THESIS: NP MNYAKA

Developing a conceptual model linking remuneration governance compliance, executive pay, pay-gap, and performance of JSE firms

by

Nomanyano Prim-Rose Mnyaka

submitted in accordance with the fulfilment of the requirements

for the degree of

DOCTOR OF PHILOSOPHY

in the subject

ACCOUNTING SCIENCES

at the

UNIVERSITY OF SOUTH AFRICA

SUPERVISOR: PROF. COSMAS M. AMBE

DATE SUBMITTED: 25 DECEMBER 2022

DECLARATION

Name: Nomanyano Prim-Rose Mnyaka

Student number: 4887-199-0

Degree: Doctor of Philosophy in Accounting Sciences

Developing a conceptual model linking remuneration governance compliance, executive pay, pay-gap, and performance of JSE-listed firms

I declare that the above thesis 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.

SIGNATURE

25 December 2022

DATE

ABSTRACT (ENGLISH)

Purpose: The global interest in the ability of corporate governance to increase a firm's wealth based on its reaction to corporate scandals/collapses has led to contestation of the agency theory favoured by extant studies compared to stewardship and tournament theories. The study aimed to develop a conceptual model linking RGC (RGC), executive pay, pay-performance link, executive-employee pay-gap, and firm performance of JSE-listed firms.

Methodology: A pragmatism ontology and convergent parallel mixed approach was employed on selected JSE-listed firms between 2011 and 2020. Secondary data from annual reports, the IRESS database, and extant literature were employed to develop a RGCI and to extract key variables including firm performance measures (FPMs) and key performance indicators KPIs). Descriptive statistics, correlations, regression, and comparative analysis were used to achieve research objectives.

Findings: The results indicate a declining RGC among the selected firms, a negative association between RGC and executive pay, a positive connection between RGC and firm performance, a negative moderating effect of RGC on the pay-performance link, a positive moderating effect of RGC on the connection between pay-gap and firm performance, and a disconnection of FPMs from KPIs of the JSE listed firms, suggesting a neglected endogeneity problem.

Implications and recommendations: There is a need to enforce and monitor RGC, and to review methodological and theoretical foundations in research that involves governance and executive pay, performance, or pay-gap. This is since the type and nature of KPIs are dissimilar to the FPMs, which is likely to result in research that is disconnected from what is happening in practice.

Contribution to knowledge: The study is the first to have selected firms from the full range of JSE listed firms, with specific focus on RGC post-King III and IV, tested RGC moderation effect, compared FPMs against KPIs, studied pay-gap locally and used firm performance proxies aligned with practice. The study has also identified methodological flaws and challenged the agency theory.

Keywords*: Pay, executives, executive pay, firm performance, pay-performance link, pay-gap, firm, firm performance measures, key performance indicators, governance, remuneration governance, corporate governance, corporate governance compliance, remuneration governance compliance*

ISISHWANKATHELO (ABSTRACT IN ISIXHOSA)

Injongo: Umdla wehlabathi jikelele ekukwazini kolawulo lwenkampani ukwandisa ubutyebi befemu ngokusekelwe kwindlela esabela ngayo kumahlazo / ukuwa kwenkampani kukhokelele ekukhuphisaneni kwengcamango ye*agency theory* ethandwa zizifundo ezikhoyo, xa kuthelekiswa ukulawula/ukuphatha kunye ne*tournament theories*. Uphando lujoliswe ekuphuhliseni imodeli yengqiqo edibanisa ukuthotyelwa kolawulo lwemivuzo (i*RGC*), umvuzo wesigqeba, unxibelelwano lomvuzo wokusebenza, umsantsa kumvuzo womsebenzi osisigqeba, kunye nokusebenza okuzinzileyo kweefemu ezidweliswe kwi*JSE*.

Isikholelo sophando/imethodoloji: Kusetyenziswe i*pragmatism ontology* kunye nendlela yohlalutyo lwedatha yophandontyilazwi nolweenkcukachamanani (i*convergent parallel mixed approach*) ekujongeni iifemu ezikhethiweyo ezidweliswe kwi*JSE* phakathi kuka2011 no2020. Kukwasetyenziswe idatha elandelayo evela kwiingxelo zonyaka, ulwazi olucwangcisiweyo olukwikhompyutha/idathabheyisi ye*IRESS*, uncwadi olukhoyo ukuphuhlisa isalathiso se*RGC* kunye nokukhupha iinguqu eziphambili, kubandakanya amanyathelo okusebenza okuzinzileyo (i*FPMs*) kunye nezalathisi eziphambili zokusebenza (i*KPIs*). Kusetyenziswe iinkcukachamanani ezichazayo, ukuhambelana, ubudlelwana kwiinguqu ezixhomekekileyo nezizimeleyo, kunye nohlalutyo oluthelekisayo ukufezekisa iinjongo zophando.

