-listed companies in South Africa from 2008 to 2020. The main research objectives, excluding the sub-objectives already outlined in Chapter 1, Section 1.7, are presented below:

Research objective 1:

To examine the relationship between CEO fixed pay and company accounting performance (EPS, net profit, ROA and RSF) in publicly listed companies on the JSE between 2008 and 2020.

Research objective 2:

To investigate the relationship between CEO STI and company accounting performance measures (EPS, net profit, ROA and RSF) in publicly listed companies on the JSE from 2008 to 2020.

Research objective 3:

To determine the relationship between CEO total remuneration and company accounting performance (EPS, net profit, ROA and RSF) in publicly listed companies on the JSE for the period 2008 to 2020.

Research objective 4:

To examine the interaction effect of company accounting performance measures (EPS and net profit) on CEO remuneration in JSE-listed companies (2008 to 2020).

Research objective 5:

To examine the interaction effect of company accounting performance (EPS and ROA) on CEO remuneration in JSE-listed companies (2008 to 2020).

Research objective 6:

To examine how the interaction effect of company accounting performance measures (EPS and RSF) on CEO remuneration in JSE-listed companies from 2008 to 2020 compared with their individual effect.

Research objective 7:

To determine the interaction effect of company accounting performance measures (RSF and net profit) on CEO remuneration in JSE-listed companies for the period 2008 to 2020.

Research objective 8:

To investigate how company size (MC) moderates the relationship between company accounting performance net profit and CEO remuneration in JSE-listed companies for the period 2008 to 2020.

Research objective 9:

To determine how company size (MC) moderates the relationship between company accounting performance ROA and CEO total remuneration in JSE-listed companies for the period 2008 to 2020.

Research objective 10:

To determine how company size (MC) moderates the relationship between company accounting performance RSF and CEO total remuneration in JSE-listed companies for the period 2008 to 2020.

4.2.2 Research Questions

The development of precise and well-defined research questions is essential for steering the study and ensuring consistency with its overarching objectives. Research questions serve as the foundation of the entire research process, guiding decisions about research design, data collection, and analysis methods. In the context of this study, which investigates the relationship between CEO remuneration and company performance among JSE-listed companies, the research questions aim to explore not only whether a relationship exists but also the nature, direction, and strength of such relationships over time. The formulation of these research questions was informed by previous empirical studies, gaps identified in prior research, the evolving discussion on CEO remuneration and company performance alignment, and the need to generate new insights relevant to the South African setting. The central question to this quantitative study is, among the JSE publicly listed companies in South Africa, what is the relationship between CEO remuneration and company accounting performance for the period 2008 to 2020?

Research question 1:

What is the relationship between CEO fixed pay and the company accounting performance of publicly listed companies on the JSE for the period 2008 to 2020?

Research question 2:

What is the relationship between CEO STI and the company accounting performance of publicly listed companies on the JSE for the period 2008 to 2020?

Research question 3:

What is the relationship between CEO total remuneration and the company accounting performance of publicly listed companies on the JSE for the period 2008 to 2020?

Research question 4:

How does the interaction effect of company accounting performance measures (EPS and net profit) influence CEO remuneration in JSE-listed companies from 2008 to 2020?

Research question 5:

How does the interaction effect of company accounting performance measures (EPS and ROA) influence CEO remuneration in JSE-listed companies from 2008 to 2020?

Research question 6:

How does the interaction effect of company accounting performance measures (EPS and RSF) influence CEO remuneration in JSE-listed companies from 2008 to 2020?

Research question 7:

How does the interaction effect of company accounting performance measures (RSF and net profit) influence CEO remuneration in JSE-listed companies from 2008 to 2020?

Research question 8:

How does company size, as measured by MC, moderate the relationship between net profit and CEO remuneration in publicly listed companies on the JSE for the period 2008 to 2020?

Research question 9:

How does company size, measured by MC, moderate the relationship between ROA and CEO remuneration in publicly listed companies on the JSE for the period 2008 to 2020?

Research question 10:

How does company size, measured by MC, moderate the relationship between RSF and CEO remuneration in publicly listed companies on the JSE for the period 2008 to 2020?

4.2.3 Hypotheses

In alignment with the study's quantitative research methodology, a set of hypotheses is formulated to empirically test the expected relationships between CEO remuneration and company performance. Hypotheses serve to confirm or refute assumptions grounded in theory and prior empirical findings, thereby providing a structured framework for statistical testing.

The hypotheses examine whether variations in CEO remuneration components (fixed pay, STI and total remuneration) are significantly associated with multiple measures of company performance, including EPS, net profit, ROA and RSF. Beyond these direct relationships, the study also investigates whether company size moderates the relationship between CEO remuneration and company performance, potentially altering its strength or direction.

In addition, the study incorporates hypotheses on interaction effects. Interaction analysis provides deeper insights into how two independent variables may jointly influence the dependent variable, thereby moving beyond the isolated impact of individual predictors.

To address the primary research objective, namely, to determine whether a relationship exists between CEO remuneration and company performance in JSE-listed companies from 2008 to 2020, 35 hypotheses were developed. These hypotheses are systematically grouped according to (i) the type of CEO remuneration (fixed pay, STI, total remuneration) and (ii) the nature of the effect being investigated (direct, interaction or moderating). This structured approach ensures a comprehensive analysis of the remuneration–performance nexus within the South African corporate context.

In Chapter 1, the study hypotheses were presented in summary form. For ease of reference, Table 4.1 provides a consolidated overview of all hypotheses tested in this study. The hypotheses are grouped according to the three analytical models underpinning the study, namely the direct effects model, interaction effects model and moderation effects model, to facilitate a clear link between the hypotheses and the analytical procedures employed.

Table 4.1: Consolidated overview of study hypotheses

Hypothesis	Hypothesis Statement
Direct effects model	
H ₁	There is a statistically significant relationship between CEO fixed pay and EPS.
H ₂	There is a statistically significant relationship between CEO fixed pay and net profit.
H ₃	There is a statistically significant relationship between CEO fixed pay and ROA.
H ₄	There is a statistically significant relationship between CEO fixed pay and RSF.
H ₅	There is a statistically significant relationship between CEO STI and EPS.
H ₆	There is a statistically significant relationship between CEO STI and net profit.
H ₇	There is a statistically significant relationship between CEO STI and ROA.

H ₈	There is a statistically significant relationship between CEO STI and RSF.
H ₉	There is a statistically significant relationship between CEO total remuneration and EPS.
H ₁₀	There is a statistically significant relationship between CEO total remuneration and net profit.
H ₁₁	There is a statistically significant relationship between CEO total remuneration and ROA.
H ₁₂	There is a statistically significant relationship between CEO total remuneration and RSF.
Interaction effects model	
H ₁₃	The interaction between EPS and net profit statistically significantly influences CEO fixed pay, STI and total remuneration.
H ₁₄	The interaction between EPS and ROA statistically significantly influences CEO fixed pay, STI and total remuneration.
H ₁₅	The interaction between EPS and RSF statistically significantly influences CEO fixed pay, STI and total remuneration.
H ₁₆	The interaction between RSF and net profit statistically significantly influences CEO fixed pay, STI and total remuneration.
Moderation effects model	
H ₁₇	Company size, as categorised by MC, has a moderating effect on the relationship between net profit and CEO fixed pay.
H ₁₈	Company size, as categorised by MC, has a moderating effect on the relationship between net profit and CEO STI.
H ₁₉	Company size, as categorised by MC, has a moderating effect on the relationship between net profit and CEO total remuneration
H ₂₀	Company size, as categorised by MC, has a moderating effect on the relationship between ROA and CEO fixed pay
H ₂₁	Company size, as categorised by MC, has a moderating effect on the relationship between ROA and CEO STI
H ₂₂	Company size, as categorised by MC, has a moderating effect on the relationship between ROA and CEO total remuneration.
H ₂₃	Company size, as categorised by MC, has a moderating effect on the relationship between RSF and CEO fixed pay.
H ₂₄	Company size, as categorised by MC, has a moderating effect on the relationship between RSF and CEO STI.
H ₂₅	Company size, as categorised by MC, has a moderating effect on the relationship between RSF and CEO total remuneration.

Source: Researcher's Own

This structured summary provides a coherent framework that informs the subsequent discussion of the research methodology, ensuring alignment between the research design, sampling, data collection, and analysis techniques and the hypotheses under investigation.

4.3 RESEARCH METHODOLOGY

The objective of this section is to outline the structured methodological process that guides this study. The research methodology is informed by the need to address the research problem and objectives in a systematic, coherent and replicable manner. The process commenced with a conceptualisation phase, which involved identifying and framing the research problem, defining the research objectives and designing the research questions. A broad review of the literature was conducted to understand the theoretical and empirical foundations of CEO remuneration and its relationship with company performance.

A research design defines the overarching plan that connects the research problem with the methods required to address it. It outlines the logical sequence through which the study progresses, from problem definition and hypothesis development to data collection, analysis, and interpretation of results, ensuring coherence and rigour throughout the process (Creswell & Creswell, 2018; Khanday & Khanam, 2023; Saunders et al., 2019). Following this, the study proceeds to the planning and execution phase, where methodological choices must be made based on the nature of the research problem, available resources, and the intended analytical outcomes. To provide a structured and logical approach, the study adopted the research onion framework developed by Saunders et al. (2019).

Saunders et al. (2019) recommended using the “research onion” as a framework for systematically developing and justifying methodological decisions. The research onion framework comprises six main interrelated layers: research philosophy, methodological choice, research strategy, time horizon, and techniques and procedures. Each layer contributes to a cohesive research design tailored to the study's objectives and questions. Figure 4.1 illustrates the research onion framework, with the elements selected for this study highlighted in red.

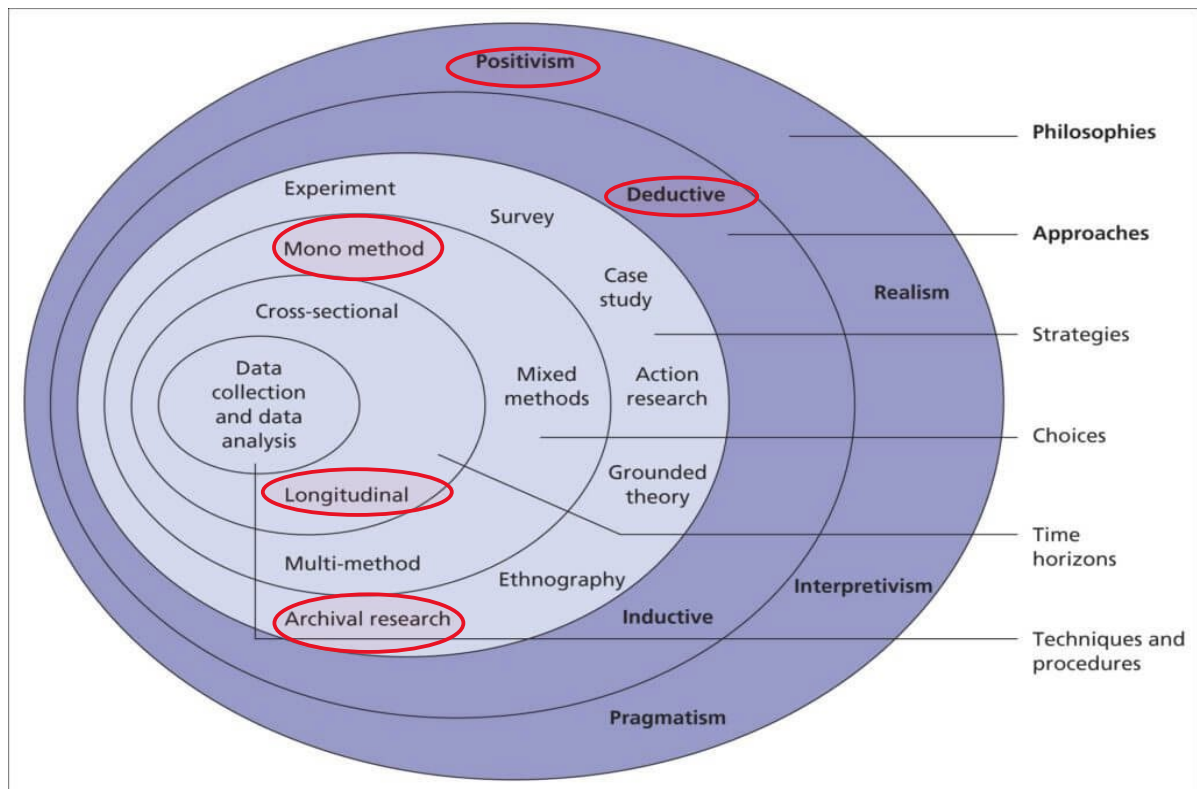


Figure 4.1: Research Onion

Source: Saunders et al. (2019:108)

4.3.1 Research Philosophy and Paradigm

Hughes (1989) asserts that research is grounded in philosophical assumptions about the nature of reality and knowledge. These assumptions shape the methodological choices made throughout the study (Onwuegbuzie, 2025). The current study, which examines the relationship between CEO remuneration and company performance, relies on specific philosophical beliefs that ultimately inform the chosen methodology, data collection methods and analytical techniques.

Research philosophy concerns the system of beliefs and assumptions that guide researchers' views of the world and the generation of knowledge (Sharma, 2024). It can be seen as the lens through which reality is interpreted and through which knowledge is constructed. As Hughes (1989) noted, all research is inherently shaped by foundational assumptions about truth, knowledge, and how it can be acquired, which in turn ultimately influence methodological choices. Saunders et al. (2019) identified four key research philosophies: interpretivism, pragmatism, realism and positivism. This study adopts a positivist stance, reflecting a

commitment to objective measurement and empirical investigation of the relationships between CEO remuneration and company performance.

Positivism emphasises objectivity, empirical observation, and the application of scientific methods (Maksimovi & Evtimov, 2023). This philosophy assumes that reality exists independently of human perceptions and can be measured, and that knowledge can be discovered through systematic observation and analysis (Ali, 2024). Positivist researchers prioritise objectivity and impartiality (Maksimovic & Evtimov, 2023). Positivist researchers typically aim to establish cause-and-effect relationships using quantitative data, which aligns with the method used in this study (Maksimovic & Evtimov, 2023). Given the study's aim, to test hypotheses on the relationship between CEO remuneration and company performance using numerical, secondary data, positivism provides an appropriate philosophical foundation. This paradigm underpins the study's commitment to objectivity, replicability and the pursuit of generalisable analysis findings (Park, Konge & Artino, 2020). This philosophy also supports evidence-based policy and decision making in CEO remuneration, which is of interest to regulators, trade unions, employees, the media, and academic researchers (Nordlund & Sango, 2022).

The choice of positivism is further reinforced by the study's theoretical foundation, in particular agency theory, which assumes that actors such as CEOs are rational and respond predictably to incentives. Agency theory emphasises aligning CEO remuneration components, such as fixed pay and STI, with objective performance metrics (e.g., EPS, ROA) and shareholder interests, which aligns with positivism's focus on empirical, observable evidence.

Other research philosophies were considered but deemed less suitable for the current study. Interpretivism focuses on understanding phenomena from a subjective, human-centred perspective, often employing qualitative methods and small, non-generalisable samples (Nickerson, 2024). Interpretivist approaches recognise that individuals construct meaning differently and are influenced by unique motivations and perspectives (Nickerson, 2024). This paradigm is not appropriate here, as the study relies on archival, secondary, quantitative data extracted from company annual reports and databases such as the McGregor Database and Profile Group.

Pragmatism, by contrast, emphasises practical problem solving using both subjective and objective approaches (Elgeddaway & Abouraia, 2024). It recognises multiple interpretations

of reality and supports the use of quantitative, qualitative, or mixed methods, which are best suited to the research question. Pragmatism is particularly useful for studies exploring lived experiences or complex stakeholder problems. Since this study does not involve qualitative inquiry or aim to construct new frameworks from participant perspectives, pragmatism is not suitable.

Realism posits that entities exist independently of perception or theory (Phillips 1987) but acknowledges that understanding reality is shaped by social and cultural factors (Michele, 2020). As with interpretivism, realist approaches often employ mixed methods, combining quantitative and qualitative data to explore complex social phenomena. While realism can accommodate socio-cultural influences, the exclusive reliance on numerical data to test established theories makes realism less applicable to the current study.

The justification for using positivism is as follows: the current study tests established theories, such as agency theory, stakeholder theory, and management control theory, using secondary quantitative data drawn from annual reports, the McGregor BAF database, and the Profile Group. This aligns with the positivist paradigm, which is ideally suited to hypothesis-driven empirical research. A positivist enables rigorous testing, generalisability of findings, and objective interpretation, all of which are critical for contributing to evidence-based policy and practice in CEO remuneration (Nordlund & Sango, 2022).

The study adopts a positivist philosophy due to its emphasis on objectivity, quantification, and theory testing. Positivism directly informs the deductive research approach discussed in the next section and underpins the design, data collection, and analytical procedures used to address the study's objectives and research questions.

4.3.2 Research Approach

Beyond selecting the appropriate methodological orientation, research also entails a logical reasoning process that guides the interaction between theory and data. The primary reasoning approaches are deductive and inductive. Deductive reasoning begins with a well-developed theory or hypothesis and uses data to empirically test these theories (Ali & Dang, 2022). The current study follows a deductive reasoning process grounded in theories such as agency theory, management control and stakeholder theory to examine whether CEO remuneration aligns with company performance among JSE-listed companies. Hypotheses were developed

from literature and quantitative data sourced from annual reports, the McGregor BFA database, and the Profile Group. This deductive approach allows for a systematic and objective analysis of the pay–performance relationship.

Inductive reasoning, on the other hand, involves identifying patterns and themes from specific observations and using these to develop general theories or hypotheses. It is typically associated with qualitative methods and does not necessarily begin with a predefined theoretical framework (Barrett & Younas, 2023). The research seeks themes and patterns in the data, and these findings either validate an existing theory or provide a foundation for constructing a new one. Although the two approaches seem mutually exclusive, research can use both methods (Bucher, 2021). The scientific method is fundamentally characterised by the ongoing testing and refinement of theories. After a theory has been supported through deductive reasoning, inductive reasoning can then draw on the research observations to further refine and extend the theory. Once deductive reasoning has established a theory, it can then be utilised to examine its validity (Bucher, 2021).

However, this study does not seek to construct new theoretical frameworks. Instead, it is theory driven and focused on testing theoretical relationships using quantitative methods. Therefore, an inductive method is not appropriate for the current research purpose.

Figure 4.2 presents a diagrammatic representation of the deductive reasoning process used in this study.

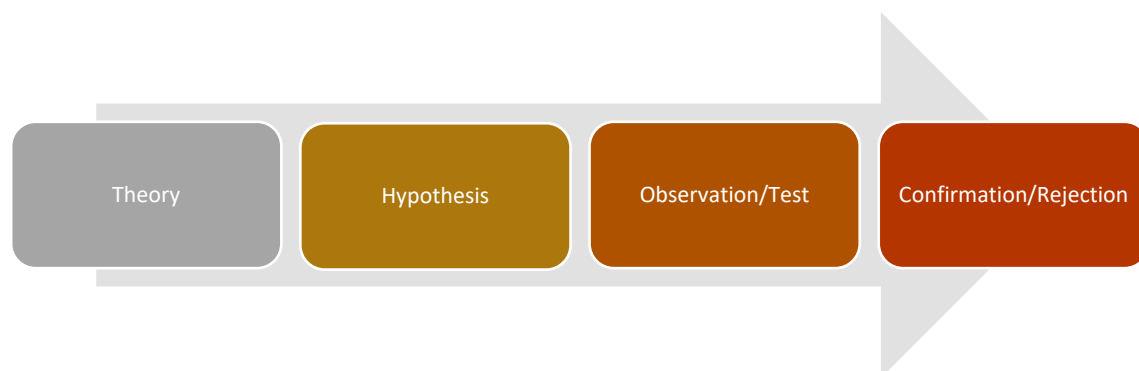


Figure 4.2: Deductive Process in Research Approach

Source: Dudovskiy (2018:1)

In summary, this study adopts a deductive reasoning approach grounded in established theories and implemented through a quantitative methodology. By drawing hypotheses from the literature and testing them using objective, reliable and credible data, this study aims to

evaluate the link between CEO remuneration and company performance among JSE-listed companies from 2008 to 2020. The deductive approach ensures a structured and theory-driven process of investigation, which supports the development of reliable and generalised findings. Building on the foundation of the research approach, the next section discusses the research design and the overall strategy and structure that connects the research questions, hypotheses and methods. This research design assists the study by implementing the deductive approach and achieving its empirical and theoretical objectives.

4.3.3 Research Strategies

Advancing to the next layer of the onion, the research strategy describes the specific plan that outlines how data will be collected and analysed in line with the research objectives. Common strategies include surveys, experiments or archival research, depending on the study's objectives. Like Coetzee and Hall (2020), the current study is a desktop-based investigation that relies on secondary, publicly available data such as annual reports. Archival research is a method of collecting and analysing data from existing documents or records (Shahid, 2021). The data for the current study were obtained from existing sources covering the period 2008 to 2020, with the researcher mindful of the importance of ensuring the data were reliable, credible, and relevant to the research question. For this study, the archival strategy enabled access to a large dataset spanning 2008 to 2020, facilitating longitudinal analysis of CEO remuneration and company performance among JSE-listed companies. The use of archival research on secondary data was an approach utilised by previous researchers (Bussin et al., 2023; Coetzee & Hall 2020) and validated the approach used by the researcher.

Other research strategies were considered but deemed unsuitable for the current study. Experimental research manipulates independent variables to assess causal effects on dependent variables in controlled environments (Alturki, 2021). Aligned with a positivist paradigm, experimental research is deductive and capable of establishing cause-effect relationships. However, its application is limited by potential human, system and random errors, and it is impractical for evaluating historical longitudinal data such as those required in this study (Alturki, 2021).

Action research is participatory and context-specific, addressing real-world problems through collaboration with participants in practical settings (Johannesson & Perjons, 2021). While valuable for qualitative problem solving, this method was unsuitable because the current study

is quantitative, explanatory, and based on secondary archival data rather than active intervention.

Grounded theory is inductive and qualitative, generating theory from patterns observed in empirical data without preexisting hypotheses (Johannesson & Perjons, 2021). Its small, emergent sample design contrasts with the large, longitudinal dataset required here. Grounded theory's focus on theory generation renders it inappropriate for a study testing predefined hypotheses regarding CEO remuneration and company performance.

Ethnography examines cultural practices and social interactions through immersive observation (Johannesson & Perjons, 2021). As a qualitative method, it prioritises the understanding of participants' perspectives and lived experiences. The current study, in contrast, seeks to analyse numerical data objectively; thus, ethnography is not aligned with the study's quantitative, archival focus.

Surveys systematically collect data from representative samples to examine attitudes, opinions, or behavioural trends (Johannesson & Perjons, 2021). While surveys are suitable for contemporary or perception-based research, they are ill suited for historical or longitudinal analysis of objective financial metrics such as CEO pay, EPS and ROA, all of which are publicly disclosed in audited annual reports.

Given the research objectives, an archival strategy was selected as the most appropriate approach. This strategy enables access to a large, longitudinal dataset and allows for rigorous evaluation of measurable relationships between CEO remuneration and company performance from 2008 to 2020. The approach is consistent with established methodologies in the field and provides a robust framework for testing hypotheses using objective, verifiable data (Bussin et al., 2023; Coetzee & Hall, 2020).

Having determined that the archival research strategy is the most appropriate approach for this study, the next section outlines the research design, which integrates the research questions, hypotheses, data collection methods and analytical techniques.

4.3.4 Research Methodological Choices

Research approaches are commonly classified into three types: quantitative, qualitative and mixed methods (Taherdoost, 2022). This classification serves as a guide for methodological and analytical decisions by aligning them with the purpose of the study, the nature of the data

and the research objectives. While brief overviews of qualitative and mixed methods approaches are provided, the focus of this study is on the quantitative approach, which has been selected as the most appropriate approach.

Quantitative research entails the systematic compilation and analysis of numerical data to explain, predict or control variables and their relationships (Taherdoost, 2022). It objectively tests theoretical assumptions by measuring the links between independent and dependent variables. In the current study, the focus is on assessing the relationship between CEO remuneration (dependent variable) and various measures of company performance (independent variables) using secondary data from reliable sources, including annual reports, the McGregor BFA database, and the Profile Group.

A quantitative approach aligns with the positivist paradigm and supports a structured, deductive reasoning process. It facilitates hypothesis testing, enables statistical analysis and supports the generalisation of results to the wider population of JSE-listed companies. This contributes to both theoretical advancement and practical solutions related to CEO remuneration structures (Munther et al., 2024).

Qualitative research, in contrast, provides in-depth insight into lived experiences, motivations and contextual factors. It is typically applied to explore phenomena through open-ended data collection practices such as interviews, focus groups and ethnography (Lim, 2024). Data are interpreted inductively, with themes emerging from unstructured information (Cresswell, 2025). While quantitative and qualitative approaches are often presented as distinct, they exist on a continuum, with the distinction primarily in data type (numerical vs textual) and research objectives (hypothesis testing vs exploration) (Cresswell, 2025). The mono method is chosen when the research is either qualitative or quantitative (Cresswell, 2025).

While qualitative methods provide valuable insights into perceptions, experiences and contextual factors, they were not suitable for this study. The objective of the current study is to analyse the measurable relationship between CEO remuneration and company performance using numerical data. The use of small samples and subjective interpretations in qualitative research limit the generalisability of findings and hypothesis testing. Similarly, mixed methods research, which combines qualitative and quantitative techniques, was not adopted, as this study focuses entirely on quantitative, hypothesis-driven analysis based on empirical

data, testing theories such as agency theory. Table 4.2 summarises the key distinctions between quantitative and qualitative research, including the points outlined above.

Table 4.2: Differences between quantitative and qualitative research

PARAMETER	QUANTITATIVE RESEARCH	QUALITATIVE RESEARCH
Goal and design	To test theoretical propositions and examine causal relationships utilising a structured approach.	To gain insight into complex phenomena by adopting an interpretive, descriptive, and subjective perspective.
Research questions	Focused questions (what, when, where)	Open-ended (how, why)
Sample size	Large	Small
Data type	Quantifiable, numeric	Unstructured, textual
Data collection method	Common methods include controlled observation, experiments, questionnaires, and surveys using rating scales or closed-ended questions. The methods can be experimental, quasi-experimental, descriptive or correlational	Qualitative methods may comprise semi-structured interviews or open-ended surveys, review relevant documents and literature, focus groups, as well as case study and ethnographic research techniques.
Data analysis	Deductive, statistical analysis	Inductive, thematic/content analysis

Source: Adapted from Sreekumar (2025)

Mixed methods research is an approach that purposely combines quantitative and qualitative research techniques within a single study (Alele & Malau-Aduli, 2023). The purpose is to leverage the strengths of both techniques. The fundamental assumption of mixed methods research is that integrating quantitative and qualitative approaches yields a more comprehensive understanding of the research problem than either method could alone (Alele & Malau-Aduli, 2023).

there are conflicting or differing results in mixed methods, the challenge is how to interpret them.

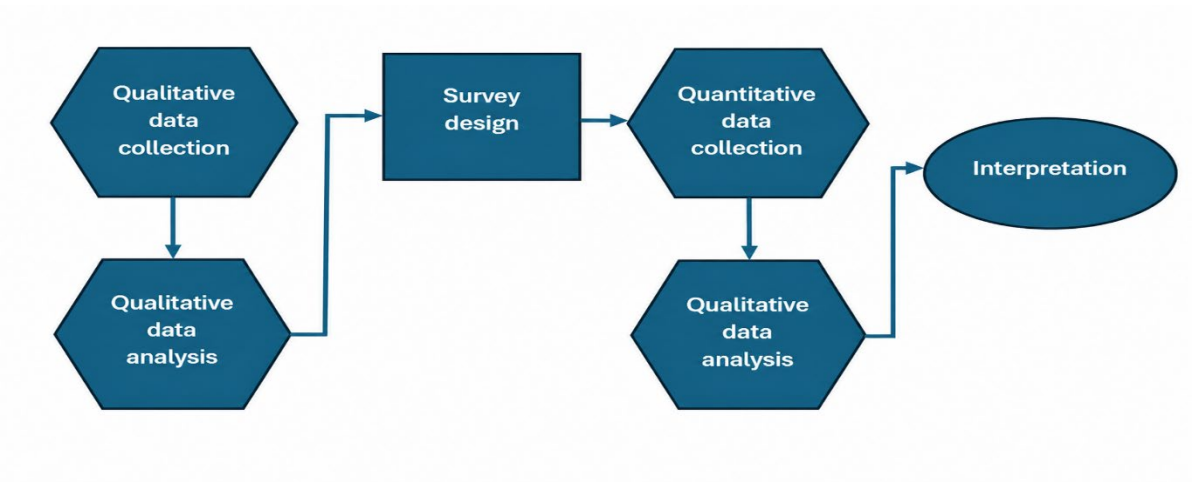


Figure 4.4: Exploratory Sequential Mixed Methods Design

Source: Alele & Malau-Aduli (2023: Section 5.5)

The explanatory sequential design, illustrated in Figure 4.5, entails first collecting and analysing quantitative data, followed by qualitative data to deepen the interpretation and contextual understanding.

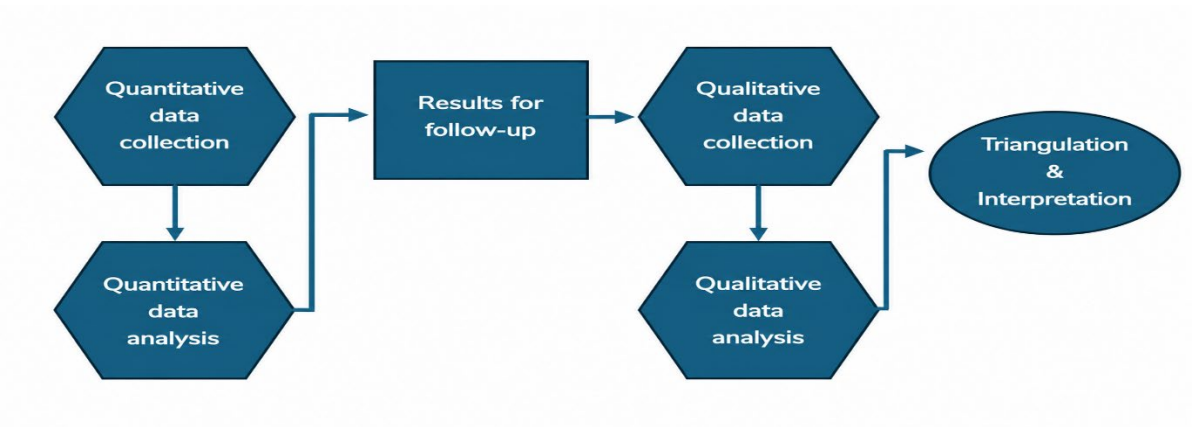


Figure 4.5: Explanatory Sequential Mixed Methods Design

Source: Alele & Malau-Aduli (2023: Section 5.5)

Despite its advantages, mixed methods were deemed unsuitable for this study. The quantitative data are adequate to meet the research objectives, evaluate hypotheses, and draw generalisable inferences across a large sample of companies listed on the JSE. Therefore, incorporating qualitative data was not justified in the context of this research.

4.3.5 Time Horizons

The time horizon outlines the period across which data are obtained and analysed, guiding the structure of the investigation. According to the research onion framework, two primary time horizons are recognised, mainly cross-sectional and longitudinal (Saunders et al., 2019). Cross-sectional studies collect and analyse data from a single point in time and usually investigate a particular phenomenon at that time (Wang & Cheng, 2020). While this approach is efficient for examining contemporary issues, it is limited in its ability to capture trends or dynamic relationships between variables.

In contrast, longitudinal studies involve observations of the same variables over an extended period, allowing for the analysis of patterns, trends and potential causal relationships (Bala, 2020). This approach is particularly well-suited for studying developments in CEO remuneration, which evolve in response to market dynamics, regulatory changes, or broader economic shifts. For this study, a longitudinal time horizon is used for the period 2008 to 2020. This 13-year period allows for a comprehensive assessment of CEO remuneration and its relationship with company performance. The longitudinal aspect allows the researcher to track changes over time and explore the stability or evolution of pay-performance alignment. CEO remuneration is complex, and various factors determine its structure and quantum. This design supports the testing of not only direct relationships but also moderating and interaction effects, incorporating variables such as MC as a proxy for company size.

An annual analysis of CEO remuneration was conducted to examine year-to-year trends, and a consolidated analysis was also performed to identify overarching patterns over the full period. This longitudinal time horizon enhances the study's ability to identify potential causal relationships between CEO remuneration and company performance. By capturing the variation over time, the approach enables a deeper understanding of the dynamics influencing the relationship and supports more robust conclusions about factors that may drive observed patterns (Volg, 2023).

The selected timeframe includes several significant global and national events that may have influenced CEO remuneration and company performance, including the global financial crisis (2008-2009), post crisis recovery period (2009), King IV governance reforms (2016), and the COVID-19 pandemic (2020). By accounting for these contextual dynamics, the longitudinal

design strengthens the study's validity and relevance, enabling a richer understanding of how CEO remuneration aligns with company performance over time (Volg, 2023).

4.3.6 Techniques and Procedures

Following the time horizon layer of the research onion, the final methodological layer involves identifying the techniques and procedures used for data collection and analysis. The data collection techniques for the study focused on archival research and a desktop study.

Archival research involves collecting data from publicly available annual reports on company websites (Högstrom & Olausson, 2023). This was complemented by sourcing secondary data from credible, objective databases, such as McGregor BFA and Profile Group. Using a secondary data approach is effective for a quantitative study, as it provides access to structured, reliable numerical data relevant to the current study, such as fixed pay, STI, EPS, MC, ROA, and RSF. Data collection was conducted in accordance with ethical guidelines to ensure that the data were valid, reliable, and fit for testing the hypothesis and answering the research question.

To answer the key research question concerning the connection between CEO remuneration and company performance, the study needed to draw on data that were accurate, credible and relevant (Mazhar, Anjum, Anwar, & Khan, 2021). Given the quantitative nature of the study and its deductive approach, the quality of the data was critical in ensuring the validity of the analysis and findings. Data collection is a vital phase of any research project because it provides the necessary information to test hypotheses, address research questions, and conduct an objective study (Karunarathna et al., 2024). This process involved identifying appropriate data sources and choosing appropriate data collection methods.

The study required data on CEO remuneration measures (fixed pay, STI and total remuneration) and company performance measures (EPS, MC, net profit, ROA and RSF). To determine the best data collection approach, prior studies were analysed to identify credible data sources and methods used by previous researchers (Al-Shammari, 2021; Bussin et al., 2023; Coetzee & Hall, 2020; Högstrom & Olausson, 2023; Padia & Callaghan, 2021; Siwende et al., 2024). Leveraging these established sources ensures consistency, comparability, and greater reliability of the study's findings, as prior validation in the literature attests to their credibility (Lafia, Thomer, Moss, Bleckley & Hemphill, 2023).

Data collection methods are generally categorised as primary or secondary. Primary data involves gathering original information directly from sources through techniques such as surveys, interviews, or experiments, whereas secondary data utilises pre-existing information from journals, books, reports, online databases, publicly available organisational data, and prior research studies (Mazhar et al., 2021). This study employed secondary data because of its efficiency, accessibility, and ability to provide validated numerical information for hypothesis testing (Högstrom & Olausson, 2023).

Specifically, data were sourced from published company annual financial statements, the McGregor BFA database, and Profile Group, a South African provider of financial data and investor information. The researcher concluded that using data from audited, publicly traded companies, such as annual financial statements, which are subject to stringent regulatory and auditing oversight, contributes to the integrity and reliability of the data (Högstrom & Olausson, 2023; Kieviet et al., 2024). The McGregor BFA database has precedent in prior research (Carlson & Bussin 2019; Naik et al., 2020; Ramgath & Bussin, 2021). Data collection was conducted by a single researcher to ensure consistency and minimise errors, with spot checks confirming the accuracy of information across sources (Kieviet et al., 2024). The researcher initially collected data from the McGregor database, and where data were missing, they were obtained from companies that published annual financial statements and profile groups. To ensure that the data collected from the three sources was correct, spot checks were performed, and no anomalies were noted.

The study focused on three main CEO remuneration components, fixed pay, STI and total remuneration, as the dependent variables. The independent variables in the company performance measures included EPS, MC, net profit, ROA, and RSF, with turnover as a control variable and PC as a proxy for company size. These metrics were selected on the basis of their frequent use in previous empirical studies on CEO remuneration and company performance, ensuring methodological alignment and facilitating comparisons of findings:

- Earnings per share indicates profitability per share owned and has been used to examine financial performance in relation to CEO remuneration (Nkwadi & Matemane, 2022; Ramgath & Bussin 2022).
- Market Capitalisation (MC) represents a company's size and market presence (Siwendu, et al., 2024).

- Return on assets (ROA) measures a company's effectiveness in using its assets to generate profit (Bello et al., 2022; Hampskink 2020; Högstrom & Olausson 2023; Nkwadi & Matemane 2022; Siwendu, Swanepoel & Stumke 2024).
- Return on Shareholders' Funds (RSF) was used widely used to assess the return generated on equity capital (Carlson & Bussin 2020; Hampskink 2020; Hlidberg 2020; Ramgath & Bussin 2022; Siwendu et al., 2024; Spoor 2020).
- Net profit, a widely accepted measure, measures overall financial performance (Carlson & Bussin 2020; Ramgath & Bussin 2022).

By adopting these empirically validated financial indicators, this study maintains methodological alignment with previous research, ensuring the relevance, consistency and comparability in studying the relationship between CEO remuneration and company performance across JSE-listed companies.

4.4 RESEARCH DESIGN

The research design presents the overarching framework that ensures that the research problem is systematically addressed through a logical, structured and coherent process (Khanday & Khanam, 2023). It defines the study's goals and outlines the strategy to be used to reach the research objectives, serving as a framework for the collection, measurement, and analysis of data on CEO remuneration and company performance (Khanday & Khanam, 2023).

Overall, the selected research design aligns with the study's deductive logic, supporting the development of empirically grounded understandings of the correlation between CEO remuneration and company performance. The next section builds on this foundation by detailing the research process implemented in the study.

4.5 TARGET POPULATION AND SAMPLING

The target population refers to the entire group of interest that the researcher intends to study (Willie, 2024). For this research, the target population included all companies listed on the JSE between 2008 and 2020. These companies were selected on the basis of the requirement that JSE-listed entities are mandated to publicly disclose CEO remuneration and to publish

their independently audited financial statements (Naik et al., 2020). Figure 4.6 presents the number of companies listed on the JSE between 2008 and 2020.

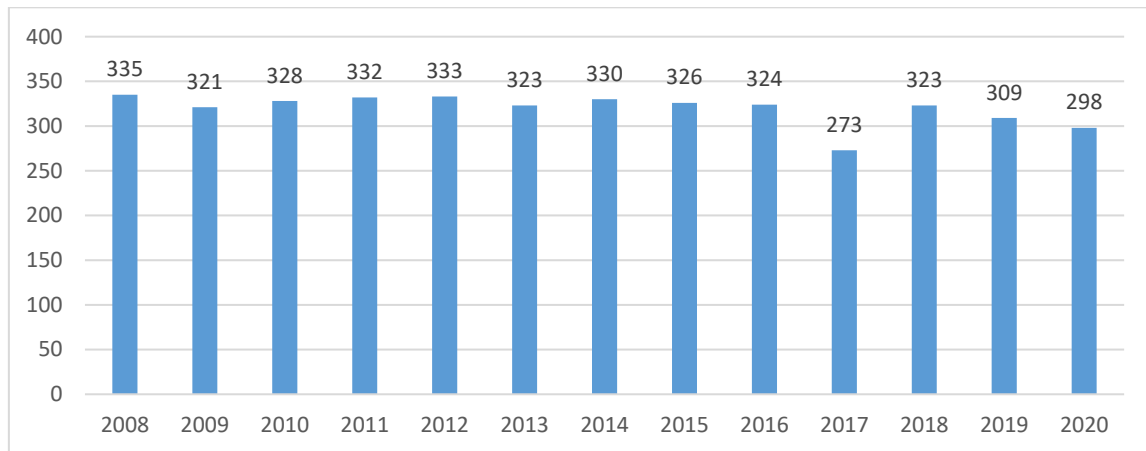


Figure 4.6: Number of Companies Listed on the JSE, 2008–2020

Source: Adapted from JSE (2020))

A census approach was employed, aiming to include the entire target population of JSE-listed companies rather than drawing a sample. A census approach involves systematically collecting and analysing data from every unit within a target population (Marshall, 2023). This method was appropriate for the current study, as it allows for the following:

- An in-depth analysis of the companies.
- Reliable and accurate results, with the possibility of analysing subgroups.
- Reduced sampling bias.
- Broader generalisability to the JSE-listed population.

The JSE-listed companies represented a diverse range of industries, sizes and listing durations. The census approach was especially suited to capturing this diversity, reflecting that CEO remuneration concerns extend across sectors and company sizes.

Despite its strengths, the census method has practical limitations, particularly in terms of the time and effort required to collect, verify and process large volumes of data (Marshall, 2023). In addition, companies had to meet the specific inclusion criteria to be eligible:

- Consistently listed on the JSE between 2008 and 2020.

- Availability of data on CEO remuneration and company performance measures. The number of companies varied slightly across regression models due to specific data availability. Specifically, the fixed pay and total remuneration models were to include 61 companies were incorporated into the study. For STI, the pay model only included 60 companies
- Data accessible via McGregor BFA, company websites, Group Profile

Out of a potential range of 273–335 companies, 61 JSE met the criteria and were included in the dataset. The inclusion/exclusion criteria further required the following:

- Any companies that were delisted between 2008 and 2020 were not included in the study.
- Where a CEO's tenure ended mid-year, remuneration was annualised as if they had been appointed for the entire year, ensuring consistency.

A limitation of the study is the potential for survivorship bias, where only surviving or compliant companies are included, and others, such as delisted companies or those with missing data, are excluded (Van Wyk & Wesson, 2021). This method of selection is contrary to that of Van Wyk and Wesson (2021), who included mining companies listed on the JSE for the period 2010–2016. To reduce survivorship bias, their study incorporated delisted companies, provided that they had been listed over a minimum period of three years during the study period. Selection bias of this nature can undermine the credibility and reliability of research findings by introducing systematic distortions, potentially skewing results and excluding valuable insights from companies that were omitted due to data unavailability or delisting (Rao, 2024).

In this study, survivorship bias is partially mitigated through the following measures:

- Including data from companies where CEOs were replaced or terminated during the study period, ensuring that any contributions made during their tenure were incorporated into the analysis.
- Providing balanced interpretations of results, reporting both statistically significant and insignificant results (Rao, 2024).

- Using a longitudinal design, moderating and interaction effects, allowing nuanced understanding of changes across time and context.

While not all bias can be eliminated, the study's methodological rigour and comprehensive data treatment enhance its validity.

The final sample of 61 companies represented multiple sectors, with the largest representation in basic materials (26%), consumer services (18%), and financial services (15%). Table 4.3 summarises the industry distribution.

Table 4.3: Distribution of JSE companies by industry

Type of Industry	Number of companies in the sample per industry	Percentage of companies in the sample
Basic materials	16	26%
Financials	9	15%
Industrials	19	31%
Consumer services	11	18%
Oil & Gas	1	2%
Technology	1	2%
Health care	1	2%
Telecommunications	0	0%
Utilities	0	0%
Real Estate	3	5%
Total	61	100%

Source: Researcher's own

This industry distribution provides a clear overview of the final sample and its representativeness. The following section details the research process, describing the systematic steps undertaken for data collection, verification, and analysis.

4.6. RESEARCH PROCESS

Building on the methodological framework provided by the research onion, this section focuses on the sequential research process followed in this study, guided by Ulrich's (2012)

research process model. A research methodological approach outlines the plans and procedures for conducting a study, moving from overarching philosophical foundations to detailed techniques for data collection, analysis, and understanding.

While the research onion provided a structured and systematic selection of methodological components, the operationalisation of these methods was informed by Ulrich's model (Figure 4.6). This model represents the rigorous logical progression of tasks needed to operationalise empirical research, including the formulation of the research problem, the review of the literature, the development of a hypothesis, the design of the study, the data analysis, and the interpretation of results (Singh, 2021). The research process was structured into three key phases:

- Conceptualising the study
- Planning and conducting the study
- Compilation and presentation of the thesis

4.6.1 Conceptualising the Study

Conceptualisation is the foundation phase of the research process. For the current study, the researcher selected a research topic that is relevant, current and capable of contributing to both academic knowledge and practical application. The chosen topic investigates the relationship between CEO remuneration and company performance for JSE-listed companies from 2008 to 2020.

The topical nature of the topic, especially in the media and the number of empirical studies conducted on CEO remuneration and company performance, suggests that the topic is not clear cut or simple to understand. For this study, conceptualisation went beyond mere topic selection to include a clear, researchable research and defensible problem. This step is as follows:

- Narrowed the scope of investigation to a manageable focus.
- Directed the development of the literature review.
- Identified key concepts, variables and data sources.

The literature review was the important step in this phase, providing the following:

- Contextual background and theoretical underpinning for the research.
- Insights into existing findings and knowledge gaps identified through recommendations for further research.
- A rationale for the study's relevance and contribution.

Based on this synthesis of the literature review, the research objectives and questions were developed, ensuring alignment with the theoretical framework. Hypotheses were then developed to test the relationships between CEO remuneration and company performance, considering both direct effects and interaction or moderating influences. This conceptual framework formed the basis for planning the subsequent implementation and data analysis procedures.

4.6.2 Planning the Study

Following conceptualisation, the next critical step was developing a research design to operationalise the research objectives. The planning phase translated the conceptual framework into structured activities for data collection, preparation and analysis.

Credible secondary sources were identified through literature research and discussions with thesis supervisors, statisticians, university librarians and financial specialists. These secondary sources included audited annual financial reports from company websites, the McGregor BFA database and Group Profile, selected for their regulatory compliance and prior use in empirical academic studies.

The population comprised JSE-listed companies across all industry sectors from 2008 to 2020. A quantitative research design was adopted, relying on secondary data to test the hypotheses regarding CEO remuneration and company performance. Statistical analysis was conducted using SPSS Version 27 and EViews to ensure a rigorous evaluation of the relationships between variables.

4.6.3 Compilation of the Thesis

The final phase involved the compilation and drafting of the thesis, integrating all stages of the study, from conceptualisation to data analysis, into a coherent academic document. This stage focused on interpreting descriptive and multiple regression analyses relative to the research questions, objectives, hypotheses and literature review.

Each phase is illustrated in Figure 4.7, which shows the practical sequential steps undertaken from the research problem formulation to the final interpretation of the findings.

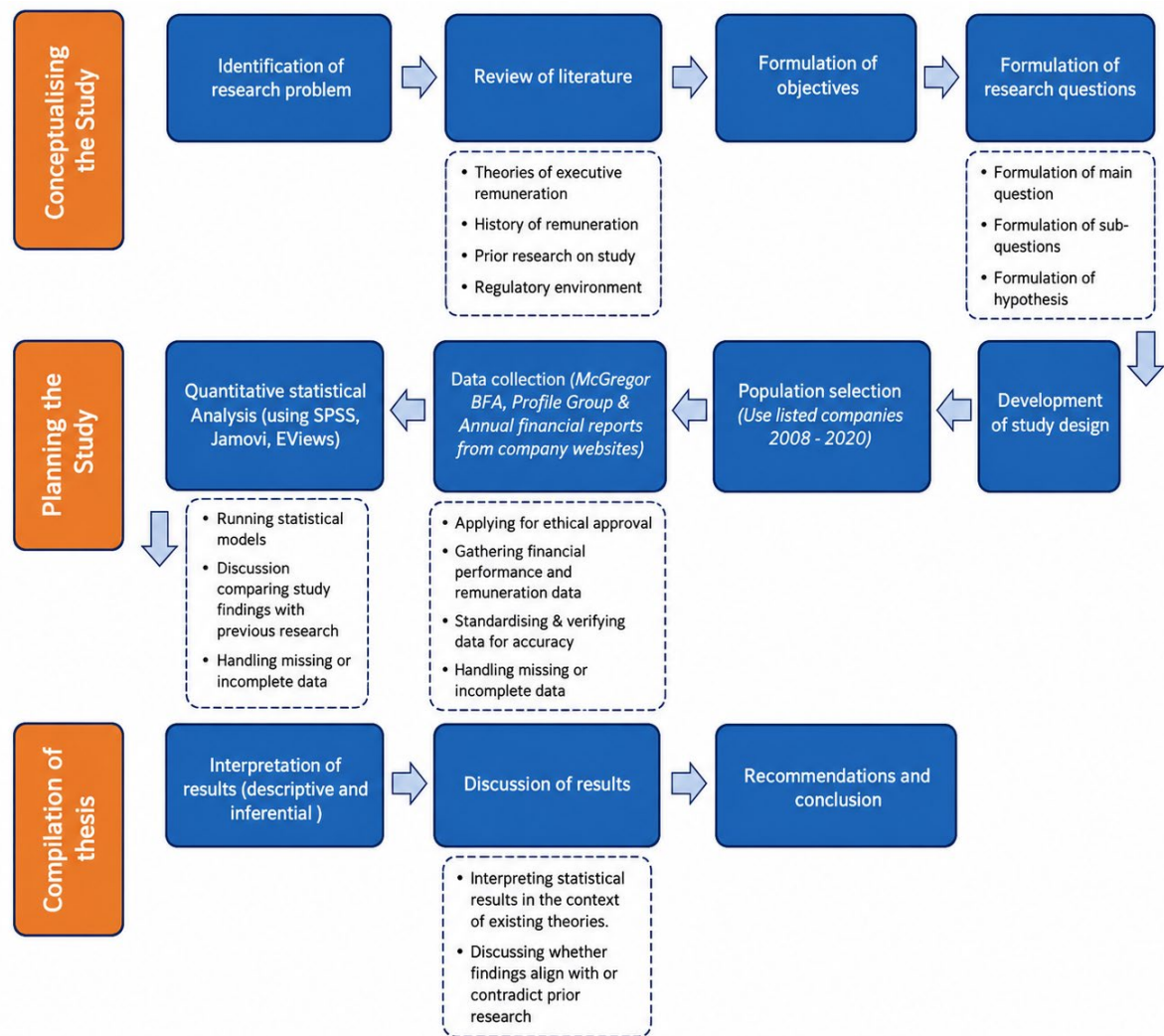


Figure 4.7: Research Process

Source: Adapted from Ulrich (2010)

4.7 DATA COLLECTION

The primary objective of this study was to collect reliable data to address the study questions and evaluate the research hypotheses. The focus on JSE-listed companies was intentional, as their audited financial statements provide verified, accurate reflections of their financial performance.

4.7.1 Sources and nature of the data

For this study, no single data source contained all the information needed. Therefore, the researcher compiled a comprehensive dataset from multiple secondary sources, including JSE-listed company websites, the McGregor BFA database and data from the profile group. These sources are widely recognised and trusted for financial and investor data, enhancing the validity and reliability of the dataset. Secondary data are data that were collected for other purposes in most cases (Ajayi, 2023). The use of secondary data has several advantages. As secondary data already exists, this leads to time savings in finding the material required, either digitally or in print. The accessibility of secondary data via networked technologies has been an advantage, given the vast amount of information available digitally (Cheong, Lyons & Majumdar, 2023). Secondary data collection is less expensive than primary data collection and therefore enables the collection and analysis of larger, longitudinal datasets (Cheong et al., 2023). Additionally, academics have advocated data sharing for SDA, asserting that it may assist with new research questions and increase sample sizes and statistical power. Reanalysing previous research and data is possible using secondary data (Wickham, 2019). The data posted online are often cleaned by professional staff, who provide insight into the data collection method and data cleaning process. The validity, reliability, accuracy, and credibility of the data were therefore built on the statutory requirements that strictly administer all JSE-listed entities.

4.7.2 Data Collection Process

The researcher collected financial and remuneration data for 61 JSE-listed companies from 2008–2020. A multi-phased approach was employed, using company websites, the McGregor BFA database, and Profile Group, which provides investor-focused financial data. Given the significance of CEO remuneration to stakeholders such as investors, sourcing data from credible, audited, and widely recognised sources enhances the study's reliability and credibility. This ensures that the analysis is based on trusted financial information aligned with investor and corporate governance interests.

The statistician offered input on data structuring, transformation, and statistical stability, particularly regarding the spreadsheet format for manual data capture. The statistician and supervisors provided guidance on the cleaned dataset, advised on the data structure, and were suitable for analysis. This oversight provided the robustness of the data before the statistical

analysis was conducted. However, the primary responsibility for the data collection and cleaning remained with the researcher.

Not all data variables were available from a single source, and a multi-phase approach was used to collect the data. The initial data were sourced from annual financial reports. Data on CEO fixed pay, STI, and the operationalised measure of total remuneration were captured as reported in the statements; no calculations were necessary. LTIs were excluded from the dataset because they fell outside the scope of the empirical analysis. In some instances, the STI was recorded as performance-related payments, and the notes to the accounts clarified that this was based on 12-month performance, in line with the study's definition of STI. For the company performance measures, the ratios were extracted from the annual reports. The next phase of data collection involved sourcing data from the McGregor database, followed by profile data to fill in missing variables that were not available in the annual reports or where annual reports could not be found.

Remuneration components were available across various sections of the annual reports, including the Remuneration Report section. Remuneration data can also be found in other reports. Most companies provided definitions and explanations of the remuneration types, which the researcher used to align data collection with the study requirements. In most instances, companies disclosed remuneration data for at least two consecutive financial years within a single annual report. This facilitated the verification of manually captured data and, in some cases, reduced the need to access multiple reports to retrieve year-to-year remuneration figures.

The company performance measures used for this study included EPS, MC, net profit, ROA and RSF. CEO remuneration data were captured in detail, comprising gross basic monthly salary, individual benefits (such as pension contributions and medical aid), and total remuneration. To ensure accuracy and avoid computational errors, the researcher did not perform any calculations on the company's performance measures. Although the relevant formulas were outlined and discussed in Chapter 3, only reported values from the official sources were recorded. In cases where data were not available from any of the designated sources, those fields were recorded as missing.

The data collected by the researcher were captured in an Excel spreadsheet for analysis. Each row of data captures the remuneration and financial performance measures per company per

year. The data were subsequently exported into SPSS Version 27, Jamovi V2.3.5 and EViews V11 for analysis. For the analysis, the independent variables consisted of key indicators of company performance. The indicators were earnings per share (EPS), market capitalisation (MC), net profit, return on assets (ROA), return on shareholders' funds (RSF) and turnover (control variable). The dependent variables (CEO remuneration components) comprised fixed pay, STIs, and an operationalised measure of total remuneration, all expressed in rand. Consistent with the scope of this study, LTIs were excluded from the empirical analysis. The following section outlines the procedures followed in processing and treating the data after collection, including actions taken to organise the dataset for analysis.

4.7.3 Data Cleaning

Data cleaning ensures accuracy, reliability, and validity. The data were categorised, and outliers were deleted. The study covered the period 2008 to 2020 and used data for 61 companies short listed for the study. Each observation of remuneration and company performance for a particular company per year was entered as a single row in the spreadsheet. Data accuracy was ensured by conducting occasional spot checks on various items or observations both during and after data entry. Once the data had been captured in the spreadsheet, the researcher reviewed year-to-year changes to check for discrepancies in the figures. Where the values showed some discrepancies, for instance, a marked increase in fixed pay, the researcher double checked these against published annual financial statements, data provided by the Profile Data and the McGregor BFA database for accuracy. The importance of cleaning the data were to ensure data validity, reliability, and accuracy. Further cleaning took place during the descriptive research phase. The researcher was able to analyse the descriptive statistics for any possible errors utilising the minimum, maximum, means or medians. The researcher checked for missing values in both remuneration and company performance measures and sourced these values from the three sources identified. Where values could not be obtained from the three sources, they were captured as missing values and not replaced by any other value.

Three companies in the industrial sector had missing company performance data for 2019, whereas the third company also lacked data for 2020. However, remuneration data were available for all three companies across all the years. All three companies were included in the study to avoid missing observations from these three companies. The reasons for the four

missing observations were that the researcher was unable to find the data. Lord, Qin and Geedipally (2021) explained that time series involves data collected across multiple points in time, allowing the same variable to be examined repeatedly within a given interval. Panel data, on the other hand, combine elements of both cross-sectional data (captured at a single point in time) and time series data. As noted by Lord et al. (2021), panel datasets represent a specific form of pooled data in which the same cross-sectional units are observed over a period, giving the dataset both spatial and temporal dimensions. The cross-sectional component of the data refers to the 61 companies included. The inclusion of the 61 companies over the 13-year period allows for the analysis of trends in CEO remuneration and company performance over time and highlights how these variables evolve over time. In the current study, panel data were utilised since the remuneration of the CEOs of all 61 JSE-listed companies was statistically analysed against several variables from 2008 to 2020 (13 years); therefore, the data became multidimensional (Lord et al., 2021).

The researcher attempted to include as many companies as possible from each industry sector in the study. From the collected data, it is important for further research that the researcher outline the profiles of the industry sectors to which the companies belong. The JSE utilises the Industry Classification Benchmark (ICB) (Figure 4.8), a widely used standard for classifying and comparing companies by industry and sector. The ICB allows for the analysis and performance measurement of listed companies. In total, JSE companies are classified into 11 Industries, 19 Supersectors, 41 Sectors, and 114 Subsectors. Figure 4.8 shows the industries of the JSE companies.

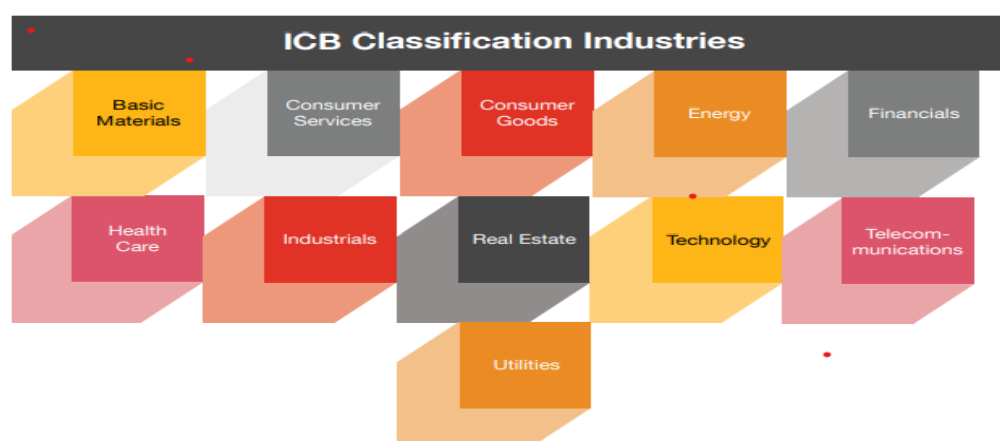


Figure 4.8: JSE ICB Classification of Industries

Source: PwC 12th edition (2020)

The data cleaning process was necessary to ensure the validity, reliability and accuracy of the dataset prior to the analysis. The researcher identified and corrected inconsistencies while preserving the integrity of the data. This section provides further insight into how the data were cleaned and treated.

4.7.4 Data Treatment

Following data cleaning, it was necessary to treat the dataset to ensure comparability and analytical consistency across all companies and years. To enable replication of this study, it is important to outline how the data were handled. This state was critical in preparing the dataset for regression analysis, particularly given the study's longitudinal design and use of panel data modelling techniques. The following section outlines the data treatment steps and explains the rationale for the methodological decisions made to address data gaps and enhance analytical robustness. The data used in this study were treated via a series of deliberate approaches to ensure that the dataset was analytically suitable for examining the relationship between CEO remuneration and company performance across 61 companies over the 13-year period. The treatment procedure also directly supports the study's quantitative, deductive design, which relies on standardised, reliable data to test hypotheses about the various variables of CEO remuneration and company performance.

CEO remuneration was reported in various currencies across companies (rand, US Dollar, GBR (Pound), and Euro). To ensure comparability across companies and years, all remuneration figures were converted to South African rand using the annual average Reuters exchange rate for each financial year. The conversion to rand was important to ensure that variations in remuneration were attributable to actual differences in remuneration policies or performance outcomes, rather than currency fluctuations. The remuneration and financial data were reflected as per the applicable financial year of each company. The CEO remuneration data in this study were reported in different currencies, primarily rand (54 companies), pound (2 companies), Euro (2 companies), and U.S. dollars (3 companies). To ensure consistency, all remuneration figures were converted to rand following the approach taken by Coetzee and Hall (2020).

In some instances, the CEO's employment ended before the financial year ended. The researcher captured the data for the longest-serving CEO and annualised the pro rata earnings for that year (dividing the earnings by the number of months worked and multiplying by 12).

This approach was consistent with previous studies (Bezuidenhout & Bussin, 2020; Van Wyk & Wesson, 2021) and was used to ensure that remuneration was comparable with that of other CEOs who served a full year. While excluding such cases could have been considered, it would have significantly reduced the number of valid data points across the 13-year panel, particularly given the natural CEO turnover. The study acknowledges that projecting annual remuneration may not accurately reflect the remuneration a CEO actually earned in a given year.

In addition, during data collection, some data could not be obtained. The researcher checked the reason for the missing data, and all the data were attributable to the researcher not being able to obtain the data from the company's financial statements, the McGregor BFA database or the Profile Group. Missing values are an important concept for successfully managing data. Missing values in performance measures or remuneration were handled by retaining unbalanced panel data. This approach is suitable for practical, real-life databases where companies may not disclose all information every year. When transparency is enhanced, other researchers can assess the reliability and applicability of the study through clear, detailed reporting of missing data. If missing data are not properly handled, incorrect conclusions about the data may be drawn. Except for turnover (15.5% missing data), all variables had less than 5% missing values. According to Okpara et al. (2022), a missing data rate of 5% or less is insignificant. The statistics are based on all the cases with valid data. In quantitative research, missing data are more common (Emmanuel et al., 2021). Enders (2003) claimed that research studies often had a missing data rate varying from 15% to 20%. Figures 4.9 and 4.10 show the number of missing values per measure studied.

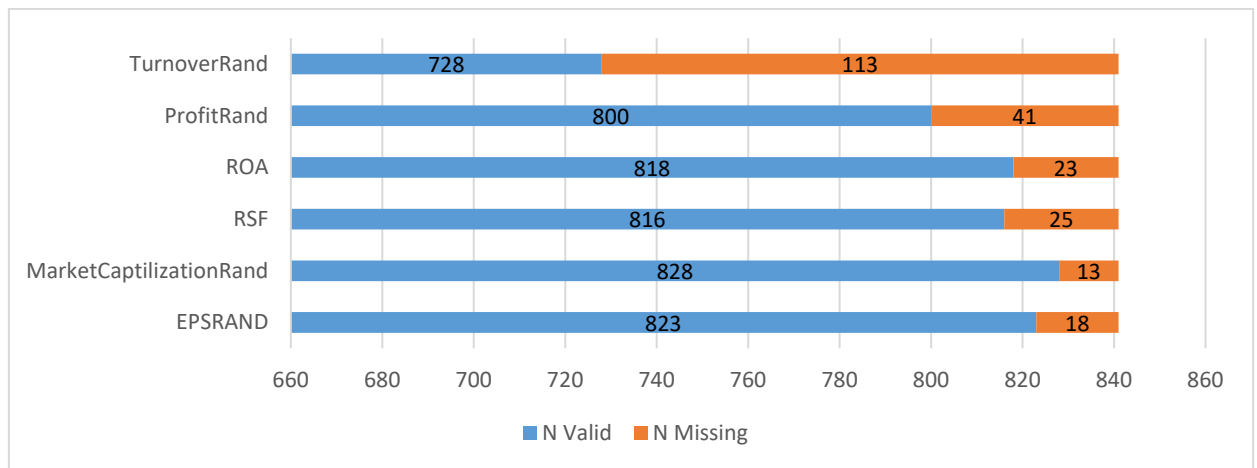


Figure 4.9: Frequencies: Company Performance Measures

Source: Researcher's Own

For the dependent variables, CEO remuneration and total remuneration had 824 valid and 17 missing data points, STI had 798 valid and 43 missing data points, and fixed pay had 824 valid and 17 missing data points.

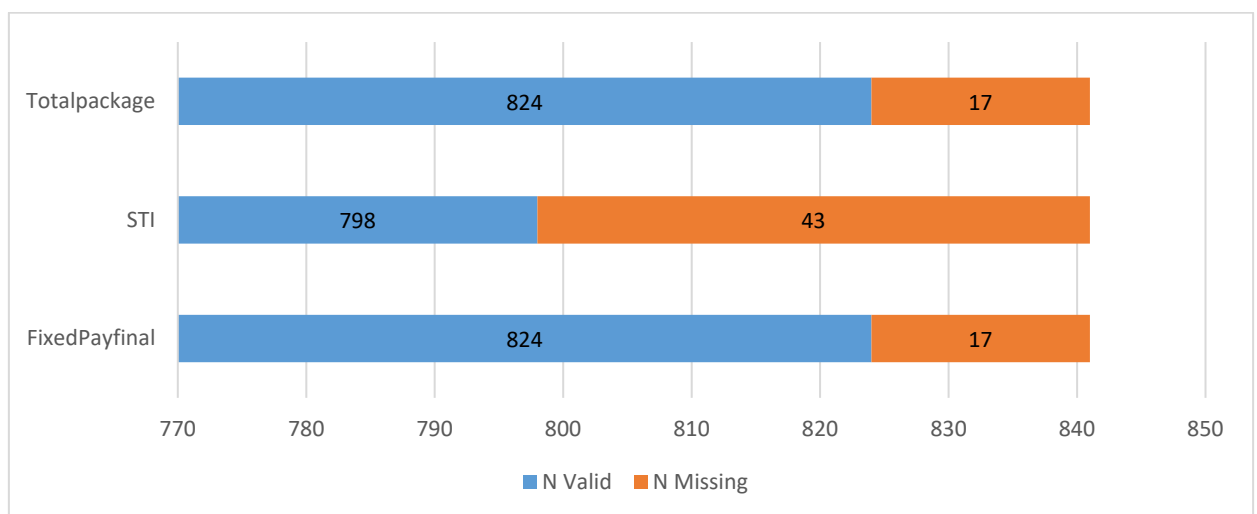


Figure 4.10: Frequencies of CEO Remuneration Variables

Source: Researcher's Own

Given the frequency of missing data in Figures 4.9 and 4.10, it is crucial to consider the reasons for the missing data. The reason for the missing data influences the method used for statistical analysis. There are three classifications of missing data (Schober & Vetter 2020):

- *Data missing completely at random (MCAR)* refers to data where the pattern of the missing data is completely random and is completely unrelated to dependent or

independent variables. For the current study, missing data, for example, on company performance measures for the three industrial companies, were due to the researcher's failure to find the data. Data are regarded as MCAR when the probability of being missing is the same for all companies or variables. The causes of the missing data are unrelated to the data. This type of missing data does not introduce bias but reduces the sample size, which is not the study's intention.

- *Missing at random (MAR)* - Systematic differences between missing data and available data can be explained by patterns present in the observed values. In relation to the current study, an example of MAR could involve companies in the basic materials sector, which tend to have missing STI data; the missing STI data are not related to the actual STI amount. This means that the missing data are likely influenced by sector-specific disclosure practices rather than the magnitude of the STI amounts themselves.
- *Missing not at random (MNAR)* – the probability of missing data is dependent on the missing values; that is, there are systematic grounds for the data gaps. For example, CEOs with high performance incentives may opt not to disclose their bonus amounts, resulting in missing data directly related to the variable itself.

Missing data can pose challenges for the study because they can influence the results. It is therefore important to address missing values before conducting any analysis, as simply removing them may lead to biased or misleading conclusions (Emmanuel et al., 2021). The approaches used to address the missing data in statistical analysis, if incorrectly explained, may decrease the size of the sample companies and decrease the power to estimate models. As the study aims to determine which company performance measures are statistically significant predictors of CEO remuneration, the decrease in sample size may result in the analysis losing statistical power, and independent variables that might have otherwise been statistically significant may no longer show enough variation to demonstrate their relationship with CEO remuneration (Curley et al., 2019). Contribution to knowledge in the remuneration profession on remuneration strategies that align pay with performance may be hindered as a result of studies compromised by sample size. The potential for biased findings may also be increased.

Several factors, including the amount of missing data, its pattern, and the mechanism behind it, influence the importance of missing values. Various techniques have been considered by the researcher for handling missing data, and these techniques are discussed below in relation to the current study.

- Deletion of the data of companies with missing values is appropriate if the data are missing at random (Ranganathan & Hunsberger, 2024). This method was not utilised in the study, as it would have led to the deletion of certain companies, which may have affected the total number of companies within each sector. For example, as noted in Figures 4.8 and 4.9, which show the missing data per company performance measure and remuneration type, all companies with missing data will have been deleted by the researcher using this approach, thereby possibly decreasing the statistical power of the analysis. To demonstrate the impact of deletion, for MC, 13 missing data points were associated with 10 different companies. This would have required the researcher to exclude 10 companies from the total sample of 61. As one of the purposes of the study is to contribute knowledge on the study topic, the challenges posed by decreased statistical power would have negatively affected the achievement of this objective. This might distort the study's findings. Companies were deleted because a few missing values appeared unnecessary, as data analysis methods such as regression analysis account for missing data.
- Imputation techniques – Missing or incomplete data are addressed using imputation techniques, which estimate values to retain all companies rather than removing them. Single imputation substitutes the missing value with a plausible estimate derived from other existing data (Arefin & Masum, 2024). Replacement values for single imputation may be derived from the mean or median of the available data, predicted using regression analysis, carried forward from the last observation, or based on best case or worst-case scenarios (Arefin & Masum, 2024). Unlike the deletion method, this method allows all the data to be retained and avoids influencing the results. However, the imputation technique through replacement of missing data with estimated data reduces the natural variations in data, making the variations more uniform than reality. As noted by Okpara et al. (2022), missing data are common in studies, and the imputation of values creates an inaccurate impression of complete data. This method

was discounted by the researcher, as it would potentially introduce bias into the study, especially if the data were not missing at random. Instead of using imputation techniques, which might distort CEO remuneration trends, this study uses estimation techniques (for example, generalised least squares (GLS) and fixed effect models) that can accommodate missing values without reducing the sample to only complete cases.

- Pairwise deletion is a method for handling missing data where all available data are used rather than deleting the whole case. Pairwise deletion is useful for maximising the number of data points used in the analyses rather than discarding entire companies due to a few missing values. However, if the missing data are deliberately omitted, for example, by a company, pairwise deletion can introduce bias by not accounting for the missing data.

The researcher determined that the data were not missing completely at random (MCAR) using Little's MCAR test. For the current study, although missing value replacement was considered, Little's missing completely at random (MCAR) test (Little, 1988) was conducted and indicated that the data were not missing completely at random ($p < 0.001$). Multiple imputation methods are used when the data are not MCAR and have some disadvantages and can produce biased estimates. Therefore, due to the years when data were missing, for example, at the end or the beginning of the period, it was decided to work with the unbalanced data and address any issues within the estimation methods chosen. To accurately analyse the relationship between CEO remuneration and company performance over the 13-year period, the study adopted a range of estimation methods suitable for unbalanced panel data. These estimation methods are commonly used to calculate missing values in regression models, enhancing the validity of findings despite the unbalanced data. This was done by first conducting an analysis with ordinary least squares (OLS). Given the presence of heteroskedasticity and serial correlation, the study uses EViews and applies robust standard errors and GLS to correct for violations. In addition, fixed- and random-effects models were estimated and compared using the Hausman test to determine the most suitable model. These estimations enabled the researcher to draw reliable inferences from the panel dataset, despite some companies having missing data for certain years, as noted in Section 4.7.

The use of unbalanced data is supported by Nkwadi and Matemane (2022), who conducted a quantitative study to examine the relationship between executive remuneration and company performance in the mining sector of the JSE. The dataset consisted of twenty-eight companies observed from 2007 to 2018, although some companies had missing observations for certain variables. As these missing values were not imputed, the resulting dataset constituted an unbalanced panel (Nkwadi & Matemane, 2022). Instead of deletion or imputation, the study opted for estimation methods that can accommodate missing data from different periods of time. Since missing data are common, working with unbalanced data reflects real-world constraints where data availability varies for a variety of reasons.

Realising that CEO remuneration is an emotive subject for various stakeholders, the researcher sought not to artificially balance the data, thereby avoiding potential bias or distortion in the analysis or findings. Accurately representing real-world events and business choices requires working with unbalanced data rather than replacing missing data. For example, the CEO of Tongaat Hullett's decision to receive a 0% cash package increase during the financial years 2016/17 and 2017/18 reflects a real-world scenario in which remuneration remained unchanged by deliberate choice (Tongaath Hullett, 2018). If the researcher classified one of these financial years as missing and applied imputation techniques to fill the gap, it could artificially alter the CEO remuneration trend. Retaining unbalanced data in such cases ensures that the study accurately reflects genuine remuneration patterns rather than introducing distortions by replacing data.

In conclusion, the treatment of data involved converting financial figures reported in various currencies, annualising remuneration data where necessary, and evaluating the nature of missing data. Each data treatment step was therefore applied in direct support of the study's empirical aim of generating valid, reliable, and statistically analysable data for testing the relationship between company performance and CEO remuneration. This data cleaning and treatment provided a quality control mechanism used to strengthen the integrity of the dataset prior to the statistical analysis discussed in the next section.

4.8 DATA ANALYSIS

Data analysis includes all the processes and methods used to transform, visualise, model, and interpret data to extract value from raw data (Kuo, 2024). The exact nature of the findings will

depend on the analysis methods applied to the dataset. After the data were gathered, an important part of the study was to choose the methods to analyse the data. Importantly, the data analysis used provides an objective interpretation of the results.

To analyse the collected data, the researcher utilised two main streams of statistical methods, namely, descriptive statistics and inferential statistics.

4.8.1 Descriptive Statistics

The dataset collected by the researcher provides a wealth of raw data from which to start building an understanding of CEO remuneration and company performance. As the purpose of this study is to contribute to the topical debate on the relationship between CEO remuneration and company performance, additional insight may be gained from data that remain useful to various stakeholders. To illustrate the patterns and trends, particularly during significant global and South African-related events, the study employed descriptive statistics. This method allows for a clear presentation of how CEO remuneration and company performance have evolved over time, highlighting any significant shifts or correlations that may have occurred in response to global economic conditions. Using descriptive statistics, this study can offer insights into the overall distribution, central tendency, and variation in the data, thereby enabling an understanding of how external factors may have influenced CEO remuneration and company performance during this period.

Descriptive statistics are data analyses that define, describe, or summarise information in a meaningful way, allowing patterns to emerge from the data (Cooksey, 2020). The importance of descriptive statistics does not extend to drawing assumptions beyond the data we had examined or reaching conclusions about any hypotheses developed. SPSS V27 and Jamovi version 2.3.5 were used for conducting the descriptive statistical analyses. Future forecasts are not made as part of the descriptive analysis; instead, only historical data are used to draw conclusions (Chiat & Panatik, 2019). The value of descriptive statistics in a research study is that they form the basis for further analyses and enable other researchers to replicate the study (Sirisilla, 2023). Statistical analysis was used to determine the mean, median, standard deviation, minimum, maximum, 95% and 5% percentiles, skewness, and kurtosis.

The descriptive statistics of the variables involved the following:

- Frequency distribution is a presentation or summary that depicts the number of times a specific value or category has occurred in a variable studied. Frequency distributions provide a more structured and organised way to present raw data (Sirisilla, 2023). For the current study, the frequency distributions were captured into a table to summarise the data, from which the researcher was able to present the data in graphs for a meaningful and understandable presentation of the data, after which a discussion of the results was performed.
- The mean refers to the average of a variable of interest and is calculated by the sum of the values of the variable for a given dataset divided by the aggregate number of values of the variable (Semanjski, 2023).
- The median is the value that divides the set of ordered data values into halves when the order is from the smallest to the largest figure (Semanjski, 2023).
- The standard deviation is an indicator of how dispersed a range of numbers is from the mean. The closer the numbers are to the average, the lower the standard deviation will be. Conversely, the more scattered the numbers are, the greater the standard deviation (Semanjski, 2023).
- Skewness reflects whether, in a graph, the data are clustered around the middle or if they are leaning towards the right or left. Skewness illustrates the symmetry of the distribution of the values. Positive skewness means that the scores are clustered around the left bell shape at the lowest values. Negative skewness denotes values clustered at the right side of a graph (Kingsley & Robertson, 2020).
- Standard deviation is an important measure of CEO remuneration, especially in benchmarking, as it shows the variation or dispersion of salaries within a dataset. A high standard deviation in CEO remuneration across companies denotes significant disparities in remuneration levels, possibly indicating that other factors, such as company size, industry or financial performance, contribute to the wide disparities in remuneration differences (Darling 2022). A low standard deviation indicates that CEO remuneration is consistent across companies. As companies have indicated that CEO remuneration is benchmarked against comparators, the significance of standard

deviation assists organisations in determining whether their CEO remuneration aligns with that of competitors.

- Kurtosis explains the level of peakness of a graph with positive kurtosis values, indicating clustering of values at the centre with thinner longer ends of the tail. A distribution of values closer to zero denotes a flat graph with too many values at the extreme parts of the graph.

As discussed in Section 4.7.4 (data treatment), the descriptive statistical analysis revealed that the collected data were unbalanced. The presence of missing data influenced the choice of method used to address these gaps. Using descriptive statistics, the researcher presents the results in graphs to illustrate the trends and patterns of CEO remuneration and company performance that may not be apparent in numerical data. Graphical tools such as line graphs illustrate changes in company performance and CEO remuneration over time, making it easier to identify fluctuations and trends to provide meaningful insights that enhance the interpretation of the data. The next section discusses the statistical analysis methods used for inferential statistics.

4.8.2 Inferential Statistical Analysis

The other statistical method used by the researcher was inferential statistics, which allows for an understanding of how variables interact with one another on the basis of data from a sample population. Beyond the sample companies, broad conclusions about the relationship between CEO remuneration and company performance can be drawn using inferential statistics. Inferentially used for testing hypotheses to draw conclusions about the relationship between CEO remuneration and company performance.

The primary inferential technique used in this study was multiple regression analysis, which was applied within a panel data framework. This approach was selected to examine how various performance indicators, mainly EPS, MC, net profit, ROA and RSF, explain the changes in CEO remuneration components, fixed pay, STI and total remuneration over a 13-year period across JSE-listed companies. Regression modelling enabled the researcher to test the study's hypotheses; evaluate the direction, strength and statistical significance of the relationships; and control for unobserved heterogeneity across companies and years. Typically, inferential statistics allow researchers to identify relationships or associations

between variables, but they do not establish definitive cause–effect relationships. In general, inferential statistics enable researchers to examine the relationships or associations among variables, but they do not provide conclusive evidence of causation. What sets inferential statistics apart from descriptive statistics is their capacity to draw conclusions that extend beyond the data at hand, whereas descriptive statistics simply organise and describe the information that has been collected (Salas-Parra, Castro-Ochoa & Machado-Aranda, 2023); in other words, premises are widened into far-reaching generalisations. The following section presents the regression analysis technique; the underlying regression assumptions and the regression approach used in the study.

4.8.2.1 Regression analysis

For the dataset, which comprises a panel data structure, multiple regression analysis was employed to quantitatively estimate the relationships between variables and to test the study’s hypotheses. This method seeks to explain variations in the dependent variable (fixed pay, STI and total remuneration) by examining how they are influenced by changes in an independent variable (EPS, MC, net profit, ROA and RSF), using a mathematical equation to quantify the relationship. In conducting the regression analysis, the researcher will examine the direct relationship between each independent variable and the dependent variable.

Given the aims of this study to examine the direct and indirect relationships between CEO remuneration and company performance, multiple regression analysis was selected as the suitable method. Regression enables the researcher to examine how multiple company performance measures influence CEO remuneration. Furthermore, it also makes it possible to test for moderating (MC) and interaction effects, which are essential to address the research hypotheses. Multiple regression analysis is a statistical method that helps identify which variables in a research topic (independent variables) influence an outcome (dependent variable) (Gupta, 2021). The literature review in Chapter 2.4 provided insight into empirical studies that identified which independent variables were statistically significantly related to the dependent variables. For the current study, the examination of EPS, MC, net profit, ROA and RSF will determine which of these performance metrics influence fixed pay, STI and total remuneration. In addition, the moderating effects further enhance the study by identifying how company size (MC) may influence or alter the strength and direction of the relationship between CEO remuneration and company performance.

According to Gupta (2021), regression enables the move from a disorganised, challenging set of data to a clearer, more insightful model. Multiple regression analyses establishes the direction and relative strength of the relationship between the independent variables and a dependent variable. Regression analysis answers the question of whether the differences in remuneration are influenced by the financial performance of companies or if the movement of remuneration is a factor that happens naturally possibly influenced by other factors.

For this study, regression modelling was conducted in EViews V11, a package that permits the statistical analysis of panel data. The use of EViews V11 allowed for appropriate estimation of fixed, random and pooled regression models and the correction of any heteroskedasticity or autocorrelation present in the data. Panel regression analysis was essential for answering the study's core questions and testing its hypotheses in a statistically rigorous manner. This method is particularly suited for panel data where repeated observations across time and companies must be analysed (Vomberg & Wies, 2022).

There are two basic types of regression: simple regression and multiple regression. Simple regression uses one independent variable to predict the outcome of the dependent variable (Wienclaw, 2021). In contrast, multiple regression incorporates two or more independent variables to predict the value of the dependent variable (Wienclaw, 2021). For this study, multiple regression was conducted to analyse the relationship between CEO remuneration variables (dependent variable) and company performance (independent variable). Ramgath and Bussin (2022), Netshituka, Robbetze and Cassim (2024), Emokpae (2023) and Rau (2024) also utilised multiple regression analysis.

Steps in regression analysis

It is important at this stage to outline the steps to conduct the regression analysis. The phases required to conduct regression analysis are discussed below (Chatterjee & Hadi, 2015):

- *Selection of potentially relevant variables*

The next step is selecting the relevant variables that clarify or predict the reaction variable. In this study, the response variable is CEO remuneration measured through fixed pay, STI and total remuneration, whereas the predictor variables are company performance measures such as EPS, MC, net profit, ROA and RSF. These variables were chosen for the current research as commonly used variables in empirical research on the same topic and their theoretical

alignment with agency theory. Multiple regression permits the analysis of multiple independent and dependent variables in line with the study's deductive philosophical approach. The quantitative nature of the data for the study and hypothesis testing drawn from agency theory made multiple regression the most appropriate technique.

In the analysis, the response variable is denoted by Y , and the variable that predicts or explains the response is X . The independent variable, company performance measures chosen for the study, was used to enable comparison of this study's findings with those of previous studies conducted by other researchers. The research for the quantitative analysis utilised a fair mix of financial and market measures. The various company performance measures used are discussed in Section 3.4.

Models for panel data

Three types of panel data models are applied in this study:

- a) Fixed effect model/LSDV model. The core assumption of this model is that individual cross sections possess unique characteristics that remain consistent over time and are unaffected by temporal changes (Ralston, 2023). By controlling for these unobserved, time-variant factors, the models accommodate heterogeneity across entities. This approach has been similarly applied by Grey, Flynn and Adu (2025) as well as Rehman et al. (2021) to address the risk of omitted variable bias.
- b) Random effect model. Under this approach, the individual-specific effects are modelled as random and are assumed not to correlate with the explanatory (independent) variables (Ralston, 2023). This assumption allows for the inclusion of both time-varying and time-invariant variables, making the model more efficient than the fixed effects approach when the assumption holds.
- c) The pooled ordinary least squares (OLS) model assumes that there are no differentiating characteristics among the cross sections of companies utilised for the study. It treats all observations as homogeneous, combining them into a single dataset without accounting for the unique attributes of each company. This is potentially not a realistic characterisation of companies, as each company differs significantly in its structural and operational characteristics.

The pooled OLS regression model was used in this study as a basic departure point and a reference model.

4.8.2.2 Regression Assumptions

The objective of this research was to make effective interpretations from a dataset. Confirming the assumptions is necessary to ensure that the results produced by the regression analysis can be relied upon and will not lead to incorrect conclusions. Therefore, before the regression results were interpreted, the researcher checked the assumptions of normality, homoscedasticity, autocorrelation/serial correlation, multicollinearity, and outliers. A robustness test was conducted on the basis of the reliability/validity of the tests (Narayanan & Carrier, 2021).

Normality test

In regression analysis, one of the important assumptions is that the residuals (error terms) of the model are normally distributed, as this affects the validity of the statistical inferences. Residuals that are normally distributed allow for valid hypothesis testing and indicate that the model has captured the data structure well (Knief & Forstmeier, 2021). The current study assessed normality to ensure that the regression estimates drawn from the relationship between CEO remuneration and company performance measures were statistically valid.

To draw valid conclusions from the regression, the residuals should follow a normal distribution. The disturbance term, or residuals in the relationship between the independent variables and the dependent variable in a regression model, is tested for normality in multiple regression analysis to determine whether it is modelled by a normal distribution (Sonwalker, 2024). This was examined in the current study through an examination of the kurtosis and skewness of the standardised residuals. The Jarque–Bera test was not applied because, on the basis of Aslam, Sherwani and Saleem (2021), it is not capable of discerning between the departures of the individual and the remainder of the elements from non-Gaussianity. In the residual testing depicted in Section 5.6 (Chapter 5), the same reasoning was pursued, and the Jarque–Bera statistic was ignored. Therefore, the residuals were assessed on the basis of the skewness and kurtosis values within the acceptable range.

Orcan (2020) suggested that kurtosis should be 3 and that skewness should be 0 for variables that are normally distributed. However, most guidelines indicate a range between -2 and +2

for skewness and kurtosis values, for which a normal distribution of the variable can be assumed (Orcan, 2020). However, Sovey, Osman and Mohd-Matore (2022) emphasise that a kurtosis value ranging between -7 and +7 is an acceptable range when regression analysis is applied to the data. For the current study, EViews was used to compute the values of skewness and kurtosis, which reports kurtosis with a base value of 3. From the calculation in EViews, a value of 3 should be subtracted to obtain the final kurtosis value.

Homoscedasticity

Homoscedasticity comprises two meanings, the same as homo and variance from scedasticity. The term means the same variance. The assumption suggests that the error term is similar across all values of the independent variables. This is in comparison to heteroscedasticity, where the error values are different across all values of the independent variables. According to Yang, Tu and Chen (2019), the homoscedasticity assumption is more critical than the normality assumption. When the data are perfectly normal, the F test for the regression model will generate incorrect results if heteroscedasticity exists.

F tests can assess several model terms at the same time, making it possible to compare the fit to different linear models. In regression analysis, the overall F test evaluates whether the proposed linear model provides a significantly better fit to the data than a model that contains no predictor variables (Sureiman & Mangera, 2020). The potential heteroskedasticity of the residuals was subsequently investigated for the current study. The hypotheses tested were as follows:

- The null hypothesis (H_0): residuals are homoscedastic.
- Alternative hypothesis (H_1): residuals are not homoscedastic.

Using EViews11, to be assumed to be homoscedastic, the null hypothesis requires that the probability value be above 0.05. The outcomes implied that the null hypothesis was rejected ($p < 0.05$, $p = 0.000$); therefore, the residuals were heteroskedastic for the cross-sectional (company) measurement and for the period measurement ($p < 0.05$). This means that the homogeneity of variance assumption has been violated. To address this challenge and ensure the validity of the statistical inference, the study employed robust estimation methods, including White's heteroskedasticity-consistent standard errors and, where necessary, generalised least squares (GLS) estimators. These statistical techniques correct for non-

constant error variances and produce more reliable standard errors, enabling accurate hypothesis testing despite the presence of heteroskedasticity (Knief & Forstmeier, 2021).

Autocorrelation or serial correlation

When analysing time series and panel data, structural issues such as autocorrelation and stationarity must be carefully considered. Autocorrelation, otherwise known as serial correlation, occurs when the value of a variable at one point in time is correlated with its value at an earlier time. In other words, past values of a variable are related to its current values (Lord, Qin & Geedipally, 2021). It can be either positive or negative, with a perfect negative autocorrelation of -1 and a perfect positive autocorrelation of +1. Positive autocorrelation implies that increases in a variable at one time point are likely to be followed by increases in subsequent periods, whereas negative autocorrelation reflects an alternating pattern over time (Corporate Finance Institute (CFI), 2022).

Autocorrelation is particularly relevant in time series analysis and panel data, as it indicates trends, seasonality, or persistent patterns across periods. However, in regression analysis, serial correlation violates the ordinary least squares (OLS) assumption of independence of observations, potentially biasing standard errors and undermining the validity of hypothesis tests (Cooksey, 2020; Kumar, Sharma & Cerda, 2020). In panel data models, the presence of serial correlation can distort predictive accuracy and invalidate significance tests (Anderson, 1942).

The Durbin–Watson (DW) statistic is commonly used to assess the presence of serial correlation (Cooksey, 2020). The statistic ranges from 0 to 4, with values near 2 indicating little or no autocorrelation. Values moving toward 4 suggest strong negative autocorrelation. This test statistic ranges from 0 to 4, where values close to 2 (the middle of the range) suggest little to no autocorrelation, and values approaching 4 indicate strong negative autocorrelation (CFI, 2022). DW values between 1.5 and 2.5 are generally interpreted as acceptable, indicating that serial correlation is not a significant concern (Chakraborty & Tsokos, 2021). However, according to Bobbitt (2021), a DW statistic less than 1 or greater than 3 is a clear indication of problematic autocorrelation; therefore, values between 1 and 3 are considered acceptable.

The DW statistic is formally expressed as:

$$d = \frac{\sum_{i=2}^n (e_i - e_{i-1})^2}{\sum_{i=1}^n e_i^2}$$

where:

- $e_i = y_i - \hat{y}_i$ are the residuals
- n = the number of elements or observations in the sample
- d takes on values between 0 and 4

While addressing serial correlation is critical to ensuring the independence of observations, another important diagnostic concern in regression analysis is multicollinearity, which is related to the degree of correlation among independent variables. The following section explores how this issue was identified and addressed in the study.

Multicollinearity

Multicollinearity in multivariate regression occurs when predictor variables show a strong linear relationship with one another. It arises when two or more predictor variables exhibit a high degree of linear correlation. When this assumption is violated, standard errors are inflated, and coefficient estimates lose precision, undermining the reliability of the model (Shrestha, 2020). In this study, multicollinearity was evaluated through a Pearson correlation matrix and by calculating variance inflation factors (VIFs). The VIF indicates the extent to which the variance of an estimator is inflated due to multicollinearity. As a rule of thumb, variables with a VIF exceeding 10 are regarded as highly collinear (Shrestha, 2020).

Outliers

Outliers are extreme data points that deviate substantially from the overall distribution of a variable. They may occur due to errors in data capture or represent genuine but atypical observations. Outliers can distort statistical estimates such as the means and standard deviations, resulting in bias or misleading conclusions (Dash, Behera, Dehuri & Ghosh, 2023).

The sample data's outliers inject bias into statistical estimations such as the mean values, resulting in under- or overestimated final values. Prior to the study of the dataset, which included outliers, dealing with outliers was crucial. This process includes modifying outliers after determining their origin or substituting them with replacement values (Dash et al., 2023).

To address this issue, the dataset was first examined using descriptive statistics, skewness, kurtosis values, and graphical analyses to detect extreme points. Where necessary, a winsorising procedure was applied. Winsorising involves recoding extreme values to less severe, but still valid, thresholds rather than eliminating them entirely. In this study, the lowest 5% of values were recoded to the 5th percentile, and the highest 5% of values were recoded to the 95th percentile. This approach preserves the integrity of the dataset while mitigating the undue influence of extreme observations.

4.8.2.3 Regression Approach followed in this study

The dataset for this study consisted of 61 JSE-listed companies examined over a period of 13 years (2008–2020), creating a panel data structure that combines both cross-sectional, as represented by companies, and time series covering the 2008-2020 dimensions. Panel data consists of observations of multiple companies over time, as illustrated in Figure 4.11. Panel data regression was adopted as the primary statistical method because it allows for control of unobserved company-specific features, takes into consideration repeated observations over a period, reduces potential omitted variable bias and provides more efficient and reliable estimates than the typical cross-sectional or time series regression alone. Data panel regression allows for improved causal influence by considering both individual-specific and time-specific influences.

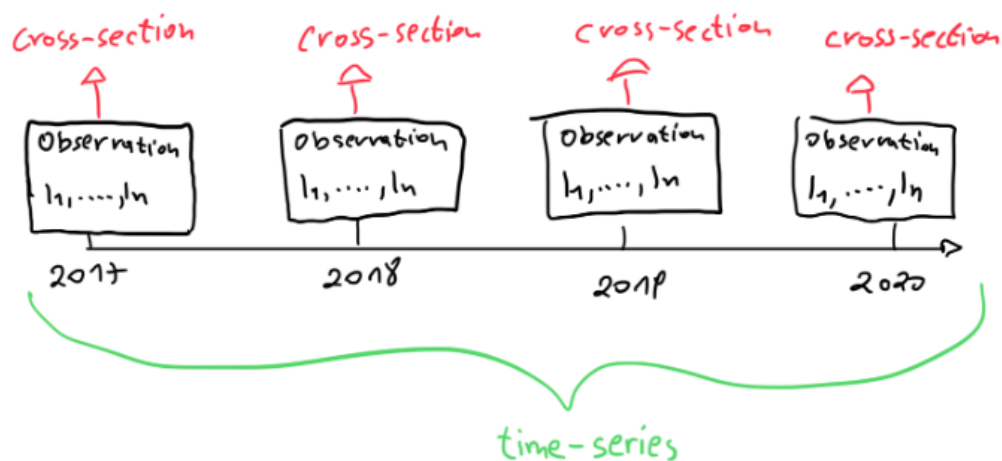


Figure 4.11. Illustration of the Panel Data Design

Source: Brugger (2021)

The initial analysis employed panel least squares regression, i.e., ordinary least squares (OLS) regression, on the panel dataset. The residuals were tested for the presence of autocorrelation using DW statistic and for homoscedasticity for the cross-section (company) and period dimensions. If the results indicated heteroskedasticity and/or serial correlation, appropriate corrections were applied. Furthermore, the Hausman test was applied to assess whether a fixed or random effects model was more appropriate. The resulting fixed or random regression model statistics were assessed using the F statistic and residual diagnostics. If these results are satisfactory, the model(s) will be considered robust, and the results will be interpreted. In cases where this was necessary, estimated generalised least squares (EGLS) with period SUR estimation was applied, as this method adjusts for heteroskedasticity and for general correlation among observations within each cross-section. In addition, white diagonal standard errors and covariance were used as robust techniques for estimating standard errors.

4.8.2.4 Moderation and interaction effects

To gain a comprehensive understanding of the complex relationship between CEO remuneration and company performance, this study examined the influence of a moderating variable as well as interaction terms between explanatory variables. (Naik, 2020). T Moderator or interaction effects may help explain the nature and strength of the relationship between CEO remuneration and company performance.

Although the terms interaction variable and moderator variable are often used interchangeably, their meanings depend on context. Statistically, a moderator can be represented as (Cotter, Schmiede, Moss & Ambroggio, 2024):

$$Y = \beta_0 + \beta_1 X + \beta_2 M + \beta_3 (X \times M) + \varepsilon$$

where:

- Y = Dependent variable
- X = independent variable
- M = moderator variable (company size - MC)
- $X \times M$ = interaction term between X and M
- β_0 = Intercept

- β_3 = regression coefficient, which represents the moderation effect of M on the relationship [between X and Y]
- ε = Error term (captures variation in Y not captured by the predictors)

A statistically significant β_3 indicates that M moderates the relationship between X and Y . The interaction effects impact allows the study to determine whether two or more independent variables jointly influence the outcome in a manner that differs from their individual effects. This is statistically represented as:

$$Y = \beta_0 + \beta_1 X + \beta_2 Z + \beta_3 (X \times Z) + \varepsilon$$

where:

- Y = Dependent variable
- X = independent variable
- Z = independent variable
- $X \times Z$ = interaction term between X and Z ,
- β_0 = Intercept
- β_3 = regression coefficient for $X * Z$, represents the interaction effect of X and Z
- ε = Error term (captures variation in Y not captured by the predictor)

Here, $(X \times Z)$ is the interaction term, where if β_3 is statistically significant, there is an interaction effect.

4.9 VALIDITY AND RELIABILITY

In quantitative research, validity and reliability are essential indicators of research quality and assist in ensuring that findings are accurate, credible and trustworthy by the academic community. Validity is defined as the extent to which a concept is correctly measured in a study on the basis of what it is intended to measure. This ensures that the conclusions drawn are sound, meaningful and applicable to the research content (Nha, 2021). In contrast, reliability is a measure of the consistency or dependability of measured values under consistent conditions using the same instruments (Sürücü & Maslakçı, 2020). High levels of validity and reliability indicate that the findings are stable and dependable and can assist in

making informed decisions on the basis of research findings (Anderson, Boateng & Abos, 2024).

In this study, both validity and reliability were enhanced through careful data selection, multi-source verification and rigorous data cleaning procedures. Specific examples are provided for the content, construct and criterion validity, relating each to the current study.

4.9.1 Validity in the Study

A test or a research instrument is valid if it measures the issue intended to be measured and is referred to as measurement validity (Nha, 2021). The validity of the research is improved by presenting a detailed context description of the phenomenon under investigation for study replication and identifying potential researcher bias. Research typically recognises three main forms of validity, namely, construct, criterion and content validity, which the study aimed to address.

Construct validity indicates the extent to which the variables and measurement tools used in the current study accurately reflect the theoretical constructs or frameworks they are intended to represent (Olmsted, 2024). In this study, construct validity was ensured by aligning the measurement of CEO remuneration and company financial measures with the principles of agency theory, which posits that CEO remuneration should be linked to company performance through performance-based incentives such as STI.

Content validity concerns the extent to which the variables chosen for the research study accurately capture or represent all aspects of the concept being measured (Roebianto et al., 2023).

Criterion validity investigates how well a measurement tool matches other established and validated measures of the same concept (Nickerson, 2023). Without criterion validity, research tools may fail to measure variables reliably or consistently in line with other validated instruments in line with recognised and reputable sources. In this study, criterion validity was supported by verifying data across three independent and reputable sources (McGregor BFA, Profile Group, and audited company annual reports). Additionally, a statistician reviewed the structure and consistency of the dataset, enhancing the reliability of the data used for analysis. Criterion validity is the appropriate validity to use in this study. Criterion validity was assessed by examining the relationship between CEO remuneration and company performance

indicators. A statistically significant association would provide evidence that remuneration align with company performance, consistent with agency theory.

4.9.2 Reliability in the Study

Reliability is important to researchers, as it establishes the authenticity and credibility of quantitative research. Reliability rests on the extent to which a measure remains consistent and stable over time, independent of the researcher or the sample being examined (Adeyemi, 2024). This enables the mitigation of errors in results and facilitates replication and generalisability of findings across a population. For the current study, reliability was supported by the use of standard definitions, structured data collection methods and multiple data sources. CEO remuneration and company performance variables were collected using a consistent process and verified for accuracy. Nha (2021) suggested that to enhance reliability, techniques that can be used may involve triangulation, by which different sources of data are used for cross-checking. Triangulation may entail the use of various approaches for data collection, such as questionnaires, interviews and focus groups. Another triangulation method could involve environmental triangulation, where data are collected at different places, or investigator triangulation, where different investigators collect and analyse data (Nha, 2021). Theory triangulation involves the use of various theories to investigate the problem under investigation. Another method of reliability is an audit trail, wherein independent individuals can authenticate the findings of a study through following the researcher's research trail, highlighting the need to provide an extensive account of the research process. An investigator's position requires self-reflection by the researcher, noting their potential areas of biases and assumptions about the research being undertaken (Nha, 2021).

The attributes observed in this study included the following:

- Internal consistency (homogeneity) – the same variables and definitions were applied consistently across all companies and sectors.
- Stability - the study data from 2008 to 2020, year-on-year data, allowed for repeated observations of the same variables, enabling internal checks of trends and anomalies.
- Equivalence – Data were cross-validated using multiple sources and reviewed by a statistician for consistency and structure.

By ensuring validity and reliability, the study strengthens the integrity of the statistical analysis and supports the generalisability of the findings across the JSE-listed company population. In addition to the methodological rigour, the study also upheld ethical standards, which are important in maintaining accountability, academic integrity and transparency. The following section outlines the ethical considerations observed during the research process.

4.10 ETHICAL CONSIDERATION

Ethical codes of conduct guide researcher behaviour and professional practice, covering concerns that may surface during research (Mirza, Bellalem & Mirza, 2023). Observing ethical behaviour in research, even in quantitative, secondary data-based research, requires careful consideration of several factors. Determining what constitutes appropriate behaviour, a standard of conduct, and objectives is crucial for every research project. Those in charge of research have a fundamental responsibility to operate in a way that is ethically, methodologically, and academically sound (Kaiser, 2019). Kaiser (2019) observed that it is often assumed that the formal standards and structured procedures associated with quantitative research ensure its academic and ethical legitimacy. However, even within quantitative approaches, opportunities for misconduct still exist. Researchers may fabricate or manipulate data, alter results, or omit unfavourable findings, all of which can compromise the integrity of the research. To address this, the researcher took deliberate steps to uphold ethical standards throughout the research process.

In some research instances, participants or authorised persons must be thoroughly informed of the study's requirements, the intended use of the data, and any potential negative effects (Mirza, et al., 2023). Informed consent is primarily relevant when research involves direct interaction with research participants or the collection of sensitive information. Since this study did not involve human participants or public or confidential data, informed consent was not applicable.

To promote data integrity and accuracy, the researcher reviewed the data and cross-checked it against multiple sources (audited annual reports of JSE-listed companies, the McGregor BFA database, and Profile Group). Any missing data were not replaced by other values and were marked as missing to avoid introducing bias into the analysis. Where inconsistencies were found, verification was conducted, and the annual audited reports were deemed to be the

correct documents. The importance of ethical considerations lies in enhancing research validity, maintaining scientific integrity, and facilitating collaboration within the research community.

The research also followed the University of South Africa protocols for ethical approval. Ethical clearance was obtained from the University of South Africa under (Ref #: 2017_HRM_013DAM) and is attached as Annexure A.

4.11 CHAPTER SUMMARY

This chapter outlined the research methodology utilised for this study, guided by the research “onion” framework as a systematic approach. A panel data analysis was employed using data from 61 JSE-listed companies covering the period from 2008 to 2020.

The positivist research philosophy was utilised in this study, supporting a quantitative, evidence-based inquiry. To contextualise the study around the relationship between CEO remuneration and company performance measures, other relevant prior studies were discussed, particularly within the South African context. The chapter further outlined the study’s target population, company performance variables (EPS, MC, net profit, ROA, and RSF), and CEO remuneration variables (fixed pay, STI, and total remuneration). Additionally, the data sources were identified, and the rationale for selecting each variable was explained.

The next chapter presents the statistical analysis and interprets the results in relation to the research objectives and hypotheses.

CHAPTER 5: RESEARCH RESULTS

5.1 INTRODUCTION

This research aimed to evaluate whether there was a relationship between CEO remuneration and company performance measures within JSE companies from 2008 to 2020. The remuneration variables considered for the study were fixed pay, short-term incentives (STI) and total remuneration. The research focused on earnings per share (EPS), market capitalisation (MC), net profit, return on assets (ROA), return on shareholders' funds (RSF) and turnover (control variable). This chapter reports the results and findings of the analysis conducted to answer the research question, as reiterated in Chapter 1, Section 1, and Chapter 4, Section 4.2.2. To analyse the collected data, the researcher utilised two main branches of statistics: descriptive and inferential.

This chapter begins with a descriptive statistical analysis that provides insight into the data distribution and ensures that any data issues are addressed before commencing the inferential analyses. This is followed by a discussion of the process, then a multiple regression analysis to address the research objectives. The discussion then centres on the findings, using descriptive and multiple linear regression analyses. Finally, the chapter provides an overview of the research findings.

5.2 OVERVIEW OF JSE COMPANIES

This section provides an overview of the JSE-listed companies included in the study. The dataset comprises both time series data from 2008 to 2020 and cross-sectional data from a sample of 61 companies. Chapter 4 (Table 4.3) provides a detailed breakdown of the number of companies per industry sector represented in the study.

5.3 DESCRIPTIVE STATISTICS OF COMPANY PERFORMANCE MEASURES (WINSORISED) PER ANNUM

The descriptive statistics for the research variables included the mean, median, standard deviation, minimum, maximum, 95% and 5% percentiles, as well as the skewness and kurtosis, as discussed in Section 4.8.1 of Chapter 4.

5.3.1 Overall descriptive statistics of Company Performance Measures for the period 2008 to 2020

The study utilised five measures of company performance – EPS, MC, net profit, ROA, RSF and turnover – which were included as control variables. Descriptive statistics were computed to examine patterns across the 13 years of the study. High skewness and kurtosis values in the company performance data indicate potential outliers. These were addressed through winsorisation at the 5th and 95th percentiles, a statistical technique that reduces the influence of outliers by applying thresholds to increase the statistical efficiency and robustness of inference (Abiodun, Matovu & Olanrewaju, 2022). Specifically, the top 5% values were replaced with the 95th percentile value, and the bottom 5% values were replaced with the 5th percentile value. Table 5.1 presents the overall descriptive statistics, with the median used to discuss the analysis findings. Data from Peregrine (2020), PSV (2020) and Unicorn Holdings (2019 and 2020) were partially missing, resulting in 841 cases.

Remuneration and rand-denominated company accounting performance figures are presented in whole rands, with decimal values (cents) removed. In contrast, financial ratios and company performance measures, such as EPS, ROA, and RSF, retain decimals for meaningful precision. For instance, a value of 0.25 is presented as 0.25 rather than 0. Turnover, as a control variable, is reported in whole Rands.

Table 5.1: Descriptive statistics of company performance measures for the period 2008 to 2020 (before winsorisation)

	EPS	MC Rand	RSF	ROA	Profit Rand	*Turnover Rand
Mean	895.70	193 360 550	10.88	8.81	2 245 412	24 562 621
Median	154.50	6 749 943	12.19	7.62	342 327	5 195 185
SD	7 288.13	91 9142 942	78.26	16.66	9 118 220	53 848 818
Skewness	0.33	7.51	-11.21	0.58	0.20	4.26
Kurtosis	52.82	63.96	340	11.81	40.70	23.27
Minimum	-85 798	11 925	-175	-79.12	-24 558	-245 580
Maximum	61 483.15	10 760 042 792	916	148	66 240 141	508 804 520

*Turnover is included as a control variable in the regression analysis.

Source: Researcher's own

The mean is useful as a measure of central tendency because changes in any score affect the mean (Spilotro, 2022). However, the median may be preferable to the mean when the data are skewed and contain potential outliers. The mean loses its ability to provide the best central measure of the data. The standard deviation indicates the spread of the data around the mean. As shown in Table 5.1, the median EPS in South Africa was 154.50, the mean was 895.70, and the maximum was 61,483.15. The EPS was skewed positively (mean greater than median). The median RSF was 12.19, the mean was 10.88, and the maximum was 916.27. The RSF had a negatively skewed distribution. The median ROA was 7.62, the mean was 8.81, and the maximum was 147.82. The median MC was R6 749 943, and the mean was R193 360 550; the maximum was R10 760 042 792. The difference between the mean and median of MC suggests a large distribution of companies in terms of size. The net profit mean was R2 245 412, the median was R342 327, the minimum was -R24 558, and the maximum was R66 240 141. The negative minimum EPS -R85 798, RSF -1 746.77, ROA -79.12 and net profit -R24 558 may indicate that shareholders are losing rather than gaining value. Table

5.2 provides descriptive statistics following the winsorisation process. The values for each company performance measure reflect the application of winsorisation.

Table 5.2: Descriptive statistics (winsorised) – measures of central tendency for company performance variables for the 13-year period

	EPS	MC Rand	RSF	ROA	Profit Rand	*Turnover Rand
Mean	560.75	72 653 336	11.16	8.82	1 944 107	20 057 552
Median	154.50	6 749 943	12.19	7.62	342 327	5 191 393
SD	1 083.46	187 074 898	17.07	11.06	4 274 959	33 792 266
Skewness	2.26	3.42	-0.42	0.25	2.60	2.21
Kurtosis	4.56	10.67	0.65	0.19	5.53	3.89
Minimum	-528.98	66 454	30.80	-14.09	-791 071	70 903
Maximum	4 151.73	823 918 285	44.64	33.62	16 378 000	127 393 480

*Turnover is included as a control variable in the regression analysis

Source: Researcher's own

As shown in Table 5.2, the median EPS in South Africa was 154.50, the mean EPS was 560.75, and the maximum EPS was 4 151.73. The median RSF was 12.19, the mean was 11.16, and the maximum was 44.64. The median ROA was 7.62, the mean was 8.82, and the maximum was 33.62, indicating that most companies generated relatively modest ROA. The EPS and ROA data were positively skewed, suggesting that while most companies reported lower EPS and ROA values, a few companies reported exceptionally high performance levels that pulled the mean above the median. RSF had a negatively skewed distribution, suggesting that most companies reported relatively higher RSF, while a few reported lower RSF, pulling the mean below the median. The median MC was R6 749 943, the mean was R72 653 336, and the maximum was R823 918 285. The variation in MC across these values indicates substantial differences in company size. The net profit mean was R1 944 107, the median was R342 327, the minimum was -R791 071, and the maximum was R16 378 000. A negative minimum EPS of -R528.98, ROA of -R14.09 and net profit of -R791 071 may indicate that shareholders are losing, rather than gaining, value. The median net profit was 342 327, the

mean was R1 944 107, and the maximum was R16 378 000. The minimum net profit was -R791 071. The minimum profit of -R791 071 denoted the net loss over a specific period.

5.3.2 Descriptive Statistics of Company Performance Measures (Winsorised) Per Annum

The overall descriptive analysis presented in the previous section provides a summarised view of the 13-year period. However, they do not reveal how company performance indicators fluctuate from one year to the next. To address this gap, this section presents year-to-year changes in the company performance measures, thereby highlighting trends and patterns not visible in the overall descriptive analysis.

Table 5.3 presents the median annual company performance values from 2008 to 2020, whereas Table 5.4 presents the corresponding mean annual company performance values. Both tables are included to offer a comprehensive view of the data distribution. The median values provide a robust measure of central tendency for skewed data, whereas the mean values offer additional insight into the average annual performance.

Table 5.3: Median annual company performance measures

Year	EPS WINS	ROA WINS	MC WINS	RSF WINS	PROFIT WINS	*TURNOVER WINS
2008	183	12	4 169 518	20	315 428	3 150 738
2009	76	8	3 371 991	12	145 593	2 844 492
2010	172	8	4 656 173	14	303 537	3 423 219
2011	181	9	6 296 380	15	338 000	4 453 567
2012	150	8	6 784 900	13	346 099	4 625 551
2013	193	8	8 459 044	13	318 568	5 195 185
2014	189	8	8 206 646	13	372 000	5 714 064
2015	148	7	8 414 866	11	346 695	6 035 104
2016	232	8	8 239 430	11	486 418	5 893 671
2017	204	7	9 612 274	10	499 669	6 382 814
2018	198	6	8 485 620	11	424 842	6 405 316
2019	155	6	8 121 841	9	409 000	8 519 142
2020	33	3	6 263 155	5	29 366	7 492 000

*Turnover is included as a control variable in the regression analysis

Source: Researcher's own

Table 5.4: Mean annual company performance measures

Year	EPS WINS	ROA WINS	MC WINS	RSF WINS	PROFIT WINS	*TURNOVER WINS
2008	182.83	12.31	4 169 518	19.98	315 428	3 150 738
2009	75.78	8.26	3 371 991	12.04	145 593	2 844 492
2010	171.64	8.16	4 656 173	13.68	303 537	3 423 219
2011	180.60	8.63	6 296 380	14.64	338 000	4 453 567
2012	150.36	7.86	6 784 900	13.10	346 099	4 625 551
2013	192.51	8.12	8 459 044	12.97	318 568	5 195 185
2014	188.78	7.56	8 206 646	13.48	372 000	5 714 064
2015	148.00	6.92	8 414 866	11.31	346 695	6 035 104
2016	231.95	7.65	8 239 430	11.29	486 418	5 893 671
2017	203.65	7.48	9 612 274	10.38	499 669	6 382 814
2018	198.30	6.46	8 485 620	10.71	424 842	6 405 316
2019	154.52	6.24	8 121 841	9.30	409 000	8 519 142
2020	32.90	3.28	6 263 155	4.92	29 366	7 492 000

*Turnover is included as a control variable in the regression analysis

Source: Researcher's own

5.3.2.1 Purpose of annual analysis

This section analyses each component of the company performance measures on a year-to-year basis, using the median values as the primary reference points. The median is preferred because it is less sensitive to outliers and extreme values, making it a more reliable indicator of the central trend in skewed datasets (Tenny & Hoffman, 2022). Skewed data are any dataset that contains one or more outliers or values at either the extremely high or extremely low end of the dataset (Tenny & Hoffman, 2022). Although the dataset used in this study has been winsorised, which reduces the influence of extreme values at both ends of the distribution,

some differences between the mean and median may still remain. The skewness is not eliminated by winsorisation; therefore, the median continues to provide a useful and conservative summary measure for describing the annual variation in company accounting performance.

5.3.2.2 Earnings per share

Earnings per share (EPS) is regarded as a significant indicator of risk, company performance, and corporate success. The importance of the EPS lies in its ability to forecast potential growth in future share prices, as changes in the EPS are frequently reflected in share price performance (Paff, 2021). EPS is therefore an indicator of corporate value and profitability per share. The median EPS for the period 2008 to 2020 fluctuated from a low R32.90 (2020) to a high R231.95 (2016). The largest negative percentage decline in EPS was 79% between 2019 and 2020. The decline in EPS may be due to the COVID-19 pandemic. A UNDP (2020) reported that the sectors most adversely affected by the COVID-19 pandemic include textiles, education services, food and accommodation, tourism, beverages, tobacco, glass products and footwear.

Generally, EPS is a good gauge of whether a company is considered profitable, with a higher EPS signalling greater investment appeal. A downwards trend indicates a negative perception of the company. The primary purpose of an EPS is to apprise investors and potential investors of an entity's activities, profitability, and financial position for a specific period (Robbetze, Villiers & Harmse, 2017). Figure 5.1 shows the fluctuations in EPS from 2008 to 2020 and the percentage change, highlighting yearly movements. Notably, since 2017, the EPS has sharply declined, plummeting from R203,65 to R32.90.

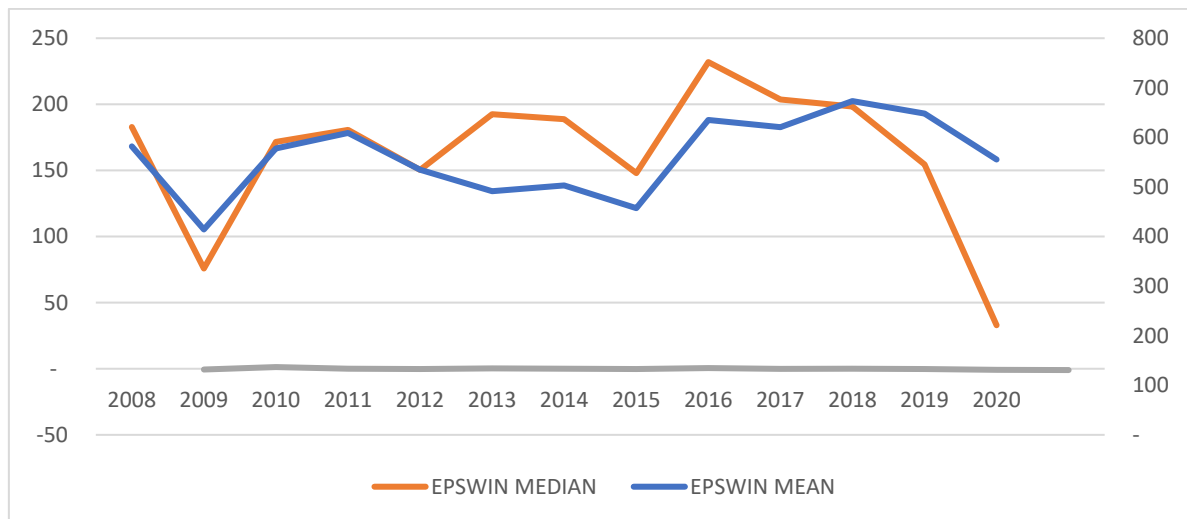


Figure 5.1: Median Earnings Per Share

Source: Researcher's Own

5.3.2.3 Return on assets

The return on assets (ROA) financial ratio indicates the profitability of a company in relation to its total assets and is evidence of the company's efficiency in using its assets to generate profits (Hargrave, James & Eichler, 2022). The ROA is noted as a percentage. The higher the ROA is, the better the company uses its assets to generate profits. Figure 5.2 illustrates the median and percentage changes in ROA over the period.

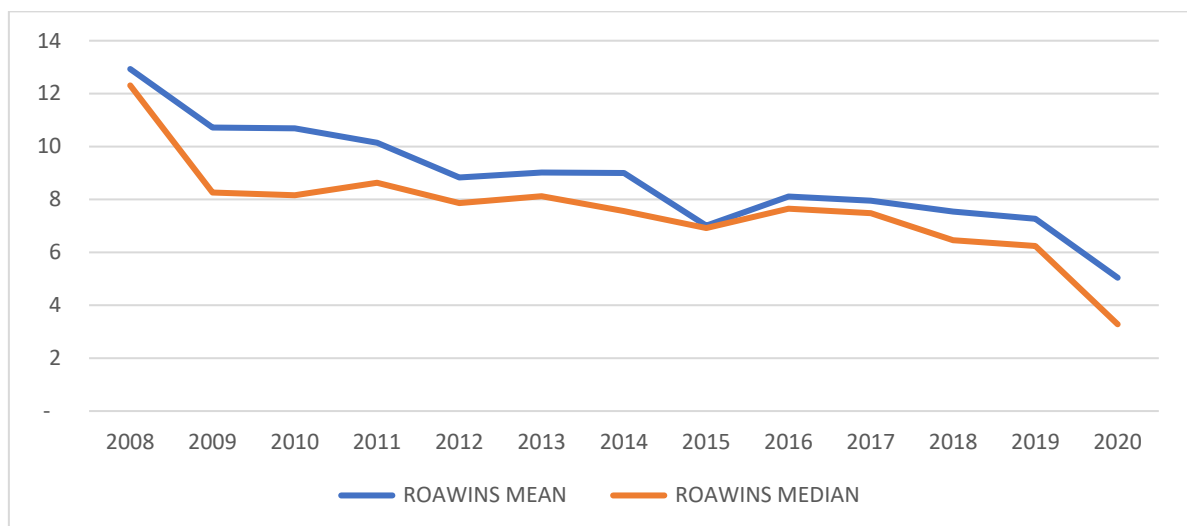


Figure 5.2: Median Return on Assets

Source: Researcher's Own

Figure 5.2 clearly shows that the median ROA in 2008 was the highest of the period, at 12.31 (2008), and the lowest, at 3.28, occurred in 2020. The highest median percentage decrease was 47% from 2019 to 2020. The ROA of shareholders and investors should be analysed and compared across periods to assess a company's performance. With the year-on-year decline in ROA, it can be concluded that JSE companies' ability to utilise their assets to generate profits was less favourable.

5.3.2.4 Market capitalisation

Market capitalisation (MC) represents the total rand worth of all companies' outstanding shares. Since a company is represented by X number of shares, multiplying X by the per share price represents the total rand value of the company (JSE, 2022). MC is useful in determining the relative size of an organisation in comparison to another. Figure 5.3 illustrates the median MC for the period 2008 to 2020.

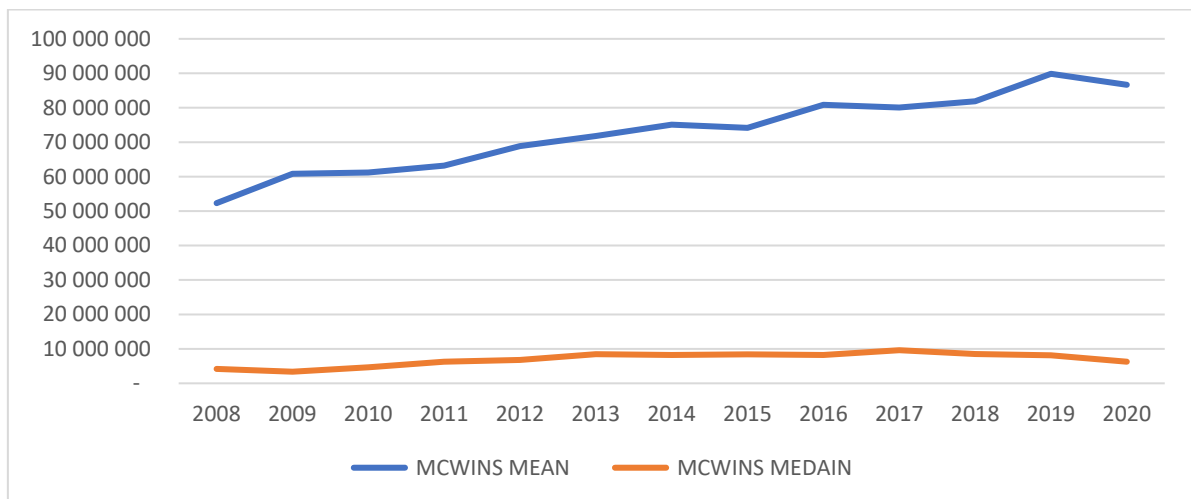


Figure 5.3: Market Capitalisation

Source: Researcher's Own

As shown in Figure 5.3, the MC median for 2008 was R4 169 518, with the highest median MC in 2017 occurring at R9 612 274, alongside declines in 2013 (-3%), 2017 (-12%), 2019 (-23%) and 2020 (-100%), indicating an overall volatile trend between 2008 and 2020. This trend indicates a variation in valuations among smaller and middle-sized companies over the 13-year study period. The sluggish growth between 2010 and 2015 mirrors the economic slowdown in South Africa. There was a 38% increase in the median MC from 2009 to 2010.

This gradual improvement coincides with the post-financial global financial crisis recovery and periods of economic growth in South Africa. The median largest MC decrease occurred between 2019 and 2020, with a -23% decline. This may be attributed to the COVID-19 pandemic.

5.3.2.5 *Return on shareholders' funds*

Fatai, Akpa, and Egwakhe (2020) define returns to shareholders as the overall gains or benefits earned by investors from their investment activities. A company with declining fortunes may rapidly lose shareholders through stock dumping, which invariably drives down its market capitalisation, leading to negative consequences such as share price losses and difficulty attracting new investors (Fatai, Akpa & Egwakhe, 2020). The median RSF is illustrated in Figure 5.4.

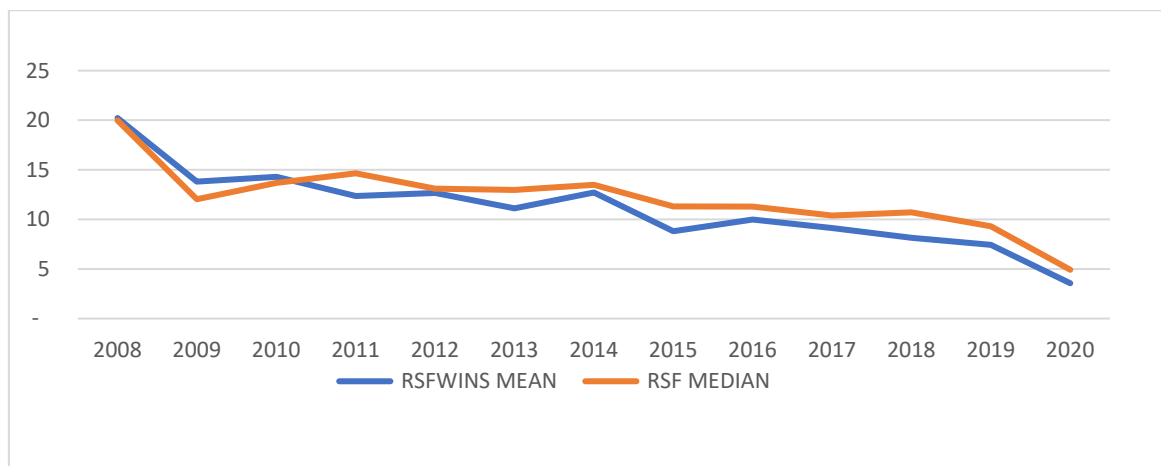


Figure 5.4: Median Return on Shareholders' Funds

Source: Researcher's Own

Figure 5.4 indicates that the median RSF declined in 2008 from 19.98 to 4.92 in 2020. The median RSF experienced a negligible 1% reduction during the 2012–2013 period. The largest median RSF decrease, -47%, was observed in 2019/2020, which could be attributable to the COVID-19 crisis. In 2008/2009, a median RSF decrease of 40% was observed. This decline could be attributed to the global financial crisis of 2007/2008. The highest increase (14%) was recorded for the 2009/2010 period, in line with the post-global financial crisis recovery period. Overall, the RSF median exhibited substantial variability, with changes ranging from -100% to +14%. The negative RSF dominated over the research period, indicating periods where RSF

declined significantly. Smaller marginal growth than declines were noted, suggesting sluggish recoveries, although these are smaller than the declines in RSF.

5.3.2.6 Net Profit (expressed in R'000)

The net profit reflects how much of each rand of sales remains after total expenses are subtracted. Profit growth in a company can indicate that the CEO has been successful in managing the company's resources effectively and efficiently (Nariswari & Nugraha, 2020). Figure 5.5 reflects the profit for the period 2008 to 2020.

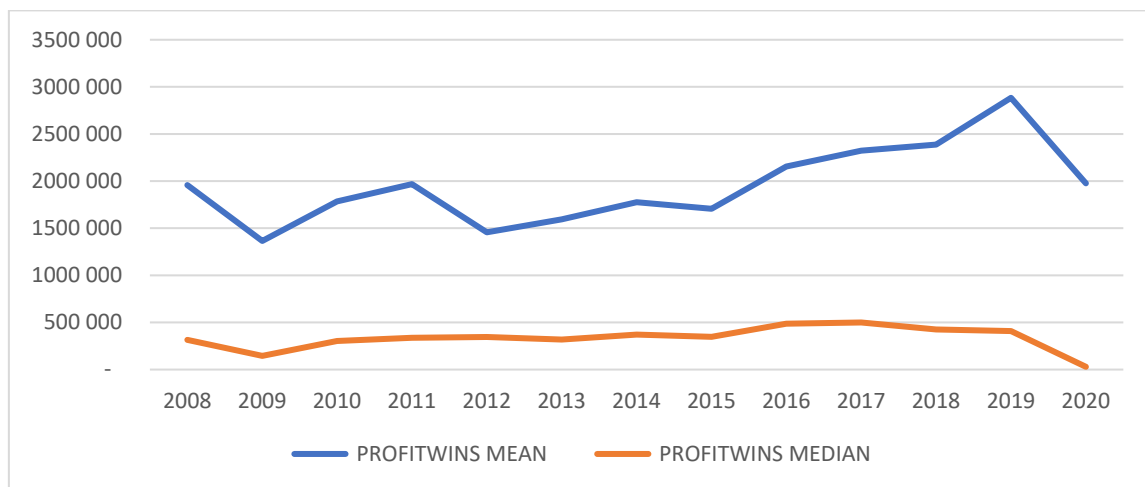


Figure 5.5: Median Profit

Source: Researcher's Own

Figure 5.5 shows that the median profit decreased from R315 428 in 2008 to R29 366 in 2020. The highest median increase of 108% was in 2009–2010. The largest growth in net profit was in 2009/2010, following a large decline of 54% in 2008/2009. A 40% increase was experienced in 2015/2016. The overall increase in profit in 2017 was attributed mainly to higher turnover, greater gains from asset sales and reduced losses from asset revaluations. The highest median profit was also observed in 2017. South African businesses increased their net profit before tax by 49% in the 2017 fiscal year (Stats SA, 2018). The mining industry was the most responsible for this increase. In the mining sector, the mining of metal ores, coal and lignite, gold, and uranium ore subgroups contributed to this increase (Stats SA, 2021). The largest median decrease of -93% occurred in 2019–2020. According to Statistics South Africa (2021), seven of the nine industries covered by the survey reported lower profits in 2020 than in 2019 due to the national lockdown.

5.4 DESCRIPTIVE STATISTICS – CEO REMUNERATION MEASURES

This section provides an overview of the descriptive statistics of the CEO remuneration measures, mainly fixed pay, STI and total remuneration, from 2008 to 2020 for the JSE companies included in the study.

5.4.1 Overall Period– CEO Remuneration Measures

The descriptive statistics discussion will centre around the mean, median, minimum, and maximum remuneration, skewness and kurtosis for the study period. The numbers shown below depict the actual numbers.

Table 5.5: Descriptive statistics – measures of central tendency for remuneration variables (pre-winsorised figures)

	Fixed Pay	STI	Total package
Mean	6 072 373	3 244 540	9 202 858
Median	3 596 000	1 634 816	5 639 200
SD	20 956 882	4 960 046	22 110 441
Skewness	23,91	3,60	20,26
Kurtosis	635,93	19,41	502,14
Minimum	236 524	0	236 524
Maximum	569 140 000	47 785 256	569 140 000

Source: Researcher's own

The fixed package median for CEO remuneration for the period 2008 to 2020 was R3 596 000, with a maximum fixed pay of R569 140 000 and a minimum of R236 524. The median STI for the 13-year period was R1 634 816, and the mean was R3 244 540. The highest STI in the 13-year period was R47 785 256, with a minimum STI of R0. The zero-rand STIs can be a result of no bonuses being paid or that these were not revealed distinctly but incorporated in the total remuneration. When the data were missing, they were captured as missing and not captured as a zero-rand value. The median total remuneration over the 13-year period was R5 639 200, and the mean was R9 202 858. The maximum total remuneration observed in the 13-year period was R569 140 000, with a minimum of R236 524. The median of all the CEO

remuneration measures was lower than the mean over the study period. This indicated that the data were skewed to the right. Table 5.5 indicates that fixed pay and total package were highly skewed to the right compared with STI, which was slightly skewed. The skewness to the right indicates that there are remuneration values in the dataset that are much greater than the median. These higher values increase the mean and skew the distribution in a positive direction (Wilson & Boddie, 2021).

The high skewness and kurtosis values displayed in the remuneration data indicate potential outliers. The data were subsequently investigated, and a choice was made to winsorise the data at the 5% and 95% percentiles. The data are presented in Table 5.6 below.

Table 5.6: Descriptive statistics -measures of central tendency for remuneration variables (winsorised)

	Fixed pay wins	STI wins	Total package wins
Mean	4 757 573	2 844 529	7 609 357
Median	3 596 000	16 348 160	5 639 200
SD	3 621 850	3 319 215	6 012 613
Skewness	1.51	1.23	1.21
Kurtosis	1.83	0.62	0.73
Minimum	967 699	0.00	11 115 000
Maximum	15 396 867	115 000 000	23 497 750

Source: Researcher's own

The fixed package median for CEO remuneration for the period 2008 to 2020 was R3 596 000, with a maximum fixed pay of R15 396 867 and a minimum of R967 699. The median STI for the 13-year period was R1 634 816, and the mean was R2 844 529. The highest STI in the 13-year period was R11 500 000, with a minimum STI of R0. The median total remuneration over the 13-year period was R5 639 200, and the mean was R7 609 357. The maximum total remuneration in the 13-year period was R23 497 750, with a minimum of R1 111 500. The difference between fixed pay and total remuneration might be due to the different industries included in the study.

5.4.2 Descriptive Statistics – Fixed Pay Annual Analysis

The fixed pay over the study period from 2008 to 2020 was analysed on an annual basis. As discussed earlier, the remuneration philosophy of remuneration committees around awarding fixed pay for CEOs was noted as determined by benchmarking against comparator companies. The rationale for the fixed pay awarded was to ensure that companies attracted and retained key talent within their organisations. The discussion will illustrate the mean and median fixed pay but will only elaborate and discuss the median measure of central tendency. The fixed pay median in 2008 was R2 245 000 and steadily increased to R6 238 000 in 2020 (Table 5.7). The average annual increase in median fixed pay was 14.8% over the period 2008 to 2020. To maintain the competitiveness of remuneration, it was expected that fixed pay would increase year by year. According to Cabezon (2024), a number of factors, including the industry type, the company's size and complexity, the CEO's years of service, and expertise, may influence the packages available to different executives. Overall, increases in the median fixed pay year-on-year were noted. The highest increase of 16.7% is noted from 2011 to 2012. Figure 5.6 illustrates the fluctuation in fixed pay for the period 2008 to 2020.

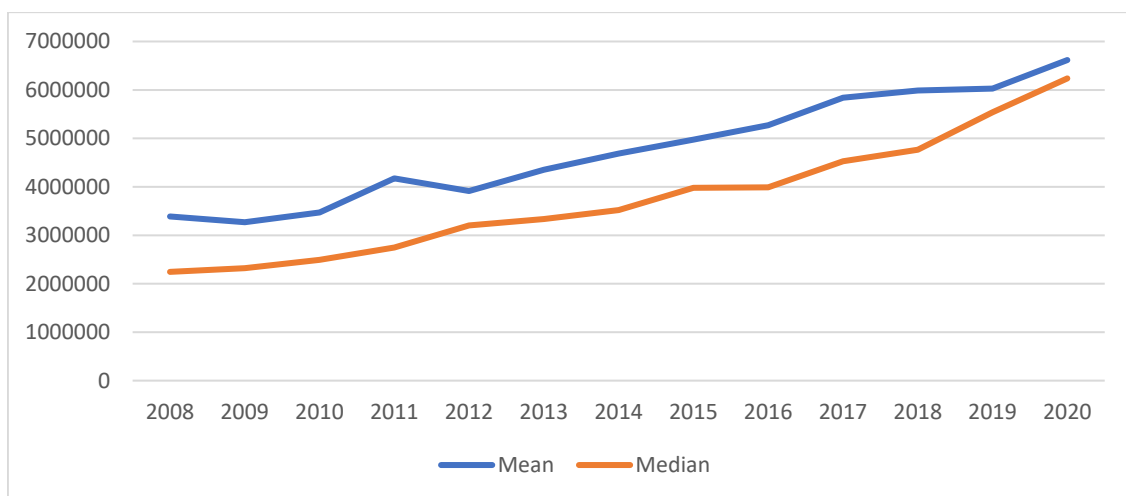


Figure 5.6: Fluctuation in fixed pay for the period 2008 to 2020

Source: Researcher's Own

Table 5.7: Descriptive statistics – fixed pay

Year	Mean	Median	SD
2008	3 388 640	2 245 000	3 254 958
2009	3 269 780	2 321 000	2 787 340
2010	3 472 293	2 493 000	3 068 705
2011	4 174 005	2 748 000	3 885 923
2012	3 913 454	3 203 500	3 152 396
2013	4 354 625	3 337 000	3 413 989
2014	4 687 758	3 519 000	3 404 742
2015	4 973 990	3 980 000	3 492 733
2016	5 271 771	3 990 300	3 886 411
2017	5 838 709	4 527 744	3 881 116
2018	5 987 312	4 767 000	3 611 397
2019	6 029 154	5 537 743	3 608 398
2020	6 617 068	6 238 000	3 697 514

Source: Researcher's own

5.4.3 Descriptive statistics – short-term incentive annual analysis

The short-term (STI) incentive paid to CEOs is to incentivise work output and create value for the company and society's shareholders (Kolb, 2012). For at least a few decades, this has been the source of much public outrage and scholarly debate, although the issue appears to have become more salient in recent years (Sandberg & Andersson, 2022).

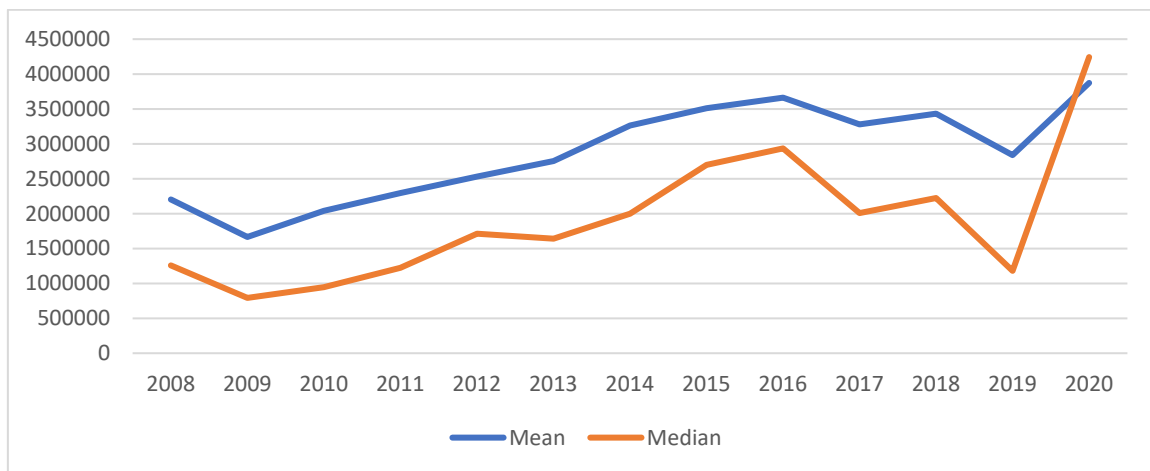
Table 5.8 shows the descriptive statistics of the STI. The median STI for 2008 was R1 258 500, which increased to R4 243 000 in 2020. The average annual increase, based on the median STI, was 19.8% from 2008 to 2020. However, it should be noted that in some instances, STIs are not guaranteed pay, and in some companies, they may not have been paid to the CEO during that year. In some years, no STIs were paid to the CEO, and this, owing to the volatility of this measure, had a bearing on the statistical analysis. The largest percentage increase in the STI awarded was in 2019/2020 (260%), and the largest decrease was in 2018/2019 (-47%).

Table 5.8: Descriptive Statistics – STI

Year	Mean	Median	SD
2008	2 203 774	1 258 500	2 807 329
2009	1 665 647	792 690	2 141 361
2010	2 040 166	946 000	2 464 081
2011	2 294 065	1 224 500	2 739 692
2012	2 530 521	1 711 500	3 033 190
2013	2 752 622	1 641 000	3 396 988
2014	3 262 398	2 000 000	3 631 508
2015	3 510 059	2 697 499	3 756 847
2016	3 662 255	2 935 500	3 492 695
2017	3 279 090	2 008 258	3 737 064
2018	3 433 290	2 224 000	3 880 823
2019	2 837 564	1 179 450	3 539 756
2020	3 872 868	4 243 000	3 485 928

Source: Researcher's own

Figure 5.7 depicts the annual STI analysis for the period from 2008 to 2020. Evident from this figure is the largest percentage STI, 29%, that was awarded in 2011.

**Figure 5.7: STI Annual Analysis for 2008–2020**

Source: Researcher's Own

5.4.4 Descriptive Statistics: Total Remuneration Annual Analysis

The total remuneration was the amount that was payable to the CEO during a year. As shown in Table 5.9, the median total remuneration in 2008 was R3 710 000, increasing to R8 066 000

in 2020. The average annual increase, based on the median total remuneration, was 9.8% from 2008 to 2020. The highest percentage increase occurred in 2014/2015, at 18.3%. The classic and often quoted “ideal CEO-to-average worker ratio” is 20:1 (or 25:1), as advocated by Peter Drucker. According to the Remuneration Report of the PwC (2020), in South Africa, for lower-level employees, the National Minimum Wage (NMW) is used as the benchmark for comparison with CEO salaries. Compared with the NMW, which considers only other potentially relevant factors, such as whether the NMW should be the ideal comparator, the claims that CEO remuneration is excessive seem justifiable.

Table 5.9: Descriptive statistics – total remuneration annual analysis

Year	Mean	Median	SD
2008	5 442 329	3 710 000.	4 894 379
2009	5 061 899	3 718 400	4 649 227
2010	5 524 186	4 112 000	5 014 753
2011	6 758 577	4 679 000	6 232 219
2012	6 434 494	4 690 500	5 470 993
2013	6 984 122	5 322 000	5 630 380
2014	7 903 126	6 288 000	5 863 563
2015	8 404 153	7 440 000	6 269 734
2016	8 931 807	8 145 000	6 398 259
2017	9 158 008	7 781 000	6 588 389
2018	9 700 815	8 664 745	6 500 931
2019	9 001 195	8 477 797	5 717 552
2020	9 328 328	8 066 000	6 019 170

Source: Researcher’s own

Figure 5.8 clearly shows negative growth in the median total remuneration for 2017 and 2019, with growth rates of -4% and -2%, respectively. This may have been affected by the decreased STI pay in those years and possibly affected by the impact of COVID-19.

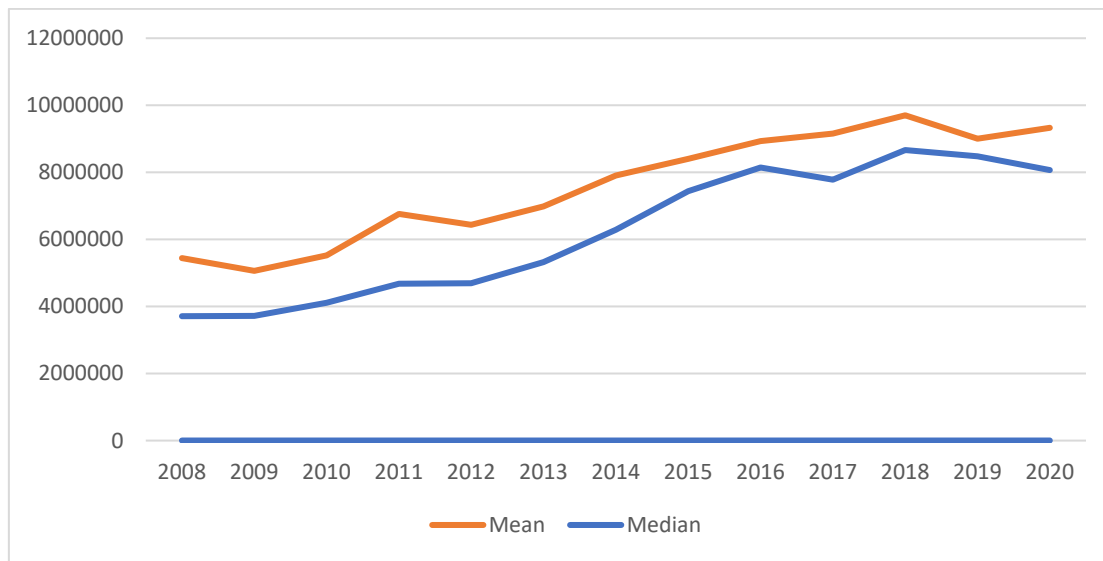


Figure 5.8: Total remuneration annual analysis for 2008–2020

Source: Researcher's Own

Figure 5.8 shows negative growth in the median total remuneration for the years 2018/2019 and 2019/2020, at -2% and -5%, respectively. This may have been affected by the decrease in STI pay during those years. According to the World Bank (2018), although South Africa was recovering from difficulties in 2015 and 2016, this marked the end of the super-commodity cycle and severe drought. South Africa's limited growth prospects were a constraint, which may have affected the awarding of STI payments to CEOs.

5.5 INFERENCE STATISTICS

Building upon the descriptive analysis, the next stage of the research involved inferential statistical techniques to test the stated research questions in Chapter 1, Section 1.6 and Chapter 4, Section 4.2.1 and hypotheses as noted in Chapter 1, Section 1.7.2 and Chapter 4, Section 4.2.2. Inferential statistics enable generalisation beyond the observed sample by estimating relationships between variables and assessing their statistical significance. To draw inferences about the larger population of JSE-listed companies, various panel data regression models were employed to determine whether a relationship exists between CEO remuneration components and company performance from 2008 to 2020.

The dependent variables in the regression models comprised CEO remuneration components, namely fixed pay, STIs, and the operationalised measure of total remuneration, expressed in

rand values. Consistent with the study's scope, LTIs were excluded from the empirical analysis.

This section presents the results of regression analyses in relation to the research questions. As the sub-questions were outlined previously (Chapter 1, Section 1.6, and Chapter 4, Section 4.2.2), only the main research questions are presented below. However, the statistical results pertaining to the sub-questions are discussed in the subsequent analysis.

Research question 1:

What is the relationship between CEO fixed pay and the company accounting performance of publicly listed companies on the JSE for the period 2008 to 2020?

Research question 2:

What is the relationship between CEO STI and the company accounting performance of publicly listed companies on the JSE for the period 2008 to 2020?

Research question 3:

What is the relationship between CEO total remuneration and the company accounting performance of publicly listed companies on the JSE for the period 2008 to 2020?

Research question 4:

How does the interaction effect of company accounting performance measures (EPS and net profit) influence CEO remuneration in JSE-listed companies from 2008 to 2020?

Research question 5:

How does the interaction effect of company accounting performance measures (EPS and ROA) influence CEO remuneration in JSE-listed companies from 2008 to 2020?

Research question 6:

How does the interaction effect of company accounting performance measures (EPS and RSF) influence CEO remuneration in JSE-listed companies from 2008 to 2020?

Research question 7:

How does the interaction effect of company accounting performance measures (RSF and net profit) influence CEO remuneration in JSE-listed companies from 2008 to 2020?

Research question 8:

How does company size, as measured by MC, moderate the relationship between net profit and CEO remuneration in publicly listed companies on the JSE for the period 2008 to 2020?

Research question 9:

How does company size, measured by MC, moderate the relationship between ROA and CEO remuneration in publicly listed companies on the JSE for the period 2008 to 2020?

Research question 10:

How does company size, measured by MC, moderate the relationship between RSF and CEO remuneration in publicly listed companies on the JSE for the period 2008 to 2020?

Hypotheses H_1 to H_3 , as formulated in Chapter 1, Section 1.7.2 and Chapter 4, and Section 4.2.3, are tested, and the results are provided in Section 5.8.

Regression analyses were conducted in three phases. First, the direct effects of each independent variable on the dependent variable were assessed. Second, the moderating role of company size in these relationships was evaluated. Finally, interaction effects were analysed to determine whether the combined influence of two independent variables on the dependent variables differed from their individual effects.

Model specifications

Regression modelling was performed in Eviews11, a package that permits the statistical analysis of panel data. Regression modelling allows us to estimate the connection between a dependent variable and multiple independent variables.

The analysis, therefore, attempts to explain whether the remuneration of the CEO, that is, fixed pay, STI and total remuneration, can be explained by, and to what extent, the performance indicators of the company, which for this study were market capitalisation, EPS net profit, ROA and RSF. As a first step, potential multicollinearity was assessed. The other regression assumptions were tested within the regression modelling.

Multicollinearity

As a first step, multicollinearity was determined by using the variance inflation factor (VIF). The threshold is 10 (Vittinghof et al., 2012), with values greater than 10 indicating

multicollinearity and suggesting the removal of an independent variable. Table 5.10 below provides the VIF for each independent variable.

Table 5.10: Multicollinearity results

	VIF
RSFWINS	2.272
ROAWINS	2.194
TURNOVERWINS	3.234
EPSWINS	4.655
MCWINS	2.969
ROFITWINS	5.737

Source: Researcher's own

As shown in Table 5.10, no VIF value exceeded 10. Consequently, it can be presumed that no serious multicollinearity was detected between the independent variables. All the company performance measures were therefore included in each of the multiple regression analyses.

5.5.1 Direct Relationship Analysis – CEO Remuneration and Company Performance

The research examined the direct relationship between CEO remuneration and company performance among JSE-listed companies from 2008 to 2020. This stage of the analysis aimed to examine the relationships between each individual performance indicator (EPS, net profit, ROA, and RSF) and the different components of CEO remuneration. To address these issues, four overarching research questions were posed, which were further broken down into sub-questions to test the link between each performance metric and respective remuneration components (fixed pay, STI and total remuneration). The findings provide a better understanding of how company performance drives CEO remuneration.

5.5.1.1 Relationship between CEO Fixed Pay and Company Performance

Question 1 of the study aimed to determine whether there was a relationship between CEO fixed pay and the performance of publicly listed companies on the JSE for the period 2008 to 2020. On the basis of theoretical frameworks and prior empirical studies, it was anticipated that fixed pay would be positively related to key financial performance indicators reflecting

an alignment of interests between CEOs and shareholders as per agency theory and optimal contracting principles (Bezuidenhout, 2021; Coetzee & Hall, 2020). In addition to the critique from managerial power theory, which posits that CEOs may exert influence over their own remuneration regardless of company performance, the study also anticipated that fixed pay may not be strongly performance sensitive, especially during periods of economic downturn (Carlson & Bussin, 2020; Wijeweera et al., 2021).

Model 1: Pooled Ordinary Least Squares

The first analysis of the data was a pooled ordinary least squares (OLS) regression on panel data, which served as the baseline model. The OLS model assumes that all companies and time periods in the dataset are the same and ignores individual characteristics (Moussa & Ceesay, 2022). A t-test was used to determine the statistical significance of each independent variable while controlling for other variables in the model. A statistically significant result has an extremely small chance of occurring if there is no true effect in a research study (Bhandari, 2020). While the tables present the analysis results with full numerical precision (e.g., values reported to four decimal points), to ensure transparency, values are rounded to three decimal points in the accompanying discussion for clarity and ease of interpretation. Importantly, scientific notation is used in the following tables. For example, a value such as 4.90E-05 denotes 4.90×10^{-5} , which is equivalent to 0.000049.

An adjusted R-squared of 0.374 indicated that 37.4% of the variance in fixed pay is explained by these variables. Furthermore, the F statistic indicated that the regression coefficients were jointly significant, implying that the model was statistically significant.

Table 5.11: Fixed pay regression model

Dependent Variable: FIXEDPAYWINS_1				
Method: Panel Least Squares				
Sample: 2008 2020				
Periods included: 13				
Cross sections included: 61				
Total panel (unbalanced) observations: 709				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	3329496	158065.8	21.06398	0.0000
MCWINS	0.000939	0.001060	0.886248	0.3758
ROAWINS	26739.76	14340.80	1.864594	0.0627
EPSWINS	1006.359	217.4096	4.628862	0.0000
PROFITWINS	-0.152387	0.064495	-2.362762	0.0184
TURNOVERWINS	0.054199	0.005788	9.363727	0.0000
RSFWINS	-29313.47	9314.953	-3.146926	0.0017
Weighted stats				
Root MSE	2840145		R-squared	0.378972
Mean dependent var	4623618		Adjusted R-squared	0.373664
S.D. dependent var	3606545		S.E. of regression	2854270
Akaike info criterion	32.57635		Sum squared resid	5.72E+15*
Schwarz criterion	32.62141		Log likelihood	-11541.32
Hannan-Quinn criter.	32.59376		F-statistic	71.39727
Durbin-Watson stat	0.541521		Prob(F-statistic)	0.000000

* Note: 5.72E+15 (5,720,000,000,000,000)

Source: Researcher's own

However, the Durbin-Watson (DW) statistic of 0.542, as shown in Table 5.11, suggests a strong presence of autocorrelation in the residuals, violating one of the OLS assumptions and potentially biased results. As a result, alternative regression models were considered to produce more reliable and valid findings in line with the research objective. This approach is supported by prior studies using panel data in CEO remuneration research (Phuonget al., 2024; Scholtz et al., 2025).

Model criticism and selection

According to Agag, Brown, Hassanein and Shaalan (2020), models that utilise specific sample data may not be statistically useful when applied to new data due to the influence of other factors or events. Model validation is vital for ensuring model adequacy.

After the pooled model was deemed not credible, the next step was to determine whether a fixed- or random-effects model should be applied to the data and to investigate residual heteroskedasticity.

Model 2: Hausman test and Fixed Effect Model

Owing to the panel structure of the data of the JSE-listed companies from 2008 to 2020, which included multiple observations per company over time, the Hausman test was conducted to determine the most suitable regression model. The Hausman test was applied to assess whether the fixed effects or the random effects model provided a more suitable specification. This is key to ensuring that company- and time-specific characteristics do not lead to bias and inconsistencies in estimating the relationship between CEO fixed pay and company performance (Scholtz et al., 2025). The Hausman test was thus used only to determine which model was most suitable, the fixed-effect or random-effect model (Rehal, 2022).

The hypotheses tested by the Hausman test are outlined below:

- Null hypothesis (H_0): The random effect model is the most appropriate: there is no correlation between individual effects and the independent variables (probability = greater than 0.05)
- Alternative hypothesis (H_1): The fixed effect model is appropriate: there is a correlation between individual effects and the independent variables (probability is less than 0.05).

If the p-value is less than 0.05 at the 5% significance level, the null hypothesis is rejected in favour of the fixed effects model. On the other hand, if the p-value is greater than 0.05, the random effects model is preferred.

The Hausman test yielded a p-value of 0.0418 (Table 5.12), suggesting that the random-effects model is not the most suitable ($p\text{-value} > 0.05$).

Table 5.12: Hausman test results

Correlated random effects – Hausman Test			
Equation: Untitled			
Test cross-section random effects			
Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	13.082	6	0.0418

Source: Researcher's own

Model 3: Panel cross-section heteroskedasticity test

The potential heteroskedasticity of the residuals was subsequently investigated to investigate whether the variance of the error terms remained constant across observations. The hypotheses tested were as follows:

- The null hypothesis (H_0): the residuals are homoscedastic (the variance of the error terms is constant across all observations).
- Alternative hypothesis (H_1): the residuals are not homoscedastic (the variance of the error terms varies across all observations).

To be considered homoscedastic, the null hypothesis requires that the p-value be greater than 0.05. The results, however, indicated that the null hypothesis was rejected ($p < 0.05$, $p = 0.000$); therefore, the residuals were heteroskedastic for the cross-sectional (company) dimension and for the time period dimension ($p < 0.05$).

The fixed-effects model accounts for within-company effects (individual characteristics), as each organisation has its own policies governing remuneration. The fixed effect model results are presented in Table 5.13. RSF was the only statistically significant predictor of CEO fixed pay, with a p-value of 0.0160 and a coefficient of -24,501.78, suggesting that CEOs overseeing large companies with higher returns on shareholder funds may receive lower fixed pay. The coefficient for RSF of -24 501 suggests a one unit increase in RSF is associated with a decrease of 24 501.78 in CEO fixed pay. The negative coefficient for RSF suggests that

increased shareholder resistance to excessive remuneration or a focus on other performance drivers may decrease fixed pay levels. The significance of turnover supports the established view that company size or higher revenue is a key determinant of CEO remuneration (Ragmath & Bussin, 2022; Lokman & Tareh, 2020). The results align with the expectation that increased revenue is associated with the operational scale, which remuneration committees use as an indicator to determine CEO fixed pay (Ragmath & Bussin, 2022). Although the results showed a DW score of 1.07, which was above Field's (2003) recommendation of 1, it remained below the generally accepted threshold of 1.5, suggesting that some positive autocorrelation still exists. This, therefore, means further regression models were explored.

Table 5.13: Cross-sectional fixed pay (dummy variables) effect model

Dependent Variable: FIXEDPAYWINS_1				
Method: Panel Least Squares				
Sample: 2008 – 2020				
Periods included: 13				
Cross sections included: 61				
Total panel (unbalanced) observations: 709				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	3626017	223576.6	16.21823	0.0000
MCWINS	0.003511	0.002103	1.669240	0.0956
ROAWINS	-27058.50	16293.24	-1.660719	0.0973
EPSWINS	100.7264	262.7252	0.383391	0.7016
PROFITWINS	0.077764	0.080535	0.965591	0.3346
TURNOVERWINS	0.058284	0.010057	5.795267	0.0000
RSFWINS	-24501.78	10144.59	-2.415255	0.0160
Effects Specification				
Cross-section fixed (dummy variables)				
Root MSE	2059821		R-squared	0.673345
Mean dependent var	4623618		Adjusted R-squared	0.639764
S.D. dependent var	3606545		S.E. of regression	2164637.
Akaike info criterion	32.10314		Sum squared resid	3.01E+15*
Schwarz criterion	32.53442		Log likelihood	-11313.56
Hannan-Quinn criter.	32.26975		F-statistic	20.05115
Durbin–Watson stat	1.069882		Prob(F-statistic)	0.000000

* Note: 3.01E+15 (3,010,000 000 000 000)

Source: Researcher's own

Therefore, to address the presence of autocorrelation and heteroskedasticity further, as shown above (Table 5.13), the estimated generalised least squares (EGLS) estimation method utilising period SUR estimates, which adjusts for heteroskedasticity and the general correlation of observations within a cross-section, was applied, as were white diagonal

standard errors and covariance, which is a robust standard error estimation method. The results are shown in Table 5.14.

Table 5.14: Final regression results (fixed pay)

Dependent Variable: FIXEDPAYWINS_1				
Method: Panel EGLS (Period SUR)				
Sample: 2008 2020				
Periods included: 13				
Cross sections included: 61				
Total panel (unbalanced) observations: 709				
Linear estimation after one-step weighting matrix				
White diagonal standard errors & covariance (d.f. corrected)				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	2967692.	188355.8	15.75578	0.0000
MCWINS	0.003141	0.001972	1.592736	0.1117
ROAWINS	4606.623	8810.294	0.522868	0.6012
EPSWINS	664.0191	211.3967	3.141105	0.0018
PROFITWINS	-0.093070	0.061436	-1.514897	0.1302
TURNOVERWINS	0.048440	0.009699	4.994495	0.0000
RSFWINS	-11830.76	5748.211	-2.058164	0.0399
Weighted Statistics				
Root MSE	0.937272		R-squared	0.284732
Mean dependent var	0.793798		Adjusted R-squared	0.278618
S.D. dependent var	1.194305		S.E. of regression	0.941933
Sum squared resid	622.8409		F-statistic	46.57499
Durbin–Watson stat	1.897379		Prob(F-statistic)	0.000000
Unweighted Statistics				
R-squared	0.357512		Mean dependent var	4623618
Sum squared resid	5.92E+15*		Durbin–Watson stat	0.511426

*Note: 5.92E+15 (5920, 000 000 000 000)

Source: Researcher's own

Table 5.14 clearly shows that the residuals are approximately normally distributed, as the skewness was 1.061 and the kurtosis was 6.759. The kurtosis provided in EViews was not subtracted from 3 in the formula; therefore, 3 was subtracted from 9.759.

The adjusted R-squared is 0.279; therefore, 27.9% of the variance in the dependent variable is explained by the independent variables. It is possible that the remaining 72.1% of the variation in fixed pay is attributable to factors not included in the model. The F statistic ($F = 46.58$, $p < .0001$) indicates that the model is statistically significant overall, suggesting that at least one predictor variable significantly explains variation in fixed pay. The DW statistic (1.897) suggests no evidence of first-order autocorrelation.

RSF ($p = 0.040$) and EPS ($p = 0.002$) are statistically significant predictors of fixed pay at the 5% level of significance. A coefficient for RSF of -11 830.76 suggests that a one unit increase in RSF is associated with a decrease of 11,830.76 in CEO fixed pay. RSF is used by investors to assess a company's financial health (Clark, Brown & Kazel, 2022). The reasons for negative RSF could be a factor of accumulated losses over several periods or years that could have resulted in negative shareholders' equity over the period taken into consideration. The negative RSF could also be because of accumulated losses over several periods; investment in capital expenditure could have resulted in negative shareholder returns over the period considered. The calculation of RSF, as discussed previously, is based on dividing a company's earnings after taxes by the total shareholders' equity and multiplying the result by 100%. Whenever the total earnings of a company are negative, the RSF tends, in some instances, to be commensurately negative.

The findings of the tests for all three models provided valuable insights into the relationship between CEO fixed pay and company performance among JSE-listed companies from 2008 to 2020. Traditional profitability measures, such as ROA and net profit, do not exhibit a statistically significant relationship with fixed pay. This, therefore, raises the managerial power of CEOs as a possible reason for the misalignment among CEO fixed pay, ROA, and net profit.

The test results address Research question 1, which sought to determine the relationship between CEO fixed pay and company performance. The proportion of company performance indicators with no statistically significant relationship with fixed pay suggests that fixed pay is not sensitive to company performance. This aligns with existing studies reporting no

statistically significant relationship between fixed pay and company performance (Matemane, 2022; Yahaya, 2025). Matemane (2022) and Siwendu et al. (2024) reported evidence that fixed pay decreased in favour of increasing short-term incentives as a proportion of total CEO remuneration.

5.5.1.2 Relationship between CEO STI and Company Performance

The analyses conducted under Research Question 2, as discussed in Chapter 1, Section 1.6 and Chapter 4, Section 4.2.2, directly address the research question aimed at investigating whether there was a relationship between CEO STI and the company performance of publicly listed companies on the JSE for the period 2008 to 2020. Agency theory principles suggest that to manage the relationship between the CEO (agent) and the shareholder (principal), the principal must take intentional action to align the CEO's interests with shareholder value creation, often through performance-linked mechanisms such as STI, which reward the CEO for achieving specific objectives. Because STIs are a variable linked to performance, it was expected that they would exhibit a stronger, more direct relationship with short-term performance indicators such as ROA, EPS, and net profit. STIs drive the significantly positive relationship between company performance and CEO remuneration (Kweh et al., 2022).

Model 1: Pooled OLS Regression

The initial analysis applied a pooled least squares (OLS) regression to evaluate the relationship between CEO STI and company performance indicators. The results are presented in Table 5.15 below.

However, the DW value of 0.82 indicates evidence of autocorrelation, a violation of one of the regression assumptions that threatens the reliability of the model estimates. As a result, further testing and model refinement were necessary.

Table 5.15: STI regression model (pooled OLS)

Dependent Variable: STIWINS				
Method: Panel Least Squares				
Sample: 2008- 2020				
Periods included: 13				
Cross sections included: 60				
Total panel (unbalanced) observations: 690				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	1418512.	144649.3	9.806566	0.0000
ROAWINS	-43545.77	13071.42	-3.331373	0.0009
RSFWINS	62327.09	8526.319	7.309964	0.0000
MCWINS	-0.000653	0.001003	-0.650522	0.5156
EPSWINS	139.4180	200.2194	0.696326	0.4865
PROFITWINS	0.034489	0.058247	0.592115	0.5540
TURNOVERWINS	0.037542	0.005325	7.050075	0.0000
Weighted Statistics				
Root MSE	2559790.	R-squared	0.308790	
Mean dependent var	2596219.	Adjusted R-squared	0.302718	
S.D. dependent var	3081160.	S.E. of regression	2572874.	
Akaike info criterion	32.36904	Sum squared resid	4.52E+15*	
Schwarz criterion	32.41506	Log likelihood	-11160.32	
Hannan-Quinn criter.	32.38684	F-statistic	50.85369	
Durbin-Watson stat	0.816559	Prob(F-statistic)	0.000000	

*Note: 4.52E+15 (4520, 000 000 000 000)

Source: Researcher's own

Model 2: Fixed Effects Model

A Hausman test was conducted to investigate the most appropriate panel data model. The null hypothesis (that the random-effects model is the most appropriate) was rejected ($p < 0.001$), consistent with the fixed-effects model being more suitable, as shown in Table 5.16. A panel cross-sectional heteroskedasticity test further revealed that the residuals were heteroskedastic in the cross-sectional company dimension ($p < 0.005$), confirming the use of fixed effects with robust estimation techniques. The fixed effects model results in Table 5.17 show that RSF was a statistically significant predictor of STI. RSF continues to maintain a positive relationship with STI, underscoring the importance of STI in performance-linked pay design. The adjusted R-squared of 0.539 indicates that approximately 53.9% of the variation in CEO STI in the fixed-effects model is explained by EPS, net profit, ROA, and RSF. Other unmeasured factors, such as macroeconomic factors, CEO characteristics, or governance quality, may account for the other 46.1% of the variance.

Table 5.16: Hausman Test

Correlated Random Effects – Hausman test			
Equation: Untitled			
Test cross-section random effects			
Test summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	29.726956	6	0.0000

Source: Researcher's own

Although the results revealed a DW score of 1.3, which was above Field's recommendation of 1 but below the generally accepted threshold of 1.5, further regression models were explored and are presented in Table 5.17.

Table 5.17: Cross-sectional fixed effects (STI) model

Dependent variable: STIWINS				
Method: Panel least squares				
Sample: 2008 – 2020				
Periods included: 13				
Cross sections included: 60				
Total panel (unbalanced) observations: 690				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	758697.5	220405.0	3.442289	0.0006
ROAWINS	-11688.24	16153.94	-0.723553	0.4696
RSFWINS	22348.68	10087.08	2.215575	0.0271
MCWINS	0.005005	0.002051	2.440989	0.0149
EPSWINS	292.5370	260.4683	1.123119	0.2618
PROFITWINS	0.042147	0.078140	0.539377	0.5898
TURNOVERWINS	0.057089	0.009808	5.820437	0.0000
Effects Specification				
Cross-section fixed (dummy variables)				
Root MSE	1988713.		R-squared	0.582799
Mean dependent var	2596219.		Adjusted R-squared	0.539340
S.D. dependent var	3081160.		S.E. of regression	2091242.
Akaike info criterion	32.03518		Sum squared resid	2.73E+15*
Schwarz criterion	32.46912		Log likelihood	-10986.14
Hannan-Quinn criter.	32.20303		F-statistic	13.41047
Durbin–Watson stat	1.293614		Prob(F-statistic)	0.000000

* Note: 2.73E+15 (2730, 000 000 000 000)

Source: Researcher's own

Model 3: Final EGLS Model (corrected for heteroskedasticity and autocorrelation)

The estimated generalised least squares (EGLS) estimation method using period SUR estimates, which corrects for heteroskedasticity and the general correlation of observations within a cross-section, was applied, as were the period weights (panel corrected standard errors), standard errors and covariance estimates, which constitute a robust standard error and

covariance estimation method. The results are shown in Table 5.18. The results of the EGLS indicated that RSF ($p < 0.001$) and ROA ($p = 0.021$) were statistically significant predictors of STI at the 5% level. The negative association between ROA and STI may indicate that short-term incentive structures are not strongly aligned with asset efficiency, potentially reflecting remuneration designs that prioritise market-based or shareholder return metrics over accounting-based performance indicators (Tahtamoni et al., 2026). The positive association of ROA with STI is contrary to the findings of Scholtz et al. (2025), who reported no significant association between executive directors' incentive remuneration and ROA. The insignificant association may stem from executive directors' remuneration being designed to reward short-term goals rather than promote long-term efficiency and asset management (Scholtz et al., 2025). The positive relationship between STI and RSF supports agency theory on the alignment of goals between shareholders and CEOs. The statistically significant positive relationship between RSF and STI suggests that higher RSF values are associated with higher STI, reinforcing the notion that performance-linked rewards are effective in aligning CEO behaviour with shareholder value creation. EPS ($p = 0.122$) and net profit ($p = 0.219$) were not significant predictors of STI at the 5% significance level.

Table 5.18: STI Final regression model

Dependent variable: STIWINS				
Method: Panel EGLS (Period SUR)				
Sample: 2008 - 2020				
Periods included: 13				
Cross sections included: 60				
Total panel (unbalanced) observations: 690				
Linear estimation after one-step weighting matrix				
Period weights (PCSE) standard errors & covariance (d.f. corrected)				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	1087260.	165135.6	6.584046	0.0000
ROAWINS	-26639.76	11534.46	-2.309580	0.0212
RSFWINS	40177.36	7174.423	5.600083	0.0000
MCWINS	-0.001070	0.001052	-1.017522	0.3093
EPSWINS	263.6228	170.3721	1.547335	0.1222
PROFITWINS	-0.070504	0.057314	-1.230142	0.2191
TURNOVERWINS	0.045622	0.006014	7.585408	0.0000
Weighted statistics				
Root MSE	0.945735		R-squared	0.203234
Mean dependent var	0.541303		Adjusted R-squared	0.196235
S.D. dependent var	1.073670		S.E. of regression	0.950569
Sum squared resid	617.1461		F-statistic	29.03597
Durbin–Watson stat	1.864917		Prob(F-statistic)	0.000000
Unweighted statistics				
R-squared	0.275053	Mean dependent var	2596219.	
Sum squared resid	4.74E+15*	Durbin–Watson stat	0.743462	

* Note: 4.74E+15 (4740 000 000 000 000)

Source: Researcher's own

The residuals can be assumed to be approximately normally distributed, as indicated by the skewness of 0.266 and kurtosis of 2.03.

Table 5.18 above reveals that the adjusted R-squared value was 0.196, indicating that 19.6% of the variance in the STI is explained by the independent variables included in the model. This further suggests that 80.4% of the variance in STI remains unexplained by the model and may be attributable to other factors not included in the analysis. The F statistic ($F = 29.04$, $p < 0.001$) suggests that the model is statistically significant overall.

The model results assisted in answering the research question of the relationship between STI and company performance. The findings of the final model partially support agency theory through the statistically significant positive relationship between STI and RSF. This finding posits that shareholder responses and expectations influence the STI structure and outcomes, pointing to some degree of alignment between CEO incentives and shareholder value. The negative relationship with ROA and the insignificance of net profit and EPS suggest that STI is not consistently linked to traditional accounting measures, which gives credence to concerns echoed by managerial power theory, which argues that CEOs may unduly influence their own remuneration irrespective of company performance (Hundal, Boren & Eskola, 2025; Siwendu et al, 2024). This may reflect ineffective governance or flawed remuneration structures in STI among JSE-listed companies.

5.5.1.3 Relationship between CEO Total Remuneration and Company Performance

Research question 3, as discussed in Chapter 1, Section 1.6, and Chapter 4, Section 4.2.2, sought to determine the relationship between CEO total remuneration and the company performance of publicly listed companies on the JSE for the period 2008 to 2020. In general, the CEO's total remuneration is expected to have a positive, though sometimes weak-to-moderate, relationship with company performance. As company performance increases (for example, higher net profit and increased ROA), CEO total remuneration is likely to increase; however, this increase is not a perfect linear function. The relationship is expected to vary depending on the performance measure.

Model 1: Pooled OLS (Panel Least Squares)

The first model specification, as with fixed pay and STI, was also analysed statistically for total remuneration. The first model applied was pooled least squares regression, which treats

all company-year observations as homogeneous, without accounting for individual company differences. The DW statistic of 0.645 indicates the presence of autocorrelation in the residuals in Table 5.19 below. The model does not control for unobserved heterogeneity across companies, which may lead to biased estimates. Thus, alternative regression models must be considered.

Table 5.19: Total remuneration - regression model (pooled OLS)

Dependent Variable: TOTPACKAGEWINS				
Method: Panel Least Squares				
Sample: 2008 – 2020				
Periods included: 13				
Cross sections included: 61				
Total panel (unbalanced) observations: 709				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	4803321.	246597.4	19.47839	0.0000
EPSWINS	733.5224	339.1793	2.162639	0.0309
ROAWINS	-12956.55	22372.98	-0.579116	0.5627
MCWINS	0.001637	0.001653	0.990357	0.3223
RSFWINS	36920.60	14532.19	2.540607	0.0113
TURNOVERWINS	0.084853	0.009030	9.396677	0.0000
PROFITWINS	-0.029897	0.100619	-0.297136	0.7665
Weighted stats				
Root MSE	4430890.		R-squared	0.402348
Mean dependent var	7210406.		Adjusted R-squared	0.397240
S.D. dependent var	5735526.		S.E. of regression	4452927.
Akaike info criterion	33.46585		Sum squared resid	1.39E+16*
Schwarz criterion	33.51090		Log likelihood	-11856.64
Hannan-Quinn criter.	33.48325		F-statistic	78.76604
Durbin–Watson stat	0.645641		Prob(F-statistic)	0.000000

* Note: 1.39E+16 (13900, 000 000 000 000)

Source: Researcher's own

Model 2: Fixed vs Random Effects Model (Hausman Test)

Considering the presence of unobserved company-specific characteristics, a random effects model using EGLS was estimated to account for the differences.

The Hausman test was subsequently conducted, and when the p-value was greater than 5%, it was 0.0527 (Table 5.20), indicating that the null hypothesis could not be rejected and that the random effects model was applied.

Table 5.20: Hausman test result (total remuneration)

Correlated Random Effects – Hausman Test			
Equation: Untitled			
Test cross-section random effects			
Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	12.448125	6	0.0527

Source: Researcher's own

However, as shown in Table 5.21, the DW score was 1.05, which was still below the threshold. The random effect model thus did not adequately address the problem of autocorrelation for total remuneration.

Table 5.21: Cross-section random effect model (total remuneration)

Dependent Variable: TOTPACKAGEWINS				
Method: Panel EGLS (Cross-section random effects)				
Sample: 2008 – 2020				
Periods included: 13				
Cross sections included: 61				
Total panel (unbalanced) observations: 709				
Swamy and Arora estimator of component variances				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	5106382.	451206.5	11.31717	0.0000
EPSWINS	387.6156	385.3800	1.005801	0.3149
ROAWINS	-24255.28	24355.55	-0.995883	0.3197
MCWINS	0.002876	0.002362	1.217348	0.2239
RSFWINS	2180.072	15195.79	0.143466	0.8860
TURNOVERWINS	0.086980	0.012408	7.009783	0.0000
PROFITWINS	0.116966	0.117073	0.999087	0.3181
Effects Specification				
Weighted Statistics				
Root MSE	3500848.		R-squared	0.192819
Mean dependent var	2464308.		Adjusted R-squared	0.185920
S.D. dependent var	3908430.		S.E. of regression	3518259.
Sum squared resid	8.69E+15*		F-statistic	27.94895
Durbin–Watson stat	1.046599		Prob(F-statistic)	0.000000
Unweighted Statistics				
R-squared	0.381451		Mean dependent var	7210406.
Sum squared resid	1.44E+16**		Durbin–Watson stat	0.631276

* Note: 8.69E+15 (8690, 000 000 000 000) ** Note: 1.44E+16 (1440, 000 000 000 000)

Source: Researcher's own

However, the results in Table 5.21 show a DW value of 1.05, which is still below the general 1.5 threshold. Therefore, further regression models were explored.

Model 3: Final EGLS Model (Corrected for autocorrelation and heteroskedasticity)

To address heteroskedasticity and cross-sectional correlation, the model was estimated using Panel EGLS with Period SUR weighting and White diagonal standard errors and covariance as presented in Table 5.22.

As shown in Table 5.22, RSF ($p = 0.0309$) was statistically significant and positively linked with total CEO remuneration. This finding supports agency theory by suggesting that CEO remuneration is aligned with company performance, particularly in terms of revenue generated and the effectiveness of shareholder returns for each rand of equity invested. ROA ($p = 0.903$), EPS ($p = 0.059$), and net profit ($p = 0.432$) were not statistically significant predictors of total remuneration at the 5% level of significance. The key findings from Table 5.22 are interpreted below.

The residuals appear approximately normally distributed, although the kurtosis value suggests a degree of leptokurtosis. The kurtosis provided was not subtracted from 3 in their formula; therefore, 3 was subtracted from the kurtosis value of 7.129. The DW test yielded a value of 1.94, suggesting no evidence of first-order autocorrelation in the residuals. The adjusted R-squared value of 0.246 indicates that approximately 24.6% of the variation in CEO's total remuneration is explained by the company performance indicators included in the model. Factors other than the model, amounting to 75.4%, remain unexplained. The F statistic $F = 39.48$, $p < 0.001$), therefore, indicates that the model is statistically significant overall, implying that the independent variables jointly explain a significant proportion of the variation in total remuneration.

Table 5.22: Total remuneration final regression model

Dependent Variable: TOTPACKAGEWINS				
Method: Panel EGLS (Period SUR)				
Sample: 2008 – 2020				
Periods included: 13				
Cross sections included: 61				
Total panel (unbalanced) observations: 709				
Linear estimation after one-step weighting matrix				
White diagonal standard errors & covariance (d.f. corrected)				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	4117252.	287481.3	14.32181	0.0000
EPSWINS	819.2513	433.8558	1.888303	0.0594
ROAWINS	-2010.208	16505.28	-0.121792	0.9031
MCWINS	0.002811	0.003267	0.860384	0.3899
RSFWINS	21478.30	9933.025	2.162312	0.0309
TURNOVERWINS	0.088150	0.014997	5.877713	0.0000
PROFITWINS	-0.107967	0.137250	-0.786645	0.4318
Weighted Statistics				
Root MSE	0.957870		R-squared	0.252312
Mean dependent var	0.802606		Adjusted R-squared	0.245921
S.D. dependent var	1.142179		S.E. of regression	0.962634
Sum squared resid	650.5186		F-statistic	39.48232
Durbin–Watson stat	1.940728		Prob(F-statistic)	0.000000
Unweighted Statistics				
R-squared	0.383992		Mean dependent var	7210406.
Sum squared resid	1.43E+16*		Durbin–Watson stat	0.623628

* Note: 1.43E+16 (1430, 000 000 000 0000)

Source: Researcher's own

The findings contribute to the overarching aim of the study by providing empirical evidence that total CEO remuneration is more strongly associated with shareholder-linked measures

such as RSF, relative to other performance indicators, suggesting partial alignment between CEO remuneration and shareholder-oriented performance.

5.5.2 Introduction – The Effect of Interaction Effects on Fixed Pay, Sti and Total Remuneration

Having examined the direct relationship between individual company performance indicators and CEO remuneration types (questions 1 to 3), the next phase of the analysis investigated whether combinations of performance indicators, through interaction terms, offer additional explanatory power in understanding variations in CEO fixed pay. This was particularly relevant since some performance indicators showed weaker or statistically non-significant direct relationships. This approach is supported by both practical organisational relevance and a theoretical foundation. From the organisational and remuneration design perspective, the CEO remuneration structure is rarely based on one isolated performance metric. Typically, remuneration committees consider multiple financial indicators, such as profitability, capital efficiency, and company size, when determining the optimal remuneration structure. This approach was intended to act in appreciation of the complex logic that is employed by companies in the actual determination of CEO remuneration. For example, the inclusion of interaction effect allows for the examination of conditional relationships between performance indicators recognising that the effect of one performance metric on CEO remuneration may depend on the level of another. This reflects the configurational nature of remuneration design, where multiple financial signals are jointly evaluated by remuneration committees.

5.5.2.1 Methodological choice

This model investigates whether the combination of two company performance indicators (represented as interaction terms) better explains CEO fixed pay, STI and total remuneration than individual indicators alone. Given the prior identification of autocorrelation and heteroskedasticity in the analysis of all CEO components of remuneration (Models 1 to 3 for questions 1 to 3), it is methodologically appropriate to proceed to estimation using EGLS with Period SUR for interaction terms in questions 4, 5 and 6. This approach improves the efficiency and consistency of parameter estimates in the presence of heteroskedasticity and cross-sectional correlation. The interaction terms were included alongside their corresponding main effects to examine the conditional relationships and joint influence of company

performance indicators on CEO remuneration, thereby reducing the risk of model misspecification.

In line with the methodological approach for earlier models, the estimation was performed using panel EGLS with period seemingly unrelated regressions (SUR) to correct for heteroskedasticity and autocorrelation. Interaction terms were sequentially introduced alongside the main effects of the individual variables. Unlike the models for research questions 1 to 3, which focused on individual performance indicators, this model was specifically designed to capture the combined influence of two performance indicators on CEO fixed pay, STI and total remuneration. The following section presents and interprets the statistically significant interaction effects observed, linking them to theoretical expectations.

5.5.3 Interaction Effects Analysis of Company Performance on CEO Remuneration

Research Question 4, as stated in Chapter 1, Section 1.6, and Chapter 4, Section 4.2.2, aimed to determine whether the combined effect of company performance measures (ROA, RSF, EPS, MC, and net profit) interact to influence CEO fixed pay in Johannesburg Stock Exchange-listed companies from 2008 to 2020. The objective was to determine whether the effect of one performance indicator on CEO remuneration is conditional upon the level of another indicator.

Below is a discussion and analysis of the key findings and an interpretation of the significant interaction terms.

5.5.3.1 Interaction Effects of Earnings Per Share (EPS) and Net Profit CEO Remuneration

The analysis examined the combined effect of EPS and net profit on CEO remuneration. EPS is calculated by dividing a company's net income by the weighted average number of outstanding shares. Therefore, EPS is influenced not only by net profit, but also by changes in the number of shares outstanding (Corporate Finance Institute, 2025). While higher net profit may increase EPS, this effect may be diluted where the number of shares outstanding also increases. Accordingly, a higher EPS may justify higher CEO remuneration, but only when interpreted in relation to both profitability and share structures (Ramgath & Bussin, 2022). As a commonly used investor ratio, EPS serves as a key indicator of a company's profitability per share and is often used to benchmark financial performance across companies

listed on the JSE. Consequently, aligning CEO remuneration to EPS is expected to reflect investor-focused accountability and performance-based remuneration.

However, it is critical to acknowledge the methodological limitations of the interaction of EPS and net profit. The EPS is directly derived from net profit; therefore, the two measures are mathematically related. This introduces a risk of multicollinearity and redundancy, as EPS and net profit capture overlapping information (de Winter, 2025). Consequently, the interaction term may reflect shared variance rather than a true conditional effect, thereby complicating interpretation. EPS and net profit may not represent fully independent performance constructs, as both partly reflect the same underlying profitability dimension. Therefore, in the context of remuneration design and pay-performance alignment, this limitation should be acknowledged with caution. Its statistical significance may partly reflect mathematical overlap between distinct variables rather than a substantively meaningful interaction effect.

Table 5.23: Interaction effects of EPS and net profit on CEO remuneration

Variable	Fixed Pay (Coeff)	Prob.	STI (Coeff)	Prob.	Total Rem. (Coeff)	Prob.
C	2,972,671	0.0000	1,070,477	0.0000	4,129,873	0.0000
ROA WINS	5,241.12	0.5575	-27,712.32	0.0172	-3,731.52	0.8203
MCWINS	0.003842	0.0519	-0.000695	0.5103	0.004004	0.2433
PROFIT WINS	-0.047820	0.6216	0.079151	0.2936	0.176727	0.3597
TURNOVE R WINS	0.045237	0.0000	0.042252	0.0000	0.081769	0.0000
RSFWINS	-12,633.25	0.0349	36,431.77	0.0000	12,573.73	0.2478
EPSWINS	680.45	0.0004	434.77	0.0211	1,246.64	0.0039
INTEPS PROFIT	-1.64E-05	0.4957	-4.90E-05	0.0095	-0.000107	0.0231
Durbin Watson	1.872643		1.859048		1.915406	
F-Statistic	36.68635		26.76089		33.99383	
Adjusted R- Squared	0.260809		0.207671		0.245972	

Source: Researcher's own

As shown in Table 5.23, although the overall model was statistically significant, the interaction between EPS and net profit was not statistically significant for fixed pay at the 5% level ($p = 0.496$, coefficient = -1.64). This indicates that, while the model as a whole explains variation in CEO fixed pay, the specific EPS-net profit interaction does not make a statistically significant contribution to explaining fixed pay beyond the individual effects of these variables. As EPS already incorporates net profit, its joint effect does not provide additional explanatory insight. Calculation of EPS = (net income - Preferred Dividends) / Weighted Average Common Shares Outstanding (Corporate Finance Institute, 2025))

However, for STI and total remuneration, the results showed that there was a statistically significant relationship at the 5% level with STI ($P = 0.010$) and total remuneration ($p =$

0.023). The coefficient values of -4.90 (STI) and -0.000 (total remuneration) suggest an inverse association, which may reflect remuneration committees' efforts to avoid rewarding temporary increases in profitability.

These results contradict the assumption that increased profitability and larger company size, or market value, strengthen the argument for increased CEO remuneration. The increase in EPS may be a factor not directly attributable to CEO performance. Factors such as asset sales that temporarily increase earnings, share buybacks that reduce the number of outstanding shares without improving performance, and restructuring charges that artificially increase profits temporarily can all distort EPS and net profit (Fajasy, 2025). Remuneration committees, therefore, may intentionally control STI or total remuneration increases when EPS is high to reduce the risk of rewarding CEOs for temporary or accounting-driven gains rather than genuine CEO performance. Institutional theory also posits that pressure exerted on organisations by regulators, shareholders, and the public may draw attention and curb excessive CEO remuneration.

The DW statistic of 0.817, suggests the presence of positive autocorrelation; however, the use of EGLS with period SUR is expected to mitigate its impact on the efficiency of the estimate. The adjusted R-squared is 0.261; therefore, approximately 26.1% of the variance in CEO fixed pay is explained by the combined EPS and net profit company performance indicators. The regression analysis yielded a statistically significant F-statistic ($F = 36.687$, $p < 0.001$), suggesting that the model was statistically significant at the 5% significance level overall, and that the independent variables jointly explained a significant proportion of the variation in CEO fixed pay. However, the significance of the overall model does not suggest that the interaction effect was statistically significant. The contribution of the interaction term was therefore evaluated using its individual coefficient and associated p-value.

Notably, any combination of interactions can be subjected to statistical analysis to explain the relationships among variables. However, it is important to acknowledge that, beyond its research value, this study aims to contribute to the knowledge of other stakeholders, such as remuneration professionals, remuneration committees, and employees. Hence, there are practical implications of such studies: caution against using performance metrics that risk double counting, as they add no value and may create an illusion of performance complexity. Overlapping measures may create confusion for different stakeholders about how CEO

remuneration is determined. EPS and net profit are prone to manipulation through accounting practices, such as debt-funded profits, and overreliance on these metrics, which risk rewarding CEOs for “artificial” performance gains. After King IVs and regulations such as Say on Pay, regulators expect transparency, logic and fairness regarding the pay–performance link. The incorporation of redundant measures such as EPS and net profit combined could be criticised as weak governance or evidence of managerial power where the CEO may have influenced adoption.

The next section will take the discussion further by analysing the complex relationship between CEO remuneration and company performance as influenced by a moderating variable, MC, as a proxy for company size.

5.5.3.2 Interaction Effects of Earnings Per Share $\times$ Return on Assets (INTEPSROA) on CEO Remuneration

As shown in Table 5.24, the dependent variables, fixed pay STI and total remuneration, were analysed across the period 2008 to 2020, with 61 cross sections, that is, companies, and a total of 709 observations. The interaction between EPS and ROA was statistically insignificant at the 5% level across all remuneration types for fixed pay ($p = 0.461$), STI ($p = 0.089$) and total remuneration ($p = 0.113$).

The coefficients for the interaction were negative for fixed pay (-6.658), STI (-15.224) and total remuneration (-28.667). The negative coefficients are contrary to expectations in that a higher EPS and ROA combination is associated with a decrease in CEO fixed pay, STI and total remuneration. This result contrasts with agency theory, which posits that a positive alignment between CEO remuneration and company performance is ideal for mitigating agency problems (Carlson & Bussin, 2020).

These results may suggest that the combination of EPS and ROA was not the performance measure chosen by remuneration committees for CEO remuneration.

The adjusted R-squared values are 0.281 (fixed pay), 0.201 (STI) and 0.247 (total remuneration); therefore, approximately 28.1%, 21.1% and 24.7%, respectively, of the proportion of the variance of the

CEO remuneration is explained by the combined EPS and ROA company performance indicators. The regression analysis yielded statistically significant F statistics for fixed pay (F

= 40.61), STI (F = 25.65), and total remuneration (F = 34.20), suggesting the overall statistical significance of the models.

Table 5.24: Interaction effects of EPS and ROA on CEO remuneration

Variable	Fixed Pay (Coeff)	Prob.	STI (Coeff)	Prob.	Total Rem. (Coeff)	Prob.
C	2 968587	0.0000	1096865	0.0000	4161018	0.0000
ROA	6323.319	0.4848	-24543.61	0.0415	3366.874	0.8441
WINS						
MCWINS	0.002936	0.1478	-0.001864	0.0810	0.002199	0.5069
PROFIT	-0.082269	0.1981	-0.016052	0.7880	-0.041904	0.7695
WINS						
TURNOVER	0.048923	0.0000	0.044514	0.0000	0.086823	0.0000
WINS						
RSFWINS	-12877.30	0.0302	38372.40	0.0000	17620.77	0.1019
EPSWINS	735.3577	0.0010	459.3308	0.0256	1147.984	0.0195
INTEPS	-6.657845	0.4606	-15.22437	0.0889	-28.66734	0.1132
ROA						
Durbin Watson	1.893162		1.843986		1.941316	
F-Statistic	40.61072		25.65234		34.20097	
Adjusted R- Squared	0.281419		0.200526		0.247134	

Source: Researcher's own

The next section will continue analysing the combined effect of EPS, only in this instance with RSF, on CEO remuneration.

5.5.3.3 Interaction Effects of Earnings Per Share and Return on Shareholders' Funds on CEO Remuneration

As shown in Table 5.25, the interaction between EPS and RSF was statistically significant at the 5% level across all three remuneration types ($p = 0.023$; $p = 0.001$; $p = 0.018$) for fixed pay, STI and total remuneration, respectively. EPS measures profitability per share and is regarded as a short-term, market-facing performance metric, whereas RSF is a longer-term,

internally driven performance indicator that reflects how well CEOs utilise equity to drive growth and returns for shareholders (Majka, 2024).

The coefficients were negative for all three remuneration types: -11.103 (fixed pay), -16,970 (STI), and -23.176 (total remuneration). The sign of the regression coefficient indicates whether the relationship between variables is positive or negative (Carlson & Bussin, 2020). The negative coefficients of -11.103 (fixed pay), -16,970 (STI) and -23.176 (total remuneration) suggest that the effect of EPS on CEO fixed pay, STI and total remuneration depends on the level of RSF. In other words, increases in EPS do not have the same effect on CEO remuneration at all levels of RSF. As RSF increases, the positive influence of EPS on remuneration appears to weaken. (McLeod, 2023).

According to stewardship theory, the restraint on the over-rewarding of CEOs aligns with the view that CEOs are motivated by intrinsic rewards (such as accomplishment, recognition, and alignment with organisational success) rather than exclusively by short-term financial incentives (Kolawole et al., 2025). With companies now strategically focused on sustainability, long-term strategies often incorporate sustainability considerations, recognising the importance of environmental and social responsibility for long-term success (Yang, 2023). Too much focus on short-term financial indicators (such as EPS) can sometimes negatively encourage short-termism, potentially undermining long-term organisational objectives.

The findings may highlight the remuneration balancing mechanism by remuneration committees, where fixed pay is intentionally constrained in exceptional financial performance, and possibly, greater emphasis is placed on variable pay to maintain the flexibility, cost efficiency and motivation of CEOs (Madhani, 2021). The optimal remuneration mix posits a threshold beyond which increasing fixed or variable remuneration no longer adds value (Xoxoday, 2025).

The adjusted R-squared values are 0.284 for fixed pay, 0.202 for STI, and 0.248 for total remuneration, indicating that approximately 28.4%, 20.2%, and 24.8% of the variation in CEO remuneration, respectively, is explained by the combined EPS and RSF and their interaction effect. Approximately, 71.6%, 79.8% and 75.2% of the variation in fixed pay, STI and total remuneration remained unexplained by the models and may be attributable to other factors not included in the analysis, such as corporate governance characteristics, sector specific

influences, or economic conditions. The regression analysis yielded significant F statistics for fixed pay ($F = 41.20$, $p < 0.001$), STI ($F = 25.90$, $p < 0.001$), and total remuneration ($F = 34.36$, $p < 0.001$), indicating the overall statistical significance of the models. The interaction between EPS and RSF was statistically significant at the 5% level.

Table 5.25: Interaction effects of EPS and RSF on CEO remuneration

Variable	Fixed Pay (Coeff)	Prob.	STI (Coeff)	Prob.	Total Rem. (Coeff)	Prob.
C	3015808.	0.0000	1121303.	0.0000	4230579.	0.0000
ROA	5319.996	0.5483	-30432.00	0.0083	-2043.988	0.9023
WINS						
MCWINS	0.002805	0.1716	-0.002066	0.0474	0.002116	0.5326
PROFIT	-0.082162	0.1709	-0.031179	0.5825	-0.080977	0.5407
WINS						
TURNOVER	0.048339	0.0000	0.044789	0.0000	0.087622	0.0000
WINS						
RSFWINS	-13415.41	0.0197	41106.68	0.0000	19228.41	0.0607
EPSWINS	917.2026	0.0002	659.3597	0.0016	1345.458	0.0104
INTEPS	-11.10331	0.0228	-16.96990	0.0007	-23.17582	0.0179
RSF						
Durbin Watson	1.897816		1.846719		1.939060	
F-Statistic	41.11484		27.56886		34.35759	
Adjusted R- Squared	0.283983		0.212798		0.248011	

Source: Researcher's own

5.5.3.4. Interaction Effects of Return on Shareholders' Funds (RSF) and Net Profit on CEO Remuneration

The results presented in Table 5.26 show the interaction effect between RSF and net profit (INTRSFPROFIT) in predicting CEO remuneration. This model is also part of the extended analysis under Research Question 4, which investigates the combined effects of financial performance variables on CEO remuneration. Net profit is the absolute amount or earnings

after expenses and taxes (Jayathilaka, 2020). According to Jayathilaka (2020), companies operate in dynamic, unstable environments, and the efficiency of CEOs is determined by their ability to identify opportunities that increase profitability.

Notably, both variables (RSF and net profit) are directly linked, as RSF is a ratio based on net profit ($RSF = \text{net profit} / \text{shareholder equity}$). Although RSF and net profit are mathematically related, they capture partially overlapping yet conceptually distinct aspects of performance: efficiency and scale. However, this overlap introduces potential redundancy that must be considered when interpreting interaction effects. From a remuneration design perspective, combining these two variables is logical, as the rationale for rewarding CEOs should be based not only on the generation of profits but also on how efficiently they use the capital entrusted to them.

The interaction term INTRSFPROFIT was statistically significant across all three remuneration types ($p = 0.019$, $p = 0.012$, $p = 0.011$), with negative coefficients (-0.004, -0.004, and -0.009) for fixed pay, STI and total remuneration, respectively. The negative interaction suggests that the positive effect of net profit on CEO remuneration weakens at higher levels of RSF, and similarly, the effect of RSF diminishes at higher levels of net profit. This may suggest that remuneration committees consider these shareholder-aligned performance measures jointly rather than independently when determining CEO remuneration.

With adjusted R-squared values of 0.284 for fixed pay, 0.202 for STI and 0.250 for total remuneration, the model explains a moderate proportion of the variation in CEO fixed pay, STI and total remuneration, respectively. The adjusted R-squared values are 0.284 for fixed pay, 0.202 for STI, and 0.250 for total remuneration, indicating that approximately 28.4%, 20.2%, and 25% of the variation in CEO remuneration, respectively, is explained by the combined RSF and net profit interaction effect. Approximately 71.6%, 79.8%, and 75% of the variation in fixed pay, STI, and total remuneration remained unexplained by the models and may be attributable to other factors not included in the analysis, such as peer benchmarking or CEO characteristics, such as experience. These findings are broadly consistent with stewardship theory, which posits that CEOs are driven not only by financial incentives but also by other incentives, such as commitment to the organisation and reputation.

The regression analysis yielded a significant F statistic for fixed pay ($F = 41.20$, $p < 0.001$), STI ($F = 25.90$, $p < 0.001$) and total remuneration ($F = 34.74$, $p = 0.001$), indicating that the models are statistically significant overall and that the independent variables jointly explain a significant proportion of the variation in CEO fixed pay, STI and total remuneration.

Table 5.26: Interaction effects of RSF and net profit on CEO remuneration

Variable	Fixed Pay (Coeff)	Prob.	STI (Coeff)	Prob.	Total Rem. (Coeff)	Prob.
C	2974196.	0.0000	1095159.	0.0000	4152064.	0.0000
ROA WINS	7909.111	0.3834	-27947.03	0.0168	2772.320	0.8697
MCWINS	0.002517	0.2308	-0.001877	0.0821	0.001437	0.6792
PROFIT WINS	0.007865	0.9221	0.064401	0.3775	0.130068	0.4778
TURNOVER WINS	0.047685	0.0000	0.043766	0.0000	0.086532	0.0000
RSFWINS	-13670.35	0.0192	40585.53	0.0000	18367.80	0.0690
EPSWINS	695.6392	0.0008	290.4964	0.0904	897.0810	0.0361
INTRSF PROFIT	-0.003951	0.0189	-0.004490	0.0119	-0.009215	0.0107
Durbin Watson	1.897792		1.855982		1.942705	
F-Statistic	41.20074		25.89936		34.73993	
Adjusted R- Squared	0.284419		0.202130		0.250143	

Source: Researcher's own

Financial performance alone may not fully explain remuneration outcomes; other determinants could have contributed to the misalignment between CEO remuneration and company performance. An alternative to financial indicators, proposed by Olusegun (2020) in a study of Nigerian listed companies, is that board composition and size are determinants of CEO remuneration.

5.5.4 Moderating Role of Company Size in the CEO Relationship

Following the analysis of the combined (interaction) effects of independent variables on CEO remuneration, this section examines the moderating role of MC on the relationship between CEO remuneration and company performance for JSE-listed companies for the period 2008 to 2020. The interaction and moderation effect are statistically represented in a similar manner using an interaction term in a regression model (Liu, Yuan & Wen, 2022). However, the two differ conceptually. Interaction refers to the combined influence of two variables on the outcome, whereas moderation focuses on whether the relationship between an independent variable and a dependent variable changes according to the level of a third variable, the moderator (Rimpler, Kiers & Ravenzwaaij, 2025). In the current study, market capitalisation was used as a proxy for company size and served as the moderator variable. The statistical moderation analysis examined whether the relationship between company performance indicators and CEO remuneration varied with company size. The discussion on the moderating effects results will be presented using values rounded to three decimal places.

5.5.4.1 Moderating Effects of Company Size on the relationship between Return on Assets and CEO Remuneration

MC, as a proxy for company size, reflects the market value of an organisation, whereas ROA measures asset efficiency in generating profits (Einstein, 2025). The moderation analysis tested whether MC influences the relationship between ROA with fixed pay, STI and total remuneration.

The results from Table 5.27 indicate that the interaction term ($MC \times ROA$) is significant at the 5% level for fixed pay ($p < 0.001$, coefficient, 0.005) and total remuneration ($p < 0.001$, coefficient 0.001). This is consistent with the finding that the effect of ROA on CEO remuneration varies with company size, indicating that MC moderates the relationship between ROA and CEO fixed pay. Specifically, the positive association between ROA and CEO fixed pay and total remuneration was stronger in companies with higher MC than in companies with lower MC, suggesting that company size moderates the pay-performance relationship.

These findings suggest that CEOs in larger companies are rewarded more for improved asset efficiency, which is consistent with the view that leading large organisations entails managing

complex operations, broader stakeholder bases, and greater market presence (Edmund et al., 2023; Nodlund & Petterson-Sango, 2021; Ragmath & Bussin, 2022). According to Rusdiyanto and Narsa (2020), larger companies receive increased scrutiny from investors, regulators, and analysts, thereby increasing the need for effective asset management and reducing incentives for accounting manipulation. Yahaya (2025) further noted that CEOs navigating inflationary pressures, regulatory uncertainties, and industry challenges bring strategic value that warrants higher fixed pay and total remuneration. According to human capital theory, CEO skills, experience, and expertise are particularly valuable in large, complex organisation (Grugulis, 2024).

Nguyen and Minh (2025) reported that ROA and COVID-19 were positively associated with MC. Considering that this study period coincided with the onset of the COVID-19 pandemic, this impact is significant. They also reported a negative interaction between financial crises and ROA, whereas global financial crises and COVID-19 significantly moderated the ROA–MC relationship. Companies with higher ROA typically pay higher dividends, attracting investors and increasing MC. Larger companies were better leveraged to navigate these crises, sustaining investor confidence and MC.

These results suggest that companies with both high MC and ROA are strongly associated with higher fixed pay and total remuneration, reflecting pay premiums for strong combined financial performance. Equity theory explains this outcome, positing that CEOs assess fairness by comparing their remuneration with their contributions to those of peers (Patterson, 2023). In larger, more efficient companies, higher fixed pay and total remuneration may be to maintain perceived fairness, satisfaction, and retention.

The strong association between high MC and ROA with increases in CEO fixed pay and total remuneration aligns with stewardship theory, which views the CEO as a responsible steward of company assets, generating shareholder returns.

For STI, the moderation effect was not statistically significant ($p = 0.812$; coefficient = -1.95), suggesting that the association between ROA and STI does not vary significantly across companies of different sizes. Fachriyyah et al. (2025) noted that higher ROA has a positive and significant effect on company value, implying that improved asset efficiency should, theoretically, justify higher STI payouts under agency theory. The lack of significance in this

study may indicate that JSE remuneration committees do not consistently link asset efficiency (ROA) to STI.

Table 5.27: Moderation effect of MC × ROA on fixed pay, STI and total remuneration

Pay Type	Moderation Term	Interaction term coefficient	P-Value	F-Statistic	Adjusted R-Squared	Durbin Watson
Fixed Pay	MC x ROA	0.000493	0.000	57.890	0.360	1.886
STI		-1.95E-05	0.812	26.001	0.203	1.856
Total Remuneration		0.00055	0.002	41.140	0.284	1.922

Source: Researcher's own

The adjusted R-squared value of 0.360, 0.203, 0.284 indicates that approximately 36%, 20.3% and 28.4% of the variance in fixed pay, STI and total remuneration respectively is explained by the moderation model, which included ROA. Other factors not included in the model accounted for approximately 64% for fixed pay, 79.7% for SIT, and 71.6% for total remuneration, which remained unexplained by the models and may be attributable to other factors not included in the analysis, such as governance framework or organisational strategy. The regression F statistics was statistically significant for both fixed pay ($F = 57.889$, $p < 0.001$), for STI ($F = 26.00$, $p < 0.001$) and total remuneration (41.14 , $p < 0.001$), indicating that the moderating models were statistically significant overall, suggesting that ROA, MC and their interaction jointly contributed to explaining the variation in CEO remuneration. in CEO fixed pay and total remuneration.

The next analysis examined the moderating effect of company size and EPS on CEO remuneration.

5.5.4.2 Moderating Effects of Company Size on the relationship between Net Profit and CEO Remuneration

Research questions 7 to 9 examine whether company size (proxied by MC) moderates the relationships between company performance and CEO fixed pay, STI and total remuneration for JSE-listed companies from 2008 to 2020. Larger companies are assumed to benefit from

economies of scale, stable stock performance, greater opportunities to access capital and market dominance, which positively impacts profitability and investor confidence (Fuadi, Wulandari & Chairunnisa, 2024). Drawing on optimal contracting and agency theory, it is assumed that larger, higher-profit companies design contracts to minimise agency costs and better align the interests of principals and agents (Foarta & Sugaya, 2021).

For fixed pay the moderation model was statistically significant overall ($F = 39.034$, $p < 0.001$). The interaction between MC and net profit was not statistically significant (coefficient = $-2.63E-10$, $p = 0.780$) suggesting company size did not moderate the relationship between net profit and fixed pay. This may imply that other factors may have been considered by the remuneration committee in designing CEO remuneration frameworks. The adjusted r-squared value of 0.273 indicates that approximately 27.3% of the variation in total remuneration was explained by the model. 72.7% remaining variation in CEO total remuneration may be attributable to factors not included in the model, such as long-term shareholder value creation.

The moderation analysis results presented in Table 5.28 for STI, the moderation model was statistically significant overall ($F = 26.625$, $p < 0.001$). The interaction between MC and net profit was negative and statistically significant (coefficient = $-2.63E-10$, $p = 0.013$) suggesting that the relationship between net profit and STI varied according to company size. The relationship between net profit and company size was weaker in companies with higher MC, than in companies with lower MC. showed that MC significantly moderated the relationship between net profit and STI (at the 5% level) ($p = 0.013$, coefficient = -2.63). The negative coefficient suggests that as company size increases, the positive effect of net profit on STI diminishes, suggesting that the positive association between net profit and STI weakens as company size increases. Stewardship theory provides an explanation, suggesting that CEOs in larger organisations may be motivated more by intrinsic drivers than STI. The adjusted r-squared value of 0.207 indicates that approximately 20.7% of the variation in total remuneration was explained by the model. 79.3% remaining variation in CEO total remuneration may be attributable to factors not included in the model, such as ESG performance.

For total remuneration, the moderation was statistically significant overall ($F = 34.010$, $p < 0.001$). however, the interaction between MC and net profit was not statistically significant (coefficient = $-8.00E-11$, $p = 0.780$), suggesting that company size did not significantly

moderate relationship between net profit and total remuneration. The adjusted r-squared value of 0.246 indicates that approximately 24.6% of the variation in total remuneration was explained by the model. 75.4% remaining variation in CEO total remuneration may be attributable to factors not included in the model, such as economic conditions.

Table 5.28: Moderation effect of MC × net profit on fixed pay, STI and total remuneration

Pay Type	Moderation Term	Interaction term coefficient	P Value	F-Statistic	Adjusted R-Squared	Durbin Watson
Fixed Pay	MC x net profit	3.56E-11	0.780	39.034	0.273	1.899
STI		-2.63E-10	0.013	26.625	0.207	1.864
Total Remuneration		-8.00E-11	0.780	34.010	0.246	1.921

5.5.4.3 Moderating Effects of Company Size on the relationship between Return on Shareholders' Funds and Remuneration

Agency theory's rationale for prioritising shareholder value is closely aligned with the principles of shareholder theory, which posits that the primary responsibility of CEOs and boards is to maximise shareholder wealth, often positioning shareholder interests above other stakeholders such as suppliers, customers and society at large (O'Connell & Ward, 2020). Within this framework, CEO remuneration is designed to incentivise behaviours that enhance returns to shareholders, ensuring alignment between CEO behaviours and the primary goal of shareholder value maximisation (O'Connell & Ward, 2020). In contrast, stakeholder theory argues that sustainable organisational success depends on balancing multiple stakeholder interests, which may not be financially driven. These theoretical lenses provide a context for understanding the moderating role of company size (as categorised by MC) in the relationship between RSF and CEO remuneration components.

For fixed pay, the moderation model was statistically significant overall ($F = 49.53, p < 0.001$). The interaction between MC and RSF was positive and statistically significant (coefficient =

0.0002), suggesting that the relationship between RSF and fixed pay varied according to company size. The positive relationship between RSF and fixed pay was stronger in companies with higher MC than in companies with lower MC. The adjusted r-squared value of 0.324 indicates that approximately 32.4% of the variation in fixed pay was explained by the model. 67.6% remaining variation in CEO fixed pay may be attributable to factors not included in the model, such as long-term shareholder value creation.

The moderation analysis results presented in Table 5.29 for STI, the moderation model was statistically significant overall ($F = 26.29$, $p < 0.001$). The interaction between MC and RSF was not statistically significant (coefficient = $1.25E-05$, $p = 0.795$) suggesting that company size did not significantly moderate the relationship between RSF and STI. The relationship between RSF and company size was weaker in companies with higher MC, than in companies with lower MC. The adjusted r-squared value of 0.205 indicates that approximately 20.5% of the variation in total remuneration was explained by the model. 79.5% remaining variation in CEO STI may be attributable to factors not included in the model, such as economic conditions.

For total remuneration, the moderation was statistically significant overall ($F = 37.610$, $p < 0.001$). The interaction between MC and RSF was positive and statistically significant (coefficient = 0.0002, $p = 0.010$), suggesting that the relationship between RSF and total remuneration was stronger in companies with higher MC than in companies with lower MC. The adjusted r-squared value of 0.265 indicates that approximately 26.5% of the variation in total remuneration was explained by the model. 73.5% remaining variation in CEO total remuneration may be attributable to factors not included in the model, such as economic conditions.

These findings suggest that remuneration committees may place greater emphasis on shareholder value creation, as reflected by RSF, when determining fixed pay, and total remuneration

Table 5.29: Moderation effect of MC x RSF on fixed pay, STI and total remuneration

Pay Type	Moderation Term	Interaction term Coefficient	P-Value	F-Statistic	Adjusted R-Squared	Durbin Watson
Fixed Pay	MC x RSF	0.0002	0.000	49.530	0.324	1.865
STI		1.25E-05	0.795	26.290	0.205	1.852
Total Remuneration		0.0002	0.010	37.610	0.265	1.910

Source: Researcher's own

5.6 HYPOTHESIS TESTING

In line with the study's quantitative research methodology, hypotheses were developed to empirically test the expected relationships between CEO remuneration and company performance. The formulation of these hypotheses was grounded in theory and prior research evidence, providing a statistical basis for testing. Through empirical testing, the study sought to confirm or reject assumptions regarding the relationship between CEO remuneration and company performance. Table 5.30 below summarises the results of the hypotheses tested. To ensure consistency in data presentation, all tables display the exact statistical values obtained from the analysis, following a uniform format throughout the research.

At the 5% significance level, the research hypothesis is supported if the p-value is less than 0.05 ($p < 0.05$). If the p-value is greater than or equal to 0.05 ($p \geq 0.05$), there is insufficient evidence to support the hypothesis (Akhileshwari, 2023).

Table 5.30: Summary of hypotheses results

Research Hypothesis	Hypothesis Testing Results
H ₁ : There is a statistically significant relationship between CEO remuneration, namely fixed pay, STI and total remuneration, and company performance indicators EPS, net profit, ROA and RSF among JSE-listed companies for the period 2008 and 2020.	CEO fixed pay x EPS: Supported (p = 0.0018) CEO fixed pay x net profit: Not supported (p = 0.1302) CEO fixed pay x ROA: Not supported (p = 0.6012) CEO fixed pay x RSF: Supported (p = 0.0399) CEO STI x EPS: Not supported (p = 0.1222) CEO STI x net profit: Not supported (p = 0.2191) CEO STI x ROA: Supported (p = 0.0212) CEO STI x RSF: Supported (p < 0.0001) CEO total remuneration x EPS: Not supported (p = 0.0594) CEO total remuneration x net profit: Not supported (p = 0.4318) CEO total remuneration x ROA: Not supported (p = 0.9031) CEO total remuneration x RSF: Supported (p = 0.0309)
H ₂ : The interaction between company performance indicators, namely EPS, net profit, ROA and RSF, has a statistically significant influence on CEO remuneration types, namely fixed pay, STI and total remuneration beyond the individual effects of each measure among JSE-listed companies for the period 2008 to 2020.	EPS x net profit and CEO remuneration: Fixed Pay: Not supported (p = 0.4957) STI: Supported (p = 0.0095) Total remuneration: Supported (p = 0.0231) EPS x ROA and CEO remuneration: Fixed pay: Not supported (p = 0.4606) STI: Not supported (p = 0.0889) Total remuneration: Not supported (p = 0.1132) EPS x RSF and CEO remuneration: Fixed pay: Supported (p = 0.0228) STI: Supported (p = 0.0007) Total remuneration: Supported (p = 0.0179) RSF x net profit and CEO remuneration: Fixed pay: Supported (p = 0.0189) STI: Supported (p = 0.0119) Total remuneration: Supported (p = 0.0107)

H3: Company size, measured by market capitalisation, significantly moderates the relationship between company performance indicators, namely EPS, net profit, ROA and RSF, and CEO remuneration, measured through fixed pay, STI and total remuneration among JSE-listed companies for the period 2008 and 2020.	MC, significantly moderates the relationship between net profit and CEO remuneration: Fixed pay: Not supported ($p = 0.7792$) STI: Supported ($p = 0.0125$) Total remuneration: Not supported ($p = 0.7796$) MC, significantly moderates the relationship between ROA and CEO remuneration: Fixed pay: Supported ($p < 0.001$) STI: Not supported ($p = 0.812$) Total remuneration: Supported ($p = 0.002$) MC, significantly moderates the relationship between RSF and CEO remuneration: Fixed pay: Supported ($p < 0.001$) STI: Not supported ($p = 0.795$) Total remuneration: Supported ($p = 0.010$)
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Source: Researcher's own

This study aimed to investigate the relationship between CEO remuneration and company performance among publicly listed JSE companies for the period 2008 to 2020. The motivation for the study was the increasing scrutiny surrounding CEO remuneration and its justification, particularly within the context of South Africa's high levels of inequality. With companies listed on the JSE required to publish the remuneration of CEOs and provide their remuneration philosophies, the theoretical expectation of a positive statistically significant relationship between CEO remuneration and company performance.

To justify this assumption, agency theory and optimal contracting theory have posited that the interests of CEOs should be aligned with shareholder interests to avoid agency costs; therefore, the assumption would be that CEO remuneration would be a statistically positive relationship between CEO remuneration and company performance, especially for variable pay, which is linked to performance. Company size was also expected to influence CEO remuneration, with larger companies expected to remunerate their CEOs higher as a result of the complexity of operations and the greater demands on the CEO. When the p-value is greater than or equal to 0.05, the hypothesis is not supported, indicating insufficient statistical

evidence to conclude that a significant relationship exists between CEO remuneration and company performance.

The findings demonstrate that the pay-performance relationship is selective, conditional, and dependent on company characteristics such as size. The findings may suggest that remuneration committees are actively mitigating excessive CEO remuneration through financial performance measures. This highlights the importance of considering non-financial measures that promote long-term sustainable outcomes for companies. Stakeholder theory posits that companies should serve the interests of all stakeholders affected by their operations, not just shareholders. Therefore, it is necessary to research how the design of CEO remuneration and company performance can balance the needs of diverse stakeholders, including customers, employees, suppliers, communities, and shareholders, to promote long-term sustainable outcomes. This approach contrasts with the traditional shareholder-focused model by underscoring the interconnectedness and shared value creation.

5.7 CHAPTER SUMMARY

The present study aimed to examine the relationship between CEO remuneration and company performance measures among JSE-listed companies from 2008 to 2020. To analyse the collected data, the researcher utilised two main branches of statistical methods, namely, descriptive statistics and inferential statistics. With respect to descriptive statistics, the researcher described only the findings of the collected data using the mean, median, minimum, maximum and standard deviation.

The descriptive statistics also provided an overall summary of the CEO's fixed pay, STI, and total remuneration over the 13-year period. The fixed package median for CEO remuneration for the period 2008 to 2020 was R3 596 000, with a maximum fixed pay of R569 140 000 and a minimum of R236 524. The median STI for the 13-year period was R1 634 816, and the mean was R3 244 540. The highest STI in the 13-year period was R47 785 256, with a minimum STI of R0. The maximum total remuneration observed in the 13-year period was R569 140 000, with a minimum of R236 524. The large dispersion between minimum and maximum suggests the presence of outliers and a highly skewed remuneration distribution.

The analysis of CEO remuneration revealed annual fluctuations in each remuneration type for the study period. There was no uniform increase in CEO fixed pay, STI or total remuneration

during the study period. As the study was conducted during key events, the annual analysis provided insight into the possible impact of these events on CEO remuneration. For instance, fixed pay fluctuated over the 13-year period from the lowest growth rate of 0% in 2015/2016 to the highest percentage increase of 17% in 2011/2012. The average annual increase, based on the median STI, was 19.8% from 2008 to 2020. The fluctuations in CEO STI were compared with broader economic trends, and company performance metrics also varied over the study period. For instance, the decrease in STI and broader economic conditions in 2018/2019 aligns with the concurrent decrease in company performance indicators during the same period: ROA decreased by 3%, EPS decreased by 22%, RSF decreased by 13%, and net profit decreased by 4%.

For total remuneration, the average annual increase, based on the median, was 9.8% from 2008 to 2020. The total remuneration annually steadily increased from R3 710 000 to the maximum amount noted, R8 664 745 in 2018, and then declined in 2019 (R8 477 797) and 2020 (R8 066 000).

The descriptive statistics were followed by inferential statistics, which enabled the analysis of the relationship between CEO remuneration and company performance measures. The study also examined the direct relationships, interaction effects, and moderating effects using panel data regression models with corrections for heteroskedasticity and autocorrelation. The direct relationship findings revealed that different CEO fixed pay, STI, and total remuneration rates were explained to various degrees by EPS, ROA, and RSF.

The results of the analysis revealed that the relationships between fixed pay and the company performance measures EPS and RSF were statistically significant at the 5% level.

When the relationship between STI and company performance measures was examined, ROA ($p=0.02$) and RSF ($p=0.00$) were statistically significant predictors, indicating stronger relationships. The positive statistical significance of the relationships between STI and ROA and RSF aligns with the agency theory objective of linking STI to shareholder objectives. Total remuneration was influenced primarily by RSF. The study findings were grounded and linked to theoretical and empirical studies.

The complexity of the relationship between CEO remuneration and company performance was further analysed through investigating the combination of company performance

measures on CEO remuneration to provide further explanatory power. Significant interactions were observed for certain combinations, particularly between $\text{EPS} \times \text{RSF}$ and $\text{RSF} \times \text{net profit}$, while others for example, $\text{EPS} \times \text{ROA}$, were not statistically significant. Some interactions yielded negative coefficients, suggesting that the influence of one performance indicator on remuneration weakens at higher levels of another, possibly as a measure of remuneration committees attempting to curb excessive CEO remuneration or the focus on other non-financial performance metrics. These results reflected different theoretical groundings and principles from agency to stakeholder theories, emphasising shareholder alignment with intrinsic motivation factors in determining the pay–performance link.

The study also considered the importance of a third element in influencing the strength and direction of the link between CEO remuneration and company performance. The analysis of company size (as categorised by MC) as a common moderating variable suggests that MC significantly influenced the strength of the relationship between certain performance measures and remuneration outcomes. Company size moderated several relationships, strengthening some (e.g. ROA and RSF with remuneration), while weakening others (e.g. net profit and total remuneration). The results underscore the fact that although company size suggests complexity in decision making, economies of scale, and market dominance, the findings suggest that company size does not always strengthen or change the influence of CEO remuneration. The findings suggest that while CEO remuneration is partially aligned with company performance, the strength and nature of this relationship vary depending on the type of remuneration and the performance metric.

Chapter 6 summarises the main research findings and discusses the results against the background of the literature review. It also provides recommendations on a framework that could be utilised in providing guidelines linking remuneration and performance relationships.

CHAPTER 6: DISCUSSION OF RESULTS

6.1 INTRODUCTION

The main objective of this research was to investigate the relationship between CEO remuneration and the company performance in publicly listed organisations on the Johannesburg Stock Exchange (JSE) from 2008 to 2020. Although this topic has been widely examined in international studies, the findings remain inconclusive. This study aimed to interpret and discuss its findings in the context of existing knowledge, highlighting their importance for both theory and practice. To guide this discussion, the researcher presented a conceptual framework that diagrammatically illustrates the presumed relationship between CEO remuneration and company performance, noting the key concepts and variables and thereby providing a structured lens for addressing the research questions.

The remuneration variables considered for the study, as discussed in Chapter 3, Section 3.3, were fixed pay, STI, and total remuneration. For the company performance measures, the research focused on EPS, net profit, ROA and RSF.

This chapter examines how the findings from Chapter 5 compare with those of earlier research on similar subjects, noting the similarities and discrepancies with the objective of contributing to the literature on CEO remuneration and company performance. Eight main questions and corresponding sub-questions were posed for the study, and hypotheses were proposed to test the relationship between the independent and dependent variables. After the conceptual framework, the results of each question will be discussed.

6.2 ANNUAL RELATIONSHIP BETWEEN CEO REMUNERATION AND COMPANY PERFORMANCE

This section primarily provides insight into the relationship between CEO remuneration and company performance measures over a 13-year period. Multiple regression analysis provides a consolidated overview of the relationship between CEO remuneration and company performance. Public discussions and debates on CEO remuneration are often framed around annual figures and long-term trends, underscoring the importance of examining and discussing year-to-year fluctuations in both CEO remuneration and company performance measures. The annual analysis of CEO remuneration and its link to company performance provides an

opportunity to gain insight into how the pay–performance link has evolved over the study period and to analyse how this relationship has been influenced by global events that have impacted companies. It also provides insights into the effectiveness of corporate governance structures and legislation reforms in managing and controlling CEO remuneration. The analysis will be conducted within a theoretical framework. Finally, the study will return to the research hypothesis regarding whether there is a statistically significant relationship between each component of CEO remuneration and company performance measures.

In examining year-on-year movement in company performance and CEO remuneration, all percentage changes are reported relative to the previous year. This is because calculating any annual increase or decrease uses the previous year's value as the basis for determining the percentage change. This approach ensures consistency, accuracy, and alignment with standard year-on-year financial practices.

6.2.1 Discussion – Earnings Per Share (EPS) Annual Analysis

The analysis of EPS over the 13-year period revealed pronounced volatility, highlighting the sensitivity of South African JSE-listed companies to both domestic and global macroeconomic factors. The median EPS fluctuated markedly, with a decrease from a high R231.95 in 2016, to a low R32.90 in 2020, illustrating the cyclical nature of corporate profitability within South Africa's emerging market context.

Following the global financial crisis in 2008, the median EPS declined sharply from R182.83 to R75.78 in 2009, whereas CEO fixed pay and total remuneration exhibited upward rigidity, increasing slightly from R2 245 000 to R2 321 000 and from R3 710 000 to R3 718 400, respectively. This decoupling between organisational performance and executive remuneration suggests a temporary misalignment consistent with managerial power theory, which posits that entrenched executives may sustain or increase their pay levels amid declining performance. However, STIs declined, from R1 258 500 to R792 690, reflecting partial adherence to agency theory, which maintains that performance-linked pay mechanisms align CEO interests with those of shareholders.

Following the global financial crisis of 2008, the median EPS rebounded significantly in 2010 (+127% compared with 2009), due to the post-global financial crisis recovery, reflecting stabilisation efforts and partial recovery in earnings. From 2011 to 2013, EPS growth

fluctuated (+5%, 17%, and 28%), reflecting the broader structural constraints within the broader South African economy. As noted by Muthu and Wesson (2023), developed markets tend to manage volatility more effectively than emerging markets do; South Africa is part of this market, where structural fragility, weaker investor confidence, and governance challenges increase vulnerability. In emerging markets, EPS is more volatile and more susceptible to governance weaknesses, making it a less reliable indicator of CEO remuneration.

The median EPS declined by 2% in 2014 compared with 2013, and by 22% in 2015 compared with 2014, coinciding with reduced commodity demand and global price volatility. This was followed by a rebound in 2016 (R231.95 or 57% compared with 2015), suggesting a temporary resurgence in profitability. The subsequent decline in 2017 (-12% compared with 2016) and 2018 (-3% compared with 2017) reflected intensified domestic political uncertainty, including cabinet reshuffles and sovereign credit downgrades, which undermined investor sentiment and company-level profitability.

The most pronounced decrease, 79%, occurred in 2020 compared with 2019 and was directly linked to disruptions in revenue streams, supply chains, and market confidence caused by the COVID-19 pandemic. As the EPS is calculated from net profit, these results align with the median net profit contraction of -93% reported for 2020 compared with 2019. Takyi and Bentum-Ennin (2020) similarly reported that stock market performance across African economies deteriorated significantly during the pandemic period. Corroborating this, Statistics South Africa (2021) reported that seven out of nine industries experienced lower profits in 2020 than in 2019 due to national lockdown restrictions.

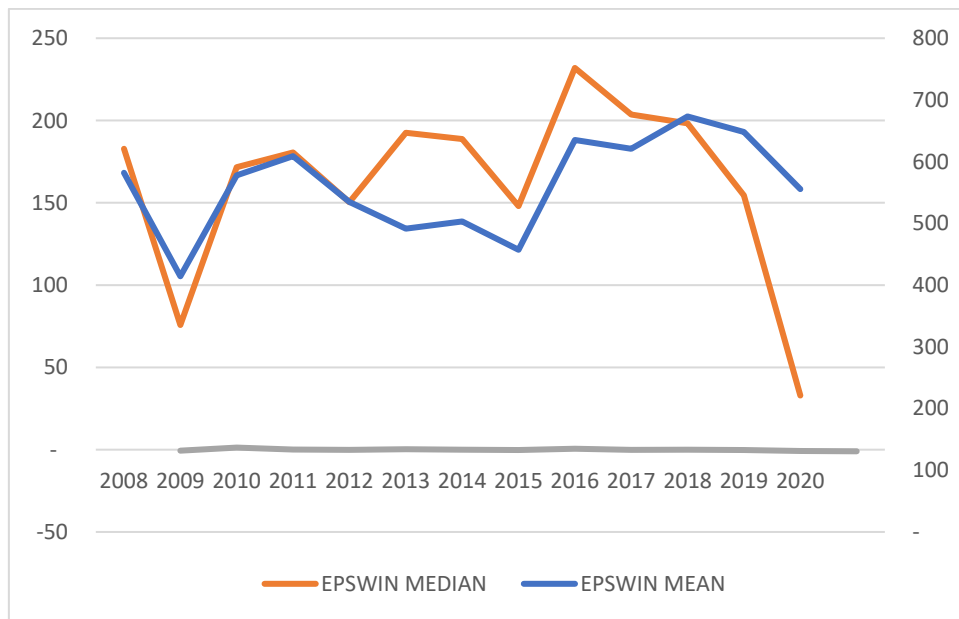


Figure 6.1: Median Earnings Per Share (Researcher's own)

6.2.2 Discussion – Return on Shareholder's Funds Annual Analysis

The analysis of median RSF from 2008 to 2020 revealed a cyclical pattern of alternating gains and declines, highlighting the sensitivity of shareholder returns to fluctuations in profitability, asset utilisation and financial leverage. A high median RSF signals efficient deployment of shareholders' capital in generating profits, whereas a low RSF indicates operational inefficiencies or excessive leveraging (Majika, 2024).

The median RSF was 20% in 2008 but declined sharply to 12% in 2009, a 40% reduction, reflecting the impact of the 2008 global financial crisis on South African JSE-listed companies. This downwards trend mirrored similar contractions in net profit and EPS during the same period, highlighting the interconnectedness of these indicators in reflecting company performance. The RSF partial recovery was 14% in 2010 and 15% in 2011, but the rebound was short-lived. It declined to 13% in 2012 and 2013, then to 11% in 2015 and 2016. The modest RSF improvement to 15% in 2011, together with profit gains of 11% in the same year, coincided with a 29% increase in CEO STI. This suggests a temporary alignment between CEO remuneration and shareholder returns, which is consistent with agency theory and emphasises linking executive pay to organisational performance.

However, the South African macroeconomic environment, heavily influenced by the mining sector, introduced significant volatility. High labour costs, motivated by the high number of

strikes in South Africa, disturbances in the global economy, and instability of financial markets, may have impacted the median RSF during the period 2011-2014 (Gaston, Obalade & Muzinutsi, 2020). Gaston et al. (2020) caution that volatility in the mining sector poses substantial systemic risks for investors, amplifying uncertainty in shareholder returns.

The relationship between median RSF and median EPS suggests partial consistency, supporting the notion that shareholder value is partly earnings driven. For example, the median RSF declined by 11% in 2012 compared with 2011, which was consistent with the median EPS decline of 17% in 2012. Nevertheless, CEO remuneration diverged from these performance trends. In 2012, compared with 2010, while both the median RSF and median EPS contracted, CEO STI increased by 40%, fixed pay increased by 17%, and total remuneration increased by 0.25%. This pattern highlights a pay-performance misalignment, reflecting a key agency-theory critique that executive remuneration is often insulated from performance shocks. Such protection of executive pay points to managerial power dynamics and potential rent extraction, where CEOs influence remuneration decisions through entrenched governance structures.

The sharp decline in 2020 relative to 2019 further highlights this misalignment. The median EPS fell by 79%, and the median RSF fell by 47%, indicating a steep deterioration in company profitability amid the COVID-19 pandemic. These declines reflect declining net income and weakened operational efficiency, ultimately eroding investor confidence and share prices. Despite this, CEO remuneration remained relatively stable, illustrating the resistance of remuneration rigidity.

Collectively, the findings indicate that although RSF and EPS generally move in tandem, CEO remuneration, particularly fixed pay and total remuneration, does not consistently respond to performance volatility. This suggests that remuneration committees may prioritise executive retention and contractual stability over strict adherence to pay-performance alignment. The persistence of upwards pay rigidity in periods of declining returns reinforces managerial power theory's assertion that COEs can influence remuneration outcomes, thereby diluting the efficacy of performance-based governance mechanisms intended to protect shareholder interests.

6.2.3 Discussion - Return-On-Assets Annual Analysis

This section examines the relationship between CEO remuneration and ROA for JSE-listed companies from 2008 to 2020, a period marked by major domestic and global events, including the global financial crisis of 2008-2009, the South African economic slowdown between 2010 and 2015, and the COVID-19 pandemic. These events significantly influence company profitability and asset efficiency, thereby shaping both performance outcomes and remuneration decisions.

Reflecting similar volatility in EPS, RSF, and net profit, the median ROA declined steadily over the 13-year period, from 12.31% in 2008 to 3.28% in 2020. The study hypothesised a statistically significant positive relationship between ROA and CEO fixed pay. However, the descriptive analysis revealed that while ROA fluctuated substantially, median fixed pay increased consistently from R2 245 000 in 2008 to R6 238 000 in 2020. This divergence suggests a misalignment between asset-based performance and remuneration, contradicting institutional theory, which posits that regulatory, shareholder, and societal pressures should contain excessive CEO remuneration.

Hollander and Havemann (2020) noted that declining business confidence during this period adversely affected company revenues and profits. As ROA measures profitability relative to total assets, external shocks, such as global financial instability or domestic structural constraints, directly affect this ratio. In 2009, ROA declined by -33% compared with 2008, mirroring the downward trends observed in EPS and RSF and likely reflecting the broader postcrisis market shock. CEO STI declined by -37% during the same period, suggesting that, at least initially, CEO STI was responsive to asset efficiency, an outcome consistent with agency theory's principle of performance alignment.

Between 2009 and 2011, ROA exhibited volatility. It declined sharply in 2009 by -33% relative to that in 2008, followed by a marginal decrease in 2010 (-1%), relative to that in 2009, before rising to 6% in 2011 relative to that in 2010. This recovery, however, was not sustained, with ROA decreasing again. This led to a decline in 2012 (-9%) relative to 2011. In contrast, CEO total remuneration increased steadily during these years by 11% (2010) relative to 14% (2011) and 0.25% (2012), whereas STI increased by 19% (2010 relative to 2009), 29% (2011 relative to 2010) and 40% (2012 relative to 2011). The South African business cycle experienced a recovery from 2009-2010, marked by GDP expansions of 2.8%

and 4%, respectively, driven by increased household consumption and government infrastructure spending (Hollander & Havemann, 2020). This partial recovery may have encouraged remuneration committees to continue rewarding executives despite unstable returns, signalling a gradual decoupling of pay from ROA performance. From 2010 to 2015, the South African economy experienced an economic slowdown due to the impact of the 2008-2009 global financial crisis, resulting in a slow, uneven recovery in GDP. The downgrades by credit rating agencies increased borrowing costs, whereas political instability and labour unrest in key industries such as mining and manufacturing significantly weakened economic conditions and contributed to a deteriorating operating environment. ROA slugging performance from 2010 to 2015 mirrored the economic slowdown in South Africa. The misalignment between ROA and CEO remuneration suggests that remuneration committees may have prioritised executive motivation and retention amid economic uncertainty. Rather than penalising poor performance, committees are likely to reward CEOs for navigating turbulent conditions and approach, consistent with stewardship theory, which views CEOs as custodians responsible for organisational continuity during crisis periods.

The ROA continued to underperform during 2017 to 2018. In 2017, ROA decreased by 2% relative to 2016, and in 2018, it decreased further by 14% relative to 2017, highlighting a consistent downward trend despite the broader economic recovery signals in South Africa. Domestic political disruptions, including cabinet reshuffles and the 2017 downgrade of South Africa's sovereign credit rating to "junk status" by Standard and Poor, further undermined investor confidence (Hullett, 2020). These adverse conditions, largely beyond managerial control, likely prompted remuneration committees to continue upwards adjustment in CEO pay. As Deloitte (2020) observed, remuneration committees increasingly sought to design reward frameworks that incentivised business resilience and long-term recovery. Within the stewardship paradigm, this behaviour highlights the role of COEs as trusted stewards responsible for safeguarding organisational stability and shareholder value through crises.

The sharp decline from 2019 (-47%) to 2020 reflected the disruptive effects of the COVID-19 pandemic, echoing similar declines in EPS, net profit, and RSF. Since ROA is a key measure of how effectively assets generate earnings, the sustained decline across consecutive years signals that JSE-listed companies became progressively less efficient in converting assets into profit.

6.2.4 Discussion - Net Profit Annual Analysis

Net profit, defined as a company's financial performance after deducting operating expenses from revenue, exhibits volatility over the study period. The global financial crisis of 2008 had an immediate effect, reflected in a 54% decline in the median net profit. While profits recovered intermittently, the most severe contraction occurred in 2019/2020, with a decline of -93%, coinciding with the onset of COVID-19 and structural weaknesses in the South African economy.

In contrast, CEO remuneration showed persistent growth over the study period, except for the CEO STI. The median total remuneration increased at an average annual rate of 9.8% between 2008 and 2020, whereas fixed pay rose at a greater rate, at 14.8% annually. This pattern suggests a negative correlation between net profit and CEO fixed pay and total remuneration. Given that fixed pay is a guaranteed component of remuneration and represents a substantial cost to companies, its steady increase likely contributed to the decline in net profit. The misalignment between pay and performance reinforces the managerial power hypotheses, which argue that powerful CEOs can influence remuneration committees to secure above-optimal pay regardless of company outcomes. decrease in net profit figures (O'Callaghan & Anakwe, 2025). Benchmarking practices may also explain the persistent escalation of fixed pay, as remuneration committees often align CEO salaries with peer groups to remain competitive, thereby creating an upward spiral even when net profit weakens (De Vaan et al., 2019).

Following the recovery from the global crisis, the median net profit increased by 108% in 2010 relative to 2009 and maintained these increases in 2011 and 2012 by 11% and 2%, respectively. From 2013 onward, net profit gains decreased by 8% relative to 2012. The year 2012 was marked by the Marikana massacres, which impacted the mining sector due to the violent demonstrations of miners, possibly marking the beginning of the decline of the mining sector, which contributed a significant portion of South African GDP. South Africa also experienced declining commodity prices, and the global challenges included the slowdown of major trading partners, such as China, which led to a slowdown in the South African economy, impacting median net profit (Baxter, 2021)

Unlike fixed pay, STI experienced negative growth in some years (2009, 2013, 2017, and 2019), which is in line with net profit and stewardship theory, as the custodians of company

resources, the CEO, make decisions with the best interests of the company. For the periods of 2017 and 2019, the negative growth in median net profit closely aligns with the country's economic conditions, with GDP growth forecast at 1% in 2017 and 1.2% in 2019 due to low international demand for South African commodities (Statistics, 2021). STI awards may support stewardship theory, which suggests that if CEOs are given free rein, they will indeed behave responsibly and in the best interest of shareholders.

The largest percentage increase in the STI awarded was in 2020 (260%), relative to 2019, and the largest decrease was in 2019 (-47%), relative to 2018. The negative growth in STI may indicate some alignment with company performance measures, as net profit also decreased by 4%. As STIs are rewards awarded to CEOs for achieving certain key performance targets, fluctuations in median STIs may appear to align with median net profit in some instances. Bedford et al. (2023) reported that, to alleviate stakeholder pressure, CEOs announced symbolic pay cuts but offset them with increases in cash bonuses. The year-to-year increases in fixed pay were not as substantial as those for STI. The fixed pay increases ranged from 3% to 17%, whereas the positive STI increases ranged from 11% to 260%. The onset of the COVID-19 pandemic may have contributed to the decrease in net profits, as the South African economy faced lockdown, which impacted revenue. Total remuneration declined by -5% in 2020 relative to 2019. Deloitte noted that CEOs at large, medium, and small JSE-listed companies reported a reduction in their total remuneration between 2019 and 2020.

The next section discusses the annual trends in MC for JSE-listed companies from 2008 to 2020.

6.2.5 Discussion – Market Capitalisation Annual Analysis

The data revealed alternating years of modest gains and declines, highlighting the vulnerability of the median MC to factors that influence market value ascribed to a company. A high median MC indicates the market's perception of a company's stability, size, and potential. Larger companies are considered leaders in their industry and are perceived as stable investments compared with smaller companies, which are deemed riskier but offer opportunities for significant growth.

The analysis of the median MC over the 2008–2020 period reveals volatility, mirroring fluctuations in median EPS, net profit, ROA, and RSF. The median MC in 2009 decreased by

19% relative to 2008, reflecting the impact of the global financial crisis on South African JSE-listed companies. However, there was a steady increase over the next 3 years, 2010 by 38% relative to 2009, 2011 by 35% relative to 2010, 2012 by 8% relative to 2011 and 2013 by 25% relative to 2012, possibly in reaction by the market to the post-global crisis recovery, leading to increased investor confidence and stronger capital inflows into South Africa (Maluleka, 2022).

From 2014 to 2016, marginal gains and losses were observed in median MCs, ranging from -3% to 3%. The volatility in the economy, largely in the mining and manufacturing industries, is driven by labour unrest in South Africa, and disturbances in the global economy and instability of financial markets may have impacted the median MC during the period 2013 to 2015 (Gaston, Obalade & Muzinutsi, 2020). In contrast, during the period of 2014 to 2016, STI increased by 22%, 35%, and 9%, respectively, possibly indicating that MC was not the performance metric aligned with STI during this period, as remuneration committees, in line with agency theory, suggest that CEO pay should be aligned with company performance.

Similarly, the drastic decrease in 2020 relative to 2019 in median EPS (-79%) was accompanied by a median RSF decline of -47% and a median MC decline of -23%. As discussed earlier, with declines in EPS and RSF, a decline in MC signals a company's deteriorating financial performance, suggesting that net income is declining and profit per share is falling, potentially due to challenges with overall efficiency and profitability, which negatively impact investor confidence and stock prices.

6.3 DISCUSSION ON THE DIRECT RELATIONSHIP BETWEEN CEO REMUNERATION AND COMPANY PERFORMANCE

Research questions 1, 2, and 3 examined the relationship between the different CEO remuneration components, that is, fixed pay, STI, and total remuneration, and company performance, among the JSE publicly listed companies in South Africa for the period 2008 to 2020. The separation of pay components is important because each component is designed to serve a particular purpose in CEO remuneration structures. Fixed pay represents a guaranteed base salary that provides income stability, STI reflects short-term CEO performance incentives typically linked to annual performance outcomes, whereas total remuneration represents an aggregate cash-based measure of CEO remuneration.

Through analysing these components individually, the study provides a nuanced understanding of how specific company performance measures (EPS, net profit, ROA, and RSF) influence CEO remuneration. The findings presented below should be interpreted within the scope of the study, which is confined to cash-based remuneration components. Accordingly, LTIs are excluded from the empirical analysis and are not reflected in the reported relationships.

The following discussion presents the findings for each research question and compares them with previous empirical studies to highlight the similarities and differences in the pay–performance relationship. The discussion further interprets the findings in relation to the literature, theoretical frameworks, and practical applications.

6.3.1 Relationship between CEO Fixed Pay and Company Performance Measures

Research question 1 aimed to analyse the relationship between CEO fixed pay and the company performance measures of JSE publicly listed companies during the period 2008 to 2020. OLS multiple regression for panel data was used to test this relationship. The results revealed that RSF ($p = 0.040$, coefficient = -11830.76) and EPS ($p = 0.002$, coefficient = 664.02) were statistically significantly associated with fixed pay at the 5% level of significance. Approximately 27.9% of the variance in fixed pay was explained by the independent variables.

The negative coefficient for RSF suggests an inverse association between RSF and fixed pay, with greater returns on shareholders' funds associated with lower fixed pay in the model. This may suggest that fixed pay is less directly responsive to shareholders' return performance indicator than STI. These results may suggest that, where RSF performance is stronger, remuneration committees are less likely to adjust fixed pay and might instead rely on other remuneration types to recognise performance (Putra & Setiawan, 2024). As RSF reflects the efficiency with which shareholders' funds are utilised to generate returns, the findings may suggest that remuneration committees prioritise financial stability, shareholder value creation during the study period (Abu-Ali, Al-Jamal & El-Masry, 2024).

The findings were different for EPS association with fixed pay. The positive coefficient for EPS suggests a positive association between EPS and fixed pay, suggesting that higher EPS

is associated with higher CEO fixed pay in the statistical model. This suggests that remuneration committees may consider shareholder earnings when setting fixed pay.

Similarly, Ramgath and Bussin (2022) reported a significant negative relationship between RSF and fixed remuneration, whereas EPS had a significant positive effect on CEO fixed remuneration. In contrast, Siwendu et al. (2024) reported only a weak relationship between RSF and fixed pay. These inconsistencies may be due to differences in study periods, industry focus, and sample composition: Ramgath and Bussin (2022) examined the financial services sector (2015-2019), whereas Siwendu et al. (2024) examined the mining sector (2015 to 2021). In contrast, the present study included all JSE-listed companies over a 13-year period (2008–2020), providing a broader and more representative perspective.

Neither ROA nor net profit showed a statistically significant relationship with fixed pay, contrary to the study's hypothesis that posited a positive link between these measures and fixed pay. These findings are inconsistent with those of Siwendu et al. (2024) and Yahaya (2025), who reported a significant relationship between fixed pay and ROA. Similarly, Coetzee and Hall (2020) reported a moderate positive relationship between CEO remuneration and net profit after tax (NOPAT), whereas Bussin and Ncube (2017) reported a moderate-to-strong relationship between net profit and fixed pay. The divergence between these studies and the current findings could be due to differences in the samples studied, industry contexts, timeframes, and methodological approaches.

The absence of a significant relationship between fixed pay, ROA, and net profit may indicate that other factors, such as benchmarking practices or governance dynamics, inform CEO pay decisions. Asikin and Roespinoedji (2020) emphasised that ROA provides a more comprehensive measure of financial performance, capturing the efficiency of asset utilisation. Thus, the lack of significance in this study implies that the CEO's fixed pay was not effectively linked to asset utilization performance.

While South African research on this subject has yielded mixed results, this study contributes to a nuanced understanding by reaffirming the importance of RSF and EPS as meaningful predictors of CEO fixed pay. It also highlights the complex and context-dependent nature of this relationship. Li (2021) reported that externally recruited CEOs tend to receive higher remuneration than internally promoted CEOs do, which may partially explain the observed misalignment between CEO remuneration and company performance in this study.

Overall, the results of Research Question 1 indicate that a positive relationship exists between fixed pay and only two of the five company performance measures, RSF and EPS, whereas no significant relationship was observed with net profit or ROA. Edmans et al. (2023) noted that reductions in directors' remuneration are rare, with 77% of companies never implementing them. This aligns with the current study's finding of an average median fixed pay increase of 14.8% from 2008 to 2020. The mean fixed pay for CEOs was R5 363 070, with a median of R3 519 000.

The persistence of increasing fixed pay, despite weak correlations with profitability measures, supports Jensen and Murphy's (1990) argument that directors do not perceive poor company performance as a justification for reducing remuneration. Therefore, benchmarking practices, rather than performance alignment, may play a dominant role in determining CEO fixed pay. However, this practice has pitfalls. Groysber et al. (2021) observed that most directors aim to position remuneration "just above the midpoint", resulting in a continuous upwards drift in pay levels, effectively creating a "race to the top".

Remarkably, directors do not believe that poor performance justifies remuneration reductions even though they think that good recent performance does (Jensen & Murphy, 1990). Future research should therefore examine how CEO fixed pay determination has evolved in the post-COVID-19 era, in which shifting macroeconomic conditions, ESG imperatives, and changing notions of work–life balance are reshaping executive remuneration frameworks.

6.3.2 Relationship Between STI and Company Performance Measures

Research question 2 aimed to analyse the relationship between CEO STI and company performance measures, EPS, net profit, ROA and RSF, for JSE publicly listed companies over the period 2008 to 2020. The underlying hypothesis posited a statistically significant positive relationship between CEO STI and company performance. In line with agency and optimum contracting theory, it was assumed that companies design STI schemes to align CEO behaviour with shareholder value creation. However, Gong, Jiang and Xie (2024) cautioned that entrenched CEOs may wield influence over remuneration contract design, exploiting incentive structures to secure private benefits. Other tactics may involve the manipulation of performance metrics to artificially increase performance-based remuneration.

The results of the present study revealed a significant positive relationship between STI and the company performance measures ROA and RSF. The coefficient for ROA (-26639.76) indicated that as ROA increased, CEO STI decreased, suggesting a possible inverse or lagged relationship between asset efficiency and short-term rewards. Conversely, the positive coefficient for RSF suggests that increases in RSF correspond with higher CEO STI. Together, the independent variables explained 19.6% of the variance in STI, implying that 80.4% of the variation in STI can be attributed to other organisational or external factors not captured within the model.

No statistically significant relationship was found between STI and either EPS or net profit. This finding aligns with Coetzee and Hall (2020), who reported a similarly negative correlation between CEO remuneration and profitability measures. In contrast, Chulkov and Barron (2023) observed a positive link between STI and ROA, especially for CEOs approaching retirement age or impending departure, suggesting that remuneration committees that increase STI payout long-term incentives are less applicable. Conversely, Bååth and Janseen (2022) reported no significant relationship between ROA and CEO STI, diverging from the results of this study.

Furthermore, Bååth and Janseen (2022) and Kieviet et al. (2024) reported a weak yet significant negative relationship between CEO STI and RSF, suggesting that during economic downturns, increases in STI may increase operating expenses and diminish total income. Given that RSF incorporates total net profit after taxation, preference dividends, and ordinary share capital plus reserves, macroeconomic contractions would naturally depress RSF outcomes. As Bååth and Janseen (2022) argued, variations in findings across countries may stem from differing corporate governance systems and cultural contexts influencing pay-performance alignment. From a stewardship theory perspective, CEOs may be motivated more by intrinsic rewards and organisational commitment than by short-term financial incentives, potentially explaining the weak relationship between STI and financial performance measures.

In alignment with this study's findings, Kieviet et al. (2024) reported no significant relationship between CEO remuneration and net profit. However, Bussin and Carlson (2020) reported a weak positive relationship between the two. Padia et al. (2020) attributed such inconsistencies to the inherent ambiguity in how variable pay (STI) interacts with different

types of company performance, highlighting that STI may reward behaviours not always directly reflected in traditional financial outcomes.

The insignificance of the EPS as a predictor of STI in this study aligns with the caution raised by Gong et al. (2024), who warned that the EPS may be unreliable because of executives' potential to manipulate earnings to influence performance-based pay. Similarly, Alshare, Kadir, Kamarudin and Hassan (2023) reported that CEOs frequently engage in earnings management to increase remuneration, contradicting agency theory's assumption that fair pay aligns managerial and shareholder interests. Masulis (2020) added that CEOs' ability to influence STI financial outcomes, coupled with remuneration structures such as tenure, can encourage short-termism rather than sustainable value creation.

Globally, regulatory developments may have further influenced remuneration committee behaviour. For example, the United States America Dodd-Frank Act mandates the disclosure of CEO-to-median employee pay ratios, whereas the UK's corporate governance code requires similar transparency. Such measures may have indirectly shaped South African remuneration practices, promoting greater scrutiny and alignment of STI awards with fair and defensible outcomes.

In conclusion, while Vester (2022) emphasised that CEOs need to be incentivised to generate profits for shareholders rather than at the expense of shareholders, the findings of this study suggest that STI design within JSE-listed companies remains only partially aligned with company performance. The significant link with RSF, but not with EPS or net profit, implies that remuneration committees may reward capital efficiency and stability over short-term profitability. However, the weak explanatory power of the model emphasises the complexity of STI determination, which may be influenced by behavioural, governance, and contextual factors. The growth in CEO remuneration relative to other employees has been the subject of public debate, leading to pressure to limit CEO pay.

6.3.3 Relationships Between Total Remuneration and Company Performance

Research question 3 analysed the relationships between CEO total remuneration and company performance measures, EPS, net profit, ROA, and RSF, and JSE publicly listed companies from 2008 to 2020. The findings indicate that RSF was the only statistically significant predictor at the 5% level, explaining 24.6% of the variance in total remuneration. RSF

suggests consistent relationships with all three CEO remuneration components, highlighting its robustness and explanatory strength as a key determinant of executive pay outcomes. In contrast, no statistically significant relationships were observed between total remuneration and EPS, net profit, or ROA.

This study revealed that RSF was the only company performance measure significantly associated with CEO total remuneration, explaining 24.6% of the variation. This finding diverges from those of Carlson and Bussin (2020) and Coetzee and Hall (2020), who reported no significant RSF effect. The significance of RSF across all remuneration components suggests that boards of publicly listed JSE companies may prioritise shareholder returns over traditional accounting-based profitability measures when determining CEO remuneration. The consistent significance of RSF contributes to the body of knowledge by positioning RSF as a relatively strong explanatory measure for remuneration design. Its consistent link with both fixed pay and STI highlights its robustness as a performance metric. As stewards of the company's assets and shareholder wealth, boards are expected to evaluate how effectively CEOs utilise shareholder funds, an assessment that RSF directly captures, thereby aligning with stewardship theory's emphasis on responsible resource management. These findings provide new insight into the pay–performance relationship by positioning RSF as a robust and contextually relevant metric for South African companies.

In contrast to the present findings, several prior studies, such as Hall and Coetzee (2020), whose study of JSE-listed companies covered the period 2006–2015, and Nkwadi and Matemane (2022), who examined the mining sector between 2007–2018, identified EPS as a significant determinant of CEO remuneration. The lack of significance for EPS in this study may be attributed to variations in study periods, sectors examined, and broader economic environments, thereby highlighting the importance of contextual and temporal factors in shaping the pay–performance relationship.

Similarly, while Bussin and Carlson (2020) reported a weak but positive relationship between net profit and total remuneration, the current study revealed no significant association. With respect to ROA, the absence of a significant association with total remuneration is consistent with findings by Naik et al. (2020) and Bussin and Carlson (2020) but contrasts with those of Coetzee and Hall (2020) and Boakye et al. (2020), who reported a strong negative relationship between ROA and CEO remuneration. Akter et al. (2020) reported a significant negative

relationship between ROA, RSF, and total remuneration, highlighting the complex and sometimes contradictory nature of these relationships.

Taken together, these comparative findings suggest that while accounting-based measures such as EPS and net profit have traditionally been viewed as significant determinants of CEO remuneration, RSF emerges as a more consistent and explanatory predictor across all components of CEO remuneration among JSE-listed companies. This finding highlights the need for continued exploration of which performance measures best predict CEO remuneration outcomes. The inconsistencies in results across accounting-based and market-based metrics may indicate an evolving focus on remuneration governance, where organisations increasingly integrate non-financial and forward-looking indicators into executive pay frameworks.

Bussin and Christo (2022) noted that the unpredictability introduced by the COVID-19 pandemic may catalyse a paradigm shift towards greater emphasis on environment, social and governance (ESG) metrics alongside total shareholder return. Moreover, macroenvironmental developments, such as the implementation of the King IV codes of good practice, government regulations, and political factors, as discussed in Sections 1.4, 2.5, and 2.6, warrant further investigation regarding their influence on CEO remuneration structures. These shifts reinforce the dynamic and context-dependent nature of executive remuneration in South Africa's corporate landscape.

6.4 DISCUSSION ON INTERACTION EFFECTS OF THE COMBINED INDEPENDENT VARIABLE ON THE DEPENDENT VARIABLE

Research questions 4, 5, and 6 sought to determine how the combined effects of company performance measures, ROA, RSF, EPS, MC, and net profit, influence CEO fixed pay, STI, and total remuneration in JSE-listed companies between 2008 and 2020.

Having examined the direct relationship between CEO remuneration and company performance, this section recognises that the interaction effects among company performance measures offer a more comprehensive understanding of the remuneration–performance nexus. The relationship between CEO remuneration and company performance is inherently complex, and the inclusion of interaction terms facilitates the identification of conditions under which the main effects may not show relationships, but, when combined, enables the

extension of established theoretical relationships to different contexts and enhances the understanding of the contingencies that influence CEO remuneration outcomes.

To provide a nuanced understanding of the interaction effect of the combined effect of independent variables, the discussion first presents and discusses the direct (main) effects of the independent variables to establish the baseline relationships. Thereafter, the results of the interaction analyses are discussed, with particular emphasis on whether the interaction effects are statistically significant. Coefficient values are reported in the text only when they are negative to highlight instances of inverse relationships. When no coefficient values are explicitly mentioned, they should be interpreted as positive.

6.4.1 Discussion Earnings Per Share x Net Profit (INTEPSNETPROFIT) On CEO Remuneration

Research question 4 examines how the interaction effect of EPS and net profit influences CEO remuneration, specifically fixed pay, STI, and total remuneration, for JSE-listed companies between 2008 and 2020. The interaction effects between EPS and net profit on CEO remuneration are reported in Chapter 5, Section 5.6.2.6. Prior empirical studies have explored similar relationships between CEO remuneration and company performance, albeit with varying results. Nkwadi and Matemane (2022) reported a statistically significant relationship between CEO remuneration and EPS in the post Marikana period (2013-2018), suggesting that shareholder-oriented performance indicators gained prominence in remuneration decisions following heightened scrutiny of executive pay practices.

Table 6.1: Interaction effects of EPS and net profit on CEO remuneration

Variable	Fixed Pay (Coeff)	Prob.	STI (Coeff)	Prob.	Total Rem. (Coeff)	Prob.
PROFIT WINS	-0.047820	0.6216	0.079151	0.2936	0.176727	0.3597
EPSWINS	680.45	0.0004	434.77	0.0211	1,246.64	0.0039
INTEPS PROFIT	-1.64E-05	0.4957	-4.90E-05	0.0095	-0.000107	0.0231

Source: Researcher's own

EPS and net profit are inherently linked; EPS is calculated as net profit divided by the number of shares outstanding. The mathematical dependence between the two raises multicollinearity concerns, limiting the interpretative value of the interaction results (de Winter, 2025). This overlap highlights the methodological challenge of distinguishing between the statistical and economic significance of performance metrics in executive pay research. This highlights the analytical risks inherent in combining mathematically related variables, as such interactions can distort the pay–performance link and misguide remuneration design.

Although the statistical output presents coefficients and significance levels, the broader implication lies in recognising the limitations of relying solely on empirical models to infer pay–performance alignment (Edmans et al., 2023). The inclusion of the interaction between EPS and net profit was deliberate, intended to demonstrate the inherent risks of relying solely on statistical relationships between independent and dependent variables in isolation, without embedding such analysis within relevant theoretical and practical contexts. From a research perspective, different econometric models can be employed to suggest statistical significance and infer potential relationships between variables (Simonsohn, Simmons & Nelson, 2020). However, in practice, remuneration design requires committees to make principled, transparent, and defensible decisions regarding the inclusion of specific performance measures (Siwendu et al., 2024). These decisions are not merely technical; they reflect

contested organisational and societal priorities shaped by stakeholder expectations, governance pressures, and evolving conceptions of fairness and value creation.

Consequently, organisations must exercise rational judgement in selecting the performance metrics applied to CEOs. Given the ongoing debates and competing stakeholder interests surrounding CEO pay, these decisions are inherently complex and highly contested (Edmans et al., 2023). Recognising these limitations is therefore critical, as the selection of company performance measures and the statistical findings illustrate the real-world challenges faced by remuneration committees and reward specialists in aligning performance indicators with both corporate objectives and societal expectations.

The strong interest in CEO remuneration and its link to company performance reflects the concerns of multiple stakeholders and underlines the importance of selecting complementary metrics that meaningfully capture the performance–pay relationship. Optimal contracting theory advocates remuneration contracts that align CEO remuneration with long-term shareholder interests, recommending a balanced portfolio of metrics that includes market-based indicators (such as EPS) alongside efficiency indicators (such as ROA or RSF) (Rivera, Zapatero & Zhong, 2025). In contrast, managerial power theory cautions that powerful CEOs may influence the choice of performance measures in their favour, favouring easily attainable or overlapping indicators. For example, the simultaneous use of EPS and net profit may lead to “double counting,” which artificially inflates perceived performance and enables undue remuneration gains for CEOs.

These dynamics highlight the strategic responsibility of remuneration committees to integrate expertise from finance, accounting, and human capital governance when designing performance-linked pay structures. Committees must ensure that selected metrics are theoretically defensible, empirically robust, and resistant to manipulation. In doing so, they enhance not only the integrity of remuneration systems but also organisational legitimacy and stakeholder trust in the fairness and effectiveness of executive pay practices.

Following the discussion of the interaction between EPS and net profit, despite the challenges posed by multicollinearity, it is important to discuss the direct relationship of each independent variable (EPS and net profit) with CEO remuneration. The direct relationship serves as an essential reference point to establish whether net profit independently predicts fixed pay, STI and total remuneration after the interaction influence of its interaction with the

EPS is considered. It enables comparison of the direction, strength, and significance of the effects, allowing for a clearer understanding of how the interaction term alters or enhances the underlying relationships.

6.4.1.1 Direct effect of EPS and Net Profit on fixed pay

It is important to mention the individual effects of the influence of the company performance measure and its relationship with CEO remuneration, as this helps explain the interaction effect. The direct effect of net profit on fixed pay suggests no statistically significant relationship at the 5% level ($p = 0.622$; coefficient = -0.048). This finding suggests that, despite being a key indicator of organisational profitability, net profit does not independently impact the CEO fixed pay component of CEO remuneration among JSE-listed companies during the study period.

For EPS, the relationships with fixed pay were statistically significant at the 5% level ($p < 0.001$, coefficient = 680.45), suggesting that increases in EPS are associated with corresponding increases in the fixed portion of CEO remuneration.

The interaction effect between EPS and net profit was negative and statistically insignificant at the 5% level for fixed pay ($p = 0.496$, coefficient = $-1.64E$), suggesting that combining these two performance measures does not significantly influence fixed pay. No statistical evidence was found that the interaction between EPS and net profit significantly influences CEO fixed pay. Practically, these findings may suggest that remuneration committees may avoid placing excessive emphasis on closely related profitability measures when determining CEO remuneration, thereby reducing the risk of rewarding overlapping aspects of company performance.

The results imply that when determining the company performance measures for CEOs, remuneration committees possibly rely on other measures, such as EPS, turnover or RSF, as presented elsewhere in the model, rather than net profit when determining fixed pay. Profitability, which is prone to fluctuations, while fixed pay is a guaranteed portion of CEO remuneration, may influence this decision. Boards may have prioritised company size and benchmarking norms as preferred mechanisms to justify CEO fixed pay in alignment with industry norms.

6.4.1.2 Direct effect of EPS and Net Profit on STI

CEO STI is evaluated as a dependent variable that may be influenced by net profit. The findings show that, like the fixed pay model, STI has no statistically significant direct relationship with net profit ($p = 0.294$; coefficient = 0.079). This suggests that net profit alone does not meaningfully influence STI among JSE-listed companies during 2008 to 2020. In contrast, EPS showed a statistically significant positive relationship with CEO STIs ($p = 0.0211$; coefficient = 434.77). Aligning EPS with variable pay components such as STI is more consistent with sound remuneration governance, as it rewards short-term performance without compromising long-term sustainability.

The interaction had a negative and statistically significant effect on STI at the 5% level ($p = 0.0095$, coefficient = -4.90E). This suggests that the positive relationship between one profitability measure and remuneration weakens as the other profitability measure increases.

The absence of a significant interaction between EPS and net profit may also be viewed from a stakeholder-theory perspective. Stakeholder theory suggests that organisations create value for a broad range of stakeholders, such as employees or customers, rather than focusing exclusively on shareholder interests. Consequently, CEO remuneration may reflect a wider set of organisational priorities and performance targets than financial measures alone (Nnadi & Mutyaba, 2023). This may help to explain why EPS and net profit had a negative and statistically significant relationship with STI. The launch of King IV in 2016, which emphasised good corporate governance and recognises that organisations operate within a broader social and environmental context, may also influence the increasing focus on corporate governance as a key performance metric (Cliffe Dekker Hofmeyr, 2025). By promoting accountability to both current and future stakeholders, King IV supports a shift from purely financial measures toward more holistic indicators in evaluating company performance and CEO remuneration.

As EPS and net profit are both different dimensions of profitability, remuneration committees may want to intentionally avoid the impact of the combined weight of these two variables in determining CEO STI to ensure a balanced, diversified performance scorecard. As stewards of the organisation, remuneration committees aim to design remuneration structures that promote fairness to avoid excessive payouts to CEOs.

6.4.1.3 Direct effect of EPS and Net Profit on total remuneration

For the final component of CEO remuneration, total remuneration, the findings reveal that EPS was positively and statistically significant at the 5% level total remuneration ($p = 0.0039$, coefficient = 1.246.64). Agency theory predicts that improved profitability should be accompanied by higher total remuneration to strengthen the alignment between CEOs and shareholders.

In contrast, the combined interaction effect of EPS and net profit on total remuneration results was negative and statistically significant ($p = 0.023$; coefficient = -0.000). The negative and statistically significant interaction coefficient suggests that the combined influence of EPS and net profit is associated with a weaker increase in total CEO remuneration. The findings suggest that although higher EPS was associated with higher total remuneration, the positive association weakened as net profit increased. Practically, a possible explanation for the findings may suggest that the remuneration committees do not reward EPS and net profit independently when determining CEO total remuneration, possibly because both measures reflect aspects of company profitability. This result suggests that corporate governance mechanisms such as remuneration committees may moderate the over awarding of CEOs.

Murphy and Jensen (2024) provided useful insights into why remuneration committees may exercise caution when accounting-based performance metrics, such as net profit, are linked to CEO remuneration. Their framework of incentive zones, illustrated in Figure 5.1, depicts how bonus plans are structured around pre-determined performance thresholds. These thresholds establish an 'incentive zone' bounded by upper and lower performance limits, beyond which additional effort yields diminishing or no marginal rewards.

When CEOs believe they cannot meet minimum performance targets at a lower level within a given period, they may reduce discretionary effort or strategically manipulate financial reporting by deferring revenue or accelerating expenses to shift reported profits across periods. Such practices, which distort reported profitability across periods, provide a plausible explanation for the non-significant relationship between net profit and CEO remuneration observed in this study. The timing of income and expenses may inflate or depress net profit without reflecting CEO performance, reinforcing the need for caution when interpreting its role in pay-performance analysis.

A compelling anecdote cited by Murphy and Jensen (2025:96) further illustrates this behavioural dynamic (although the quote referenced ROE/RSF, this can also be relevant to net profit):

“His performance measure was Return on equity (ROE/RSF), the upper performance threshold was set at 15%, and he discovered that his firm could easily surpass this upper threshold. He told us, half seriously: I’d have to be the stupidest CEO in the world to report an ROE (RSF) of 18%. First, I wouldn’t get any bonus for any results above the cap. Second, I could have saved some of our earnings for next year. And third, [the board of directors] would increase my target performance for next year”.

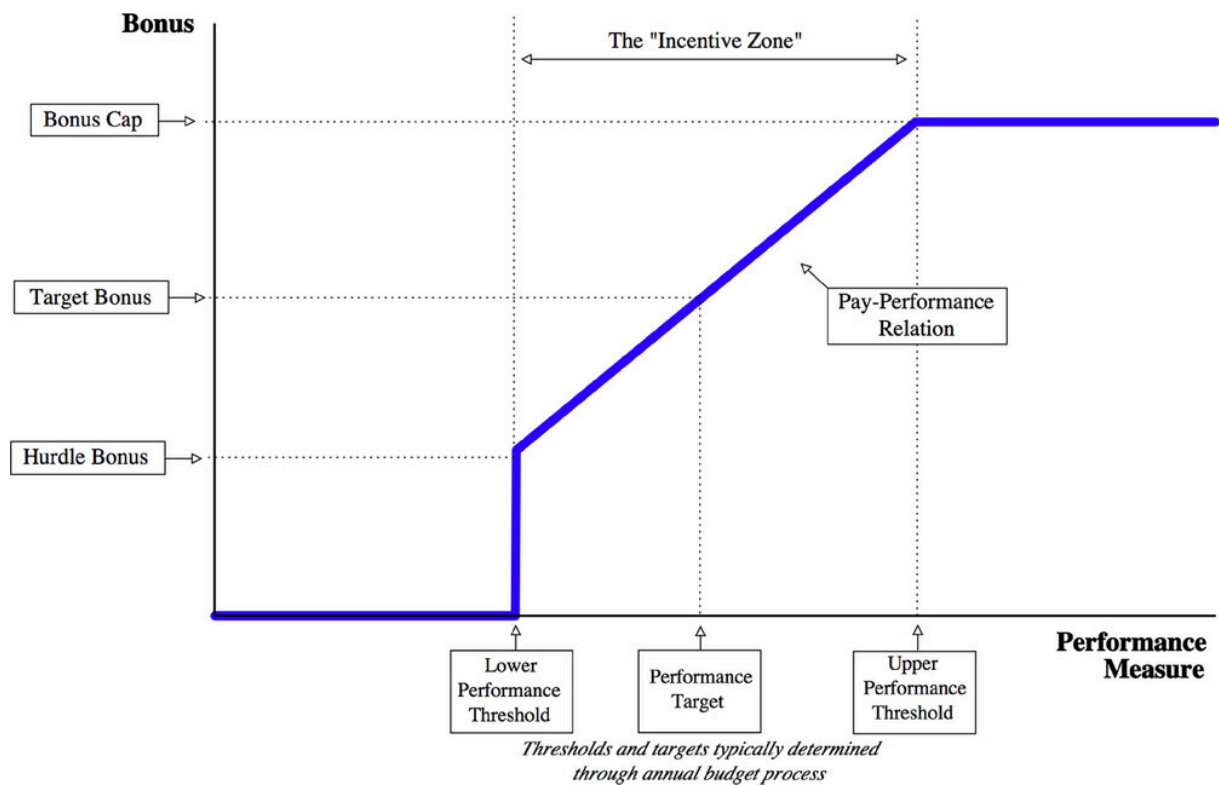


Figure 6.2: Typical Bonus Plan

Sources: Murphy and Jensen (2024:96)

6.4.2 Discussion of Earnings Per Share (Eps) and Return on Assets (ROA) Regarding CEO Remuneration (INTEPSROA)

Research question 5 examines how the interaction effect of EPS and ROA influences CEO remuneration, specifically fixed pay, STI, and total remuneration, for JSE-listed companies

between 2008 and 2020. Consistent with the previous analysis, this section first discusses the direct effects of each variable on CEO remuneration, followed by the interaction effect of EPS and ROA on CEO remuneration.

Table 6.2: Interaction effects of EPS and ROA on CEO remuneration

Variable	Fixed Pay (Coeff)	Prob.	STI (Coeff)	Prob.	Total Rem. (Coeff)	Prob.
ROAWINS	6323.319	0.4848	-24543.61	0.0415	3366.874	0.8441
EPSWINS	735.3577	0.0010	459.3308	0.0256	1147.984	0.0195
INTEPSROA	-6.657845	0.4606	-15.22437	0.0889	-28.66734	0.1132

Source: Researcher's own

6.4.2.1 Direct effect of EPS and ROA on fixed pay

EPS suggests a positive and statistically significant relationship with fixed pay ($p = 0.001$; coefficient = 735.36) at the 5% level, supporting optimal contracting theory, which advocates for pay structures that mitigate agency–principal conflicts.

In contrast, ROA was not statistically significant with fixed pay ($p = 0.485$; coefficient = 6323.32). This finding indicates that increases in ROA do not translate to higher fixed pay. These findings suggest that remuneration committees may therefore avoid linking fixed pay and ROA, owing to its susceptibility to volatility and the potential for one-off increases in net profit, such as through asset disposals or accounting adjustments (Uwah, Aji, Iniabasi, 2023).

The interaction between EPS and ROA was negative and statistically insignificant at the 5% level with fixed pay ($p = 0.461$, coefficient = -6.658). Therefore, there is insufficient evidence to conclude that the combined influence of EPS and ROA is associated with CEO fixed pay. A one-unit increase in the combined EPS and ROA measure is associated with a decrease in CEO fixed pay by approximately R6,658. From a governance perspective, the results suggest that fixed pay may be determined by factors other than the combined influence of EPS and ROA, such as company size or peer benchmarking. Since fixed pay is a guaranteed component of CEO remuneration, remuneration committees may reserve performance

alignment with variable remuneration rather than with fixed pay. The absence of significant interaction is broadly consistent with agency theory, which suggests that performance-sensitive incentives are more appropriately linked to variable remuneration than to fixed pay (Mans-Kemp & Swartz, 2024).

6.4.2.2 Direct effect of EPS and ROA on STI

The direct influence of EPS on STI was positive and statistically significant at the 5% level ($p = 0.026$; coefficient = 459.33). The positive and statistically significant association between EPS and STI is broadly consistent with optimal contracting theory, which argues that remuneration structures should align managerial rewards with shareholder interests and reduce principal-agent conflicts. EPS, as an indicator of shareholder returns and organisational success, remains a central metric for linking performance to CEO remuneration (Arsal, 2021). The significance of the EPS on STI suggests that remuneration committees on the JSE prioritise performance metrics that reflect shareholder value, reinforcing the statistical theoretical expectation that variable pay mechanisms, such as STI, are used to incentivise CEOs to increase profitability and organisational efficiency (Ramgath & Bussin, 2022). This finding aligns with prior research by Hall and Coetzee (2020), who reported that EPS is a significant determinant of CEO remuneration in South African listed companies, thereby corroborating the role of earnings-based metrics in effective pay-performance alignment.

ROA exhibited a negative and significant relationship with STI at the 5% significance level ($p = 0.042$, coefficient = -24543.61). Higher ROA is associated with lower STI during the study period. This finding suggests that STI may not have been directly linked to asset efficiency accounting-based measures but may have been influenced by other financial or non-financial indicators such as ESG.

The interaction between EPS and ROA was negative and statistically insignificant at the 5% level with STI ($p = 0.089$, coefficient = -15.22437). Therefore, as with the interaction between EPS and ROA and fixed pay, there is insufficient evidence to conclude that the combined influence of EPS and ROA is associated with CEO STI.

Overall, these results highlight the complexity inherent in designing CEO remuneration (Ramgath & Bussin, 2022). While companies may consider multiple financial performance

indicators, such as EPS and ROA, when evaluating performance, there is insufficient evidence that their combined effect influences remuneration outcomes. This finding reinforces the importance of understanding how different performance metrics interact and how remuneration structures can balance accountability, fairness, and long-term value creation.

6.4.2.2 Direct effect of EPS and ROA on total remuneration

EPS was positively and statistically significantly associated with total remuneration ($p = 0.0195$; coefficient = 1147.98) at the 5% significance level. This suggests that higher EPS is associated with higher total remuneration. This finding broadly is consistent with the pay-performance alignment, where increases in shareholder related performance are associated with higher remuneration. In contrast, for ROA, although the coefficient was positive, the relationship with total remuneration was not statistically significant at the 5% level ($p = 0.8441$; coefficient = 3366.87). There is therefore insufficient evidence to conclude that ROA was associated with total remuneration during the study period.

Although the interaction between EPS and ROA was negative, interaction effect was not statistically significant at the 5% level with total remuneration ($p = 0.1132$, coefficient = -28.667). Therefore, there is insufficient evidence to conclude that the combined influence of EPS and ROA is associated with CEO total remuneration. The findings suggest that the combined influence of EPS and ROA does not provide additional information for determining CEO total remuneration, as their joint effect was not significant.

6.4.3 Discussion Earnings Per Share Eps X Return on Shareholders' Funds (INTEPSRSF) On CEO Remuneration

Research question 6 examined how the interaction effect of EPS and RSF influences CEO remuneration, specifically fixed pay, STI and total remuneration, for JSE-listed companies between 2008 and 2020. To contextualise the interaction effects, it is also important to establish the direct relationship between the variables and CEO pay. This provides a baseline from which to evaluate how interactions modify the pay-performance link, highlighting the complexity inherent in remuneration design. As Emokpae (2023) observed, RSF can suggest a negative and significant relationship with CEO remuneration in certain contexts, illustrating that the relationship between performance and remuneration is neither straightforward nor uniform.

Table 6.3: Interaction effects of EPS and RSF on CEO remuneration

Variable	Fixed Pay (Coeff)	Prob.	STI (Coeff)	Prob.	Total Rem. (Coeff)	Prob.
RSFWINS	-13415.41	0.0197	41106.68	0.0000	19228.41	0.0607
EPSWINS	917.2026	0.0002	659.3597	0.0016	1345.458	0.0104
INTEPSRSF	-11.10331	0.0228	-16.96990	0.0007	-23.17582	0.0179

Source: Researcher's own

6.4.3.1 Direct effect of EPS and RSF on fixed pay

In terms of the direct relationship, EPS exhibited a positive and statistically significant relationship with CEO fixed pay at the 5% level, supporting the agency-shareholder-value perspective ($p < 0.001$; coefficient = 917.20). This suggests that higher EPS is associated with higher CEO fixed pay, which supports the view of optimal contracting theory, which posits that remuneration contracts are designed to align the interests of CEOs with those of shareholders and to mitigate agency–principal conflicts through performance-linked pay structures (Arsal, 2021). For RSF, the results indicate a negative and statistically significant relationship with fixed pay ($p = 0.020$, coefficient = -13 415.41). This suggests that higher RSFs are associated with lower levels of CEO fixed pay. This aligns with stewardship theory, which posits that intrinsic motivators, such as organisational commitment, may guide CEO behaviour beyond financial rewards. CEOs act as responsible stewards of company resources, thereby focusing on enhancing shareholder value even when such efforts are not financially rewarded with higher fixed pay (Mensah, Arhinful & Bein, 2024).

The negative and statistically significant interaction effect between EPS and RSF for fixed pay ($p = 0.023$, coefficient = -11.10331). This suggests that the relationship between EPS and fixed pay varied according to the level of RSF. The positive association between EPS and fixed pay weakened as RSF increased. One possible explanation for the findings is that EPS and RSF capture related dimensions of organisational performance and shareholder value

creation. This suggests that when both EPS and RSF are high, fixed pay does not increase as much as would be expected if each measure were considered separately.

6.4.3.2 Direct effect of EPS and RSF on the STI

EPS exhibited positive and statistically significant relationships with STI at the 5% level ($p < 0.001$; coefficient = 659.36), supporting the agency-shareholder value perspective. Higher EPS reliability led to higher CEO STI, which is consistent with optimal contracting theory, which promotes performance-linked pay structures that mitigate agency–principal conflicts (Arsal, 2021). Similarly, for RSF, the findings show that STI was strongly positive and statistically significant for STI ($p < 0.001$; coefficient = 41106.68). The consistent positive and significant relationship between EPS, RSF, and CEO STI reflects a prevailing practice in South African listed companies to align executive pay with shareholder value creation, which is consistent with both theory and empirical research (Coetzee & Hall, 2020; Ramgath & Bussin, 2022). These findings highlight the importance of using multiple, complementary performance measures in CEO remuneration design.

The interaction term INTEPSRSF was negative and statistically significant for STI ($p = 0.0007$, coefficient = -16.969). The negative interaction suggests that the positive effect of EPS on CEO remuneration weakens at higher levels of RSF. The practical significance of the findings is that the coefficient of -16.969 suggests that as the combined effect of EPS and RSF increases by one unit, CEO STI decreases by approximately R16,969, other factors being constant. This suggests that a strong performance on both measures simultaneously was associated with lower STI rewards than would be expected from considering the measures separately.

6.4.3.3 Direct effect of EPS and RSF on the total remuneration

EPS showed a positive and statistically significant relationship with total remuneration at the 5% level ($p = 0.0104$, coefficient = 1345.458), suggesting that increases in EPS are associated with increases in total remuneration.

The interaction effect between EPS and RSF was negative and statistically significant at the 5% level for STI ($p = < 0.000$, coefficient = -16.969), suggesting that the positive association between EPS and STI becomes weaker as RSF increases. When both EPS and RSF are high, STI does not increase to the extent that would be envisaged from the individual effects of the

two measures. The finding is not fully consistent with agency theory, which predicts that stronger company performance is associated with higher performance-based remuneration. This suggests that agency theory alone may provide an incomplete explanation of the relationship between company performance and CEO STI. The inverse relationship suggests that other theoretical perspectives, such as stewardship theory or stakeholder theory, may be more relevant for explaining the outcome of the findings.

6.4.4 Discussion Return on Shareholders' Funds X Net Profit (INTRSFPROFIT) On CEO Remuneration

Research question 7 examined how the interaction effect of RSF and net profit influences CEO remuneration, specifically fixed pay, STI, and total remuneration, for JSE-listed companies between 2008 and 2020. The rationale for combining RSF and net profit stems from the conceptual link between shareholder returns and the efficient generation of profits: RSF measures how effectively shareholder equity is deployed to generate profits, directly connecting net profit to the equity base (CFI, 2022).

Table 6.4: Interaction effects of RSF and net profit on CEO remuneration

Variable	Fixed Pay (Coeff)	Prob.	STI (Coeff)	Prob.	Total Rem. (Coeff)	Prob.
PROFIT WINS	0.007865	0.9221	0.064401	0.3775	0.130068	0.4778
RSFWINS	-13670.35	0.0192	40585.53	0.0000	18367.80	0.0690
INTRSF PROFIT	-0.003951	0.0189	-0.004490	0.0119	-0.009215	0.0107

Source: Researcher's own

6.4.4.1 Direct effect of RSF and net profit on fixed pay

RSF exhibited mixed results across all three types of CEO remuneration. The relationship with fixed pay was negative and statistically significant at the 5% level of significance ($p = 0.019$, coefficient, -13 670.35). This suggests that higher returns on shareholders' funds were associated with lower fixed pay.

The relationship between net profit and fixed pay is not statistically significant at the 5% level ($p = 0.922$; coefficient = 0.008). Although the coefficient was positive, net profit was not a statistically significant predictor of fixed pay. Therefore, no meaningful relationship can be inferred from the results. One possible explanation for the findings is that fixed pay may reflect organisations considerations such as role complexity, company size, and industry complexity which may be regarded as more relevant in determining fixed pay than RSF (Leal & Anjos, 2024).

Research studies consistently find weak to no significant linear relationships between net profit and CEO remuneration in South African organisations, including banking and state-owned entities, suggesting that remuneration committees may not heavily weight net profit alone in pay decisions (Coetzee & Bezuidenhout, 2019; Kieviet et al., 2024).

The interaction between RSF and net profit and fixed pay was negative and statistically significant at the 5% level ($p = 0.0189$, coefficient = -0.00395). The findings suggest that the combined effect of profitability (net profit) and shareholder value creation (RSF) is associated with a weaker increase in fixed pay than would be expected from their individual effects.

6.4.4.2 Direct effect of RSF and net profit on STI

In contrast, RSF suggests a positive and statistically significant relationship with STI ($p < 0.001$; coefficient = 40585.53) at the 5% level, indicating that as RSF increased, STI increased as well. This broadly aligns with agency theory, which posits that linking variable pay to measurable financial outcomes such as RSF encourages CEOs to be rewarded for improvements in the efficient deployment of shareholder funds (Ramgath & Bussin, 2022).

In contrast, although the coefficient for net profit was positive, the relationship with STI was not statistically significant ($p = 0.378$; coefficient = 0.064). There is insufficient evidence to conclude that STI was associated with net profit from 2008 to 2020. The results suggest that

variable pay was not an important determinant of STI in the sample analysed, as not significant relationship was observed. The economic conditions during the study may have contributed to these findings. As the study covered the period 2008 to 2020, this era was marked by external shocks such as the global financial crisis, South Africa's credit downgrades, political instability, and the COVID-19 pandemic, all of which led to net profit fluctuations beyond the CEO's control.

The interactions between RSF and net profit, and between RSF and STI, were negative and statistically significant at the 5% significance level ($p = 0.012$; coefficient = -0.004). Therefore, there is insufficient evidence to conclude that the combined influence of EPS and ROA is associated with CEO total remuneration. This suggests that the relationship between net profit and STI weakens as RSF increases, possibly because remuneration committees cap variable pay. Discussing the interaction effects and then relating them to the direct effect provides a holistic, nuanced understanding of how RSF and net profit jointly influence STI. While net profit may have a limited effect when examined independently, the interaction effect reveals how the combined effect influences and alters remuneration outcomes.

6.4.4.3 Direct effect of RSF and net profit on total remuneration

The final direct analysis is related to the direct relationship between RSF, net profit and total remuneration of JSE-listed companies and relates this relationship to the combined effect. The direct relationship between RSF and total remuneration was positive and not statistically significant at 5% level ($p = 0.069$, coefficient = 18367.80). Likewise, net profit was positive and not statistically significant with respect to total remuneration at the 5% level ($p = 0.478$; coefficient = 0.130). This suggests that increases in RSF and net profit were associated with decreases in total remuneration.

The interaction between RSF and net profit was negative and statistically significant at the 5% level ($p = 0.011$, coefficient = -0.009). The significant negative interaction between RSF and net profit suggests that the positive association linked to RSF weakened as net profit increased. In this context, CEOs may emphasise net profit growth to signal performance while overlooking inefficiencies in equity utilisation (Mlawu, Matenda & Sibanda, 2023). The combination of profitability and shareholder returns appears to provide additional insight into remuneration outcomes beyond their individual effects, highlighting the complexity of pay-performance alignment. The findings of the current study suggest that shareholder return

measures such as RSF may provide additional information beyond profitability alone when evaluating CEO remuneration.

6.5 MODERATION EFFECTS DISCUSSION

This section examines whether company size, proxied by MC, moderates the relationship between company performance (EPS, net profit, ROA, and RSF) and CEO remuneration, specifically fixed pay, STI, and total remuneration in publicly listed companies on the JSE from 2008 to 2020. Unlike interaction effects, which examine whether two independent variables jointly influence remuneration, moderation effects assess whether the strength or direction of the pay–performance relationship varies with company size.

The rationale for using MC as a moderator is grounded in agency theory, which posits that larger companies, with more formal structures and monitoring systems, face greater governance demands that shape remuneration design. In contrast, managerial power theory suggests that CEOs of larger companies may leverage entrenched positions to influence and weaken the pay–performance link. From an institutional perspective, larger companies are more susceptible to public and regulatory scrutiny, which may compel remuneration committees to align CEO pay more closely with company performance. The analysis provides deeper insight into whether company size moderates the relationship between company performance and CEO remuneration.

To contextualise the moderation analysis, the discussion first presents the direct effects of the independent variables on CEO remuneration to establish baseline relationships. This is followed by an evaluation of whether company size significantly moderates these relationships. Following the approach applied in the interaction effects discussion, coefficients will be reported explicitly only when they are negative; otherwise, coefficients should be interpreted as positive.

6.5.1 Moderation of Company Size on Net Profit (MC × Net Profit) – Fixed Pay, STI and Total Remuneration

Research question 8 examined whether company size, proxied by MC, moderates the relationship between net profit and CEO remuneration, specifically fixed pay, STI and total remuneration for JSE-listed companies between 2008 and 2020. Company performance reflects a company's ability to use internal and external resources effectively to create value

and achieve sustainable growth. For JSE-listed companies, this primarily translates into generating profitability for shareholders. These companies vary in size and capacity to generate profits, which may influence how CEO remuneration is structured. This section examines the moderating effect of company size, proxied by MC, on the relationship between net profit and CEO remuneration, specifically fixed pay, STI, and total remuneration, over the period 2008 to 2020. The underlying assumption is that a larger company size would positively moderate the relationship between net profit and all remuneration components.

As reported in Chapter 5 (Section 5.5.2.5), MC did not have a significant moderating effect on fixed pay ($p = 0.779$; coefficient = 3.56E) or total remuneration ($p = 0.780$, coefficient = -8.00E). This suggests that remuneration committees may determine fixed pay and total remuneration independently of company size. These findings are consistent with Ramgath and Bussin (2022), who also reported that organisation size was not a significant determinant of CEO remuneration in their study of the JSE financial sector. Ramgath and Bussin (2022) reported that in larger organisations, CEO remuneration is often determined at the time of appointment, reflecting company size rather than individual performance. Over time, however, performance outcomes become a more meaningful basis for linking CEO remuneration to company performance.

In contrast, MC significantly moderated the relationship between net profit and STI at the 5% level ($p = 0.013$, coefficient = -2.63E). Specifically, in larger firms, the positive effect of net profit on CEO STI is weakened and may even become negative, meaning that higher net profit can be associated with lower STI at high levels of market capitalisation. From a stewardship theory perspective, CEOs in larger companies may prioritise intrinsic drivers, such as recognition and achievement, over incentives such as STI.

The direct relationship between MC and CEO remuneration was statistically insignificant for fixed pay ($p = 0.201$; coefficient = 0.003), STI ($p = 0.358$; coefficient = 0.001), and total remuneration ($p = 0.444$; coefficient = 0.004), suggesting the limited explanatory power of MC as a performance determinant. In contrast, Bouteska et al. (2024) reported that company size has a significant effect on CEO remuneration and that large and complex organisations tend to pay higher CEO remuneration and have a positive alignment with CEO remuneration. Similarly, net profit showed a negative but statistically insignificant relationship across fixed pay ($p = 0.050$, coefficient = -0.120), STI ($p = 0.841$, coefficient = 0.0128), and total

remuneration ($p = 0.841$, coefficient = -0.0128), contrary to agency theory's expectations of positive pay–performance alignment.

Notably, the findings of the moderating role of MC on net profit or the direct relationship, the While a larger company size can confer advantages in terms of resources, capabilities, and profitability, it also introduces challenges, including increased organisational complexity, CEO strain, and resource constraints (Freel& Gordon, 2022). Rapid growth may improve financial outcomes, but can create uncertainties that constrain the ability to maintain consistent growth trajectories. Accordingly, remuneration committees must account for the organisational lifecycle and growth stage when designing CEO pay structures. This ensures that pay–performance linkages remain sensitive to both the opportunities and risks associated with company size. The analysis provided a clear comparison of the direct effects of MC and net profit on CEO remuneration, as well as their moderating impact. The direct relationship between MC and all three components of CEO remuneration is not statistically significant. This may suggest that the remuneration committees of JSE-listed companies do not use company size as a direct measure to determine CEO remuneration. Similarly, net profit also had a negative but statistically insignificant effect on three components of CEO remuneration. also indicated that net profit does not, on its own, drive CEO remuneration. In contrast, the study showed that MC moderates the relationship between net profit and STI at the 5% significance level ($p = 0.013$). The negative coefficient ($-2.63E$) implies that in larger companies, the impact of net profit on STI gradually weakens, whereas in smaller to medium-sized companies, net profit may play a meaningful role in determining STI outcomes.

6.5.2 Moderation of Return on Assets by Company Size (MC $\times$ ROA) – Fixed Pay, STI and Total Remuneration

Research question 9 examined whether company size, proxied by MC, moderates the relationship between ROA and CEO remuneration, specifically fixed pay, STI, and total remuneration for JSE-listed companies between 2008 and 2020. MC reflects the company size and market value of an organisation, whereas ROA captures the efficiency with which assets are utilised to generate earnings (Einstein, 2025). Large-cap companies typically operate in mature industries with stable returns, whereas mid-cap companies are in growth phases, and small-cap companies face greater volatility and market sensitivity due to their market size and supply and demand fluctuations (JSE, 2025). Understanding the combined effect of MC and

ROA on CEO remuneration is therefore important, as it captures the interplay between organisational scale and asset efficiency in shaping CEO remuneration.

Although large companies (high MCs) generally imply financial stability and stronger governance structures, size does not necessarily equate to efficiency. Remuneration committees, therefore, may consider that rewarding CEOs based on MCs without efficiency does not equate to value creation for shareholders, according to agency theory. Smaller or mid-cap companies with high ROA can be more efficient at generating profits from assets, which aligns with optimal contracting principles for rewarding CEOs, even when the organisation is smaller. Interaction enables the alignment of how scale and efficiency, in combination, condition the relationship with CEO remuneration.

The moderating effect of company size on the ROA-CEO remuneration relationship was statistically significant at the 5% level for fixed pay ($p < 0.001$; coefficient = 0.000) and total remuneration ($p = 0.000$; coefficient = 0.000), suggesting that the association between ROA and CEO remuneration varied according to company size, with larger companies showing a stronger positive association between ROA and both fixed pay and total remuneration. This aligns with Baulmol's (1959) argument, cited in Yadav, Palhi and Gangakhedkar (2022), that larger companies can exploit greater investment opportunities, thereby achieving higher profit rates, whereas smaller companies may face resource constraints. However, as companies expand, they also encounter potential diseconomies of scale, management challenges or external factors, which can undermine profitability. Thus, while company size can strengthen the pay-performance relationship by providing greater capacity and resources, unchecked expansion may eventually erode profitability and undermine the effectiveness of remuneration design (Yadav et al., 2022).

In contrast, the moderating effect of MC on the relationship between ROA and STI was negative and statistically insignificant ($p = 0.812$, coefficient = -1.95E). This suggests that STI remains weakly sensitive to accounting-based measures such as ROA. The relationship between net profit and STI was weaker in larger companies than in smaller companies. One possible explanation is that larger companies may rely on a broader range of performance measures when determining STI, rather than placing overemphasis on profitability alone. Unlike RSF, ROA does not account for financing structures (Bui, Nguyen & Pham, 2023), which may explain its weaker explanatory power in incentive pay design.

In capital-intensive sectors such as mining, which dominate the JSE, ROA can be distorted by large non-current asset bases and volatile earnings (Madimu, 2022). As such, remuneration committees in these industries may discount ROA when determining STI, recognising that short-term accounting outcomes often fail to capture operational efficiency or sustainable performance.

The direct relationship between ROA and CEO remuneration was not statistically significant for either fixed pay ($p = 0.9820$; coefficient = -0.001) or total remuneration ($p = 0.6025$; coefficient = -8397.71), indicating that ROA has limited explanatory power as a performance determinant. Similarly, MC showed a statistically insignificant relationship with fixed pay ($p = 0.5135$, coefficient = -0.001215), STI ($p = 0.3966$, coefficient = 0.001012), and total remuneration ($p = 0.4355$, coefficient = -0.002443). These results indicate insufficient evidence to conclude that MC was directly associated with any of the CEO remuneration components. These findings are not fully consistent with agency theory's expectations of positive pay-performance alignment.

MC significantly moderates the relationship between ROA and fixed pay ($p < 0.001$; coefficient = 0.000) and total remuneration ($p = 0.000$; coefficient = 0.000), suggesting that company size shapes how fixed pay and total remuneration are paid. This result shows that solely relying on the direct relationship between variables may overlook the importance of MC in moderating the relationships among ROA, fixed pay, and total remuneration.

Although there is substantial literature on CEO remuneration and company performance, relatively few studies have examined moderating or interaction effects, despite their potential to clarify the complexities of CEO pay structures. Prior research, such as Coetzee and Hall (2020), Padia and Callaghan (2020), and Siwendu et al. (2024), has largely emphasised direct relationships, overlooking contextual moderators such as company size. This study contributes to the literature by empirically demonstrating that company size (as proxied by MC) materially moderates the pay-performance relationship in South African listed companies, offering a more contextual understanding of CEO remuneration dynamics within the JSE environment.

6.5.3 Moderation of Returns of Shareholders' Funds by Company Size (MC × RSF) – Fixed Pay, STI and Total Remuneration

Research question 10 examined whether company size, proxied by MC, moderates the relationship between RSF and CEO remuneration, specifically fixed pay, STI, and total remuneration for JSE-listed companies between 2008 and 2020. The analysis of the moderating role of company size, as proxied by MC, revealed differentiated effects of the MC × RSF interaction across the components of CEO remuneration.

The moderation effect was statistically significant for fixed pay ($p < 0.001$, coefficient = 0.000), indicating that larger companies strengthen the link between RSF and the fixed-pay element of CEO remuneration. This outcome suggests that larger companies typically face greater complexity and operate across multiple branches, diverse product lines, varied markets, and sectors and international sectors. In such environments, remuneration committees appear to embed performance sensitivity even within a fixed pay structure to retain and motivate CEO talent (Saleh, Diab & Abouelela, 2025).

This finding is consistent with both academic and remuneration trends in JSE-listed companies. According to Pandher (2022), Marin and Verdier's (2012) analysis highlights that the expansion of international trade has intensified competition for CEO expertise globally, contributing to upward pressure on executive pay. Similarly, Ramgath and Bussin (2022) reported that company size positively influences CEO fixed pay at appointments, whereas RSF has a significant negative effect on CEO fixed remuneration. Together, these findings highlight how company size moderates the RSF-pay relationship, with larger companies being more likely to align fixed pay with shareholder performance metrics in response to competitive pressures and organisational complexity.

In contrast, the moderation effect of MC and RSF on STI was not statistically significant ($p = 0.795$, coefficient = 1.25E). This finding suggests insufficient evidence to conclude that MC was directly associated with STI. From a governance and agency theory perspective, one possible explanation for this insignificant moderation is that the finding is not consistent with the traditional assumption that larger companies rely more extensively on STI to align the interests of CEOs and shareholders. Instead, remuneration committees may intentionally decouple RSF from STI structures to mitigate the risk of short-termism, and excessive risk-taking is often associated with performance-based short-term pay. This strategic decoupling

emphasises a deliberate governance choice to align RSF with sustainable, long-term organisational outcomes, which may be more effectively incentivised through mechanisms such as LTIs or structured adjustments to fixed pay components. From an agency perspective, larger companies face heightened scrutiny from shareholders, regulators, and the public, prompting greater caution in incentive design. Grey, Flynn and Adu (2024) observed similar dynamics in UK-listed companies, where post-financial-crisis reforms led to greater board oversight and restructured incentive pay to mitigate excessive risk-taking. To restore accountability and curb such practices, countries such as the UK introduced regulatory reforms and increased board diversity, both of which have influenced the design of CEO remuneration packages.

The moderating effect was also statistically significant for total remuneration ($p = 0.010$; coefficient = 0.000), suggesting that larger companies strengthen the relationship between RSF and total remuneration. A possible explanation for the findings is that in larger companies, RSF, which reflects efficient utilisation and shareholders' equity, is generally well managed, with RSF serving as both a profitability indicator and a proxy for strategic efficiency and leadership capability. Majka (2024) noted that companies with high RSF are generally well managed, with RSF serving as a robust profitability indicator and a proxy for strategic efficiency and leadership capability. From a stewardship perspective, a strong RSF link signifies CEOs' capacity to create sustainable long-term value, reinforcing their role as custodians of organisational resources. Notably, this contrasts with findings that company size does not always moderate the RSF-STI relationship (Bussin et al., 2023), suggesting that remuneration committees selectively embed performance sensitivity in total remuneration rather than STIs, reflecting careful differentiation between pay components in larger companies.

The direct relationship between MC and CEO remuneration was statistically insignificant for fixed pay ($p = 0.615$; coefficient = 0.000), STI ($p = 0.262$; coefficient = -0.001), and total remuneration ($p = 0.823$; coefficient = 0.000). The hypothesis that company size, as categorised by MC, significantly influences the direct relationship between RSF fixed pay, STI, and CEO total remuneration is therefore unsupported.

RSF showed a negative and statistically significant relationship for fixed pay ($p = 0.019$, coefficient = -13063.15). However, a positive and statistically significant relationship is

reported for STI ($p < 0.001$, coefficient = 41080.33) and total remuneration ($p = 0.034$, coefficient = 20719.83). This implies that higher in was associated with lower fixed pay, but higher STI and total remuneration. These findings suggest that RSF had different relationships across remuneration components, with higher alignment observed in performance related remuneration than in guaranteed fixed pay.

Company size exerts a nuanced moderating influence, strengthening the RSF-pay relationship for both fixed pay and total remuneration while leaving STI unaffected. This differentiated pattern of the pay–performance link highlights the need for remuneration committees to incorporate company size into the design of CEO pay structures. In the South African context, this consideration becomes particularly important given the governance framework shaped by King IV and South Africa’s Companies Act (Act No. 16 of 2024), which has introduced enhanced disclosure requirements on CEO remuneration. These developments, coupled with shareholder scrutiny and strong trade union activism, highlight the need for remuneration committees to adopt transparent, context-specific approaches that balance performance, remuneration, equity, and accountability.

6.6 CHAPTER SUMMARY

The purpose of this chapter was to interpret and discuss the study’s findings in relation to the existing body of knowledge and to identify any new insights that emerged. Given the strong stakeholder interest in CEO remuneration, the expectation was that a clear relationship between CEO pay and company performance would be observed. Of the 33 hypothesis tests conducted, 17 were supported, and 16 were not supported, indicating that the relationship between company performance and CEO remuneration was selective rather than uniform across the performance measures and remuneration components. A key focus of the discussion was to situate the findings within the broader literature, highlighting both convergences and divergences with prior research and offering possible explanations for the observed differences.

Remuneration trends revealed that fixed pay increased on average over the 13-year period, even as company performance declined. In contrast, STI tended to fluctuate more closely with company performance, indicating partial alignment between CEO STI and company performance. The weak or inconsistent relationship between CEO remuneration and company

performance challenges the assumption of agency theory, although contextual factors, such as the potential impact of the COVID-19 pandemic from 2018-2020, may have influenced performance outcomes independently of CEO actions.

The moderation analysis examined whether company size, proxied by MC, influenced the strength of the relationship between company performance and CEO remuneration components. Grounded in agency theory, managerial power theory and institutional theory, the analysis explored whether structural complexity, monitoring costs and increased external scrutiny in larger companies altered the pay-performance dynamic compared with that in smaller companies. Company size strengthened the relationship between ROA and both fixed pay and total remuneration but had no moderating effect on STI. These results suggest that while accounting-based profitability measures reinforce the link between company performance and CEO pay in large companies, STI design remains relatively insensitive to accounting ratios.

Moderation of the net profit-CEO remuneration relationship by company size produced mixed results. No significant moderation effects were reported for fixed pay or total remuneration, whereas a significant negative moderation effect emerged for STI. This finding suggests that in larger companies, the association between net profit and STI was weaker, suggesting that STI may not increase proportionately with profitability as company size increases. One possible explanation is that larger companies may rely on a broader set of financial, strategic or governance related measures when determining STI rather than net profit alone. Overall, the moderation results highlight the importance of the role of company size in shaping the pay-performance relationship. Its influence was not uniformly significant across all remuneration components. Possible explanation for the mixed results is that the effect of company size is context-based, reflecting both structural advantages such as resource capacity, market complexity and potential limitations, including inefficiencies and governance challenges in very large companies.

The chapter also examined the combined interaction effects of company performance measures on CEO remuneration. As with the moderation analysis, the combined effects were mixed. For instance, net profit was consistently negative and statistically insignificant across all components of CEO pay, not supporting the agency theory view that profitability would systematically influence CEO remuneration. Assessing the direct relationship alongside

interaction effects provided insights into whether individual or combined performance measures were more strongly associated with CEO remuneration outcomes.

In summary, this chapter highlighted the complexity of the relationship between CEO remuneration and company performance. By integrating trend analysis, moderation by company size, and interaction effects, the discussion highlighted the possible challenges faced by remuneration committees in making decisions regarding CEO remuneration and company performance. These findings contribute to a nuanced understanding of pay–performance dynamics and offer a foundation for evidence-based remuneration policy design.

Chapter 7 presents an overarching synthesis of the research findings, followed by recommendations for different stakeholders and future empirical research.

CHAPTER 7: CONCLUSION

7.1 INTRODUCTION

This chapter provides an overview of the work undertaken in this study and reiterates the reason for conducting it. This study contributes to an important discussion of different communities. It sought to provide more nuanced and empirically based measures of the correlation between chief executive officer (CEO) remuneration and company performance within publicly listed organisations on the JSE from 2008 to 2020. Thus, the research was performed by assessing the relevance and insight provided by the relevant literature, some of the key theories, previous findings, surveys, and articles that propose an explanation of the relationship between CEO remuneration and company performance. An overview of the research methodology utilised in the study is also provided. A summation of the significant results of the study is presented. The study provides recommendations to key stakeholders about CEO remuneration and company performance measures and suggestions for further research.

7.2 SUMMARY AND REFLECTIONS ON REASONS FOR UNDERTAKING THE RESEARCH

As discussed in Chapter 1, the primary goal of this research was to establish whether there is a relationship between CEO remuneration and company performance among JSE-listed companies in South Africa during the period 2008 to 2020. The study was motivated by the need to better understand CEO remuneration in the South African context, while also acknowledging that South Africa operates in a broader global environment. Thus, the research sought to explore and clarify the dynamics of the interaction between CEO remuneration and company performance among listed companies on the JSE. The rationale for undertaking this research also provides the conceptual lens through which the study's findings are contextualised.

The public disclosure of CEOs' earnings from listed companies has made such data widely visible, accessible, and open to interpretation. Comparisons between CEO remuneration and that of employees at lower organisational levels highlight the vast disparities in earning power. In South Africa, the historical legacy of apartheid, which entrenched deep social and economic

inequalities, continues to be perpetuated by the significant differences in earnings and living standards between CEOs and lower-level employees. These persistent inequalities have kept the issue of CEO remuneration at the forefront of both public discourse and academic enquiry, often being described as a reflection of South Africa's enduring social and economic divides. Consequently, this study examines a longer timeframe of 13 years, distinguishing it from previous research noted in Chapter 2, to enable a robust and comprehensive analysis of the effects of CEO remuneration on company performance.

Conversely, the political, economic, social, and technological dynamics within which South African JSE-listed companies operate demand highly skilled, experienced, and versatile CEOs, individuals drawn from a relatively small and competitive pool of talent. The interaction between CEO remuneration and company performance may therefore also reflect the economic principles of supply and demand. The scarcity of qualified and experienced CEOs results in heightened competition among companies, which in turn drives CEO remuneration packages to significantly higher levels, despite the remuneration discourse.

The study also recognises that company performance measures encompass value creation for shareholders, which should be linked with CEO remuneration. As noted in Chapter 3, regulations and legislation have been enacted to assist shareholders in governing, regulating, controlling, and overseeing, and providing justifiable rationales for CEO remuneration. As a result of these debates, this study extends the existing body of knowledge by examining a longer period, 13 years from 2008 to 2020, and a broader sample of 61 companies across different industry sectors to understand the relationship between CEO remuneration and company performance measures.

The leading research questions, as discussed in Chapter 1, Section 1.6; Chapter 4, Section 4.2.2; and Chapter 5, Section 5.5, further guided the investigation into the nature and strength of this relationship. This study aimed to examine the following:

- The correlation between CEO remuneration and the financial performance measures of publicly listed companies on the JSE for the period 2008 to 2020.
- The combined effect of company accounting performance measures (EPS, net profit, ROA, and RSF) interacts to influence CEO remuneration in Johannesburg Stock Exchange-listed companies from 2008 to 2020.

- How company (as categorised by MC) moderates the effect with respect to company accounting performance (EPS, net profit, ROA and RSF) and CEO total remuneration among JSE-listed companies from 2008 to 2020.

The current study contributes to related research by covering a longer-term period from 2008 to 2020. Other researchers, such as Kieviet et al. (2024), covered 2009 to 2021; Nkwadi and Matemane (2022), 2007 to 2018; Siwendu et al. (2024), 2015 to 2021; and Van Wyk and Wesson (2020), 2010–2016. The study further advanced existing research by examining the direct and interaction effects of the independent variables on the dependent variable.

7.3 RESEARCH METHODOLOGY AND DESIGN

As discussed in Chapter 4, the researcher employed a positivist, deductive research method that required hypothesis development and testing. The researcher collected data from company-published financial statements, the McGregor BFA database, and the Profile Group. The study was archival in nature because the data were obtained from existing sources. All companies that met the consistent-listing criterion were included, and no sampling of the population was conducted. Sixty-one (61) JSE-listed companies were ultimately included in the study. Companies excluded from the study were delisted between 2008 and 2020. When the CEO's employment was terminated during the fiscal year, the remuneration of the longest serving CEO was annualised and used in the study. As secondary data were utilised in the study, ethical considerations were reduced.

For this study, the researcher focused on three components of CEO remuneration, specifically, fixed pay, STI, and total remuneration, as the dependent variables. For the company performance metrics, the research used turnover as a control variable. The predictor variables used in the study were EPS, MC, net profit, ROA, and RSF. Regression analysis was performed using Eviews11, which provides robust tools for estimating and interpreting panel data models. SPSS V27 and Jamovi V2.3.5 were used for conducting the descriptive statistical analyses. Chapter 5 provides the analysis of the results collected from the JSE-listed companies.

7.4 SUMMARY OF RESEARCH FINDINGS

This study was undertaken to deepen the knowledge and understanding of the ongoing debate surrounding the alignment of CEO remuneration and company performance among companies listed on the JSE from 2008 to 2020. Although the topic has been widely examined in prior research, it remains a controversial and highly scrutinised area among key stakeholders, including governments, trade unions, human resources specialists, the media and employees. This ongoing contention highlighted the need for further empirical investigation within the South African context. By outlining the historical background, legal framework, and methodological considerations and ultimately analysing the empirical data, this research provides insight into both the direct and interaction effects of company performance measures on CEO remuneration.

Table 7.1 presents a consolidated synthesis of the empirical findings derived from the hypothesis testing. All hypotheses were evaluated at the 5% significance level, with p-values below 0.05 indicating statistical support. The table further integrates the research questions, objectives, hypotheses, analytical models, and outcomes in a single framework, thereby enhancing traceability and providing a clear consolidated overview of how the empirical results align with the study's analytical structure.

Table 7.1: Synthesis of hypotheses and empirical findings

Analytical model	Research focus	Relationship tested	Hypothesis	Outcome
Direct effect model	RO 1: CEO fixed pay and the company accounting performance (EPS, net profit, ROA, RSF)	Relationship between CEO fixed pay and EPS	H ₁ : Positive relationship between CEO fixed pay and EPS.	Supported (p = 0.0018)
		Relationship between CEO fixed pay and net profit	H ₂ : Positive relationship between CEO fixed pay and net profit.	Not supported (p = 0.1302)
		Relationship between CEO fixed pay and ROA	H ₃ : Positive relationship between CEO fixed pay and ROA.	Not supported (p = 0.6012)
		Relationship between CEO fixed pay and RSF	H ₄ : Positive relationship between CEO fixed pay and RSF.	Supported (p = 0.0399)
	RO2: CEO STI and the company accounting performance (EPS, net profit, ROA, RSF)	Relationship between CEO STI and EPS	H ₅ : Positive relationship between CEO STI and EPS.	Not supported (p = 0.1222)
		Relationship between CEO STI and Net profit	H ₆ : Positive relationship between CEO STI and net profit.	Not supported (p = 0.2191)
		Relationship between CEO STI and ROA	H ₇ : Positive relationship between CEO STI and ROA.	Supported (p = 0.0212)
		Relationship between CEO STI and RSF	H ₈ : Positive relationship between CEO STI and RSF.	Supported (p < 0.0001)
	RO 3: CEO total remuneration and the company accounting	Relationship between CEO total remuneration and EPS	H ₉ : Positive relationship between CEO total remuneration and EPS.	Not supported (p = 0.0594)

	performance (EPS, net profit, ROA, RSF)	Relationship between CEO total remuneration and net profit.	H ₁₀ : Positive relationship between CEO total remuneration and net profit.	Not supported (p = 0.4318)
		Relationship between CEO total remuneration and ROA.	H ₁₁ : Positive relationship between CEO total remuneration and ROA.	Not supported (p = 0.9031)
		Relationship between CEO total remuneration and RSF.	H ₁₂ : Positive relationship between CEO total remuneration and RSF.	Supported (p = 0.0309)
Interaction effects model				
RO 4: EPS and net profit interaction effects	Interaction between EPS and net profit influences the CEO remuneration	To examine the interaction effect of company accounting performance measures (EPS and net profit) on CEO remuneration (2008 to 2020).	H ₁₃ : The interaction between EPS and net profit, CEO fixed pay, STI and total remuneration.	Fixed Pay: Not supported (p = 0.4957) STI: Supported (p = 0.0095) Total remuneration: Supported (p = 0.0231) Decision: Partially Supported
RO 5: EPS and ROA interaction effects	Interaction between EPS and ROA influences CEO remuneration	To examine the interaction effect of company accounting performance (EPS and ROA) on CEO remuneration (2008 to 2020).	H ₁₄ : The interaction between EPS and ROA statistically significantly influences CEO fixed pay, STI and total remuneration.	Fixed pay: Not supported (p = 0.4606) STI: Not supported (p = 0.0889) Total remuneration: Not supported (p = 0.1132) Decision: Unsupported
RO6: EPS and RSF interaction effects	The interaction between EPS and RSF influences the CEO remuneration	To examine the interaction effect of company accounting performance measures (EPS and RSF) on CEO remuneration components.	H ₁₅ : Interaction between EPS and RSF statistically significantly influences CEO fixed pay, STI and total remuneration.	Fixed pay: Supported (p = 0.0228) STI: Supported (p = 0.0007) Total remuneration: Supported (p = 0.0179)

Decision: Supported				
RO7: RSF and net profit interaction effects	RSF and net profit interaction effects	To examine the interaction effect of company accounting performance measures (RSF and net profit) on CEO remuneration (2008 to 2020).	H16: Interaction between RSF and net profit statistically significantly influences the CEO's fixed pay, STI and total remuneration.	Fixed pay: Supported (p = 0.0189) STI: Supported (p = 0.0119) Total remuneration: Not supported (p = 0.107)
Decision: Partially Supported				
Moderation effects model				
RO8: MC, measured as company size moderate the net profit-CEO remuneration relationship	MC moderates net profit-CEO remuneration	To investigate how company size (MC) moderates the relationship between company accounting performance, net profit and CEO remuneration in JSE-listed companies for the period 2008 to 2020.	H ₁₇ to H ₁₉ : Moderating effect of company size on the relationship between net profit and CEO remuneration components	Fixed pay: Not supported (p = 0.7792) STI: Supported (p = 0.0125) Total remuneration: Not supported (p = 0.7796)
RO9: Company size, measured by MC, moderates the ROA-CEO relationship	Company size moderating the ROA relationship	To investigate how company size (MC) moderates the relationship between company accounting performance, net profit and CEO remuneration in JSE-listed companies for the period 2008 to 2020.	H ₂₀ – H ₂₂ : Moderating effect of company size on the relationship between ROA and CEO remuneration components.	Fixed pay: Supported (p < 0.000) STI: Not supported (p = 0.8120) Total remuneration: Supported (p = 0.002)

RO10: Company size, measured by MC, moderates the RSF- CEO relationship	Company size moderating the RSF relationship	To determine how company size (MC) moderates the relationship between company accounting performance RSF and CEO total remuneration in JSE-listed companies for the period 2008 to 2020.	H ₂₃₋₂₅ : Moderating effect of company size on the relationship between RSF and CEO remuneration components.	Fixed pay: Supported (p < 0.000) STI: Not supported (p = 0.795) Total remuneration: Supported (p = 0.0002)
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Source: Researchers own

7.4.1 Effect of Fixed Pay on Company Performance

Research questions 1 to 3 sought to examine the relationships between CEO remuneration components, fixed pay, STI, total remuneration and company performance measures, EPS, net profit, ROA and RSF. The results reveal mixed findings in the pay–performance relationship rather than a uniform pattern across remuneration components or accounting measures. Contrary to public discourse that often assumes CEO remuneration is unjustified or disconnected from performance, the findings of this study suggest a more complex relationship. Across research questions 1, 2, and 3, CEO fixed pay, STI and total remuneration were not uniformly associated with EPS, net profit, ROA and RSF. Rather, the results showed selective pay-performance alignment, with certain performance indicators significantly associated with specific remuneration components. For question 1, which examined the link between fixed pay and company performance, fixed pay was sensitive to certain performance indicators. EPS and RSF were statistically significant positive association at the 5% level with fixed pay. A possible explanation for the findings is that remuneration committees incorporate performance considerations into the guaranteed component of CEO remuneration. These findings support the agency theory view that CEO remuneration should reflect shareholder value creation. EPS is a measure of earnings performance delivered to shareholders, whereas RSF signifies how efficiently shareholder capital is utilised. Question 2, which investigated the relationship between STI and company performance, STI responded positively and significantly at the 5% level with ROA and RSF, whereas net profit and EPS remained largely insignificant indicators. STIs are typically rewards conferred on the achievement of short-term goals, usually over a one-year period. This suggests that CEO remuneration was associated with measurable performance outcomes. This is particularly significant given the challenges faced by organisations during the research period, within which CEOs were required to operate, generate value, and act as stewards of resources entrusted to them for the benefit of shareholders.

Investigation into the association between total remuneration and company performance was the third question of the study. RSF showed a statistically significant relationship with total remuneration at the 5% level. RSF was the only company performance measure that was consistently related to all three remuneration types. The lack of statistically significant results may be interpreted as broadly consistent with stewardship theory, which suggests that CEO

behaviour may be influenced by intrinsic motivation, organisational commitment and long-term organisational objectives, rather than financial incentives alone.

When the study questions 1, 2 and 3 were answered, only RSF was statistically significant for all remuneration types at the 5% level. There were no consistent findings regarding the relationship linking remuneration of CEOs and company performance among JSE-listed companies. The initial assumption was that there would be a positive relationship, especially between CEO STIs and short-term focused company performance measures.

Research questions 4 to 6 recognised the complexity of the link between CEO remuneration and company performance by examining the interaction effect of company performance on the remuneration of CEOs. The objectives of these questions extended the analysis beyond the direct relationship to determine whether remuneration committees consider more complex remuneration designs where the performance metrics improve simultaneously. Research question 4 examined the interaction between EPS and net profit and found that the interaction term was not statistically significant at the 5% threshold for fixed pay. However, it showed a negative and statistically significant correlation at the 5% level with STI and total remuneration, relative to what would have been expected from considering each measure independently. This contrast highlights the influence of the interaction term, suggesting that the presence of net profit alters both the direction and strength of the relationship between EPS and CEO remuneration. The interaction effect changes the pay–performance dynamics, suggesting that remuneration committees may moderate or discount overlapping profitability metrics when EPS and net profit increase together. It was acknowledged that ideally, in practice, the combination of EPS and net profit is not ideal and was used for illustrative purposes.

For Research Question 6, the study tested the interaction between EPS and ROA and reported that the combination of earnings and efficiency does not always translate to higher CEO remuneration. For all three remuneration components, the relationship was statistically insignificant at the 5% level. For the direct relationship, the EPS was statistically significant for all three remuneration types. This may suggest that remuneration committees for fairness and in line with good corporate governance principles do not want to reward CEOs for achieving performance metrics that capture overlapping performance dimensions. The interaction effect between EPS and RSF for question 7 was negative and statistically

significant at the 5% level. This suggests that the relationship between EPS and CEO remuneration depended on the level of RSF. Specifically, when EPS and RSF were considered jointly, stronger performance on both measures was not associated with proportionately higher CEO fixed pay, SIT or total remuneration. For the direct relationship, it was noted that EPS were positively and statistically significant for all remuneration types, whereas STI was the only remuneration type that was not statistically significant at the 5% level with RSF. Both interaction terms have net profit as the common denominator, which is advisable for remuneration committees to avoid, ensuring that CEOs are not overpaid for their performance for the similar measures.

Question 8 sought to examine the interaction effect of RSF and net profit on CEO remuneration. The interaction results showed a consistent pattern across all remuneration types, with RSF and net profit being negative and statistically insignificant for fixed pay, STI and total remuneration at the 5% level. These results suggest that the relationship between the performance measures and CEO remuneration was not conditional on their combined effect. The direct results showed that RSF had mixed findings, being negative for fixed pay but positive for STI. Since the study period was volatile and challenging, the lack of statistical significance of net profit for all three remuneration types, it is possible that remuneration committees were reluctant to align remuneration with volatile performance metrics.

The combined effects of financial performance on remuneration of CEOs were different from expectations in that although there was a statistically significant connection between company variables, these effects are associated with a decrease in CEO remuneration. Agency theory posits that aligning CEO interests with shareholders' CEOs is required to be incentivised.

To capture the complexity and provide a nuanced understanding of the factors that moderate the connection between CEO remuneration and company performance, the study also examined whether company size, as measured by market capitalisation (MC), moderates the connection concerning company performance and CEO remuneration. The assumption was that the larger the organisation is, the greater the CEO remuneration in recognition of the complexity of operations, the hierarchical levels in the organisation and the span of control of CEOs. Overall, the moderation results indicated that company size, measured by market capitalisation, had a selective rather than uniform influence on the relationship between company performance and CEO remuneration. MC significantly moderated the relationship

between net profit and STI, with a negative coefficient suggesting that the association between profitability and STI weakened in larger companies. MC also significantly moderated the ROA-remuneration relationship for fixed pay a total remuneration, but not for STI, indicating that company size strengthened the association between ROA and the ore stable remuneration components. Similarly, MC significantly moderated the relationship between RSF and fixed pay and total remuneration, but for STI, suggesting that the influence of shareholder return performance was more evident in fixed pay and total remuneration than in STI. Taken together, the findings show that company size shaped selected pay-performance relationships, but its moderating effect differed across performance indicators and remuneration components.

Annual analysis provided nuanced insights into trends and patterns, offering a more detailed understanding of the 13-year period. It reveals significant trends across various performance measures and executive remuneration components, highlighting how these relationships evolve over time. In addition to the regression analysis findings, the research also conducted descriptive statistics to conduct an annual analysis of company performance indicators. From 2008–2020, the year-to-year trends showed volatility, with predominantly negative growth relative to each year. Over the thirteen-year period, the volatility was most pronounced for EPS, net profit and ROA which showed weak and statistically insignificant results. These volatile trends reflect the broader economic challenges during the study period, including the South African Economic slowdown, the Marikana massacres and the Credit Rating Downgrades.

For the study period, fixed pay was the only remuneration type that consistently increased year-on-year. The consistent growth in the fixed pay medians of CEO remuneration despite fluctuations in company performance and the macroeconomic environment suggests that while fixed pay is guaranteed, it may not fully reflect sensitivity to company performance or external conditions. STI and total remuneration significantly declined and showed marginal growth during the study period. These mixed findings, particularly the observed decreases in STI, may be attributable to external environmental factors affecting company performance measures such as global financial crisis, political instability or the COVID-19 pandemic.

Companies, however, are tactically aware of the need to attract, motivate and retain CEOs, particularly given the operational challenges in South Africa and globally. Access to remuneration data from comparator CEOs reinforces the market expectation for competitive pay. While this practice supports competitiveness, it also fuels the continued discourse around CEO remuneration and widening salary disparities between CEOs and employees at lower-level employees. In contrast, STI and total remuneration were more sensitive to fluctuations in company performance, aligning with the expectation that variable pay should be linked to company performance.

The next section outlines this study's empirical framework and provides recommendations for different stakeholders based on the current findings.

7.5 EMPIRICAL FRAMEWORK REFLECTING STUDY FINDINGS

Chapter 5 presented the empirical findings of this study, addressing the research questions using graphs, tables and figures to organise and display the extensive dataset in a structured and accessible manner. Chapter 6 followed with an interpretation and discussion of the significance of these findings, situating them within the broader body of work on remuneration of CEOs and company performance while also identifying emerging insights that contribute to new theoretical and contextual understanding.

In Chapter 3, the conceptual framework was outlined to illustrate the research logic and theoretical propositions underpinning the envisaged association between variables. Building on this conceptual foundation, Chapter 7 revisits this relationship through the lens of an empirical framework, providing a visual synthesis of the results and their theoretical implications.

Using a similar format to that employed for the research onion (Figure 4.1) and research process (Figure 4.6), Figures 7.1 to 7.9 present a synthesised summary of the empirical results. These figures do not replicate the detailed results discussed in Chapter 5 but rather serve as visual syntheses and interpretations, illustrating how the research questions were addressed in examining the CEO remuneration and company performance relationship among JSE-listed companies from 2008 to 2020.

The visual presentation also integrates the theoretical foundations of the study, that is, agency theory, managerial power theory, stakeholder theory and stewardship theory, to illustrate how

the empirical findings align with, extend or challenge these theoretical perspectives in explaining variations in the pay–performance relationship. The findings that revealed a significant relationship are largely supported by agency and stakeholder theories, thereby promoting value creation and accountability. Conversely, findings showing weak or insignificant relationships may support managerial power and stewardship theories, reflecting a context in which CEO discretion, organisational culture, or governance dynamics dilute the expected alignment between pay and performance.

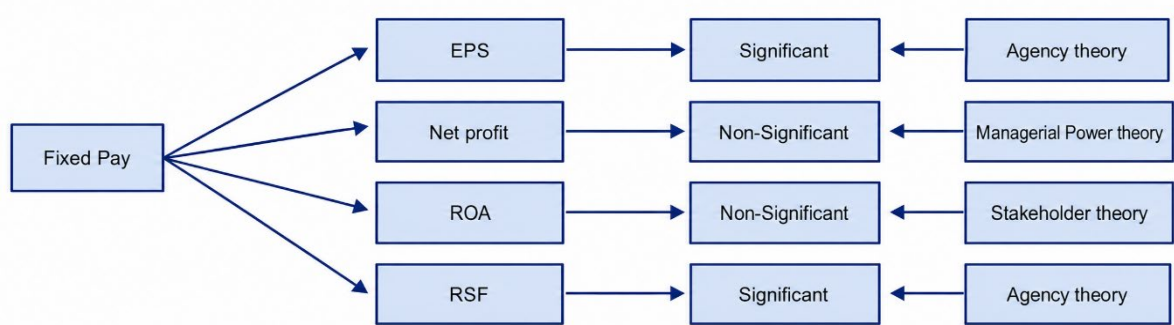


Figure 7.1: Theoretical Foundation and Empirical Relationships Between Fixed Pay and Company Performance Measures

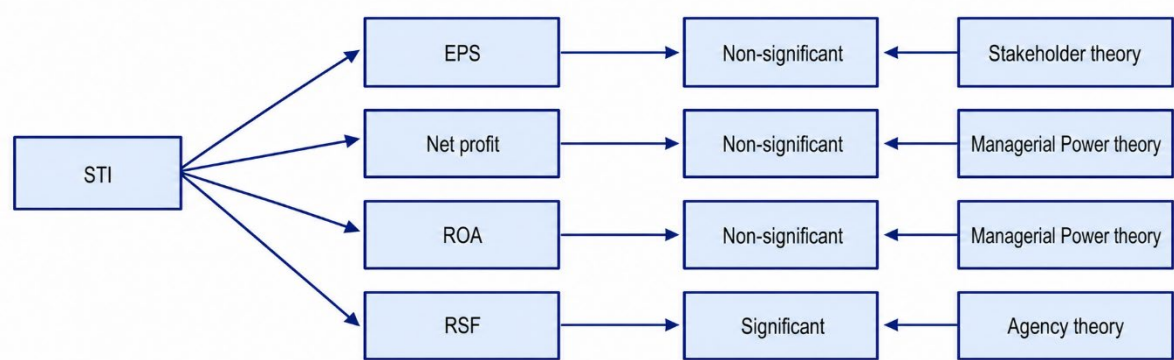


Figure 7.2: Theoretical Foundation and Empirical Relationships Between STI and Company Performance Measures

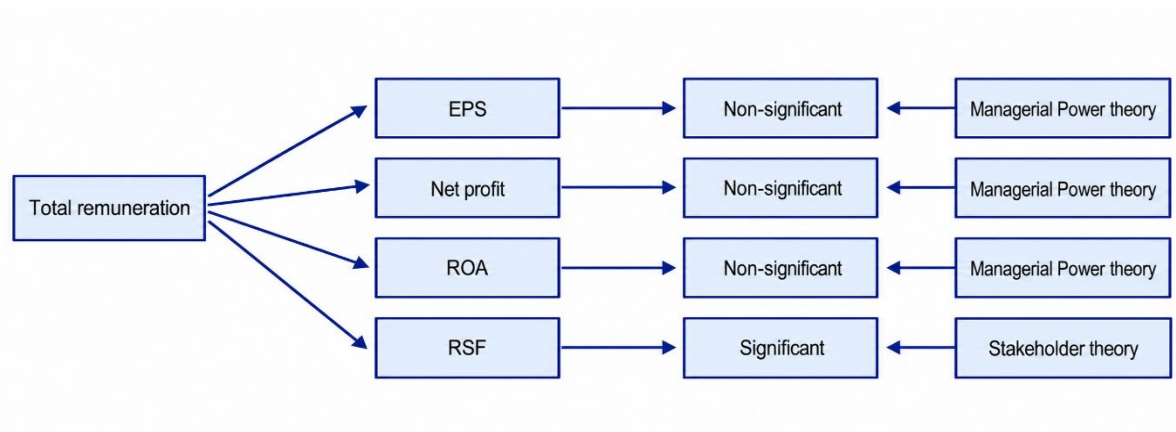


Figure 7.3: Theoretical Foundation and Empirical Relationships Between total remuneration and Company Performance Measures

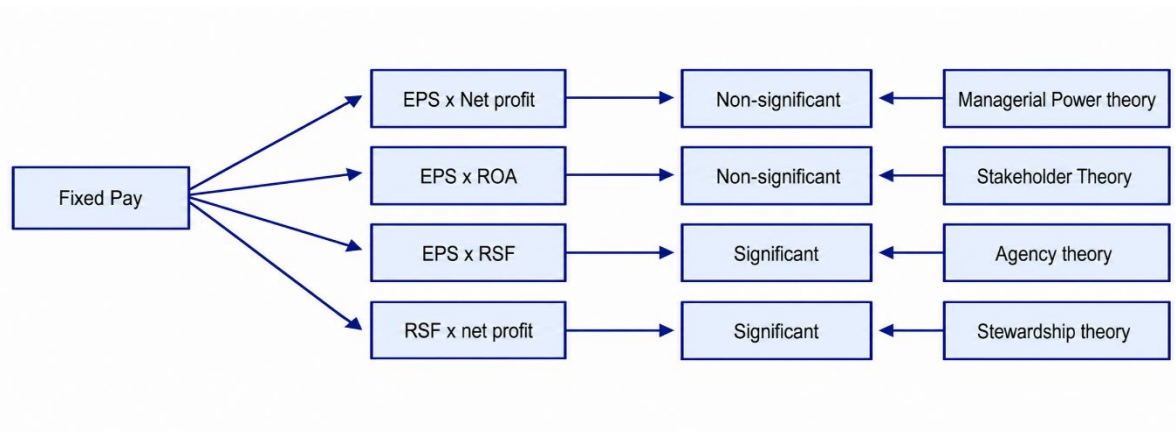


Figure 7.4: Theoretical Foundation and Empirical Effects Between fixed pay and Company Performance Measures

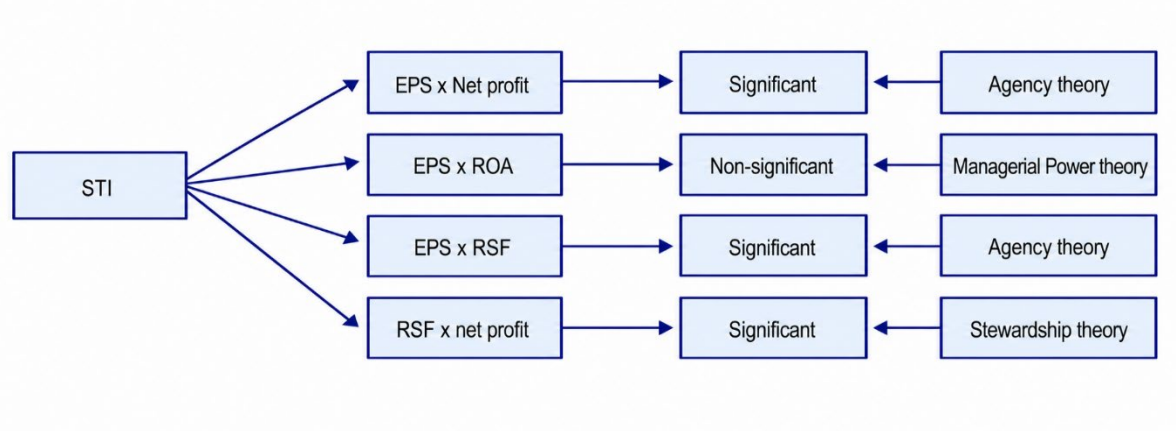


Figure 7.5: Theoretical Foundation and Empirical Effects Between STI and Company Performance Measures

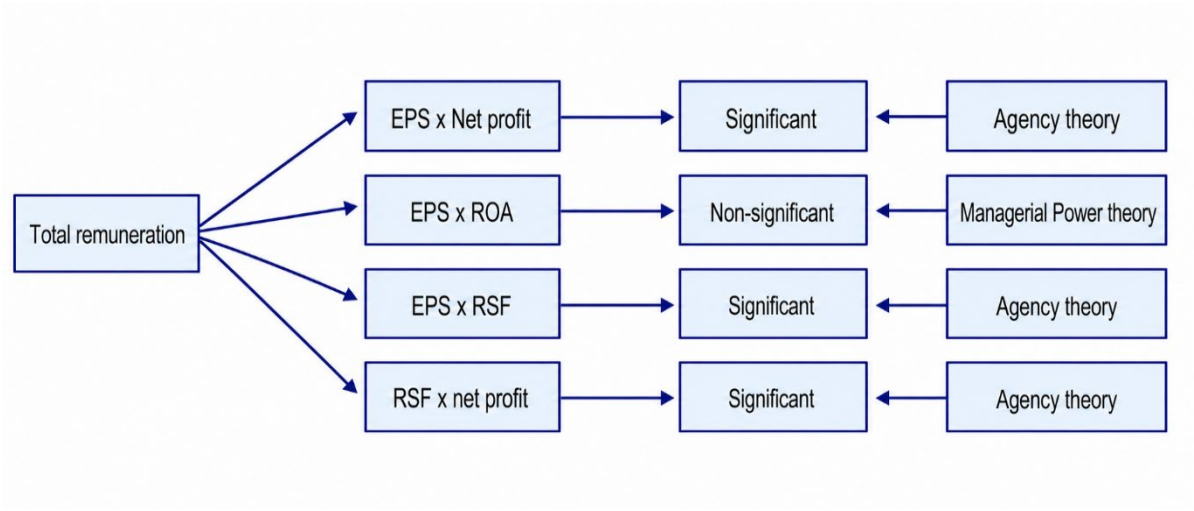


Figure 7.6: Theoretical Foundation and Empirical Effects Between total remuneration and Company Performance Measures

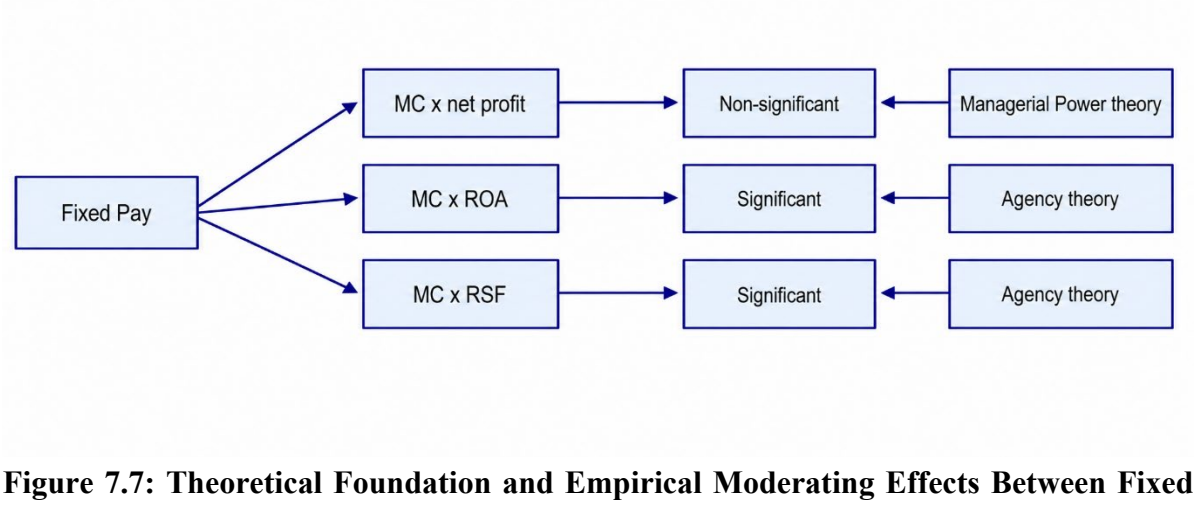


Figure 7.7: Theoretical Foundation and Empirical Moderating Effects Between Fixed Pay and Company Performance Measures

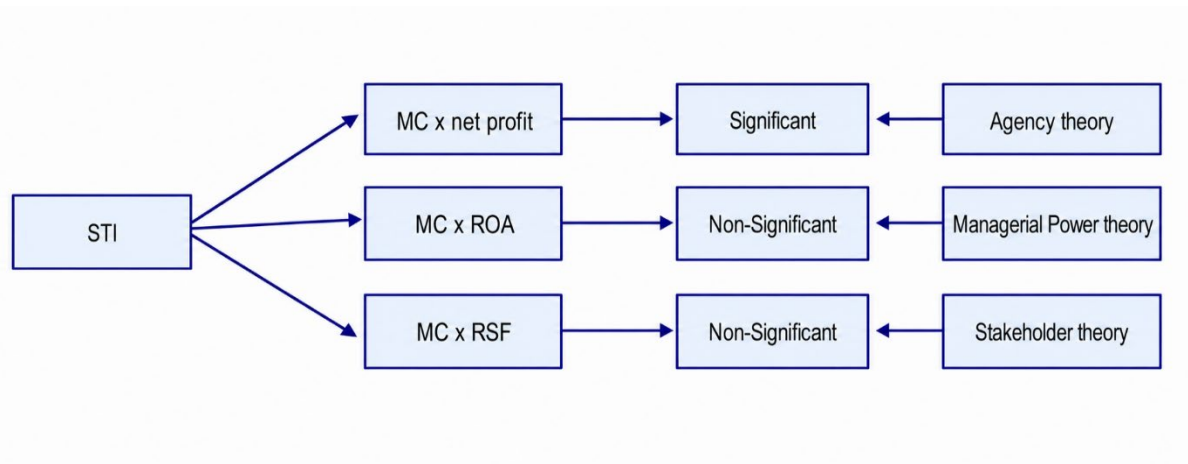


Figure 7.8: Theoretical Foundation and Empirical Moderating Effects Between STI and Company Performance Measures

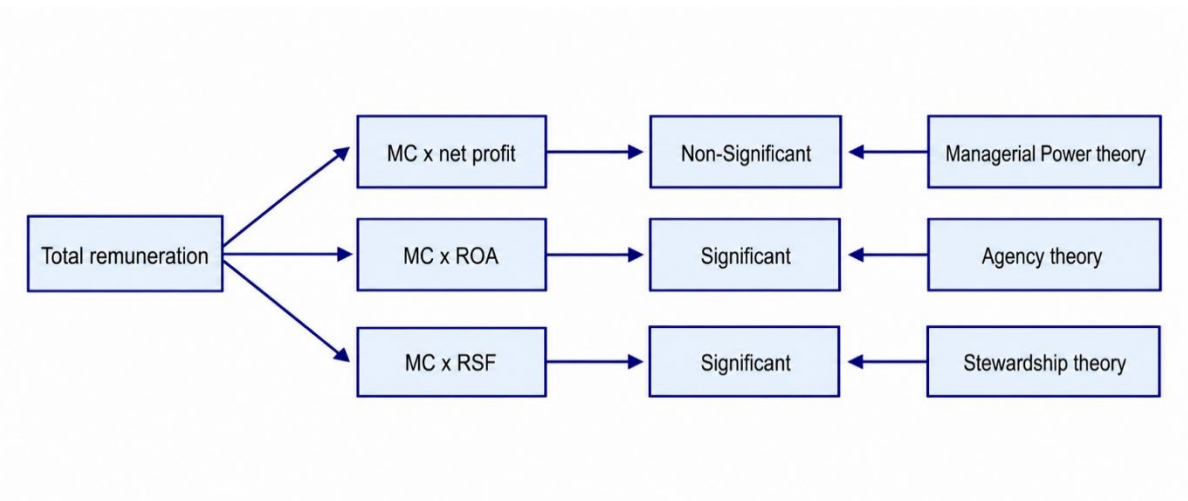


Figure 7.9: Theoretical Foundation and Empirical Moderating Effects Between total remuneration and Company Performance Measures

Figures 7.1 to 7.9 collectively integrate the study's main findings with its research objectives and theoretical foundations. The interpretations reflected in these findings align with the key principles of agency theory, stakeholder theory and managerial power theory, highlighting how each theoretical lens explains different facets of the pay–performance relationship. Presenting the empirical framework at this stage enables a consolidated understanding of the complex dynamics between the predictor and explanatory variables examined in the study. By visually demonstrating these interrelationships, the framework provides a coherent representation of the empirical outcomes, offering conceptual clarity and practical guidance

for the refinement of remuneration governance and the design of performance-linked pay structures.

7.6 RECOMMENDATIONS

The value of any study is the contributions that it can make to different key stakeholders, such as academics, professionals, other research studies, society at large and remuneration committees. Such recommendations must provide practical and rational suggestions that consider the target audience and the broader societal discourse on CEO remuneration.

7.6.1 Recommendations for the Remuneration Committee

It is imperative to use the information gathered to make recommendations to one of the key stakeholders of CEO remuneration on the association between CEO remuneration and company performance measures. The establishment of a remuneration committee is almost universally viewed as a desirable corporate governance practice. The following are the recommendations for enhancing the link with respect to CEO remuneration and company performance measures:

- **Role of remuneration committees:** To promote the long-term objectives of shareholders, remuneration committees should prioritise the design and implementation of remuneration frameworks that link CEO remuneration with sustainable company performance. The remuneration committee's primary responsibility should be to formulate remuneration plans that not only attract and retain competent CEOs but also motivate them to pursue strategies designed to increase long-term shareholder value. While enhancing shareholder long-term value, remuneration committees should also balance these with short-term value creation, which provides immediate insights into current strategies' effectiveness, allows for rapid response to market changes and assists in tracking progress toward long-term goals by breaking progress that is not manageable. Such measures adopted by remuneration committees should be transparent, consistent with corporate governance principles and consider equity measures to reduce inequalities in South Africa. A balance between long-term and short-term goals and incentives should be adopted. Short-term goals and incentives incentivise CEOs to stay on course towards achieving long-term goals.

- **Alignment of performance measures:** This study, through the analysis of direct, combined and moderating effect, has provided valuable insights into how variations in remuneration framework design may influence the effect of CEO remuneration and company performance. When designing remuneration frameworks, remuneration committees may consider adopting a combination of company performance methods to strengthen the alignment between CEO remuneration and company performance. However, caution should also be exercised in the selection of specific company performance measures, as illustrated in the combined effect of net profit and RSF on CEO remuneration. This highlights the potential for certain measures to distort pay-performance alignment if appropriately chosen. Inappropriate pay may result from the use of incorrect performance measurements, as suggested by Jensen, Murphy and Wruck (2004). The principles of managerial power theory should be applied to critically evaluate the design of any remuneration framework, ensuring that the underlying rationale for CEO remuneration does not create perceptions of bias or reinforce power imbalances that the South African Employment Equity Act seeks to address.
- **Tailored approach in contractual agreements:** Given the observed variations in the strength, significance, and direction of annual analysis results, remuneration committees should adopt a context-sensitive and flexible approach when structuring CEO remuneration contracts. Such contracts must remain responsive to both micro- and macroeconomic factors that influence company performance. The performance contracting of CEOs should be structured to differentiate between company outcomes directly attributable to CEO strategic decisions and those arising from external or uncontrollable market conditions. For instance, exceptional company performance during periods of sector-wide economic expansion may not necessarily reflect CEO effectiveness. Accordingly, remuneration committees should incorporate adaptive mechanisms that account for such exceptional influences, ensuring that remuneration outcomes remain equitable and strategically justified. Instances where misalignment appears between market-driven performance and CEO remuneration may, in fact, suggest that remuneration committees exercise prudent governance to avoid over-rewarding for exogenous circumstances. Ultimately, contractual approaches must reinforce fairness and strategic alignment by ensuring that CEO remuneration reflects

actual value creation and individual contributions rather than industry-driven performance fluctuations.

- **Rationale choice of company performance measures:** As highlighted in this research, the calculation and choice of company performance measures should account for the potential influence of accounting manipulation and misleading results. For example, as indicated, the sale of company assets may temporarily inflate net profit, thereby distorting certain metrics positively. Distortions of this nature can misrepresent the true performance of the company and result in inappropriate remuneration outcomes. Remuneration committees should exercise rigorous scrutiny over selecting performance measures that reflect sustainable company outcomes. To mitigate these risks, committees may consider using headline earnings per share, which adjusts for exceptional or non-recurring items, instead of EPS or other unadjusted profit-based measures.
- **Qualification and experience of remuneration committee members:** Given the ongoing discourse surrounding CEO remuneration and its implications for employee inequalities, labour unrest, and South Africa's enduring socio-economic disparities, it is important that remuneration committees comprise members with appropriate qualifications, expertise and professional judgement to exercise sound corporate governance. Competent committee members are indispensable for designing remuneration frameworks that are fair, transparent and strategically aligned with both organisational objectives and societal expectations. Inadequately designed remuneration frameworks may fail to promote and sustain long-term value creation but may also distort benchmarking practices, leading to inflated or misaligned CEO pay relative to peers in the market. It is recommended that board nominations prioritise individuals with demonstrated expertise in finance, human resources, corporate governance and ethical leadership to strengthen the credibility, rigour and effectiveness of remuneration committees.
- **Incorporating the interests of all stakeholders:** In line with stakeholder theory, companies must serve the interests of all their stakeholders affected by their operations rather than focusing exclusively on shareholders. It is important to recognise that stakeholders differ in their proximity and influence. Stakeholders who hold a genuine interest in the company have a legitimate claim, along with influence and authority, to

which the company bears a responsibility and moral duty. Some stakeholders may not have a stake in the company but may act as intermediaries to protect the interests of real stakeholders, such as associations to protect customer and environmental rights. Other stakeholders, such as governments, the legal justice system, and regulators, are independent regulators that exert some control over the company. Stakeholder theory posits that all these stakeholders will continue to support an organisation when they receive equitable value in return. Accordingly, remuneration committees should identify, balance, and incorporate the diverse interests of stakeholders when designing remuneration frameworks. The organisation's capacity to achieve its objectives and success depends on fulfilling the demands and expectations of various stakeholders.

- **Non-financial indicators:** Drawing on stakeholder theory, which emphasises value creation for a diverse range of stakeholders beyond purely financial indicators, remuneration committees should integrate non-financial indicators into CEO performance evaluation. These may include metrics related to social responsibility, environmental sustainability, and governance performance. In light of the growing global emphasis on ESG principles, linking CEO incentives to such non-financial measures ensures a more balanced and holistic assessment of executive effectiveness. This integration reinforces corporate accountability, advances sustainable performance, and aligns executive incentives with long-term value formation for both shareholders and society.
- **Briefing for continuity:** In instances where new committee members inherit existing remuneration strategies and philosophies, there should be a thorough briefing by outgoing members and relevant executives. Such structured handovers enhance understanding, promote institutional continuity, and prevent disruption in remuneration governance practices.
- **Adherence to the JSE and Company's Act requirements:** As this study focused on JSE-listed companies and companies operating under South African jurisdiction, remuneration committees should ensure full compliance with the JSE Listing Requirements and Company's Act 71 of 2008, specifically those provisions governing the disclosure of directors' remuneration in annual financial statements. Companies listed on the JSE have to report each director's remuneration for the current and prior financial years, with clear delineation of the fixed, short-term, and long-term

components of executive packages. Transparent disclosure enables stakeholders to assess whether remuneration structures are equitable, balanced, and strategically aligned while also facilitating meaningful benchmarking across organisations.

Collectively, these recommendations aim to enhance governance integrity, strategic alignment, and accountability of CEO remuneration practices. By integrating a theoretical perspective with regulatory compliance and stakeholder inclusivity, remuneration committees can strengthen the credibility of remuneration governance and ensure that CEO pay structures promote sustainable organisational performance and societal trust.

7.6.2 Recommendations for Human Resources Practitioners

Human resources (HR) practitioners play a pivotal role in shaping and implementing organisational remuneration strategies, including providing expert advice to remuneration committees on employee and executive pay structures. In this context, their strategic influence extends beyond administrative functions to ensure alignment between remuneration governance, performance outcomes, and organisational sustainability. The following recommendations are proposed:

- Organisations must attract, develop, and retain CEO talent with the necessary experience, competence, and leadership abilities. Providing motivating, market-competitive and performance-aligned remuneration packages is critical. HR practitioners, in collaboration with remuneration committees, should ensure that CEO remuneration strategies and policies support the company's long-term objectives and performance outcomes. Integrating the remuneration strategy into the broader business strategy ensures that the remuneration structure promotes sustainable performance, ethical leadership, and long-term shareholder value creation. Drawing on human capital theory, HR practitioners should recognise that a CEO's knowledge, skills, education and experience constitute a form of capital investment. As such, continued professional development and executive education must be prioritised to enhance leadership effectiveness and organisational returns.
- The executive remuneration strategy must enforce financial sustainability without unduly burdening the organisation's liquidity and equity. The empirical results underscore the value of developing and maintaining a clear, evidence-based alignment

between CEO remuneration and company performance to avoid disproportionate rewards unrelated to measurable outcomes. HR practitioners play a fundamental role in ensuring the transparency of CEO remuneration practices by communicating the rationale, structure and performance criteria clearly to internal and external stakeholders. Transparent communication enhances transparency, trust, and legitimacy and reduces perceptions of inequality.

- Meeting the demands of the future workforce requires individuals with advanced technological competence and soft skills. These future-fit leaders will be highly sought after, requiring HR practitioners to develop new metrics and frameworks for analysing pay-for-performance in line with evolving job complexities. Strategic workforce planning should therefore incorporate leadership attributes that reflect adaptability, digital fluency, and the ability to navigate volatility and transformation within dynamic market environments.
- While it may be tempting for HR practitioners to compete primarily on financial remuneration benchmarks, the evolving employment landscape demands a more strategic and holistic approach. Organisations should invest in defining, communicating and promoting a comprehensive total reward value proposition that extends beyond financial remuneration. This includes professional development opportunities, brand power for future career prospects, flexible work arrangements and employee well-being initiatives. The outcomes of this analysis reveal the limitations of relying exclusively on financial measures to clarify the link between CEO remuneration and company financial performance. Therefore, HR practitioners should encourage a shift towards a balanced reward philosophy that fosters intrinsic motivation, ethical leadership, and sustainable commitment rather than perpetuating a cycle of financial dependency.
- The Employment Equity Act 55 of 1998 (EEA) mandates that organisations report on wage differentials between executives and the lowest paid employees. Given South Africa's persistent inequality, compliance with this requirement is essential. HR practitioners must ensure accurate reporting and full adherence to EEA provisions to strengthen pay transparency and accountability. Through robust compliance, HR professionals contribute to reducing excessive wage disparities, promoting equity, and

empowering stakeholders to hold organisations accountable for fair and responsible remuneration practices.

7.7 CONTRIBUTIONS OF THE STUDY

This research advances the ongoing discourse on the correlation between CEO remuneration and company performance among companies listed on the JSE in South Africa from 2008 to 2020. By integrating multiple remuneration components and performance measures, the study provides both theoretical enrichment and empirical advancement to the discipline of executive remuneration. It further contributes to the understanding of remuneration governance within South Africa, which is shaped by economic volatility, scarce executive talent, and socio-economic inequality. This study adds to providing new insights that advance the understanding in three main areas, namely, empirical, theoretical and practical research, each of which is discussed below.

The study contributes to the executive remuneration literature by providing evidence on the relationship between CEO remuneration and multiple indicators of company performance among companies publicly listed on the JSE for the period 2008 -2020. The findings extend existing evidence from developed markets to the South African context, where empirical research on CEO pay-performance remains relatively limited.

The study also contributed towards performance measures. The research also focused on three different components of CEO remuneration, primarily, fixed pay, STI and total remuneration, and assessed these components against each variable of company performance measures. By including both guaranteed (fixed pay), variable (STI) and a combination of both (total package), the study demonstrates the complexity of designing pay-performance frameworks. The study demonstrates that different performance measures are associated with different remuneration components. The findings suggest that EPS, net profit, ROA and RSF do not influence fixed pay, STI and total remuneration uniformly, highlighting the importance of considering multiple indicators when evaluating pay-performance alignment.

The study contributes to theory by demonstrating that agency theory alone may not fully explain CEO remuneration outcomes. These findings refine existing agency theory assumptions by showing that the pay-performance link operates not only within the agency and principal interests but also within a broader market and institutional context, where

competitive pressures may override purely performance-based linkages. While some findings supported the pay-performance alignment, several relationships were statistically insignificant or contrary to theoretical expectations, suggesting that alternative perspectives such as stewardship theory and stakeholder theory may be more suitable in explaining CEO remuneration.

The methodological contribution of the study unlike many prior studies that focus exclusively on direct pay-performance relationships, this study examined direct, interaction and moderating effects. This approach provided a more comprehensive understanding of how company performance measures jointly influence CEO remuneration and how company size alters these relationships. The study demonstrates the complexity of designing pay-performance frameworks. The complexity of this model may capture the practical dynamics of the real world. Interactions enable the extension of well-known relationships to other contexts and provide more detailed predictions about the correlation between remuneration of CEOs and company performance beyond the simplistic one-on-one interaction.

The findings of the study have several practical contributions for remuneration committees, shareholders, policy makers and remuneration consultants. The findings provide insights for these stakeholders by highlighting which performance measures are more strongly associated with specific remuneration components. This may assist in the design of remuneration structures that better align CEO remuneration with company performance. Remuneration committees may therefore consider different dynamics surrounding CEO remuneration and company performance and integrate these dynamics into the design of remuneration structures. Caution, however, must be exercised in choosing the ideal combination of variables, as illustrated in this study. Choosing, for example, performance indicators that are complementary or overlapping may result in an inflated assessment of company performance, leading to CEO remuneration levels being unfairly high. It is recommended that remuneration committees consult financial, governance, remuneration consultants or governance experts when designing optimal remuneration frameworks.

The study contributes to corporate governance practice by providing evidence on the extent to which CEO remuneration aligns with company performance among JSE-listed companies. This therefore informs the ongoing debates regarding CEO pay fairness, accountability and

transparency. According to the research results, remuneration committees and HR practitioners can improve reporting disclosure and propose designs for CEO remuneration.

Various theories, empirical research and remuneration specialists have investigated the CEO pay components and specific company performance variables and recommended various solutions for alignment and design. However, if these various studies and solutions had been conclusive in addressing the pay–performance link, further investigations would not have been necessary, and the discourse regarding CEO remuneration would have been resolved.

7.8 RECOMMENDATIONS FOR FURTHER STUDIES

Although this study contributes to understanding the relationship between components of CEO remuneration and company performance, further research is warranted. This study was confined to specific performance and remuneration variables between 2008 and 2020. This study provides additional insights into possible areas for future research. Further studies on CEO remuneration can utilise the current study results to compare the alignment of CEO remuneration with company performance measures. Changes in the economic, social, and political landscape over time significantly influence corporate remuneration decisions, many of which are beyond the scope of this research.

CEO remuneration may also be affected by discretionary decisions. For example, former Absa Group CEO, Maria Ramos and Woolworths executives voluntarily forewent bonuses and percentage salary cuts during 2012 and 2020, respectively (News24, 2020; Davies, 2020). Future studies could analyse the effects of such voluntary actions, not considered in this study.

Future research could explore CEO self-interest and behavioural aspects influencing pay, as suggested by Bezuidenhout (2018), and include other remuneration types, particularly LTIs. Excluding LTIs in this study limited the assessment of their significance in the remuneration–performance relationship. Future studies should therefore incorporate long-term incentives (LTIs) to enable a more comprehensive assessment of the relationship between CEO remuneration and company performance. As LTIs typically constitute a substantial portion of executive remuneration, their inclusion may provide additional insight into incentive

alignment and long-term value creation. As noted by Matamene (2022), executives may trade fixed pay for variable pay, such as share options, warranting further examination.

Future researchers should critically evaluate and justify a clearer theoretical and empirical justification for the selection of company size proxies. While MC is widely used as a proxy for company size in empirical studies (for example, Ma, 2025), researchers often adopt this measure without explicitly explaining its suitability as a proxy for company size relative to other alternatives such as total assets or revenue (Lokman & Tareh, 2020; Harymawan, Agustia et al., 2020; Ramgath & Bussin, 2022; Boukattaya & Omri, 2021). This implies that researchers have independently determined the selection of the company size measure without providing any logical justification (Hashmi et al., 2020).

Further research could compare different company size proxies to determine whether the choice of proxy influences the observed relationship between company performance and CEO remuneration (Hashmi, et al., 2020).

This research examined 61 JSE-listed companies across all industries. Future studies could use stratified samples representing industry sectors or subgroups (for instance, market capitalisation, stage in the life cycle, industry sector, international or local) to enable more robust comparisons of CEO remuneration and company performance measures. As some CEO pay was denoted in foreign currency, future studies should critically assess the impact of exchange rate conversions on remuneration outcomes. This study converted foreign currency into rand values but did not evaluate the implications of conversion methods or sources. Future studies could contribute to this study by analysing this impact.

Unlike Chulkov and Baroon (2023), who excluded interim or short-tenured CEOs, this study included JSE-registered CEOs during the study period, using data for the longest-serving CEO where changes occurred. Future studies could adopt the exclusion criteria of Chulkov and Baroon (2023) to compare results and assess potential differences. In addition, this study treated CEOs as a homogenous group without distinguishing features that may influence their remuneration. Future research could examine how characteristics such as tenure, years of experience, age, gender, company size, and industry affect remuneration. In line with Zandi

et al. (2019), incorporating these variables could enable subgroup analyses to better understand differential remuneration outcomes.

Future research should continue to explore the factors affecting CEO remuneration by incorporating the recommendations emanating from this current study. There is still ongoing interest and debates to date on CEO remuneration, especially in emerging markets such as South Africa, where the subject has still not been investigated to the extent that developed countries have.

7.9 LIMITATIONS OF THE STUDY

The study examined data from 61 South African publicly listed companies on the JSE during the review period. The empirical analysis was confined to cash-based CEO remuneration components, namely fixed pay, STIs, and the operationalised measure of total remuneration. Accordingly, LTIs were excluded from the study and are not reflected in the reported findings. Despite efforts to ensure methodological rigour and comprehensive analysis, certain limitations should be acknowledged.

The study assessed the relationship pertaining to types of CEO pay and company performance over thirteen-years by treating all companies as a single, homogenous group. Consequently, it did not account for organisational heterogeneity such as sectoral differences, competitive dynamics, cyclical performance trends, or unique remuneration strategies that may have influenced outcomes. Another limitation is that the analysis was based on secondary data obtained from the McGregor BFA database, Profile Group and company financial statements. Therefore, the accuracy of findings depended on the reliability and completeness of these data sources. While every effort has been taken to cross check and verify the data, reporting inconsistencies inherent to secondary data remain a limitation.

For the moderating variable, market capitalisation used as a proxy for company size, Chan (2020), noted that different proxies capture different aspects of company size, and thus have different implications in corporate finance and CEO remuneration. MC is market-oriented and forward-looking, reflecting ownership of equity, while another potential proxy, total assets, measures total company resources.

The study utilised an unbalanced panel due to missing observations. While the randomness of missing values likely mitigated potential bias, the results cannot be generalised across JSE-listed companies. Data on company accounting performance and CEO remuneration were collected and compiled by management and verified by an external auditor. Thus, there is no reason to believe the data were materially falsified; however, the researcher acknowledges that potential omissions or immaterial discrepancies may have influenced the study's results.

By noting these limitations, future research can address them to contribute to a deeper understanding of the complex relationship between company performance, organisational characteristics and CEO remuneration.

7.10 CONCLUDING REMARKS

The study examined the connection between CEO remuneration and company performance measures for the period 2008 to 2020 for companies listed on the JSE. The analysis revealed both positive and negative relationships between CEO remuneration and company performance measures, confirming the ongoing inconclusiveness of this relationship in existing literature. The lack of uniformity across study periods, industry sectors, and measures of remuneration and performance likely contributes to these mixed findings.

The study identified that the relationship linking components of CEO remuneration and company performance measures varied in strength and direction. RSF emerged as the most pervasive company performance measure aligning with remuneration outcomes. While fixed pay was expected to exhibit a negative relationship with company performance, especially considering the global and local events, it remained unaffected due to its guaranteed nature. The results were partially consistent with prior studies, supporting some while contradicting others. Interestingly, the effect of remuneration types and ROA, ranged from moderate (fixed pay) to strong (STI) and weak (total remuneration).

The total remuneration growth year-on-year during the study period does not necessarily confirm perceptions of uncontrolled CEO pay escalation. However, as the studies that have been carried out by different researchers have not provided conclusive results about the link connecting CEO remuneration and company performance measures, they may not settle the

current debate. Due to the high unemployment rate, South Africa being the most unequal income generation country and slow economic growth, it is important to ensure that CEO salaries are aligned with company performance. Adherence to the King IV principles could assist organisations in ensuring executive remuneration strategies promote ethical leadership and long-term value creation.

The mixed results may also indicate improved corporate governance practices among remuneration committees in designing remuneration frameworks. The interaction effect analysis revealed that while fixed pay was not significantly related to company performance at the 5% level, company size, as categorised by MC, moderated this relationship, strengthening it in larger companies. Conversely, consistent with the agency theory, STI suggests a statistically significant link with company performance.

The impact of company size as categorised by MC produced mixed results. In some cases, company size strengthened and changed the direction of the effect of company size and CEO remuneration, suggesting that larger companies possess more robust governance structures that better align CEO remuneration with company performance. Conversely, in other cases, the moderating effect was statistically insignificant, suggesting that smaller companies, with fewer formal structures and greater exposure to market forces, may base remuneration decisions on factors beyond company performance. From a managerial theory perspective, CEOs may influence remuneration outcomes. While large companies (high MC) may reflect stability and resource availability, this does not necessarily translate into efficient utilisation of shareholder investments, as evidenced by RSF.

The ongoing debate surrounding CEO remuneration and company performance continues to be a widely debated subject, which garners more attention after the publication of annual financial results of JSE-listed companies, through media focus. To ensure fairness and accountability, remuneration frameworks should remain transparent, performance-linked, and adaptable to dynamic macroeconomic conditions. Post COVID-19 realities, changing labour market expectations, and emerging workforce values further highlight the importance of designing flexible and context-sensitive remuneration strategies.

REFERENCES

- 21st Century Pay Solutions Group Remuneration Definitions. 2012. 21st century pay solutions group, Johannesburg, South Africa.
- Aabo, T., Jacobsen, M.L., & Stendys, K. 2022. Pay me with fame, not mammon: CEO narcissism, compensation, and media coverage. *Finance Research letters*: 46(Part B): 102495. doi: <https://doi.org/10.1016/j.frl.2021.102495>
- Abazari, A. 2023. *The Routledge handbook of philosophy and poverty*. Salzburg: Routledge
- Abdullahi, U., Ardo, Y., Hassan, A. and Ibrahim, G. 2022. Assessment of financial and non-financial performance indicators used by small and medium construction firms in Nigeria. *FUTY Journal of the Environment*, 15(2): 48–58. Available at: <https://www.ajol.info/index.php/fje/article/view/225585> (Accessed: 4 June 2026).
- Abu-Ali, B., Al-Jamal, D. & El-Masry, A. 2024. Executive compensation, sustainability, and performance of European and US Banks. *Open Journal of Business and Management*, 12(3): 2033-2080. [https://doi: 10.4236/ojbm.2024.123106](https://doi.org/10.4236/ojbm.2024.123106)
- Accounting Tools. 2022. *The difference between turnover and profit*. Available at: <https://www.accountingtools.com/articles/what-is-the-difference-between-turnover-and-profit.html> [Accessed: 24 November 2022]
- Accounting Tools. 2024. What is weighted average shares outstanding? [online]. Available at: <https://www.accountingtools.com/articles/what-is-the-weighted-average-of-shares-outstanding.html> [Accessed: 29 January 2025]
- Accountingtute. 2023. *Addressing human error in financial reporting*. Available at: <https://www.accountingtute.com/addressing-human-error-financial-reporting/> [Accessed: 12 May 2025]
- Adelberg, A.H. 1979. Narrative disclosures contained in financial reports: Means of communication or manipulation? *Accounting and Business Research*, 9(35): 179–190. doi: 10.1080/00014788.1979.9729157. Available at: <https://doi.org/10.1080/00014788.1979.9729157>.
- Adeyemi, B.B. 2024. Reliability and validity in quantitative research. In H. Bui (Ed.), *Applied linguistics and language education research methods: Fundamentals and*

innovations (pp. 86-102). IGI Global Scientific Publishing. <https://doi.org/10.4018/979-8-3693-2603-9.ch007>

Adkins, T. 2024. Financial statement manipulation. Available at: <https://www.investopedia.com/articles/fundamental-analysis/financial-statement-manipulation.asp> [Accessed: 25 May 2025]

Ahamed, F. 2022. CEO compensation and performance of Banks. *European Journal of Business and Management Research*, 7(1): 100–103. <https://doi.org/https://ejbmr.org/index.php/ejbmr/article/view/1234/659>

Ahmed, A.D., Bahamman, S.M., & Abdulkarim, H. 2020. Directors' remuneration and financial performance: moderating role of board attributes of listed insurance companies in Nigeria. *Journal of Economics and Trade*, 5(2): 23-34.

Ahsan, A. 2024. *Understanding the four levels of strategy: A comprehensive approach* [online]. Available at: <https://www.linkedin.com/pulse/understanding-four-levels-strategy-comprehensive-approach-ahsan-nbwkc> [Accessed: 29 December 2024]

Ajayi, V.O. 2023. A review on primary sources of data and secondary sources of data. *European Journal of Education and Pedagogy*, 2(3).

Alarussi, AS. 2021. Effectiveness, efficiency and executive directors' compensation among listed companies in Malaysia. *Sage Open*, 11(4). <https://doi.org/10.1177/21582440211054129>

Alastair Marais, A., Vermaak, C. & Shewell, P, 2023. Predicting financial statement manipulation in South Africa: A comparison of the Beneish and Dechow models, *Cogent Economics & Finance*, 11(1): 2190215. <https://doi.org/10.1080/23322039.2023.2190215>

Alele, F. & Malau-Aduli, B. 2023. *An introduction to Research Methods for Undergraduate Health Profession students*. Townsville: James Cook University.

Alhammadi, A., Soar, J., Ali, B.M., Kadirgama, K. 2023. Redefining procurement paradigms: A critical review of buyer-supplier dynamics in the global petroleum and natural gas industry. *The Extractive Industries and Society*, 16. <https://doi.org/10.1016/j.exis.2023.101351>

- Al-Faryan, M.A.S. 2024. Agency theory, corporate governance and corruption: an integrative literature review approach. *Cogent Social Sciences*, 10(1). <https://doi.org/10.1080/23311886.2024.2337893>
- Alqam, M., Yousef, A.H. & Hamshari, Y. 2021. The relative importance of financial ratios in making investment and credit decisions in Jordan. *International Journal of Financial Research*, 12(2): 19929-19929. <https://doi.org/10.5430/ijfr.v12n2p284>
- Al-Shammari, H. A. 2021. CEO compensation and firm performance: The mediating effects of CEO risk taking behaviour', *Cogent Business & Management*, 8(1). <https://doi.org/10.1080/23311975.2021.1894893>.
- Acero, I., & Alcalde, N. 2019. Directors' compensation. What really matters? *Journal of Business Economics and Management*, 21(1): 180–199. <https://doi.org/10.3846/jbem.2020.11788>
- Akpan, J.U. & Oluwagbade, O.I. 2023. Social and environmental responsibility in accounting: beyond financial metrics. *International Journal of Social Science and Management Research*, 9(9): 148 – 173
- Akhileshwari, A. 2023. A comprehensive analysis of the steps involved in testing of hypotheses. *International Journal of Research in Applied Science and Engineering*, 11(VII). <https://doi.org/10.22214/ijraset.2023.55056>
- Alfawareh, F.S., Che Johari, E.E. & Ooi, C.A. 2023. Governance mechanisms, firm performance and CEO compensation: evidence from Jordan. *Journal of Financial Reporting and Accounting*, <https://doi.org/10.1108/JFRA-01-2023-0062>
- Ali, B.J. & Anwar, G. 2021. Employee turnover intention and job satisfaction. *International Journal of Advanced Engineering, Management and Science*, 7(6): 22–30.
- Ali, S.A., & Dang, H. 2021. Factors impacting the use of the NZ COVID Tracer application in New Zealand. *Smart Health*, 24(2022) 100278
- Alqam, M., Ali, H.Y., & Hamshari, Y. 2021. The relative importance of financial ratios in making investment and credit decisions in Jordan. *International Journal of Financial Research*, 12(2): 284. <https://doi.org/10.5430/ijfr.v12n2p284>

- Alshare, H.F., Kadir, M.R.B.A., Kamarudin, K.A. & Hassan, H.B. 2023. The effect of audit firm size on earnings management: Using the CEO compensation as moderator. *Wseas Transactions on Business and Economics*, 20: 505-513. [https://doi:10.37394/23207.2023.20.46](https://doi.org/10.37394/23207.2023.20.46).
- Altstadt, J. 2023. *Long-term incentives are a tool to attract and retain talent*. Available at: <https://www.pinsentmasons.com/out-law/analysis/long-term-incentives-are-a-tool-to-attract-and-retain-talent> [Accessed: 25 November 2024]
- Alturki, R. 2021. Research onion for smart IoT-enabled mobile applications. *Scientific Programming*. <https://doi.org/10.1155/2021/4270998>
- Alves, I. & Lourenço, S.M. 2023. Subjective performance evaluation and managerial work outcomes. *Accounting and Business Research*, 53(2): 127–157.
- Anastasiades, B. & Fritchie, W. 2024 The Sarbanes-Oxley Act: A comprehensive overview [online]. Available at: <https://www.auditboard.com/blog/sarbanes-oxley-act/> [Accessed: 27 November 2024].
- Anderson, R.L. 1942. Distribution of the serial correlation coefficient. *The Annals of Mathematical Statistics*, 13(1): 1-13. Available at: <http://www.jstor.org/stable/2236157>. [14].
- Anderson, M., Boateng, K., & Abos, P. 2024. Validity and reliability: The extent to which your research findings are accurate and consistent. XXXX
- Andrade, C. 2021. A student's guide to the classification and operationalization of variables in the conceptualization and design of a clinical study: Part 1. *Indian Journal of Psychological Medicine*, 43(2): 177-179.
- Anne, O., K'obonyo, P., & Muindi, F. 2021. Influence of Firm Size on CEOs Compensation. *Journal of Business and Economic Development*. 6(1): 23-29. [https://doi:10.11648/j.jbed.20210601.13](https://doi.org/10.11648/j.jbed.20210601.13)
- Anglo American Platinum Limited. 2017. *Integrated Report 2017: Building on our foundations: positioned for a sustainable future*. Johannesburg: Anglo American Platinum Limited

- Anglo American Platinum Limited. 2023. *Integrated Report 2023*. Available at: chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/https://www.angloamerican.com/~medi a/Files/A/Anglo-American-Group-v9/PLC/investors/annual-reporting/2023/aa-annual-report-full-2023.pdf. [Accessed: 7 January 2025]
- Antwi, S.K. & Nickerson, K. 2015. Qualitative and quantitative research paradigms in business research: A philosophical reflection. *European Journal of Business and Management*, 7(3): 217-225.
- Appah, E., Tebepah, S.F., & Awaji, C.E. 2020. Directors' compensation and financial performance of deposit money banks in Nigeria. *World Journal of Finance and Investment Research*, 5(1)
- Aprianti, E., & Wahyuningsih, D. 2022. Implications of return on asset (ROA), Earnings Per Share (EPS), Price Earnings Ratio (PER) and Debt to Equity Ratio (DER) to stock price. *Akselerai Jurnal Ilmiah Nasional*, 4(1):93-105
- Aran, Y., 2023. *The RSU time bomb: Regulating startup equity compensation in the unicorn era*. In: Broughman, B. & de Fontenay, E., eds. *Research Handbook on the Structure of Private Equity and Venture Capital*. Cheltenham: Edward Elgar Publishing, forthcoming 2024. Available at: <https://ssrn.com/abstract=4631051> [Accessed: 22 Apr. 2025].
- Arefin, M.N. & Masum, A.K.M. 2024. A probalistic approach for missing data imputation, *Complexity*, 2024(1). <https://doi.org/10.1155/2024/4737963>
- Arnold, A., Sender, A., Fulmer, I. & Allen, D. 2023. Variable pay transparency in organisations: when are organisations more likely to open up about pay? *Compensation & Benefits Review*, 56(1): 16-36
- Arsal, M. 2021. Impact of earnings per share and dividend per share on firm value. *Atestasi Jurnal Ilmiah Akuntansi*, 4(1):11-18
- Ashtiani, M.N. & Raahemi, B. 2022. Intelligent fraud detection in financial statements using machine learning and data mining: A systematic literature review. *Institute of Electrical and Electronics Engineers*, 10: 72504-72525. <https://doi:10.1109/ACCESS.2021.3096799>.

- Aslam M., Sherwani, RAK., & Saleem, M. 2021. Vague data analysis using neutrosophic Jarque–Bera test. *PLoS ONE* 16(12). <https://doi.org/10.1371/journal.pone.0260689>
- Azim, M.I. & Ahmmod, S.M. 2014. Executive remuneration, financial crisis and ‘say on pay’ rule. *Journal of International Business and Economics*, 2(4): 71–99.
- Azim, M.I., Mei, J.C.A, & Rahman, S. 2011. Executive remuneration and company performance: an evaluation. *Corporate Board: Role, Duties and Composition*, 7(2)
- Bai, JJ. & Mkrtchyan, A. 2023. What do outside CEOs really do? Evidence from plant-level data. *Journal of Financial Economics*, 147(1). <https://doi.org/10.1016/j.jfineco.2022.10.001>
- Baker, D., Bivens, J., & Schieder, J. 2019. *Reining in CEO compensation and curbing the rise of inequality*. [online]. Available at: <https://www.epi.org/publication/reining-in-ceo-compensation-and-curbing-the-rise-of-inequality/> [Accessed: 28 June 2023]
- Bala, J. 2020. An overview of longitudinal research designs in Social Sciences. *Studies in Indian Politics*, 8(1):105-114.
- Baker & McKenzie. 2023. *South Africa: Bridging the pay gap through transparency* [online]. Available at: <https://insightplus.bakermckenzie.com/bm/employment-compensation/south-africa-bridging-the-pay-gap-through-transparency> [Accessed: 27 November 2024]
- Baker & McKenzie. 2023. *SEC Releases Final Rule on Clawback of Incentive Compensation* Available at: chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/https://insightplus.bakermckenzie.com/bm/attachment_dw.action?attkey=FRbANEucS95NMLRN47z%2BeeOgEFCt8EGQJsWJiCH2WAUuQVQjpl3o%2BQzUxecjEbFL&nav=FRbANEucS95NMLRN47z%2BeeOgEFCt8EGQbuwypnpZjc4%3D&attdocparam=pB7HEsg%2FZ312Bk8OIuOIH1c%2BY4beLEAeiCIukYeOcBk%3D&fromContentView=1 [Accessed: 22 June 2025]
- Baker McKenzie. 2026. *Continuing obligations/periodic reporting*. Available at: <https://resourcehub.bakermckenzie.com/en/resources/cross-border-listings-guide/europe-middle-east--africa/johannesburg-jse-limited/topics/continuing-obligationsperiodic->

[reporting#:~:text=Every%20listed%20company%20must%20further,report\)%20as%20well%20as%20the](#) [Accessed: 26 December 2024]

- Balafas, N. & Florackis, C. 2014. CEO compensation and future shareholder return: Evidence from the London Stock Exchange. *Journal of Empirical Finance*, 27: 97-115.
- Balogh, A., Wright, D., & Zein, J. 2024. Does stakeholder outrage determine executive pay? *The Review of Corporate Finance Studies*, 00 (00): 1-42
- Bank of England. 2016. [online]. Available at: <https://www.bankofengland.co.uk/prudential-regulation> [Accessed: 29 July 2016].
- Barde, I.M., & Zik-Rullahi, A.A. 2020. Effect of executive compensation and share ownership on financial performance of listed deposit money banks in Nigeria. *Journal of Accounting and Taxation*, 12(1): 1-11. [https://doi: 10.5897/JAT2019.0377](https://doi.org/10.5897/JAT2019.0377)
- Barnes, P. 1987. The analysis and use of financial ratios. *Journal of Business Finance Dan Accounting*, 14(4): 449.
- Barnett, V. & Lewis, T. 1980. *Outliers in statistical data*. 1st ed. Chichester: Wiley
- Barrett, D. & Younas, A. Induction, deduction and abduction. *Evidence Based Nursing*, 27(1): 6-7
- Barron, D., Georgiadis, G. & Swinkels, J. 2020. Optimal contracts with a risk-taking agent. *Theoretical Economics*, 15(2): 715-761.
- Bawa, AJ. 2019. Market-based performance measures: A shareholder's perspective. In: *15th Annual International Bata Conference for Ph.D. Students and Young Researchers (DOKBAT), October 01, 2019*. Publisher: TBU Publications
- Baxter, R. 2021. *The global economic crisis and its impact on South Africa and the country's mining industry*. Available at: <chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/https://www.resbank.co.za/content/dam/sarb/publications/conference-papers/2009/51/Roger+Baxter.pdf> [Accessed: 10 February 2025]
- Bebchuk, L.A. & Fried J.M. 2003. Executive Compensation as an Agency Problem. Cambridge, Mass: *National Bureau of Economic Research*. Available at: <http://www.nber.org/papers/w9813>.

- Bekos, G.& Chari, S. 2024. *Upper Echelons Theory: A review*. In S. Papagiannidis (Ed), [TheoryHub Book](#). Available at <https://open.ncl.ac.uk/> / ISBN: 9781739604400
- Bello, A.L., Agbi, S.E., & Mustapha, L.O. 2022. CEO compensation and firm performance: Non-linearity and asymmetry. *International Journal of Social Sciences and Management*, 5(2):63-74
- Benuyenah, V. 2024, *Compensation and Benefits. Human Resource Management: Rationalising Managerial Decisions*. Leeds: Emerald Publishing Limited. 81-89
- Bezuidenhout, M.L., Bussin, M.H. & Coetzee, M. 2018. The chief executive officer pay–performance relationship within South African state-owned entities. *SA Journal of Human Resource Management*, 16(1): 1-13.
- Bezuidenhout, ML. & Bussin, MH. 2020. The year-on-year analysis of the relationship between chief executive officer remuneration and state-owned company performance in South Africa. *SA Journal of Human Resource Management*, 18. [https://doi: 10.4102/sajhrm.v18i0.1411](https://doi.org/10.4102/sajhrm.v18i0.1411).
- Bezuidenhout, M. 2021. The effect of the economic crisis on pay-performance link in South African state-owned enterprises. *South African Journal of Business Management*, 52(1): a1747.
- Bhattacharya, S. 2022. *The impact of the Marikana Massacre: ‘Plus ça change, plus c’est la meme chose’*. Available at: <https://www.vifindia.org/article/2022/august/18/the-impact-of-the-marikana-massacre> [Accessed: 29 January 2025]
- Bhosale, U. 2024. *Setting limits and focusing your study: exploring scope and delimitation* [online]. Available at: <https://www.enago.com/academy/scope-and-delimitations/>. [Accessed: 28 February 2025]
- BHP Group Ltd. 2024. *Annual Report 2024. Johannesburg* [online]. Available at: <https://www.bhp.com/investors/annual-reporting/annual-report-2024> [Accessed: 7 January 2024]
- BHP Group Ltd. 2024. *Annual Report 2024. Johannesburg* [online]. Available at: <https://www.bhp.com/investors/annual-reporting/annual-report-2024> [Accessed: 15 April 2025]

- Birch, 2023. *Top 10 most visionary CEOs in South Africa* [online]. Available at: <https://businesschief.ae/leadership-and-strategy/top-10-most-visionary-ceos-in-south-africa> [Accessed: 23 March 2025]
- Bivens, J. 2023. *Using tax policy to restrain CEO pay* [online]. Available from: <https://www.epi.org/publication/using-tax-policy-to-restrain-ceo-pay-best-practices-and-smart-alternatives/> [Accessed: 20 June 2025].
- Bivens, J. & Kandra, J. 2022. *CEO pay has skyrocketed 1,460% since 1978* [online]. Available at: <https://www.epi.org/publication/ceo-pay-in-2021/> [Accessed: 3 February 2024]
- Bivens, J. & Kandra, J. 2023. *CEO pay slightly declined in 2022* [online]. Available at: <https://www.epi.org/publication/ceo-pay-in-2022/> [Accessed: 3 February 2024]
- Blair, C. 2014. *Financial indicators of company performance in different industries that affect CEO pay in South Africa*. Master's Thesis. University of Cumbria, Carlisle
- Blair, M.M. & Stout, L.A. 1999. A team production theory of corporate law. *Virginia Law Review*: 247-328.
- Blanes, F., de Fuentes, C. & Porcuna, R. 2019. Executive remuneration determinants: New evidence from meta-analysis, *Economic Research-Ekonomska Istraživanja*. [https://doi: 10.1080/1331677X.2019.1678503](https://doi.org/10.1080/1331677X.2019.1678503)
- Bognanno, M.L. 2019. *Efficient markets, managerial power, and CEO compensation*. [online]. Available at: <https://wol.iza.org/articles/efficient-markets-managerial-power-and-ceo-compensation/long> [Accessed: 20 January 2025]
- Bondarenko, P. 2025. Enron scandal. *Encyclopaedia Britannica*, [online]. Available from: <https://www.britannica.com/event/Enron-scandal>. [Accessed: 28 April 2025]
- Boston University. 2021. *Comparative Economic Systems: Capitalism and Socialism in the 21st Century*. An ECI Teaching Module on Social and Economic Issues, Global Development Policy Center,
- Boukattaya, S., & Omri, A. 2021. Corporate Social Practices and Firm Financial Performance: Empirical Evidence from France. *International Journal of Financial Studies*, 9(4), 54. <https://doi.org/10.3390/ijfs9040054>

- Bouteska, A. & Mefteh-Wali, S. 2021. The determinants of CEO compensation: new insights from United States, *Journal of Applied Accounting Research*, 22(4): 663-686. <https://doi.org/10.1108/JAAR-08-2020-0176>
- Bouteska, A., Sharif, T. and Abedin, M.Z. 2024. "Executive compensation, risk and performance: evidence from the USA", *Corporate Governance*, 24(4): 964-991. <https://0-doi-org.oasis.unisa.ac.za/10.1108/CG-01-2023-0017>
- Boakye, D.J., Ahinful, G.S., & Nsor-Ambala, R. 2020. Chief executive officer compensation and financial performance: Evidence from the alternative investment market in the UK. *Indian Journal of Corporate Governance*, 13(1): 63-84. <https://doi.org/10.1177/0974686220923805>
- Brennan, N.M. 2021. Connecting earnings management to the real World: What happens in the black box of the boardroom? *The British Accounting Review*, 53(6). <https://doi.org/10.1016/j.bar.2021.101036>.
- Bresser-Pereira, L.C. 2023. *Phases of capitalism- from mercantilism to neoliberalism* [online]. Available at: <chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/https://www.bresserpereira.org.br/248-phases-of-capitalism.pdf> [Accessed: 7 January 2025]
- Bridoux, F., & Stoelhorst, J. 2022. Stakeholder theory, strategy, and organization: Past, present, and future. *Strategic Organization*, 20(4): 797-809. <https://doi.org/10.1177/14761270221127628>
- British America Tobacco plc. 2023. *Combined Annual and Sustainability Report* [online]. Available at: chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/https://www.bat.com/content/dam/batcom/global/main-nav/investors-and-reporting/reporting/combined-annual-and-esg-report/BAT_Annual_Report_Form_20-F_2023.pdf [Accessed: 7 January 2025]
- Brown, J.D. & Coombe, C. 2015. *The Cambridge guide to research in language teaching and learning intrinsic eBook*. Cambridge: Cambridge University Press.
- Brugger, B. 2021. *A guide to Panel Data regression: Theoretics and implementation with Python* [online]. Available at: <https://towardsdatascience.com/a-guide-to-panel-data->

[regression-theoretics-and-implementation-with-python-4c84c5055cf8/](#) [Accessed: 1 October 2025]

- Bucher, J. 2021. Inductive Reasoning. In *The Encyclopaedia of Research Methods in Criminology and Criminal Justice* (eds J.C. Barnes and D.R. Forde). <https://doi.org/10.1002/9781119111931.ch36>
- Budiyanti, WA. 2021. A literature review of net profit margin. *Social Science Studies*, 1(2):115-128. <https://doi.org/10.47153/sss12.2262021>
- Bugeja, M., Raymond da Silva Rosa, R., Shan, Y., & Yermack, D. 2024. Show me your hand: An examination of voting methods at annual general meetings. *Pacific-Basin Finance Journal*, 88. <https://doi.org/10.1016/j.pacfin.2024.102576>.
- Business Live. 2024. Woolworths defends executives' pay as remuneration votes fail [online]. Available at: <https://www.businesslive.co.za/bd/companies/retail-and-consumer/2023-11-23-woolworths-defends-executives-pay-as-remuneration-votes-fail/> [Accessed: 22 November 2024]
- Business Tech. 2016. *How the JSE has changed over time*. Available at: <https://businesstech.co.za/news/business/143739/how-the-jse-has-changed-over-time/> [Accessed: 24 November 2021].
- Business Tech. 2024. *Almost R100,000 a day for 14 years – Mike Brown's insane pay as Nedbank CEO* [online]. Available at: <https://businesstech.co.za/news/banking/768708/nearly-r100000-a-day-for-14-years-mike-browns-insane-pay-as-nedbank-ceo/> [Accessed: 15 April 2025]
- Bussin, M. 2018. Chief executive officer compensation sensitivity in the South African mining industry. *Acta Commercii*, 18(1): 1-13.
- Bussin, M. 2018a. CEO remuneration-performance sensitivity in the South African context. *South African Journal of Economic and Management Sciences*, 18(2): 232-244.
- Bussin, M.H. & Carlson, C. 2020. Relationship between executive pay and company financial performance in South African state-owned entities. *SA Journal of Human Resource Management*, 18(1): 1-11.

- Bussin, M, Wöcke, A, & Deysel, B. 2023. The impact of remuneration governance on chief executive officer overpayment. *South African Journal of Economic and Management Sciences*, 26(1): 1-10. <https://doi.org/10.4102/sajems.v26i1.4860>
- Business Tech. 2024. *Meet the South African bosses who earn up to R685,000 a day* [online]. Available at: <https://businesstech.co.za/news/business/772262/meet-the-south-african-bosses-who-earn-up-to-r685000-a-day/> [Accessed: 15 April 2025].
- Business Tech. 2021. *New salary laws planned for South Africa could backfire spectacularly* [online]. Available at: <https://businesstech.co.za/news/business-opinion/532682/new-salary-laws-planned-for-south-africa-could-backfire-spectacularly/>. [Accessed: 24 November 2021]
- Business Tech. 2023. *CEO remuneration slightly declined in 2022* [online]. Available at: <https://www.epi.org/publication/ceo-pay-in-2022/> [Accessed: 6 February 2024]
- Business Tech. 2023. *Some CEOs in South Africa are paid up to 700 times more than their workers* [online]. Available at: <https://businesstech.co.za/news/wealth/665433/some-ceos-in-south-africa-are-paid-up-to-700-times-more-than-their-workers/> [Accessed: 27 November 2021]
- Business Tech. 2023. *Massive pay gaps: CEO earning up to 950 times more than the average worker in South Africa* [online]. Available at: <https://businesstech.co.za/news/wealth/725422/massive-pay-gaps-ceos-earning-up-to-950-times-more-than-the-average-worker-in-south-africa/> [Accessed: 27 September 2024]
- Business Tech. 2021. *Here's how much money top CEOs and executives earn in South Africa* [online]. Available at: <https://businesstech.co.za/news/business/512306/heres-how-much-money-top-ceos-and-executives-earn-in-south-africa/#:~:text=An%20examination%20of%20TGP%20fees,for%20executive%20directors%20was%20R3> [Accessed: 27 November 2021]
- Cabazon, F. 2025. Executive compensation: The trend toward one-size-fits-all. *Journal of Accounting and Economics*, 79(1). <https://doi.org/10.1016/j.jacceco.2024.101708>.
- Cadman, B., Carter, M.E. & Peng, X. 2021. The participation constraint and CEO equity grants. *The Accounting Review*, 96(1): 67-89.

- Cappelli, P, Bassi, L, Katz, H, Knoke, D, Osterman, P & Useem, M. 1997. *Change at Work*. New York, Oxford University Press
- Cappelli, P., Conyon, M. & Almeda, D. 2020. Social exchange and the effects of employee stock options. *ILR Review*, 73(1): 124-152. [https://doi: 10.1177/0019793919827934](https://doi.org/10.1177/0019793919827934)
- Carlson, S. 1951. *Executive behaviour*. Stockholm, SE: Stromberg's
- CBIZ Compensation Consultants. 2024. What is a compensation consultant and why do you need one? [online]. Available at: <https://www.cbiz.com/insights/articles/article-details/what-is-compensation-consultant-why-do-you-need-one> [Accessed: 28 November 2024]
- Corporate Finance Institute. 2025. *Return on Equity* [online]. Available at: <https://corporatefinanceinstitute.com/resources/accounting/what-is-return-on-equity-roe/> [Accessed: 23 May 2025]
- Chakraborty, A, & Tsokos, C.P. 2021. A real data-driven analytical model to predict happiness. *Scholars Journal of Physics, Mathematics and Statistics*, 8(3): 45-61. [https://doi: 10.36347/sjpms.2021.v08i03.001](https://doi.org/10.36347/sjpms.2021.v08i03.001).
- Chalk, K. 2022. Motivating increased sales: Variable or Fixed Compensation Structure? *Engaged Management Review*: 5(1). Available at: <https://doi.org/10.28953/2375-8643.1081>
- Chang, W., Dambra, M., Schonberger, B. & SUK, I. 2023. Does sensationalism affect executive compensation? evidence from pay ratio disclosure reform. *Journal of Accounting Research*, 61(1): 187-242. [https://doi: 10.1111/1475-679X.12458](https://doi.org/10.1111/1475-679X.12458).
- Cheeseman, R. 2025. *Fair value vs historic cost depreciation* [online]. Available at: <https://marriottco.co.uk/fair-value-vs-historic-cost-depreciation/#!/-> [Accessed: 20 April 2025]
- Chen, S. & Dodd, J.L. 1997. Economic Value Added (EVA™): An empirical examination of a new corporate performance measure. *Journal of Managerial Issues*, 9(3): 318-333. Available at: <http://www.jstor.org/stable/40604150>. [06].
- Chen, Y., Jin, Z. & Qin, B. 2023. Economic Value Added in performance measurement: A simulation approach and empirical evidence. *Accounting & Finance*, 63(1): 109-140.

[https://doi: 10.1111/acfi.13053](https://doi.org/10.1111/acfi.13053). Available at: <https://doi.org/10.1111/acfi.13053>. [<https://doi.org/10.1111/acfi.13053>; 15].

- Cheong, H., Lyons, A., Houghton, R., & Majumdar, A. 2023. Secondary Qualitative Research Methodology Using Online Data within the Context of Social Sciences. *International Journal of Qualitative Methods*, 22. <https://doi.org/10.1177/16094069231180160>
- Chiat, L.C., & Panatik, S.A. 2019. Perceptions of employee turnover intention by Herzberg's motivation-hygiene theory: A systematic literature review. *Journal of Research in Psychology*, 1(2), 10–15. <https://doi.org/10.31580/jrp.v1i2.949>
- Cho, M. & Ibrahim, S. 2022, Non-financial performance measures and pay-performance sensitivity, *Journal of Financial Reporting and Accounting*, 20(2):185-214. <https://doi.org/10.1108/JFRA-01-2021-0018>
- Choiriyah, C., Fatimah, F., Agustina, S, & Ulfa, F. A. 2021. The effect of return on assets, return on equity, net profit margin, earning per share, and operating profit margin on stock prices of banking companies in Indonesia Stock Exchange. *International Journal of Finance Research*, 2(1). 103-123. <https://doi.org/10.47747/ijfr.v1i2.280>.
- Chrisman, J.J. 2019. Stewardship theory: Realism, relevance, and family firm governance. *Entrepreneurship Theory and Practice*, 43(6): 1051-1066.
- Christian, L. 2018. *Scatterplots and correlation guided notes*. [online]. Available from : <https://www.kyrene.org/cms/lib/AZ01001083/Centricity/Domain/2067/Scatterplots%20and%20Correlation%20Guided%20Notes.pdf> [Accessed: 21 November 2022]
- Chukwuma, N.J., Famba, T., Sun, H., Mensah, I.A., Kurauone, O., Li, L., & Chituku-Dzimiro, G. 2021. The effect of firm performance on CEO compensation: the moderation role of SOE reform. *SN Business & Economics*-, Springer, 1(11): 1-32
- Ciscel, D.H. & Carroll, T.M. 1980. The determinants of executive salaries: An econometric survey. *The Review of Economics and Statistics*, 62(1): 7-13.
- Clarke, T. 2020. The Contest on Corporate Purpose: Why Lynn Stout was Right and Milton Friedman was Wrong. *Accounting, Economics, and Law: A Convivium*, 10(3): 2020-0145. Available at: <https://www.degruyter.com/document/doi/10.1515/acl-2020-0145/html?lang=en#Harvard>.

- CliffsNotes. 2024. *IBM's organisational change: Strategies and challenges* [online]. Available at: <https://www.cliffsnotes.com/study-notes/15837508> [Accessed: 28 April 2025]
- Cliffe Dekker Hofmeyr (CDH). 2026. *The Companies Act Amendments: Key implications for employers in the workplace*. Johannesburg: Cliffe Dekker Hofmeyr
- Cliffe Dekker Hofmeyr (CDH). 2022. *Equal pay in South Africa*. Johannesburg: Cliffe Dekker Hofmeyr
- Cliffe Dekker, Hofmeyr (CDH). 2024. *Paycheck politics: Decoding the Companies Amendment Bill and its impact on executive remuneration*. Johannesburg: Cliffe Dekker Hofmeyr
- Cliffe Dekker, Hofmeyr (CDH). 2024. *King IV an overview*. Johannesburg: Cliffe Dekker Hofmeyr
- Coetzee, M. & Bezuidenhout, ML. 2019. The relationship between Chief Executive Officer compensation and the size and industry of South African state-owned enterprises. *South African Journal of Human Resources Management*, 17(0): a1120. <https://doi.org/10.4102/sajhrm.v17i0.1120>
- Coetzee, W.J. & Hall, J.H. 2020. The relationship between CEO compensation and company performance measurements of listed South African firms. *Southern African Business Review*, 24. <https://doi.org/10.25159/1998-8125/4149>.
- Cohn, S.R. 1979. Stock Appreciation Rights and the SEC: A Case of Questionable Rulemaking. *Columbia Law Review*, 79: 66-92. Available at: <http://scholarship.law.ufl.edu/facultypub/454> [Accessed: 22 April 2025].
- Cohen, T. 2022. Executive pay: the dichotomy of a dilemma [online]. Available at: <https://www.dailymaverick.co.za/article/2022-04-27-executive-pay-the-dichotomy-of-a-dilemma/> [Accessed: 27 November 2024]
- Cooksey R.W. 2020. Descriptive Statistics for Summarising Data. *Illustrating Statistical Procedures: Finding Meaning in Quantitative Data*, 61–139. https://doi.org/10.1007/978-981-15-2537-7_5

- Corporate Finance Institute. 2022. *Durbin Watson Statistic* [online]. Available at: <https://corporatefinanceinstitute.com/resources/data-science/durbin-watson-statistic/> [Accessed: 23 January 2025]
- Corporate Finance Institute. 2024. *Top line and bottom line*. Vancouver: Corporate Finance Institute
- Costa, M., Lisboa, I., & Marzinzik, R. 2023. Is additional CEO remuneration a performance driver? DAX CEOs Evidence. *Risks*, 11(7): 133. <https://doi.org/10.3390/risks11070133>
- Cotter, J., Schmiede, S., Moss, A., & Ambroggio, L. 2023. How to interact with interactions: what Clinicians should know about Statistical Interactions. *Hospital paediatrics*, 13(10): e319–e323. <https://doi.org/10.1542/hpeds.2023-007259>
- Cowling, N. 2024. *Banking ROA in South Africa 2013–2022*. Available at: <https://www.statista.com/statistics/1349285/banks-return-on-asset-south-africa/#:~:text=As%20of%20September%202022%2C%20the,profitability%20in%20relation%20to%20assets.> [Accessed: 13 December 2024]
- Crotty, A. 2024. Why the *Woollies boss was paid 1300 times as much as a shopfloor worker* [online]. Available at: <https://groundup.org.za/article/why-the-woolies-boss-was-paid-1300-times-as-much-as-a-shopfloor-worker/> [Accessed: 24 November 2024]
- Crumley, C.R. 2008. A study of the relationship between firm performance and CEO compensation in the United States commercial banking industry. *Journal of Applied Management and Entrepreneurship*, 13 (2,99): 26-45.
- Curley, C., Krause, RM., Feiock, R., & Hawkins, CV. 2019. Dealing with missing data: A comparative exploration of approaches using the integrated city sustainability database. *Urban Affairs Review*, 55(2): 591-615. <https://doi.org/10.1177/1078087417726394>
- Daily Maverick. 2022. *Sibanye CEO Froneman explains R300m remuneration package* [online]. Available at: <https://www.dailymaverick.co.za/article/2022-05-15-sibanye-ceo-froneman-explains-r300m-remuneration-package/> [Accessed: 12 December 2025]
- Damyanov, M. 2023. *Mediator vs moderator – which is right for you?* [online]. Available at: <https://dovetail.com/research/mediator-vs-moderator/> [Accessed: 14 March 2025]

- Dan, C. 2023. Comparative analysis of market and product development potential of Apple and Samsung. *International Journal of Advanced Multidisciplinary Research and Studies*, 3(1): 723-734
- Dar, SA. 2022. The relevance of Taylor's scientific management in the modern era. *Journal of Psychology and Political Science*, 2(6). <https://doi.org/10.55529/jpps.26.1.6>
- Darling, HS. 2022. Do you have a standard way of interpreting the standard deviation? A narrative review. *Cancer Research, Statistics, and Treatment*, 5(4): 728-733. https://doi.org/10.4103/crst.crst_284_22
- Dash, CSK., Behera, AK., Dehuri, S. & Ghosh, A. 2023a. An outlier's detection and elimination framework in classification task of data mining. *Decision Analytics Journal*, 6: 100164. <https://doi.org/10.1016/j.dajour.2023.100164>. Available at: <https://www.sciencedirect.com/science/article/pii/S2772662223000048>. [ID: 780449].
- Davies, T. 2020. *Covid-19 shows us that executive pay cuts are possible* [online]. Available at: <https://groundup.org.za/article/covid-19-shows-us-executive-pay-cuts-are-possible/> [Accessed: 3 February 2024]
- Davis, C. & O'Shea, A. 2024. *Market capitalisation: what it is and why it matters* [online]. Available at: 40hrs working hours exclude lunch break [Accessed: 12 January 2025]
- Davlembayeva, D.& Alamanos, E. 2023 *Equity Theory: A review*. In S. Papagiannidis ed, TheoryHub Book [online]. Available at: <https://open.ncl.ac.uk> / ISBN: 9781739604400 [Accessed: 9 May 2025]
- Dawadi, S., Shrestha, S. & Giri, R.A. 2021. Mixed-methods research: a discussion on its types, challenges, and criticisms. *Journal of Practical Studies in Education*, 2(2): 25-36. <https://doi.org/10.46809/jpse.v2i2.20>.
- Deb, SS., & Deb, S. 2023. The rise and fall of Enron: A cautionary tale of corporate greed and betrayal. *International Journal of Multidisciplinary Research and Growth Evaluation*, 4(5): 94–100. <https://doi.org/10.54660/IJMRGE.2023.4.5.94-100>

- de Beer, J., Keyser, N. & van der Merwe, I. 2022. Returns, political developments and economic forces: A historical perspective on the Johannesburg stock exchange (JSE), 2000-2010. *Tydskrif Vir Geesteswetenskappe*, 62(3): 453-475.
- De Lange, R. 2018. How much does your boss earn? Do you really want to know? *City Press*, 31 July 2018. [online]. Available at: https://www.news24.com/citypress/special-report/wealth_index/how-much-does-your-boss-earn-do-you-really-want-to-know-20180731 [Accessed: 30 October 2024]
- de Winter, J. (2025). Multicollinearity in statistical modelling: A review. *ResearchGate / Technical Report Repository*:1-24. <https://doi:10.13140/RG.2.2.31422.31041>.
- Dell’Erba, M. & Gomtsyan, S. 2024. Regulatory and investor demands to use ESG performance metrics in executive compensation: right instrument, wrong method. *Journal of Corporate Law Studies*, 24(1): 1–40. <https://doi:10.1080/14735970.2024.2350139>.
- Deloitte. 2017. *King IV Remuneration Governance* [online]. Available at: file:///C:/Users/Thokozile/Downloads/za_Deloitte_KingIV_Remuneration_Governance_01032017.pdf [Accessed: 16 April 2018].
- Deloitte. 2021. *Deloitte Executive Remuneration Report 2021 Director and Prescribed Officer Remuneration at JSE Listed Companies*. [Accessed: 24 November 2021].
- Deloitte. 2021. *Deloitte Executive Remuneration Report 2021. Director and Prescribed Officer remuneration at JSE Listed companies* [online]. Available at: <https://www2.deloitte.com/za/en/services/consulting-deloitte/deloitte-executive-remuneration-report-2021.html?id=za:2sm:3li:4deloitte-executive-remuneration-report-2021::6con:20210927:deloitte-executive-remuneration-report-2021>. [Accessed: 24 November 2021]
- Deloitte. 2024. US Securities and Exchange Commission (SEC) [online]. Available at: <https://www.iasplus.com/en/resources/regional/sec> [Accessed: 7 February 2024]
- De Vaan, M., Elbers, B., & DiPrete, TA. 2019. Obscured transparency? compensation benchmarking and the biasing of executive pay. *Management Science*, 65 (9) :4299-4317.

- De Wet, AS. 2024. Banking CEOs earn millions while South Africans get poorer: a stark reality, *Independent Online* 6 September 2024 [online]. Available at: https://www.iol.co.za/news/opinion/banking-ceos-earn-millions-while-south-africans-get-poorer-a-stark-reality-bf3f4dca-3bea-47b8-8fcb-2e99f314670c#google_vignette [Accessed: 9 December 2024]
- Delves, D. 2024. Beyond TSR: *The evolution of performance measurement in incentive plans*, [online]. Available at: <https://www.directorsandboards.com/compensation/beyond-tsr-the-evolution-of-performance-measurement-in-incentive-plans/> [Accessed: 16 November 2024]
- Develay, E., Giamporcaro, S., & Wang, Y. 2023. Shareholders activists can inadvertently raise CEO remuneration- here's how to help make pay rises more equals for all [online]. Available at: <https://theconversation.com/shareholder-activists-can-inadvertently-raise-ceo-pay-heres-how-to-help-make-pay-rises-more-equal-for-all-217145>. [Accessed: 16 November 2024]
- Deysel, B. & Kruger, J. 2015. The relationship between South African CEO compensation and company performance in the banking industry. *Southern African Business Review*, 19(1): 137-169. <https://doi.org/10.25159/1998-8125/5837>.
- Di Lonardo Burr, S. M., Xu, C., Li, H., Si, J., LeFevre, J.-A., & Wang, Y. 2022. Fraction mapping and fraction comparison skills among grade 4 Chinese students: An error analysis. *British Journal of Educational Psychology*, 92: 1335–1353. <https://doi.org/10.1111/bjep.12503>
- Dimes, R. & de Villiers, C. 2024. Hallmarks of integrated thinking. *The British Accounting Review*, 56(1). doi.org/10.1016/j.bar.2023.101281.
- Dimitrova, E., & Hartman, A. 2015. CEO compensation structure and firm performance: Evidence from auto industry. Bachelor of Business Administration, Jonkoping University Smaland.
- Domanovic, V. 2022. The relationship between ESG and financial performance indicators in the public sector: empirical evidence from the Republic of Serbia. *Management Journal of Sustainable Business and Management Solutions in Emerging Economies*, 27(1). <https://doi.org/10.7595/management.fon.2021.0032>

- Donaldson, L. & Davis, J.H. 1990. *CEO governance and shareholder return: Agency theory or stewardship theory*. Australian graduate School of Management, University of New South Wales.
- Dudovskiy, J. 2018. *The Ultimate Guide to Writing a Dissertation in Business Studies: A Step-by-Step Assistance*. January 2018 Edition. Business Research Methodology.
- du Toit, E. 2024. The red flags of financial statement fraud: a case study. *Journal of Financial Crime*, 31(2): 311-321. <https://doi.org/10.1108/JFC-02-2023-0028>
- Dwivedi, YK., Ismagilova, E., Hughes, DL., Carlson, J., Filieri, R., Jacobson, J., Jain, V., Karjaluoto, H., Kefi, H., Krishen, AS., Kumar, V., Rahman, MM., Raman, R., Rauschnabel, PA., Rowley, J., Salo, J., Tran, GA. & Wang, Y. 2020. Setting the future of digital and social media marketing research: Perspectives and research propositions. *International Journal of Information Management*, 59. <https://doi.org/10.1016/j.ijinfomgt.2020.102168>
- Edmans, A., Gosling, T. & Jenter, D. 2023. CEO Compensation: Evidence from the Field. *European Corporate Governance Institute – Finance Working Paper*, (No. 771/2021): 82. Available at: https://papers.ssrn.com/sol3/Papers.cfm?abstract_id=3877391.
- Einstein, B. 2025. *The Return on Assets (ROA) formula explained* [online]. Available at: <https://online.hbs.edu/blog/post/return-on-assets> [Accessed: 14 March 2025]
- Elgeddaway, M. & Abouraia, M. 2024. *Pragmatism as a research paradigm*. 23rd European Conference of Research Methodology for Business and Management Studies, Porto, 4 – 6 July 2024. ISCAP
- Emmanuel, T., Maupong, T., Mpoeleng, D., Semong, T., Mphango, B., & Tabona, O. 2021. A survey on missing data in machine learning. *Journal of Big Data*, 8(140). <https://doi.org/10.1186/s40537-021-00516-9>
- Emokpae, M. 2023. CEO compensation, share price volatility and Return on Equity. PhD thesis. Walden University,
- Enaifoghe, AP. Dlamini, NP., Jili, NN., Jili, N., & Mthethwa, R. 2023. The role of E-Government as enabler of good governance for socio-economic development in South

- Africa. *International Journal of Social Science Research and Review*, 6(1): 493-508. <https://doi.org/10.47814/ijssrr.v6i1.826>
- Enders, C.K. 2003. Using the expectation maximisation algorithm to estimate coefficient alpha for scales with item-level missing data. *Psychology Methods (Preprint)*, 8(3): 322–337. Available at: <https://oa.mg/work/10.1037/1082-989x.8.3.322>.
- Englander, E. & Kaufman, A. 2004. The end of managerial ideology: From corporate social responsibility to corporate social indifference. *Enterprise & Society*, 5(3): 404-450.
- English, M. 2023. *Financial statement analysis*. [online]. Available at: <https://www.ebsco.com/research-starters/business-and-management/financial-statement-analysis> [Accessed: 21 April 2025]
- Eisenhardt, KM. 1989. Agency theory: An assessment and review. *Academy of Management Review*, 14(1): 57–74. <https://doi.org/10.5465/amr.1989.4279003>
- Equality Trust. 2024. *Unjust rewards: Public opinion on CEO remuneration* [online]. Available at: <https://equalitytrust.org.uk/evidence-base/briefings/unjust-rewards-public-opinion-ceo-pay/#:~:text=72%25%20agreed%20that%20%E2%80%9Cgovernment%20action,for%20executives%20relative%20to%20workers>. [Accessed: 9 December 2024]
- Farida, I. & Setiawan, D. 2022. Business Strategies and Competitive Advantage: The Role of Performance and Innovation. *Journal of Open Innovation: Technology, Market, and Complexity*, 8(3): 163. <https://doi.org/10.3390/joitmc8030163>
- Farooque, O.A., Buachoom, W.W., & Hoang, N. 2019. Interactive effects of executive compensation, firm performance and corporate governance: Evidence from an Asian market. *Asia Pacific Journal of Management*, 36(11): 1111-1164. <https://doi.org/10.1007/s10490-018-09640-2>
- Feltham, G.A. & Xie, J. 1994. Performance measure congruity and diversity in multi-task principal/agent relations. *The Accounting Review*, 69(3): 429-453. Available at: <http://www.jstor.org/stable/248233>. [11].
- Fernandez, D.L. & Oliver, M. 2025. Methodology, strategies and factors for business innovation in larger companies. *International Journal of Innovation Studies*, 9(2): 91-115

- Ferris, S.P., Kim, K.A., Kitsabunnarat, P. & Nishikawa, T. 2007. Managerial power in the design of executive compensation: evidence from Japan. *Issues in Corporate Governance and Finance* Emerald Group Publishing Limited, 3-26.
- Financier Worldwide Magazine. 2020. *Getting it right – the challenges of executive compensation*. [online]. Available at: <https://www.financierworldwide.com/getting-it-right-the-challenges-of-executive-compensation#.YwDX1XZBxPY> (Accessed 19 August 2022)
- Finkelstein, S. & Hambrick, D.C. 1988. Chief Executive compensation: a synthesis and reconciliation. *Strategic Management Journal*, 9(6): 543 – 558. Available at: <http://www.jstor.org/stable/2486689>
- Flynn, A., & Li, Q. 2023. Determinants of supplier payment times before and during the pandemic: Empirical evidence from UK firms, *Journal of Purchasing and Supply Management*, 29(4). <https://doi.org/10.1016/j.pursup.2023.100850>.
- Fortuin, M. J. & Makoni, P. L. 2023. Corporate Governance in South Africa: Profit-Sharing and Stakeholder Management, *African Journal of Inter/Multidisciplinary Studies*, 5(1):1–16. <https://doi.org/10.51415/ajims.v5i1.1067>
- Franco-Santos, M. & Bourne, M. 2008. The impact of performance targets on behaviour: a close look at sales force contexts. Centre for Business Performance, Cranfield School of management.
- Gan, H., Park., MS. & Suh, S. 2020. Non-financial performance measures, CEO compensation, and firms' future value. *Journal of Business Research*, 110(2):213-227
- Ganbat, K., Sodnomdavaa, T., Buyantsogt, A., & Dangaa, G. 2026. Financial Adaptability and Firm Performance Under Macroeconomic Shocks: Evidence from a Commodity-Dependent Emerging Economy. *International Journal of Financial Studies*, 14(5), 107. <https://doi.org/10.3390/ijfs14050107>
- Gayle, G.L, Li, C & Miller, R.A. 2020. How well does agency theory explain executive compensation? *Review*, 100(3): 201-36, <https://doi.org/10.20955/r.100.201-36>
- Ghanad, A. 2023. An overview of quantitative research methods. *International Journal of Multidisciplinary Research and Analysis*, 6. <https://doi.org/10.47191/ijmra/v6-i8-52>

- Gharaibeh, A.T., Saleh, M.H., Jawabreh, O., & Ali, B.J.A. 2022. An empirical study of the relationship between earnings per share, net income and stock price. *Applied Mathematics & Information Sciences*, 16(5), pp. 673–679. <https://doi.org/10.18576/amis/160502>.
- Ghasemi, M., & A.B Razak, NH. 2020. What determines executives' remuneration in Malaysian Public listed companies? *Asian Journal of Accounting and Governance*, 13: 27-39. <https://ejournal.ukm.my/ajac/article/view/39260/10466>
- Gianfreda, G. 2020. Vertical integration. In: Marciano, A., Ramello, G. (eds) *Encyclopaedia of Law and Economics*. Springer, New York, NY. https://doi.org/10.1007/978-1-4614-7883-6_672-2
- Giles, S. 2022. *Thirty years of corporate governance* [online]. Available at: <https://abmagazine.accaglobal.com/global/articles/2022/dec/business/thirty-years-of-corporate-governance.html> [Accessed: 20 June 2025].
- Gindis, D. & Micheler, E. 2024. Institutional theory for corporate law: An invitation. *Journal of Corporate Law*: 1-37. <https://doi.org/10.1080/14735970.2024.2414465>
- Goode, V. & Saunders, W. 2021. *Remuneration codes - For banks, building societies and investment firms* [online]. Available at: <https://www.lewissilkin.com/en/insights/remuneration-code-for-banks-building-societies-and-investment-firms> [Accessed: 20 September 2020].
- Goga, S., & Valodia, I. 2024. Ownership and inequality: Policy interventions in South Africa and possible ways forward. *Development Southern Africa*, 1–20. <https://doi.org/10.1080/0376835X.2024.2419128>
- Gorman, L. & Ward, A.M. 2020. The Walker Review. *Encyclopaedia of Sustainable Management* Springer Nature.
- Gox, RF., & Hemmer, T. 2020. On the relation between managerial power and CEO pa. *Journal of Accounting and Economics*, 68(2-3). <https://doi.org/10.1016/j.jacceco.2020.101300>.
- Grey, C., Flynn, A., & Adu, DA. 2025. An examination of how executive remuneration and firm performance are influenced by Chair-CEO diversity attributes. *International Review of Financial Analysis*, 94. <https://doi.org/10.1016/j.irfa.2024.103290>

- Greyling, D. 2023. Naspers boss Bob van Dijk's R1.72 billion share selling spree. Available at: <https://mybroadband.co.za/news/investing/479919-naspers-boss-bob-van-dijks-r1-72-billion-share-selling-sprees.html> [Accessed: 9 December 2024]
- Grosse, M., Ma, N. & Scott, T. 2020. Evidence on compensation consultant fees and CEO remuneration. *Australian Journal of Management*, 45(1): 15-44.
- Ground Up. 2020. *Covid-19 shows us that executive pay cuts are possible*. Available at: <https://groundup.org.za/article/covid-19-shows-us-executive-pay-cuts-are-possible/> [Accessed: 3 March 2025]
- Groysberg, B., Abbott, S., Marino, M.R., & Aksoy, M. 2021. *Compensation packages that drive performance*. *Harvard Business Review*: January-February 2021
- Guay, W.R., Kim, S. & Tsui, D. 2023. Determinants of insider trading windows. *Available at SSRN 3844986*.
- Gupta, B.C. 2021. *Statistical Quality Control: Using MINITAB, R, JMP and Python*. 2nd edition. New Jersey: John Wiley & Sons.
- Gurufocus. 2024. *Nedbank Bank Group ROA* [online]. Available at: <https://www.gurufocus.com/term/roa/NDBKY> [Accessed: 18 December 2024]
- Hadi, A.S. & Chatterjee, S. 2015. *Regression analysis by example*. 5th edition. New Jersey: John Wiley & Sons.
- Halim, S.A. et al., 2023. Exploring The Relationship between Learning Approaches and Vroom Motivation AMONG Undergraduate Learners at Malaysian Universities.
- Hall, JH. 2023. Corporate shareholder value creation as contributor to economic growth. *Studies in Economics and Finance*, 41(1): 148 - 176
- Han, W. & Yenfei, X. 2020. *International Conference on New Energy Technology and Industrial Development (NETID 2020)*, Beijing, China, December 18 -20, 2020.
- Hair, JF., Hult, GTM., Ringle, CM., Sarstedt, M., Danks, NP., Ray, S. 2021. "Modelling". In: (PLS-SEM) Using R. Classroom Companion: *Moderation Analysis*. In: *Partial Least Squares Structural Equation Modelling Business*. Springer, Cham. https://doi.org/10.1007/978-3-030-80519-7_8

- Hall, J.H. 2024. Corporate shareholder value creation as a contributor to economic growth. *Studies in Economics and Finance*, 41(1): 148-176. <https://doi.org/10.1108/SEF-06-2021-0255>
- Hammar, H. & Djudja, I. 2019. CEO compensation and company performance: Evidence from Sweden. Bachelor's in financial economics. University of Gothenburg, Goteborg
- Hart, S.L. & Quinn, R.E. 1993. Roles executives play: CEOs, behavioral complexity, and firm performance. *Human Relations*, 46(5): 543-574.
- Harvard Law School Forum on Corporate Governance. 2022. Linking executive compensation to ESG performance. *Harvard Law School*. [online]. Available at: <https://corpgov.law.harvard.edu/2022/11/27/linking-executive-compensation-to-esg-performance/> [Accessed: 7 March 2025].
- Harvey, C., Maclean, M. & Price, M. 2020. Executive remuneration and the limits of disclosure as an instrument of corporate governance. *Critical Perspectives on Accounting*, 69: 102089. [https://doi: 10.1016/j.cpa.2019.06.003](https://doi.org/10.1016/j.cpa.2019.06.003). Available at: <https://www.sciencedirect.com/science/article/pii/S1045235418300418>. [ID: 272346].
- Harymawan, I., Agustia, D., Nasih, M., Inayati, A. & Nowland, J. 2020. *Heliyon*, 6
- Hashmi, SD., Gulzar, S., Ghafoor, Z., & Naz, I. 2020. Sensitivity of firm size measures to practices of corporate finance: evidence from BRICS. *Future Business Journal*, 6(9). <https://doi.org/10.1186/s43093-020-00015-y>
- Haylock, M, 2020. *Executives' short-term and long-term incentives - a distributional analysis*. University of Tübingen Working Papers in Business and Economics 131. Tübingen: University of Tübingen, Faculty of Economics and Social Sciences, School of Business and Economics.
- Hazzaa, OT., Abdullah, DF., & Sadaa, AM. 2024. Influence of CEO characteristics and audit committee on financial performance: Evidence from Iraq. *Journal of Open Innovation: Technology, Market, and Complexity*, 10(2). <https://doi.org/10.1016/j.joitmc.2024.100290>

- Heale, R & Twycross, A. 2015. Validity and reliability in quantitative research. *Evidence Based Nursing*, 18(3): 66–67.
- Heller, I. 2023. *Audit procedures for revenue recognition* [online]. Available at: <https://trullion.com/blog/audit-revenue-recognition/> [Accessed: 1 May 2025]
- Hermalin, B.E. & Weisbach, M.S. 1998. Endogenously chosen boards of directors and their monitoring of the CEO. *American Economic Review*: 96-118.
- Hitchcock, G., & Hughes, D 1995. *Research and the teacher: a qualitative introduction to school-based research*. 2nd Edition. London: Routledge.
- Hlidberg, H. 2020. CEO compensation and subsequent firm performance. MSc in Corporate Finance. University of Reykjavik, Reykjavik.
- Hlongwane, S. 2015. *ANALYSIS: As SA debates a minimum wage - a primer on income inequality*. Available at: <https://africacheck.org/fact-checks/blog/analysis-sa-debates-minimum-wage-primer-income-inequality> [Accessed: 20 September 201].
- Lemming, MR. & Sherman, RA. 2021. *The CEO effect: What's the value of who's in charge?* [online]. Available at: <https://www.hoganassessments.com/blog/ceo-effect-company-performance/> [Accessed: 15 April 2025]
- Högström, E., & Olausson, V. 2023. Performance and remuneration: A study of the pay-performance relation in Scandinavia. Advanced Degree in Business Administration and Economics Thesis. Umea University, Umea.
- Horváthová, J., Mokrišová, M., & Vrábliková, M. 2021. Benchmarking—A Way of Finding Risk Factors in Business Performance. *Journal of Risk and Financial Management*, 14(5): 221. <https://doi.org/10.3390/jrfm14050221>
- Huang, HL., Liang, LW., Chang, HY., & Hsu, HY. 2021. The Influence of Earnings Management and Board Characteristics on Company Efficiency. *Sustainability*, 13(21), 11617. <https://doi.org/10.3390/su132111617>
- Humphreys, D. 2020. Mining productivity and the fourth industrial revolution. *Mineral Economies* 33, 115–125. <https://doi.org/10.1007/s13563-019-00172-9>

- Husna, A. & Satria, I. 2019. Effects of return on asset, debt to asset ratio, current ratio, firm size, and dividend payout ratio on firm value. *International Journal of Economics and Financial Issues*, 9(5): 50-54.
- Ibrahim, S., Li, H., Yan, Y., & Zhao, J. 2020. Pay me a single figure! Assessing the impact of single figure regulation on CEO pay. *International Review of Financial Analysis*, 73(4): <https://doi:10.1016/j.irfa.2020.101647>
- IEduNote. 2022. *Research Process:8 steps in research process*. [online]. Available at: <https://www.iedunote.com/research-process> [Accessed: 10 October 2022]
- Indeed. 2024. *A guide to Return on Assets (ROA)* [online]. Available at: <https://www.indeed.com/career-advice/career-development/roa> [Accessed: 26 May 2025]
- Indermun, V. & Bayat, M.S. 2015. A focus on Corporate Governance and the Relationship with Business. *Business and Economics Journal*, 6(1): 1-8.
- Institute of Directors. 2022. *Executive pay disclosure – a governance imperative: IoDSA*. Johannesburg: Institute of Directors
- Institute of Economics of the Academy of sciences of the USSR. 1957. *Political Economy*. London: Lawrence and Wishart,
- Isaac, PF. 2024. The importance of corporate governance in the financial sector: A comparative analysis between Botswana and South Africa. Master's in Business Administration Thesis, University of the Witwatersrand, Johannesburg
- Jackson, C. 2023. The professional standards of executive remuneration consultants. *The Professional Standards of Executive Remuneration Consultants*. 1st edition. United Kingdom: Taylor & Francis Group, 342. Available at: http://ebookcentral.proquest.com/lib/SITE_ID/reader.action?docID=7211044&ppg=17.
- Jay, S., & Nemcova, M. 2025. *Types of compensation: A 2025 HR guide* [online]. Available at: <https://www.aihr.com/blog/types-of-compensation/> [Accessed: 17 April 2025]

- Jensen, MC. & Murphy, KJ. 1990. Performance Pay and Top-Management Incentives. *Journal of Political Economy*, 98(2): 225-264. Available at: <http://www.jstor.org/stable/2937665>. [14].
- Jensen, MC. & Meckling, WH. 1976. Theory of the firm: Managerial behavior, agency costs and ownership structure. *Journal of Financial Economics*, 3(4): 305-360.
- Jensen, MC., Murphy, KJ. & Wruck, EG. 2004. Remuneration: Where we've been, how we got to here, what are the problems, and how to fix them.
- Jerath, K. & Long, F. 2020. Multiperiod contracting and salesperson effort profiles: the optimality of “hockey stick,” “giving up,” and “resting on laurels”. *Journal of Marketing Research*, 57(2): 211-235. <https://doi.org/10.1177/0022243719887378>.
- Jerzemowska, M. 2006. The main agency problems and their consequences. *Acta Oeconomica Pragensia*, 14(3): 9-17.
- Johannesburg Stock Exchange. 2024. *List of companies with secondary listings on the JSE* [online]. Available at: <chrome-extension://efaidnbmnnnibpcajpcgclefindmkaj/https://www.resbank.co.za/content/dam/sarb/what-we-do/statistics/guides/guides-for-the-completion-of-c-forms/List%20of%20companies%20with%20secondary%20listings%20on%20the%20JSE.pdf> [Accessed: 9 December 2024]
- Johannesson, P. & Perjons, E. 2021. *Research Strategies and Methods. In: An Introduction to Design Science*. Switzerland: Springer International Publishing, Cham.
- Johnson, B. & Christensen, L. 2008. Quantitative, qualitative, and mixed approaches. *Educational Research, University of South Alabama: SAGE*.
- Johnson, RB., Christensen, LB. 2019. *Educational research: Quantitative, qualitative, and mixed approaches*. 7th ed. United States: SAGE Publications.
- Joseph, L.S. 1999. Multiple imputation:à primer. *Stat Methods Med Res*, 8(1): 3-15. <https://doi.org/10.1177/096228029900800102>.
- Joura, E., Gerged, AM., Xiao, Q. & Ullah, S. 2025, The impact of say-on-pay on firm efficiency in Anglo-Saxon economies—do CEO personal traits and CG mechanisms

- matter? *International Journal of Finance and Economics*, 0: 1-22.
<https://doi.org/10.1002/ijfe.3131>
- Jović, Z., Tomašević, S. 2021. *FINIZ 2021 - Are you ready for the ContinuousNEXT® after Covid-19? Belgrade, 3 December 2021*. Singidunum University,
- Just Share. 2024. *SA bank executives coined during Covid*. Cape Town: Just Share
- Khan, A., Kanapathippillai, S., & Dellaporatas, S. 2024. Remuneration committees, CEO remuneration, skills and retention. *Meditari Accountancy Research*, 32(2): 294-316.
<https://doi.org/10.1108/MEDAR-08-2021-1420>
- Kang, E. 2023. Literature evaluation: The focus on the difference between job-based pay and skills-based pay. *Journal of Industrial Distribution & Business*, 14(7): 1-7. doi: <http://dx.doi.org/10.13106/jidb>.
- Kanfer, R. & Ackerman, P.L. 1989. Motivation and cognitive abilities: An integrative/aptitude-treatment interaction approach to skill acquisition. *Journal of Applied Psychology*, 74(4): 657-690. [https://doi: 10.1037/0021-9010.74.4.657](https://doi.org/10.1037/0021-9010.74.4.657). [ID: 1989-41520-001].
- Kantor, B. 2019. *Don't look back in anger – assessing market returns over the last 10 years*. Available at: https://www.investec.com/en_za/focus/investing/donot-look-back-in-anger.html [Accessed: 31 January 2017]
- Kaplan, R.S. 1992. *The balanced scorecard measures that drive performance*. Harvard Business Review.
- Kaplan, RS & Norton, D.P. 2005. The Balanced Scorecard: Measures that drive performance. *Harvard Business Review* 83(7/8): 172- 180
- Karunarathna, I., Gunasena, P., & Hapuarachchi, T., Ekanayeake, U., Rajapaksha, S., Gunawardana, K., Aluthge, P., Sandara, S., Jayawardana, A., De Alvis, K., & Gunathilake, S. 2024. The crucial role of data collection in research techniques, challenges and best practices,
- Kasun, L. 2024. Influence of executive compensation on firm risk-taking behaviour in Qatar. *American Journal of Finance*, 10(2): 73 -83

- Kaushik, V., & Walsh, C A. 2019. Pragmatism as a research paradigm and its implications for Social Work Research. *Social Sciences*, 8(9):255. <https://doi.org/10.3390/socsci8090255>
- Khaled, MHB. 2020. The relationship between CEO compensation and financial performance in Jordanian public shareholding industrial companies. *Investment Management and Financial Innovations*, 17(2): 240-254. [https://doi:10.21511/imfi.17\(2\).2020.19](https://doi:10.21511/imfi.17(2).2020.19)
- Khan, MI., Mehmood, KA., & Nazeer, N. 2023. CEO remuneration and performance of firm: evidence from emerging economy. *Journal of Social Sciences Advancement*, 4(1): 1–8
- Kohn, A. 1998. *Challenging behaviourist Dogma*. [online]. Available at: <https://www.alfiekohn.org/article/challenging-behaviorist-dogma/> [Accessed: 22 April 2025]:
- Khumalo, K. 2024. *Investec sets minimum pay at R21,000 a month* [online]. Available at: <https://www.businesslive.co.za/bd/companies/financial-services/2024-07-01-investec-sets-minimum-pay-at-r21000-a-month/#:~:text=%E2%80%9CWe%20increased%20our%20minimum%20salary,employees%20and%20the%20bottom%205%25.> [Accessed: 27 November 2024].
- Khumalo, M. & Masenge, A. 2015. Examining the relationship between CEO remuneration and performance of major commercial banks in South Africa. *Corporate Ownership & Control*, 13(1): 115-124.
- Kieviet, S., Scholtz, H.E., & Pietrsen, L.A. 2024. The relationship between company performance and CEO remuneration in the South African banking sector. *Southern African Journal of Accountability and Auditing Research*, 26(1). Available at: <https://doi.org/10.54483/sajaar.2024.26.1.5>
- Kikon P. 2021. Archival Research Method Analysis. *Journal of Advanced Research in Library Information Science*, 8(1): 13-15
- Kilian, C.G. 2020. *A practical explanation of ethics as a good corporate governance principle in South Africa and New Zealand - A case study*. *Koers (Online)* [online]. Available at: <https://doi.org/10.19108/KOERS.85.1.2465>.

- Kingsley, B. & Robertson, J. 2020. *Your A to Z of research methods and statistics in psychology made simple*. Oxford, United Kingdom: Oxford University Press.
- Kissoonduth, K., Webb, W.N. & Kahn, S.B. 2019. Remuneration variables that play a role in attracting and retaining academic staff at public higher education institutions. *Kiss* 27(1): 116 -139
- Klettner, A. 2021. Stewardship Codes and the role of institutional investors in corporate governance: An international comparison and typology. *British Journal of Management*, 32(4): 988-1006. [https://doi: 10.1111/1467-8551.12466](https://doi.org/10.1111/1467-8551.12466).
- Knief, U., Forstmeier, W. 2021. Violating the normality assumption may be the lesser of two evils. *Behaviour Research*, 53: 2576–2590. <https://doi.org/10.3758/s13428-021-01587-5>
- Kolawole, JS., Igbekoyi, OE. & Alabi, AW. 2025. Unveiling stewardship theory: Emerging trends and future direction. *Journal of Business and African Economy*, 11(2):95-112. [https://doi: 10.56201/jbae.v11.no2.2025.pg95.112](https://doi.org/10.56201/jbae.v11.no2.2025.pg95.112)
- Komara, A., Ghozali, I. & Januarti, I. 2020, Examining the firm value based on signalling theory’, in *1st International Conference on Accounting, Management and Entrepreneurship (ICAMER 2019)*, Indonesia, March.
- Konigsburg, D. & Finzi, B. 2020. *CEO compensation in a COVID-19 world. How should CEOs be rewarded in a time of crisis?* [online]. Available at: chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/https://www2.deloitte.com/content/dam/insights/us/articles/6996_ceo-compensation-covid-world/DI_CEO-compensation-COVID-world.pdf [Accessed: 15 April 2025]
- Kruger, P. 2015. *Section 30(4) of the Companies Act – New developments relating to the disclosures of directors’ remuneration* [online]. Available at: <https://rsm.global/southafrica/news/section-304-companies-act-new-developments-relating-disclosure-directors-remuneration> [Accessed: 7 November 2017].
- Kumar, MP. & Kumara, NVM. 2021. Market capitalisation: Pre and post COVID-19 analysis. *Materials Today: Proceedings*, 37: 2553-2557. [https://doi: 10.1016/j.matpr.2020.08.493](https://doi.org/10.1016/j.matpr.2020.08.493).

- Kumar, S. & Praveena, KB. 2023. SWOT analysis. *International Journal of Advanced Research*, 11 (09): 744-748.
- Kumar, Vinod, Sharma, Anket, Cerda, Artemi (Ed.). 2020. *Heavy Metals in the Environment Impact, Assessment, and Remediation*. 1st Edition. Amsterdam, Netherlands: Elsevier.
- Kuo, A. 2024. *What is the difference between data analysis and statistical analysis?* [online]. Available at: https://julius.ai/articles/data-analysis-vs-statistical-analysis?utm_term=&utm_campaign=Pmax+for+Sign+Ups&utm_source=adwords&utm_medium=ppc&hsa_acc=6895452537&hsa_cam=20619172441&hsa_grp=&hsa_ad=&hsa_src=x&hsa_tgt=&hsa_kw=&hsa_mt=&hsa_net=adwords&hsa_ver=3&gad_source=1&gclid=CjwKCAiAtsa9BhAKEiwAUZAszWDITJZkmKkJuaK82pPiQMygGqbW3A1CZIKqZiMLxyDn54NxVOg28RoCaSAQAvD_BwE [Accessed: 16 February 2025]
- Kutisker-Jacobson, R. 2024. *It's been a lost decade for JSE investors, says Allan Gray* [online]. Available at: <https://www.moonstone.co.za/its-been-a-lost-decade-for-jse-investors-says-allan-gray/> [Accessed: 27 April 2025]
- Kyove, J., Streltsova, K., Odibo, U. & Cirella, G.T. 2021. Globalisation impact on multinational enterprises. *World*, 2(2): 216-230.
- Kweh, QL., Tebourbi, I., Lo, HC., & Huang, CT. 2022. CEO compensation and firm performance: evidence from financially constrained firms. *Research in International Business and Finance*, 61. <https://doi.org/10.1016/j.ribaf.2022.101671>.
- Labour Research Services.2023. *Mining Sector Report 2023*. Cape Town: Labour Research Services
- Lafia, S., Thomer, A., Moss, E., Bleckley, D. & Hemphill, I. 2023. How and why do researchers reference data? A study of rhetorical features and functions of data references in academic articles. *Data Science Journal*, 22
- Lagat, H. 2023. Assessing the relationship between performance and the directors' remuneration in the Kenyan commercial banks. Master of Commerce. Strathmore University, Nairobi. <http://hdl.handle.net/11071/15393>
- Larcker, DF. & Tayan, B. 2019. Pay for performance. But not too much pay: the American public's view of CEO remuneration [online]. Available at:

- <https://corpgov.law.harvard.edu/2019/12/12/pay-for-performance-but-not-too-much-pay-the-american-publics-view-of-ceo-pay/> [Accessed: 9 December 2024]
- Lawrence E. 2020. The impact of director's remuneration on firms' performance evidence: A study of Nigerian banking sector. *Tansian University Journal of Arts, Management & Social Sciences* 71129150OnlineACJOL <https://www.acjol.org/index.php/tujamss/article/view/1177/1163>
- Leal, P.H. & Anjos, L.C.M. 2024. Do corporate governance and managerial power induce abnormal CEO compensation contracts? An analysis of the Brazilian market. *Contaduría y Administración*, 69(4): 168-201
- Lee, B. 2023. *Curtailing Executive Overcompensation (CEO) Act* [online]. Available at: <https://www.billsponsor.com/bills/494622/house-bill-6191-congress-118> [Accessed: 22 June 2025]
- Lee, YS. 2022. Reconciling Corporate Interests with Broader Social Interests - Pursuit of Corporate Interests Beyond Shareholder Primacy. *William & Mary Business Law Review*, 4(1). Available at: <https://scholarship.law.wm.edu/wmblr/vol14/iss1/2>
- [Lee, J.](#) & [Pati, N.](#) 2024. Benchmarking executive compensations: exploring fresh perspectives on chief executive officer (CEO) compensation drivers in major US corporations. *Benchmarking: An International Journal*,. <https://doi.org/10.1108/BIJ-03-2024-0208>
- Leeder, T.M. 2022. Behaviourism, Skinner, and operant conditioning: Considerations for sport coaching practice. *A Journal for Physical and Sport Educators*: 35(3): 27–32. <https://doi.org/10.1080/08924562.2022.2052776>.
- Lestari, Mareta, S., Yolifiandri., Suryadi, E., & Barus, II. 2023. *The influence of earnings per Share, Debt to Equity Ratio and company size on stock return* [online]. Available at: <https://kneopen.com/article/html/KnE-Social/13658/22059> [Accessed: 8 December 2024]
- Li, J., 2019. Research on limitations of financial statement analysis: Based on data of listed companies. *Advances in Economics, Business and Management Research*, 110: 378-382.

- Ligere, E. 2024. *In brief: ownership and acquisition of banks in United Kingdom* [online]. Available at: <https://www.lexology.com/library/detail.aspx?g=914a768a-d85e-4a9a-a421-d39e69708445> [Accessed: 20 June 2025]
- Lim, WM. 2024. What Is Qualitative Research? An Overview and Guidelines. *Australasian Marketing Journal*, 33(2):199-229. <https://doi.org/10.1177/14413582241264619>
- Johannesburg Stock Exchange. 2023. *Financials reporting disclosures amendment schedule* [online]. Available at: <chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/https://www.jse.co.za/sites/default/files/media/documents/Amendment%20Schedule%20Financial%20Reporting%20Disclosures.pdf> [Accessed: 9 December 2024]
- Li, Y. & Singal, M. 2019. Firm performance in the hospitality industry: Do CEO attributes and compensation matter? *Journal of Hospitality & Tourism Research*, 43(2): 272-282.
- Liu, W. & Liu, Y. 2022. The impact of incentives on job performance, business cycle, and population health in emerging economies. *Frontiers in Public Health*, 9: 778101. <https://doi.org/10.3389/fpubh.2021.778101>.
- Liu, H., Yuan, K.H. & Wen, Z. 2022. Two-level moderated mediation models with single-level data and new measures of effect sizes. *Behavior Research Methods*, 54: 574–596. <https://doi.org/10.3758/s13428-021-01578-6>
- Lo, H. & Shiah-Hou, S. 2022. The effect of CEO power on overinvestment, *Review of Quantitative Finance and Accounting*, 59(1): 23-63.
- Locke, E.A. 1968. Toward a theory of task motivation and incentives. *Organisational Behavior and Human Performance*, 3(2): 157-189. [https://doi.org/10.1016/0030-5073\(68\)90004-4](https://doi.org/10.1016/0030-5073(68)90004-4)
- Lokman, N. & Tareh, F.M. 2020. How are company size, financial performance and corporate governance related to directors' remuneration? *Research in World Economy*, 11(6):12-26. <https://doi.org/10.5430/rwe.v11n6p12>
- Lovett, S., Rasheed, AA. & Hou, W. 2022. Stock options, restricted stock, salary or bonus? Managing CEO compensation to maximise organisational performance. *Business Horizons*, 65(2):115-123. <https://doi.org/10.1016/j.bushor.2021.02.041>

- Luo, LM., Lee, HT., Chiu, CC., & Lee, CW. 2023. The relations of corporate risk, operating efficiency, and firm size to managerial compensation: evidence from Taiwan stock market-listed companies. *Asia Pacific Management Review*, 28(2):194-203
- Lu, Y., Harper, A. & Sarkar, S.K. 2025. How CEO stock option compensation shapes analyst coverage. *Review of Quantitative Finance and Accounting*. <https://doi.org/10.1007/s11156-025-01436-y>
- Luo, Y. 2015. CEO power, ownership structure and pay performance in Chinese banking. *Journal of Economics and Business*, 82: 3-16. [https://doi: 10.1016/j.jeconbus.2015.04.003](https://doi.org/10.1016/j.jeconbus.2015.04.003).
- Ma, Y. 2025. Pay-Performance Sensitivity: How firm performance impacts CEO compensation. CMC Senior Theses. Claremont McKenna College, Claremont.
- Main, BG., Bruce, A. & Buck, T. 1996. Total board remuneration and company performance. *The Economic Journal*, 106(439): 1627-1644.
- Majaski, C., Boyle, M., & Perez, Y. 2024. What is rent seeking in economics, and what are some examples? [online]. Available at: <https://www.investopedia.com/terms/r/rentseeking.asp>. [accessed 14 April 2025]
- Maloa, F. The relationship between determinants of executive remuneration in South African state-owned enterprises, *South African Journal of Human Resources Management*, Tydskrif vir Menslikehulpbronbestuur, 18(0): a1250. [https://doi.org/ 10.4102/sajhrm.v18i0.1250](https://doi.org/10.4102/sajhrm.v18i0.1250).
- Mardiana, S. 2020. Modifying research onion for information systems research. *Solid State Technology*, 63(4): 5304-5313.
- Maksimovic, J. & Evtimov, J. 2023. Positivism and post-positivism as the basis of quantitative research in pedagogy. *Research in Pedagogy*, 13(1):208-213
- Mangwiro, M. 2020. *An analysis of the financial reporting practices of financially distressed South African Listed Companies*. Masters in Commence Thesis. University of Johannesburg, Johannesburg.

- Marimuthu, F. & Kwenda, F. 2019. The relationship between executive remuneration and financial performance in South African State-Owned Entities. *Academy of Accounting and Financial Studies Journal*,23(4).
- Martimort, D., Poudou, JC., & Thomas, L. 2025. *Optimal contracts under moral hazard, adverse selection and limited liability*. Toulouse School of Economics Working Paper No. 1625. Available at: chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/https://www.tse-fr.eu/sites/default/files/TSE/documents/doc/wp/2025/wp_tse_1625.pdf [Accessed: 15 April 2025]
- Madsen, DØ. 2025. Balanced Scorecard: History, implementation, and impact. *Encyclopaedia*, 5(1), 39. <https://doi.org/10.3390/encyclopedia5010039>
- Mans-Kemp, N. & Swartz, A. 2024. Disclosure on the linkages between executive pay and sustainability in a highly unequal country. *Acta Commercii*, 24(1): a1297. <https://doi.org/10.4102/ac.v24i1.1297>
- Masulis, RW. 2020. A survey of recent evidence on boards of directors and CEO incentives. *Asia Pacific Journal Financial Studies*, 49: 7-35. Available at: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3520265.
- Matemane, R., & Moloi, T.2024. Executive compensation and gaps in South Africa's regulatory framework: A structured literature review. *Agrociencia*, 58(7):42-56
- Matemane, R., Moloi, T., Adelowotan, M., & Biswas, PK. 2023. The use of non-financial performance metrics in determining directors' remuneration: the case of listed companies in South Africa. *African Journal of Business Ethics*, 17(1): 22–44. Available at: <http://dx.doi.org/10.15249/17-1-301>
- Maverick, JB. 2024. Coke vs. Pepsi: Who rules the beverage industry? [online]. Available at: <https://www.investopedia.com/ask/answers/060415/how-much-global-beverage-industry-controlled-coca-cola-and-pepsi.asp> [Accessed: 2 January 2025]
- Mazhar SA., Anjum R., Anwar AI., & Khan AA. 2021. Methods of data collection: A fundamental tool of research. *Journal of Integrated Community Health*, 10(1):6-10

- Mehboob, F. & Othman, N. 2020. Examining the links leading to behavioral support for change: An expectancy theory perspective. *International Journal of Social Sciences and Economic Review*, 2(4): 1-08.
- Memon, MA., Thurasamy, R., Ting, H., Cheah, JH., & Chuah, F. 2024. Control variables: a review and proposed guidelines. *Journal of applied Structural equation modelling*, 8(2): 1-18. [https://doi: 10.47263](https://doi.org/10.47263)
- Mensah, L., Arhinful, R. & Bein, M.A. 2024. The impact of corporate governance on financial decision-making: Evidence from non-financial institutions in the Australian securities exchange. *Asian Academy of Management Journal of Accounting and Finance*, 20(1): 41-95
- Mesioye, O., & Bakare, IA. 2024. Evaluating financial reporting quality: Metrics, challenges, and impact on decision-making. *International Journal of Research Publication and Reviews*, 5(10):1144-1156
- Meyer, H.H. 1975. The pay-for-performance dilemma. *Organisational Dynamics*, 3(3): 39-50. [https://doi: 10.1016/0090-2616\(75\)90029-7](https://doi.org/10.1016/0090-2616(75)90029-7). [ID: 1976-01676-001].
- Michele, M. 2020. Realism: Philosophical and scientific, *International Scientific Journal*, 21(21): 45-58. [https://doi: 10.7336/academicus.2020.21.05](https://doi.org/10.7336/academicus.2020.21.05)
- Miller, S. 2022. SEC adopts compensation clawback rule with requirements for public companies. [online]. Available at: <https://www.shrm.org/resourcesandtools/hr-topics/compensation/pages/sec-adopts-compensation-clawback-rule-with-new-requirements-for-public-companies.aspx>. [Accessed: 22 June 2023]
- Ministry of Higher Education and training. 2022. *Skills supply and demand in South Africa: Labour market intelligence research programme*. [Online]. Available at: <https://lmi-research.org.za/publication/skills-supply-and-demand-in-south-africa-2022/>. [Accessed: 22 June 2023]
- Mintzberg, H. 1973. *The nature of managerial work*. New York, NY: Harper & Row
- Mirza, H., Bellaleem, F., & Mirza, C. 2023. Ethical considerations in qualitative research: Summary guidelines for novice Social Science researchers. *Social Studies and Research Journal*, 11(1):441-449

- Mnyandu, T. 2025. *CEO-CFO tournament incentives and its relationship to the performance of JSE listed companies*. MBA Thesis. University of Pretoria, Pretoria
- Mohamed, Y. 2020. Association between executive directors' remuneration and earnings management among banks in Kenya. Master of Commerce. Strathmore University. Nairobi. <http://hdl.handle.net/11071/12048>
- Mohr, A. 2020. *What Are Some of the Problems Associated with Using Financial Ratios?* Available at: <https://smallbusiness.chron.com/problems-associated-using-financial-ratios-3979.html> [Accessed: 12 September 2017].
- Mr Price Group. 2023. *Remuneration Report*. Johannesburg: Mr Price Group
- Mugizi, W. 2019. Constructing a conceptual framework for quantitative data analysis in social science research. *Interdisciplinary Journal of Education*, 2 (1):74 -88.
- Müller, M., Ferreira-Schenk, S., Jansen van Rensburg, JG., Sgammini, R., & Mokatsanyane, D. 2022. Tracking the performance of Listed shares: A comparison between JSE Single- and Dual listed shares. *International Journal of Economics and Financial Issues*, 12(6): 145-154
- Munther, M., Zyoud, MM., Tahani, RK., & Dweikat, K. 2024. Quantitative research methods: Maximising benefits, addressing limitations, and advancing methodological frontiers. *Journal of Multidisciplinary Studies*, 11(4). [https://doi: 10.5281/zenodo.10939470](https://doi.org/10.5281/zenodo.10939470)
- Murineanu, AM. 2024. Creative accounting: A literature review. *proceedings of the International Conference on Business Excellence*, 18(1): 2112–2121. <https://doi.org/10.2478/picbe-2024-0178>
- Murphy, K. 1999. Executive compensation. *Handbook of Labor Economics*, 3 (2): 2485-2563.
- Murphy, KJ. 1985a. Corporate performance and managerial remuneration: An empirical analysis. *Journal of Accounting and Economics*, 7(1-3): 11-42
- Murphy, KJ. 2002. Explaining executive compensation: Managerial power versus the perceived cost of stock options. *The University of Chicago Law Review*: 847-869.
- Muslim, M. 2025. The dilemma between shareholder value and long-term business sustainability. *Advances in Management & Financial Reporting Research*, 3(1): 15-29

- Muthu, K., & Wesson, N. 2023. The impact of COVID-19 on company performance per industry sector: Evidence from South Africa. *Journal of Economic and Financial Sciences*, 16(1): 12. <https://doi.org/10.4102/jef.v16i1.801>
- Muzata, T., & Marozva, G. 2022. Executive compensation schemes: Accelerants of agency and corporate governance problems in South Africa. *African Journal of Governance and Development*, 11(1.2): 328–350. <https://doi.org/10.36369/2616-9045/2022/v11si2a7>
- Mwamba, H. 2024. *Role of management: challenges and imperatives in today's organisations*. Available at: <https://www.linkedin.com/pulse/navigating-evolving-role-management-challenges-todays-mwamba-f-zihrm-kxpxf> [Accessed: 22 October 2024].
- MyBroadBand. 2021. *Tech execs leave South Africa- and land top jobs overseas*. [online]. Available at: <https://mybroadband.co.za/news/business-telecoms/400815-tech-execs-leave-south-africa-and-land-top-jobs-overseas.html> [Accessed: 26 April 2025]
- MyBroadBand. 2024. *Vodacom and MTN shareholders suffer while their CEOs made millions* [online]. Available at: <https://mybroadband.co.za/news/telecoms/555015-vodacom-and-mtn-shareholders-suffer-while-their-ceos-made-millions.html> [Accessed: 15 November 2024]
- Naik, M., Padia, N., Callaghan, C. 2020. Variable executive remuneration and company performance: Insights from the Johannesburg Stock Exchange, South Africa. *Acta Commercii*, 20(1):1-10. <https://doi.org/10.4102/ac.v20i1.790>.
- Nandedkar, S. 2024. *Accounting ratios: meaning, purpose, limitations, types and more* [online]. Available at: <https://plutuseducation.com/blog/accounting-ratios/> [Accessed: 28 January 2025]
- Narayanan, S. & Carrier, R. 2021. *Accuracy, validity, reliability, robustness and resilience (AVR3)* [online]. Available at: <https://forhumanity.center/bok/accuracy-validity-reliability-robustness-and-resilience-avr3/> [Accessed: 17 June 2025]
- Nawar, T. & Pang, A. 2021. Determinants of CEO compensation in the FTSE100 constituent firms. *International Journal of Business Governance and Ethics*, 1(1):1-1

- Needham, C. & Needham, M. 2023. The Global Financial Crisis during the years 2008 and 2009. *Journal of Business Administration Research*, 12(2):45-53. <https://doi:10.5430/jbar.v12n2p45>
- Nel, G., Jachi, M. & Scholtz, H. 2024. The impact of institutional and managerial ownership on the pay-performance relationship: evidence from JSE listed firms. *Journal of Management and Governance*. <https://doi.org/10.1007/s10997-024-09725-9>
- Netshituka, L., Robbetze, N., & Cassim, R. 2024. Exploring association between Chief Executive remuneration and financial performance: A South African banking perspective. *Journal of Accounting and Finance*, 24(4): 170-189
- Nedbank Group. 2023. *Integrated Report for the year ended 31 December 2023*. Johannesburg: Nedbank Group
- Nguyen TD. & Ngo TQ. 2022. The role of technological advancement, supply chain, environmental, social, and governance responsibilities on the sustainable development goals of SMEs in Vietnam. *Economic Research-Ekonomska Istrazivanja*, 35(1):4557–79.
- Nha, VTT. 2021. Understanding validity and reliability from qualitative and quantitative research traditions. *VNU Journal of Foreign Studies*, 37(3) [https://doi: 10.25073/2525-2445/vnufs.4672](https://doi:10.25073/2525-2445/vnufs.4672).
- Nickerson, C. 2024. *Interpretivism paradigm and research philosophy* [online]. Available at: <https://www.simplypsychology.org/interpretivism-paradigm.html> [Accessed: 4 June 2025].
- Nickerson, C. 2023. Criterion validity: Definition and examples [online]. Available at: <https://www.simplypsychology.org/criterion-validity-definition-examples.html> [Accessed: 4 June 2025].
- Nkomo, S. 2020. The effects of CSR external and internal drivers on manager motivation and stakeholder relationships – exploring the pathways toward creating shared value. Master of Business Administration thesis. University of Pretoria, Pretoria.
- Nkwadi, R. & Matemane, R. 2022. Executive compensation and company performance: pre- and post-Marikana uprising analysis. *Southern African Business Review*, 26: 22 pages.

- Nnadi, M. & Mutyaba, PE. 2023. *The moderating effect of corporate sustainability attributes of products on the financial performance of firms*, in: *Elsevier eBooks Reference Module in Social Sciences*. <https://doi.org/10.1016/B978-0-44-313776-1.00104-5>.
- Nnadi, M. & Mutyaba, PE. 2023. The moderating effect of corporate sustainability attributes of products on the financial performance of firms, in: *Elsevier eBooks*, [online] <https://doi.org/10.1016/b978-0-44-313776-1.00104-5>.
- Nordlund, A. & Pettersson, M. 2022. CEO compensation and the relationship with company growth: an analysis of Swedish Listed OMX Stockholm companies. Advanced Degree in Business Administration and Economics Thesis. Umea University, Umea
- Novick, B. 2019. *Executive compensation: the role of public company shareholders* [online]. Available at: <https://corpgov.law.harvard.edu/2019/07/31/executive-compensation-the-role-of-public-company-shareholders/>. [Accessed: 27 November 2024]
- Nsehe, M. 2023. *South African banker Sim Tshabalala earns \$2.8 million salary from Standard Bank in 2022* [online]. Available at: <https://www.billionaires.africa/2023/08/25/south-african-banker-sim-tshabalala-earns-2-8-million-salary-from-standard-bank-in-2022/> [Accessed: 27 November 2024]
- Ntim, CG., Lindop, S., Thomas, DA., Abdou, H., & Opong, KK. 2019. Executives pay and performance: the moderating effect of CEO power and governance structure. *The International Journal of Human Resource Management*, 30(6): 921–963. <https://doi.org/10.1080/09585192.2017.1282532>
- Nurmamedova, T. 2021. The impact of audit quality on the financial performance of listed companies in Russia. *International Journal of Social Science and Humanities Research*, 9(2): April -June
- Nurhikmawaty, DI. & Widiyanti, M. 2020. The effect of debt-to-equity ratio and return on equity on stock return with dividend policy as intervening variables in subsectors property and real estate on Bei. *Open Journal of Business and Management*, 8(5): 2148-2161. <https://doi.org/10.4236/ojbm.2020.85131>.
- Nzungu, DJ., Koori, J. & Kimutai, C. 2022. Executive reward structure and financial performance of listed companies in the Nairobi Securities Exchange, Kenya. *Journal of Finance and Accounting*, 6(3):21-39. <https://doi.org/10.53819/81018102t4057>

- O'Connell, M., Ward, A.M. 2023. Greenbury Report (UK). In: Idowu, S.O., Schmidpeter, R., Capaldi, N., Zu, L., Del Baldo, M., Abreu, R. (eds) *Encyclopaedia of Sustainable Management*. Springer, Cham. https://doi.org/10.1007/978-3-031-25984-5_52
- OECD. 2023. *G20/OECD principles of corporate governance 2023*. Paris: OECD
- Ohidoa, T., & Kolade, A. 2024. Executive compensation and firms' financial performance: analytical approach in Nigeria. *NIU Journal of Social Sciences*, 10(1):283-295. <https://doi.org/10.58709/niujss.v10i1.1814>.
- Ohnsorge, F., Kose, MA. & HJ. Ohnsorge. 2022. *Today's global economy is eerily similar to the 1970s, but governments can still escape a stagflation episode*. Available at: <https://www.brookings.edu/articles/todays-global-economy-is-eerily-similar-to-the-1970s-but-governments-can-still-escape-a-stagflation-episode/> [Accessed: 22 June 2023].
- Okoye, K., & Hosseini, S. 2024. *Understanding Dependent and Independent Variables in Research Experiments and Hypothesis Testing*. [online]. Available at: https://link.springer.com/chapter/10.1007/978-981-97-3385-9_5#citeas [Accessed: 14 March 2025]
- Ollman, B. 1976. *Alienation: Marx's conception of man in capitalist society*. 2nd Edition. Cambridge: Cambridge University Press
- Olmsted, J. 2024. Research reliability and validity: Why do they matter? *Journal of Dental Hygiene*, 98(6):53-57
- Omar, A., & Owusu-Amoako, J. 2023. The role of corporate governance mechanisms on equity overvaluation. *Corporate Governance and Sustainability Review*, 7(3): 34–44. <https://doi.org/10.22495/cgsrv7i3p3>
- Omarjee, L. 2019. *Timeline: SA's credit rating journey since 1994* [online]. Available at: <https://www.news24.com/fin24/timeline-sas-credit-rating-journey-since-1994-20191124>. [Accessed: 2 February 2025]
- Onwuegbuzie, AJ. 2025. On quantitizing revisited. *Frontiers in Psychology*, 15. <https://doi.org/10.3389/fpsyg.2024.1421525>

- Orcan, F. 2020. Parametric or non-parametric: Skewness to test normality for mean comparison. *International Journal of Assessment Tools in Education*, 7(2):255-265. <https://doi.org/10.21449/ijate.656077>
- O'Toole, C., Schneider, J., Smaje, k., & LaBerge, L. 2020. *How Covid-19 has pushed companies over the technology tipping point – and transformed business forever* [online]. Available at: <https://www.mckinsey.com/capabilities/strategy-and-corporate-finance/our-insights/how-covid-19-has-pushed-companies-over-the-technology-tipping-point-and-transformed-business-forever> [Accessed: 23 June 2025]
- Ozgen, S., Mooney, A., & Zhou, Y. 2024. CEO Power: A review, critique, and future research directions. *Journal of Management*, 51(1): 132-171. <https://doi.org/10.1177/01492063241241302> (Original work published 2025)
- Padia, N. & Callaghan, C.W. 2021. Executive director remuneration and company performance: panel evidence from South Africa for the years following King III. *Personnel Review*, 50(3): 829-844.
- Paff, L. 2021. *Earnings Per Share* [online]. Available at: <https://psu.pb.unizin.org/acctg211/chapter/earnings-per-share-eps/> [Accessed: 20 June 2025]
- Panchenko, O., Balaziuk, O., & Portovaras, T. 2024. Analysis of financial statements as a business management tool. *Journal of Interdisciplinary Research*, 14(1):157 – 161
- Pandya, D. & Deventer, I.A. 2023. The impact of the board of directors on CEO pay-performance sensitivity. *Global Journal of Accounting and Finance*, 7(1): 26 – 44.
- Papenfuß, U., & Keppeler, F. 2020. Does performance-related pay and public service motivation research treat state-owned enterprises like a neglected Cinderella? A systematic literature review and agenda for future research on performance effects. *Public Management Review*, 22(7): 1119–1145. <https://doi.org/10.1080/14719037.2020.1740300>
- Park, Y., Konge, L., & Artino, AR. 2020. The positivism paradigm of research. *Academic Medicine: Journal of the Association of American Medical Colleges*. 95(5). <http://dx.doi.org/10.1097/ACM.0000000000003093>

- Park, W., Sernova, E., & Park, C.-Y. 2025. Strategic Impacts of RSUs on Company Performance: Insights into EPS and Profitability Growth. *International Journal of Financial Studies*, 13(1), 34. <https://doi.org/10.3390/ijfs13010034>
- Partyka, R. & Laureano Paiva, E. 2024. Bridging the gap: state-of-the-art on vertical integration, *RAUSP Management Journal*, 59(3): 229-255. <https://doi.org/10.1108/RAUSP-03-2023-0041>
- Pat, A, Okoli, IEN & Nuel-Okoli, CM. 2020. Influence of contingent pay and variable pay on employees' performance of public tertiary institutions. *International Journal of Advanced Academic Research (Social and Management Sciences)*, 6(12): 91-108.
- Paula, J., Gasper, J., Leatherman, M., & Williamson, S. 2023. *The CEO shareholder: Straightforward rewards for long-term performance*. Harvard Law School Forum on Corporate Governance [online]. Available at: <https://corpgov.law.harvard.edu> [Accessed: 13 May 2025].
- Pepper, A. 2019. *Agency theory and executive pay: The remuneration committee's dilemma*. 1st Edition. Switzerland: Palgrave Pivot
- Permata, SI. & Alkaf, FT. 2020. Analysis of market capitalisation and fundamental factors on firm value. *Journal of Accounting and Finance*, 1(1): 59-71. <https://doi.org/10.38035/jafm.v1i1.12>
- proAlpha, 8. 2023. *Total cost method and cost of sales method*. [Accessed: 12 July 2023].
- PricewaterhouseCoopers. 2020. *Practices and remuneration trends report. 12th Edition*. [online] Available at: <https://www.pwc.co.za/en/assets/pdf/executive-directors-report-2020.pdf>. [Accessed: 23 May 2022]
- PricewaterhouseCoopers. 2020. *Practices and remuneration trends report. 12th Edition*. [online] Available at: <https://www.pwc.co.za/en/assets/pdf/executive-directors-report-2020.pdf>. [Accessed: 23 April 2025]
- PricewaterhouseCoopers. 2024. *Guide to key performance indicators: Communicating the measures that matter* [online]. Available at: <chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/https://www.pwc.com/gx/en/audit->

- Rau, D. 2023. *What's the right pricing strategy for you?* [online]. Available at: https://www.americanexpress.com/en-us/business/trends-and-insights/articles/get-it-right-pricing-strategies-that-work-mtmc/?utm_source=chatgpt.com [Accessed: 17 December 2024]
- Rao, T. 2024. Understanding survivorship bias: Implications for research and decision making. *Journal of Emerging Technologies and Innovative Research (JETIR)*, 11(6).
- Rao, X. 2024. *The Causality Between Executive Compensation, Equity Concentration, and Corporate Performance: A Multiple Regression Analysis*. Singapore, Springer.
- Rashid, C.A. 2021. The efficiency of financial ratios analysis to evaluate company's profitability. *Journal of Global Economics and Business*, 2(4): 119-132
- Raymond, A. 2024. *Should CEOs be on social media?* [online]. Available at: <https://www.redlineexecutive.com/content-hub/should-ceos-be-on-social-media> [Accessed: 10 April 2025].
- Rehman, A., Ali, T., Hussain. S., & Waheed, A. 2021. Executive remuneration, corporate governance and corporate performance: Evidence from China, *Economic Research-Ekonomska Istraživanja*, 34(1): 3092-3118. [https://doi: 10.1080/1331677X.2020.1867214](https://doi.org/10.1080/1331677X.2020.1867214)
- Remuneration Consultants Group. 2023. *Voluntary Code of Conduct in relation to Executive Remuneration Consulting in the United Kingdom*. United Kingdom: Remuneration Consultants Group
- Republic of South Africa. Department of Trade and Industry. 2024. Companies Amendment Act 16 of 2024. *Government Gazette*, (709)50991. Pretoria: Government Printers
- Republic of South Africa. Department of Trade and Industry. 2020. Accounting guidelines: GRAP 1. Presentation of financial statements. Pretoria
- Resolve. 2024. *How will local businesses be impacted by the upcoming elections?* Johannesburg: Resolve

- Rey, ME. 2022. *The role of board-level committees in corporate governance*. [online]. Available at: chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/https://www.oecd.org/content/dam/oecd/en/publications/reports/2022/09/the-role-of-board-level-committees-in-corporate-governance_907d0a67/8a97a3f6-en.pdf [Accessed: 28 February 2025]
- Rimpler, A., Kiers, H.A.L. & Ravanzwaaij, D. van 2025. To interact or not to interact. The pros and cons of including interactions in linear regression models. *Behavior Research Methods*, 5. <https://doi.org/10.3758/s13428-025-02613-6>
- Rivera, A., Zapatero, F. & Zhong, H. 2023. *Optimal contracting with aspirational utility*. Available at: SSRN: <https://ssrn.com/abstract=5517779> or <http://dx.doi.org/10.2139/ssrn.5517779> [Accessed 7 June 2026].
- Roderick, JAL. 1988. A Test of Missing Completely at Random for Multivariate Data with Missing Values. *Journal of the American Statistical Association*, 83(404): 1198-1202. <https://doi.org/10.2307/2290157>. Available at: <http://www.jstor.org/stable/2290157>. [13].
- Roebianto, A., Savitri, SI., Aulia, I., Suciyan., A & Mubarakah, L. 2023. Content validity: Definition and procedure of content validation in psychological research. *TPM*, 30(1): 5-18
- Ross. S. 2022. *What are the main benchmarks that track the banking sector?* Investopedia. New York: Dotdash Meredith
- Ross, PT., & Zaidi, NB 2019. Limited by our limitations. *Perspectives on Medical Education*, 8(4): 261–264. doi: <https://doi.org/10.1007/s40037-019-00530-x>.
- Rothomi, A, & Rafid, M. 2023. Relationship analysis and concept of human capital theory and education. *Educatum: Scientific Journal of Education*, 1(1): 26–31. <https://doi.org/10.59165/educatum.v1i1.14>
- Rossouw, J., & Styan, J. 2019. Steinhoff collapse: A failure of corporate governance. *International Review of Applied Economics*, 33(1): 163–170. <https://doi.org/10.1080/02692171.2019.1524043>

- Ruggiano, N. & Tam, EP. 2019. Conducting secondary analysis of qualitative data: Should we, can we, and how? *Qualitative Social Work*, 18(1): 81-97. doi: 10.1177/1473325017700701. Available at: <https://doi.org/10.1177/1473325017700701>. [https://doi: 10.1177/1473325017700701; 13].
- Rulashe, T. 2024. A theory-based analysis of labour unions in the South African Public Service. *Journal Ilmu Pemerintahan*, 14(3). <https://doi.org/10.26618/ojip.v14i3.15265>
- Ruwanti, G., Chandrarin, G. & Assih, P. 2019. Corporate social responsibility and earnings management: The role of corporate governance. *Humanities & Social Sciences Reviews*, 7(5): 1338-1347.
- Safitri, J., & Affandi, MA. 2022. Mediating role of company size on Earnings Per Share and Price to Book Value. *Advances in Intelligent Systems Research*, 175: 127-131
- Sajko, M., Boone, C., & Buyl, T. 2020. CEO Greed, Corporate Social Responsibility, and organizational resilience to systemic shocks. *Journal of Management*, 47(4): 957-992. <https://doi.org/10.1177/0149206320902528>
- Salas-Parra, R., Castro-Ochoa, K. & Machado-Aranda, D. 2023. Chapter 32 - Basic science statistics. In A.E.M. Eltorai& Bakal, J.A.& Newell, P.C. & Osband, A.J. (Eds.). *Translational Surgery* Academic Press, 195-199. Available at: <https://www.sciencedirect.com/science/article/pii/B9780323903004000227> .
- Sandberg, J. & Andersson, A. 2022. CEO Pay and the argument from peer comparison. *Journal of Business Ethics*, 175(4): 759-771. [https://doi: 10.1007/s10551-020-04587-1](https://doi.org/10.1007/s10551-020-04587-1). Available at: <https://link.springer.com/article/10.1007/s10551-020-04587-1>.
- Sari, R. 2021. The multiple regression effect of financial ration on the stock prices of State-Owned Enterprises, *Golden Ratio of Finance Management* 1(1): 25 – 32
- Saunders, MNK., Lewis, P. & Thornhill, A. 2019. *Research Methods for Business Students*. 8th Edition, Pearson, New York.

- Schein, EH. 1997. The concept of client from a process consultation perspective: a guide for change agents. *In: Distinguished Speaker presentation: Consultation division of the Academy of Management, Cincinnati, 12 August 1996*
- Schmid, S. & Baldermann, S. 2021. CEOs' international experience and compensation. *Management International Review*, 61:313-364.
- Schober, P., & Vetter, TR. 2020. Missing data and imputation methods. *Anaesthesia and Analgesia*, 131(5): 1419–1420. <https://doi.org/10.1213/ANE.00000000000005068>
- Schriber, S., King, DR. & Bauer, F. 2019. Deadly sins and corporate acquisitions, *Culture and Organization*, 27(1):1–15. <https://doi.org/10.1080/14759551.2019.1621311>.
- Schneider, TI. 2021. Executive compensation and aspirational peer benchmarking, *Journal of Empirical Finance*, 62: 121-140
- Segrestin, B., Johnston, A. & Hatchuel, A. 2019. The separation of directors and managers: a historical examination of the status of managers. *Journal of Management History*: 25(2): 141-164.
- Semanjski, IC. 2023. *Smart Urban Mobility*. Amsterdam, Elsevier
- Sendyona, C.C. 2020. Enron scandal: evidence of a missed opportunity to detect and halt fraud and bankruptcy. *European Journal of Accounting, Auditing and Finance Research*, 8(5): 54-65
- Serfontein-Jordaan, M., & Dlungwane, S. 2022. Achieving sustainable corporate social responsibility outcomes: a multiple case study in the South African mining industry. *Journal for Community Communication and Information Impact*, 27. <https://doi.org/10.38140/com.v27i.6071>
- Shahid, MU. 2021. Role of informal institutions in the relationship between social capital and international entrepreneurial entry. *Journal of Business Management*, 19: 39–60. <https://doi.org/10.32025/jbm19004>
- Shopify, 2024. *GAAP vs. IFRS: 6 differences between accounting standards* [online]. Available at: <https://www.shopify.com/za/blog/gaap-vs-ifrs> [Accessed: 18 December 2024]

- Shoprite. 2020. *South Africa's low-price leader puts over R330m into consumers' pockets in one month*. Cape Town: Shoprite
- Shortland, S. 2025. *Ethical governance of executive compensation* [online]. Available from: [Ethical governance of executive compensation | Sue Shortland | Relocate magazine](#) [accessed 4 June 2026]
- Shrestha, N. 2020. Detecting multicollinearity in regression analysis. *American Journal of Applied Mathematics and Statistics*, 8 (2): 39 – 42
- Signori, S., San-Jose, L., Retolaza, J. L., & Rusconi, G. 2021. Stakeholder Value Creation: Comparing ESG and Value Added in European Companies. *Sustainability*, 13(3), 1392. <https://doi.org/10.3390/su13031392>
- Simonsohn, U., Simmons, J.P. & Nelson, L.D. 2020. Publisher Correction: Specification curve analysis. *Nature Human Behaviour*, 4: 1215. <https://doi.org/10.1038/s41562-020-00974-w>
- Singh, A. 2021. Significance of research process in research work [online]. Available at: https://www.researchgate.net/publication/350467546_Significance_of_Research_Process_in_Research_Work [Accessed: 21 January 2025]
- Singh, S. 2023. *What is descriptive research? Definition, methods, types and examples* [online]. Available at: <https://researcher.life/blog/article/what-is-descriptive-research-definition-methods-types-and-examples/> [Accessed: 21 January 2025]
- Sirakaya, Y. 2024. Fundamentals of industrial Psychology, understanding and improving human behaviour in business. *Multidisciplinary Journal with Arbitration Committee*, 5(5): 120-129
- Sirisilla, S. 2023. *Bridging the gap: Overcome these 7 flaws in descriptive research design* [online]. Available at: <https://www.enago.com/academy/descriptive-research-design/> [Accessed: 7 June 2025]
- Siwendu, T., Swanepoel, M., & Stumke, O. 2024. Relationship between executive remuneration and performance of South African mining companies. *Journal of Economic and Financial Sciences*, 17(1), 12 pages. <https://doi.org/10.4102/jef.v17i1.888>

- Skarica, V. 2025. *4 critical financial statement limitations and how to overcome them* [online]. Available at: <https://www.farseer.com/blog/financial-statement-limitations/> [Accessed: 26 May 2025]]
- Skarlicki, D., Lo, K., Rogo, R., Avolio, B.J., & DeHaas, C. 2023. The role of CEO accounts and perceived integrity in analysts' forecasts. *Organisational Behaviour and Human Decision Processes*, 176. <https://doi.org/10.1016/j.obhdp.2023.104250>
- Söderlund, M. 2023. Moderator variables in consumer research: a call for caution. *Journal of retailing and consumer services*, 73. <https://doi.org/10.1016/j.jretconser.2023.103352>
- Sol, K. & Heng, K. 2022. Understanding epistemology and its key approaches in research. *Cambodian Journal of Educational Research*, 2(2):80-99. <https://doi.org/10.62037/cjer.2022.02.02.05>.
- Soltani, M., Kythreotis, A. & Roshanpoor, A. 2024. The moderate role of national culture and prosperity index on the effectiveness of the fraud triangle to prevent financial statement fraud: a cross-country meta-analysis approach. *International Journal of Accounting, Auditing and Performance Evaluation*, 20(3/4): 251-290
- Sommer, J. 2024. A new measure shows C.E.O. pay at even more astronomical levels, *The New York Times*, 7 June 2024 [online]. Available at: <https://www.nytimes.com/2024/06/07/business/ceo-pay-compensation-stock-market.html> [Accessed: 9 December 2024]
- Song, W. & Wan, K. 2019. Does CEO compensation reflect managerial ability or managerial power? Evidence from the compensation of powerful CEOs. *Journal of Corporate Finance*, 56: 1-14. <https://doi.org/10.1016/j.jcorpfin.2018.11.009>.
- Soni, TK., & Singh, A. 2020. Directors' remuneration, corporate governance and firm performance linkages: Evidence from the emerging country [Special issue]. *Corporate Ownership & Control*, 18(1): 382-392. <https://doi.org/10.22495/cocv18i1siart12>
- Sonwalker, R. 2024. *Tackling normality in multiple regression* [online]. Available at: <https://julius.ai/articles/tackling-normality-in-multiple-regression> [Accessed: 17 June 2025]

- South African Government. 2023. *Companies Act, 71 of 2008 (Amendment Bill)*. Available at: chrome-extension://efaidnbmnnnibpcajpcgclefindmkaj/https://www.parliament.gov.za/storage/app/media/Bills/2023/B27_2023_Companies_Amendment_Bill/B27_2023_Companies_Amendment_Bill.pdf [Accessed: 3 February 2024]
- South African Institute of Chartered Accountants. 2008. *Employees Tax 1614. Employees share schemes: Issue 103*. [Accessed: 12 September 2017].
- South African Reserve Bank. 2024. *List of companies with secondary listing on the JSE (as at 30 June 2024)* [online]. Available at: <chrome-extension://efaidnbmnnnibpcajpcgclefindmkaj/https://www.resbank.co.za/content/dam/sarb/what-we-do/statistics/guides/guides-for-the-completion-of-c-forms/List%20of%20companies%20with%20secondary%20listings%20on%20the%20JSE.pdf> [Accessed: 16 December 2024]
- South African Reward Association (SARA). 2021. *Can shareholder voting address executive pay issues in South Africa?* Johannesburg: South African Reward Association
- Sovey, S., Osman, K., & Mohd-Matore, ME. 2022. Exploratory and confirmatory factor analysis for disposition levels of computational thinking instrument among secondary school students. *European Journal of Education Research*, 11(2):639-652
- Spilotro, D. 2022. *Measures of central tendency and spread* [online]. Available at: <https://ecampusontario.pressbooks.pub/prehealthsciencesmath2/chapter/measures-centraltendency-spread/> [Accessed: 27 June 2025]
- Spoor, T. 2020. To what extent does the compensation of CEOs of Dutch listed firms depend on firm performance? Master's in business administration. University of Twente, Enschede.
- Sreekumar, D. 2025. *What is quantitative research? Definition, methods, types and examples* [online]. Available at: <https://researcher.life/blog/article/what-is-quantitative-research-types-and-examples/> [Accessed: 31 May 2025]
- Srivastava, M., Ahmad, S., & Tiwary, R. 2023. CEO's Salary Hike: Harnessing the Factors Behind the Scenes. *Asia-Pacific Journal of Management Research and Innovation*, 19(4): 191-199. <https://doi.org/10.1177/2319510X241242254>

- Standard Bank Group. 2023. *Remuneration Report for the year ended 31 December 2023* [online]. Available at: chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/https://www.standardbank.com/static_file/StandardBankGroup/filedownloads/AIR/2023/SBG_RemunerationReport2023.pdf. [Accessed: 25 November 2024].
- Statistics South Africa. 2021. *A new and improved GDP is here!* [online]. Available at: <https://www.statssa.gov.za/?p=14614> [Accessed: 15 February 2025]
- Statistics South Africa. 2021. South Africa: *Unemployment rate from 1999 to 2020*. [online].
- Statistics South Africa. 2021. How unequal is South Africa? [online]. Available at: <https://www.statssa.gov.za/?p=12930#:~:text=South%20Africa%20is%20known%20as,report%20released%20by%20Stats%20SA>. [Accessed: 25 November 2024].
- Statistics South Africa. 2021. *Pre-lockdown business profits fall to their lowest level in 14 years* [online]. Available at: <https://www.statssa.gov.za/?p=15019> [Accessed: 15 December 2024]
- Statucor, 2024. S30 *Remuneration disclosure* [online]. Available at: <https://statucor.co.za/companies-act-amendments/s30-remuneration-disclosure/>. [Accessed: 14 March 2025]
- Steyn, L. 2022. Sibanye CEO's jaw-dropping R300 million payday, *News24*. 26 April 2022
- Subačienė, R., Arbidane, I., Mietule, I., Kotane, I., Auzina-Emsina, A., & Lace, N. 2026. System of Non-Financial Performance Indicators in the Manufacturing Sector. *Administrative Sciences*, 16(1): 17. <https://doi.org/10.3390/admsci16010017>
- Sureiman, O. & Mangera, CM. 2020. F-test of overall significance in regression analysis simplified. *Journal of the Practice of Cardiovascular Sciences*, 6(2): 116.
- Sutton, J. 2024. *Victor Vroom's expectancy theory of motivation* [online]. Available at: <https://positivepsychology.com/expectancy-theory/> [Accessed: 20 January 2025]
- Sutton, J. & Neuhaus, M. 2024. *Victor Vroom's expectancy theory of motivation* [online]. Available at: <https://positivepsychology.com/expectancy-theory/#the-three-components-of-expectancy-theory>. [Accessed: 29 October 2024].

- Suzette, V., Mans-Kemp N., Kallis, L. & McKenzie, K. 2019. Public ‘say on pay’ activism in South Africa: targets, challengers, themes and impact. *South African Journal of Economic and Management Sciences*, 22(1): 1-10. [https://doi: 10.4102/sajems.v22i1.3251](https://doi.org/10.4102/sajems.v22i1.3251). [[https://doi: 10.4102/sajems.v22i1.3251](https://doi.org/10.4102/sajems.v22i1.3251); 06].
- Tadayonrad, Y. & Ndiaye, AB. 2023. A new key performance indicator model for demand forecasting in inventory management considering supply chain reliability and seasonality, *Supply Chain Analytics*, 3. [https:// doi.org/10.1016/j.sca.2023.100026](https://doi.org/10.1016/j.sca.2023.100026).
- Taherdoost, H. 2022. What are different research approaches? Comprehensive review of qualitative, quantitative, and mixed method research, Their applications, types, and limitations. *Journal of Management Science & Engineering Research*, 5 (1):53-63.
- Tahtamoni T., Alkabbaa N., Hassan M.K. & Rashid M. 2026. Environmental, social and governance disclosures and value: financial incentives and performance in Fortune-500 firms. *Management Decision*, 1-27. ahead-of-print No. ahead-of-print. <https://doi.org/10.1108/MD-02-2025-0320>
- Thambi, K. 2025. An analysis of directors’ oversight function in respect of financial disclosures and their implications in South Africa. *Comparative and International Journal of Southern Africa*, 58(2). <https://doi.org/10.25159/2522-3062/19482>
- The Business Roundtable. 1981. *Statement on Corporate Responsibility* [online] Available at: <http://www.ralphgomory.com/wp-content/uploads/2018/05/1981-Business-Roundtable-Statement-on-Corporate-Responsibility-11.pdf> [Accessed: 7 July 2018]
- The Business Roundtable. 1997. *Statement on Corporate Responsibility* [online] Available at: <http://www.ecgi.org/codes/documents/businessroundtable.pdf> [Accessed: 7 July 2018]
- Theunissen, G. 2024. Discovery Bank CEO rakes in almost double Adrian Gore’s pay in 2024, *News 24*, 24 October 2024 [online]. Available at: <https://www.news24.com/fin24/companies/discovery-bank-ceo-rakes-in-almost-double-adrian-gores-pay-in-2024-20241024> [Accessed: 9 December 2024]
- Teuteberg, S. 2023. *Time for transparency on executive pay in South Africa (Groundup)*. 16 February 2023. [online]. Available from:

<https://www.groundup.org.za/article/time-for-transparency-on-executive-pay-in-south-africa/>. [Accessed: 22 June 2023 & 23 April 2025]

Tongaat Hulett. 2018. *Integrated Annual Report 2018*. Tongaat: Tongaat Hulett [online]. Available at: chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/https://www.tongaat.com/wp-content/uploads/2018/10/ar-remuneration-full.pdf. [Accessed: 26 January 2025]

Torfin, J. & Bentzen TØ. 2020. Does stewardship theory provide a viable alternative to control-fixated performance management? *Administrative Sciences*, 10(4):86. <https://doi.org/10.3390/admsci10040086>

Trung, GT. 2025. *Important role of CEO in strategic management*. [online]. Available at: <https://www.pace.edu.vn/knowledge-article/important-role-of-ceo-in-strategic-management> [Accessed: 23 March 2025]

Tseng, K. Zhong, RI. 2024. Standing on the shoulders of giants: financial reporting comparability and knowledge accumulation, *Journal of Accounting and Economics*, 78(1)

Upmeier, JR. & Vatrenjak, A. 2022. Presentation of operating expenses [online]. Available at: chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/https://www.ifrs.org/content/dam/ifrs/meetings/2022/september/iasb/ap21f-presentation-of-operating-expenses.pdf [Accessed: 8 April 2020]

United States Securities and Exchange Commission. 2017. *SEC Adopts interpretative guidance on Pay Ratio Rule* [online]. Available at: <https://www.sec.gov/news/press-release/2017-172> [Accessed: 9 November 2017]

UNISA *Policy on Research Ethics* (date unknown) [online]. Available at: from <http://www.unisa.ac.za/default.asp?Cmd=ViewContent&ContentID=27669>. [Accessed: 9 May 2016]

Valodia, I. 2021. *Why forcing disclosure of wages and executive pay in SA is a good idea*. Available at: <https://www.wits.ac.za/news/latest-news/opinion/2021/2021-05/why-forcing-disclosure-of-wages-and-executive-pay-in-sa-is-a-good-idea.html> .

- van de Ven, M., Machado, P.L., Athanasopoulou, A., Aysolmaz, B. & Turetken, O. 2023. Key performance indicators for business models: a systematic review and catalog. *Information Systems and e-Business Management*, **21**: 53–794. <https://doi.org/10.1007/s10257-023-00650-2>
- Van Welzen, P. & Bulose, S. 2021. *Secondary listing on the Johannesburg Stock Exchange* [online]. Available at: <https://financialmarketsjournal.co.za/secondary-listing-on-the-johannesburg-stock-exchange/> [Accessed: 12 December 2024]
- van Wyk, L., Wesson, N. 2021. Alignment of executive long-term remuneration and company key performance indicators: An exploratory study. *Journal of Economic and Financial Sciences*, 14(1) <https://doi.org/10.4102/jef.v14i1.564>.
- Venkatraman, N. and Ramanujam, V. 1986. Measurement of business performance in strategy research: A comparison of approaches. *Academy of Management Review*, 1(4): pp.801-808.
- Vianna, M.T. 2023. Business cycle theories after Keynes: A brief review considering the notions of equilibrium and instability, *Structural Change and Economic Dynamics*, 64: 134-143. <https://doi.org/10.1016/j.strueco.2022.12.004>
- Viljoen, N. 2024. *Steinhoff former execs accused of reaping hundreds of millions through 'fraudulent efforts'*. [online]. Available at: <https://www.moonstone.co.za/steinhoff-former-execs-accused-of-reaping-hundreds-of-millions-through-fraudulent-efforts/> [Accessed: 22 October 2024].
- Volg, S. 2023. Mixed methods longitudinal research. *Forum: Qualitative social research*, 24(1): Art 21. <http://dx.doi.org/10.17169/fqs-24.1.4012.FQS>
- Vomberg, A. & Wies, S. 2022. Panel data analysis: A non-technical introduction for marketing researchers. In: Homburg, C., Klarmann, M., Vomberg, A. (eds) *Handbook of Market Research*. Springer, Cham. https://doi.org/10.1007/978-3-319-05542-8_19-2
- Vrousalis, N. 2022. *Exploitation as domination: What makes capitalism unjust*. Oxford, Great Britain: Oxford University Press.

- Walters, DJ. & Fernbach, PM. 2021. Investor memory of past performance is positively biased and predicts overconfidence. *Proceedings of the National Academy of Sciences of the United States of America*, 118(36). <https://doi.org/10.1073/pnas.2026680118>
- Wang, C., Zhang, S., Ullah, F. 2021. Executive compensation and corporate performance of energy companies around the world. *Energy Strategy Reviews*, 38, November 2021
- Wang, X., & Cheng, Z. 2020. Cross-Sectional Studies: Strengths, weaknesses, and recommendations. National Library of Medicine. *Jul;158(1S): S65-S71*. <https://doi.org/10.1016/j.chest.2020.03.012>. PMID: 32658654.
- Wardhani, R.S., Awaluddin, M. & Reniati, 2019. Financial performance and corporate social responsibility on Return on Shares. *Jurnal Akuntansi*, 23(3): 409-432 <https://doi.org/10.24912/ja.v23i3.599>
- Warje, K. 2025. *Why do we lose interest in an activity after we are rewarded for it?* Available at: <https://thedecisionlab.com/biases/overjustification-effect> [Accessed: 23 April 2025]
- Weenders, V. 2019. What is the effect of corporate governance on the pay-performance relationship in the Netherlands? Masters in business administration. University of Twente, Enschede.
- Werksmans Attorneys. 2021. Companies Act No. 71 of 2008: Duties and liabilities of Directors 2021. Available at: chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/https://www.werksmans.com/storage/2021/08/Werksmans_Duties_and_Liabilities-2021.pdf [Accessed 17 November 2024]
- Whittington, G. 1980. Some basic properties of accounting ratios. *Journal of Business Finance & Accounting*, 7(2): 219-232. <https://doi.org/10.1111/j.1468-5957.1980.tb00738.x>.
- Wickham R.J. 2019. Secondary analysis research. *Journal of the Advanced Practitioner in Oncology*, 10(4): 395–400. <https://doi.org/10.6004/jadpro.2019.10.4.7>
- Wienclaw, R.A. 2021. *Regression analysis (business)*. Available at: <https://www.ebsco.com/research-starters/business-and-management/regression-analysis->

[business#:~:text=Simple%20linear%20regression%20is%20a,more%20than%20one%20independent%20variable.](#) [Accessed: 10 June 2025]

- Willie, M.M. 2024. Population and target population in research methodology. *Golden Ratio of Social Science and Education*, 4(1): 75 -79
- Willow, S. 2024. *Short Term incentive plan- complete guide for 2024*. Available at: <https://www.plentive.com/short-term-incentive-plan/> [Accessed: 22 April 2025]
- Wijeweera, A., Rampling, P., & Eddie, I. 2021. Executive remuneration and firm financial performance: lessons from listed companies in Australia and implications for their APEC counterparts. *Asia Pacific Business Review*, 28(2): 260–272. <https://doi.org/10.1080/13602381.2022.2013614>
- Winter, S. & Michels, P. 2019. The managerial power approach: Is it testable? *Journal of Management and Governance*, 23(3) [https://doi: 10.1007/s10997-018-9434-8](https://doi.org/10.1007/s10997-018-9434-8).
- AiGroup. 2023. *Workplace Relations: What are short term incentives?* Sydney: AiGroup
- World bank. 2024. The World Bank in South Africa. Available at: <https://www.worldbank.org/en/country/southafrica/overview> [Accessed: 10 November 2024]
- Xu, y., & Shiau, W.L. 2026. Moderation analysis in business and management research: Common issues, solutions, and guidelines for future research. *International Journal of Information Management*, 86. <https://doi.org/10.1016/j.ijinfomgt.2025.102995>.
- Xu, C., Zhang, H., Wang, M., & Iqbal, A. 2022. Investigating the relationship between entity financialization, managers' incentives, and enterprise's innovation: Fresh evidence from China. *Frontiers in Psychology*, 12, 810294. <https://doi.org/10.3389/fpsyg.2021.810294>
- Yadav, I.S., Pahi, D., & Gangakhedkar, R. 2022. The nexus between firm size, growth and profitability: New panel data evidence from Asia-Pacific markets. *European Journal of Management and Business Economics*, 31(1):115-140. [https://doi: 10.1108/EJMBE-03-2021-0077](https://doi.org/10.1108/EJMBE-03-2021-0077)
- Yahaya, O. 2025. CEO power and firm performance: The mediating role of board independence. *Review of Management Sciences*, 14(2): 01-31. <https://doi.org/10.2139/ssrn.5158574>

- Yang, T.D., Choi, B., Lee, D., & Wright, S. 2025. How remuneration committees' incentive executive compensation in Australia. *Australian Journal of Management*, 0(0)
- Yang, K, Tu, J, & Chen, T. 2019. Homoscedasticity: An overlooked critical assumption for linear regression. *General Psychiatry*, 32(5):100148. <https://doi.org/10.1136/gpsych-2019-100148>
- Yousef, M. & Dey, S.K. 2022. Best proxy to determine firm performance using financial ratios: A CHAID approach. *Review of Economic Perspectives*, 22(3): 219–239. <https://doi:10.2478/revecp-2022-0010>
- Zackoff M.W, Real F.J, Abramson E.L, Li S.T, Klein M.D, Gusic M.E. 2019. Enhancing educational scholarship through conceptual frameworks: A challenge and roadmap for medical educators. *Academic Paediatrics*, 19(2):135-141. <https://doi:10.1016/j.acap.2018.08.003>. Epub 2018 Aug 20. PMID: 30138745.
- Zajda, J. (2023). *Globalisation and dominant models of motivation theories in education*. Springer
- Zakaria, Z. 2025. Analysis of financial reporting errors and their impact on stakeholder trust. *Advances in Management & financial Reporting Research*, 3(1):1-14
- Zandi, G., Mohamad, S., Keong, O.C. & Ehsanullah, S. 2019. CEO compensation and firm performance. *International Journal of Innovation, Creativity and Change*, 7(7): 316-327.
- [Zarzycka, E.](#) & [Krasodomska, J.](#) 2022. Non-financial key performance indicators: what determines the differences in the quality and quantity of the disclosures? *Journal of Applied Accounting Research*, 23(1): 139-162. <https://doi.org/10.1108/JAAR-02-2021-0036>
- [Zhang, C.](#) 2023. Theoretical exploration of executive compensation in state-owned enterprises, China Political Economy, 6(1): 44-59. <https://doi.org/10.1108/CPE-10-2023-0009>
- Zhao, E. & Hall, C.R. 2023. The Dot-Com bubble: A historical perspective and a cautionary tale for the age of AI. *Journal of Humanities and Social Science*, 28(5): 04-07

- Zhao, Q. & Yang, L. 2019. In Anonymous (Ed.). Review of the research progress on managerial power theory. *International Conference on Advanced Education, Service and Management*. The Academy of Engineering and Education, 111-113.
- Zhou, X. 2023. Principal-agent relationship and agency problem. *Advances in Economics Management and Political Sciences*, 34(1): 75–83. [https://doi: 10.54254/2754-1169/34/20231678](https://doi.org/10.54254/2754-1169/34/20231678)
- Zhu, Z., Guo, Y., Jiang, Z., & Chen, X. 2023. The perspective of long-term and short-term incentives on the business environment, executive incentive contracts, and enterprise innovation. *SAGE Journal*, 13(4). <https://doi.org/10.1177/21582440231206960>
- Zoghlami, F. 2020. Does CEO compensation matter in boosting firm performance? Evidence from listed French firms. *Managerial and Decision Economics*, 42(1): 143-155. <https://doi.org/10.1002/mde.3219>
- Zogning, F. 2022. Agency theory: A critical view. *European Journal of Business Management*, 9 (2)
- Zwalf, S. 2021. Managing goal conflict. The case of agency theory in the policy settings for public-private partnerships; a perspective on citizen and government interests. *Ann Public Coop Econ*, 93: 913–930. <https://doi.org/10.1111/apce.12355>

ANNEXURE A



**UNISA COLLEGE OF ECONOMIC AND MANAGEMENT SCIENCES RESEARCH ETHICS
REVIEW COMMITTEE**

21 July 2017 (Date of issue)

02 February 2026 (Date of amendment)

Reference # 2017_HRM_013

Name: Thokozile Sibanda

Student Number #: 47685065

Dear Ms Thokozile Sibanda

Decision: Ethics Amendment Approval until 31 December 2027

Title: The relationship between CEO remuneration and company performance in private organisations on the Johannesburg Stock Exchange (JSE)

Researcher: Ms Thokozile Sibanda, thokozile@gmail.com, 072 352 7164
Department of Human Resource Management
College of Economics Science and Management
University of South Africa

Co- Supervisor: Dr ML Bezuidenhout, bezuiml@unisa.ac.za, 012 429 4535
Department of Human Resource Management
College Of Economics Science and Management
University Of South Africa

Qualification: PHD

Thank you for the application requesting amendments to the original research ethics certificate issued on 21 July 2017 by the Department of Human Resource Management Research Ethics Review Committee for the above-mentioned research. The approval of the requested amendment is granted until 31 December 2027

The low-risk application was reviewed by the College Research Ethics Review Committee (CRERC) in compliance with the Unisa Policy on Research Ethics and Standard Operating



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Procedure on Research Ethics Risk Assessment, using the expedited method. The proposed research may now continue with the provisions that:

- 1. The researcher/s will ensure that the research project adheres to the values and principles expressed in the UNISA Policy on Research Ethics.*
- 2. Any adverse circumstance arising in the undertaking of the research project that is relevant to the ethicality of the study, as well as changes in the methodology, should be communicated in writing to the UNISA Research Ethics Review Committee. An amended application could be requested if there are substantial changes from the existing proposal, especially if those changes affect any of the study-related risks for the research participants.*
- 3. The researcher will ensure that the research project adheres to any applicable national legislation, professional codes of conduct, institutional guidelines and scientific standards relevant to the specific field of study.*

Kind regards,



Nhlamulo Baloyi
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ANNEXURE B

LANGUAGE & TECHNICAL EDITING CERTIFICATE

BK EDITORIAL AND PUBLISHING (PTY) LTD [REG: 2020157767/07] [WWW.BKEDITORIALS.COM]

certifies that the work titled

**"THE RELATIONSHIP BETWEEN CEO
REMUNERATION AND COMPANY PERFORMANCE
IN PRIVATE ORGANISATIONS ON THE
JOHANNESBURG STOCK EXCHANGE (JSE) FOR
THE PERIOD 2008-2020"**

authored by THOKOZILE SIBANDA

has been edited and proofread to improve grammar, consistency,
readability, flow, and logic.

13 JANUARY 2026



Mr KM Leshaba, Managing Editor
bkeditorials@gmail.com



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