Iziphumo: Iziphumo zibonisa ukuhla kwe*RGC* phakathi kweefemu ezikhethiweyo, unxulumano olungalunganga phakathi kwe*RGC* kunye nomvuzo wesigqeba, unxibelelwano oluhle phakathi kwe*RGC* kunye nokusebenza okuzinzileyo, ifuthe elingalunganga lokumodareyitha le*RGC* kunxibelelwano lokuhlawula ukusebenza, ifuthe elihle lokumodareyitha le*RGC* kunxibelelwano phakathi komsantsa kumvuzo kunye nokusebenza okuzinzileyo, kunye nokwahlukana kwe*FPMs* ezivela kwi*KPIs* zeefemu ezidwelisiweyo kwi*JSE*, okubonisa ingxaki yempembelelo engakhathalelwanga.

Iziphumo kunye neengcebiso: Kukho isidingo sokunyanzelisa nokubeka iliso kwi*RGC*, kunye nokuphonononga iziseko zesikhokelo sophando kunye nethiyori kuphando olubandakanya ulawulo kunye nomvuzo wesigqeba, ukusebenza, okanye umsantsa kumvuzo. Oku kungenxa yohlobo kunye nokungafani kokudalwa kwe*KPIs* ne*FPMs*, okunokwenzeka ukuba ziphumele kuphando olwahlukeneyo koko kwenziwayo.

Igalelo kulwazi: Olu phando lolokuqala ukuba nezi nkalo zilandelayo: iifemu ezikhethiweyo ezivela kuluhlu olupheleleyo lweefemu ezidweliswe kwi*JSE*, ngokugxininisa ngokukodwa kwi*RGC post-King III* kunye ne*IV*; ifuthe lokumodareyitha le*RGC* elivavanyiweyo;

ukuthelekiswa kwe*FPMs* ne*KPIs*; ukufundwa komsantsa kumvuzo ngokwalapha/ngokwasekuhlaleni; lwaze lwasebenzisa abameli bokusebenza okuzinzileyo abahambelana noko kwenziwayo okanye umsebenzi. Olu phando luye lwachonga neziphene zesikhokelo sophando laze lwacela umngeni we*agency theory*.

Amagama angundoqo*: Umvuzo, isigqeba, umvuzo wesigqeba, ukusebenza kwefemu, unxulumano lomvuzo wokusebenza, umsantsa womvuzo, ifemu, amanyathelo okusebenza kwefemu, izalathisi ezingundoqo zokusebenza, ulawulo, ulawulo lwemivuzo, ulawulo lwenkampani, ukuthotyelwa kolawulo lwenkampani, ukuthotyelwa kolawulo lwemivuzo*

KAKARETSO (ABSTRACT IN SESOTHO)

Sepheo: Thahasello ya lefatshe ya bokgoni ba puso ya koporasi ba ho eketsa leruo la feme ho latela karabelo ya yona ho manyofonyofo/ho putlama ho entse hore ho be le phehisano ya kgopolo ya lefapha le ratwang ke diphuputso tse seng di ntse di le teng, ha di bapiswa le botsamaisi le dikgopolo tsa tlhodisano. Phuputso ena e ikemiseditse ho hlahisa moralo wa mohopolo o hokahanyang boikamahanyo ba puso ya meputso (RGC), meputso ya batsamaisi, lehokelo la ho lefshwa, sekgeo sa meputso ya basebetsi ba botsamaisi, le tshebetso ya feme ya difeme tse lenaneng la JSE.

Mekgwa e sebedisitsweng phuputsong: Ho sebedisitswe katamelo ya phuputso ya se teng ya nnete le moelelo le e kopantseng bongata le boleng ho sheba difeme tse thathamisitsweng ho JSE pakeng tsa dilemo tsa 2011 le 2020. Dintlha tsa bobedi tse tswang ditlalehong tsa selemo le selemo, datapeisi ya IRESS, le dingodilweng tse seng di ntse di le teng di ile tsa sebediswa ho hlahisa indekse ya RGC le ho ntsha dintlha tse ka sehloohong, ho kenyelletswa mehato ya tshebetso ya difeme (di-FPM) le matshwao a bohlokwa a tshebetso (di-KPI). Ho sebedisitswe dipalo-palo tse hlalosang, dikamano, ho kgutlela morao, le tlhahlobo ya papiso ho fihlella dipheo tsa patlisiso.

Diphumano: Diphetho di bontsha ho fokotseha ha RGC hara difeme tse kgethilweng, mokgatlo o fosahetseng pakeng tsa RGC le meputso ya batsamaisi, kamano e ntle pakeng tsa RGC le tshebetso ya feme, phello e mpe ya RGC ho lehokela la tshebetso ya meputso, phello e ntle ya tekanyetso ya RGC mabapi le kamano pakeng tsa sekgeo sa meputso le tshebetso ya feme, le ho kgaoha ha di-FPM ho tswa ho di-KPI tsa difeme tse thathamisitsoeng ho JSE, ho fana ka maikutlo a bothata bo sa tsotellweng ba ho qetela.

Diphello le dikgothaletso: Ho na le tlhokahalo ya ho qobella le ho beha leihlo RGC, le ho lekola mekgwa le metheo ya kgopolo-taba diphuputsong tse amang puso le meputso ya batsamaisi, tshebetso, kapa sekgeo sa meputso. Sena se bakwa ke hore mofuta le sebopeho tsa di-KPI di fapane le tsa di-FPM, e leng ntho e ka nnang ya fella ka patlisiso e sa amaneng le se etsahalang tshebetsong.

Tlatsetso tsebong: Thuto ena ke ya pele ya ho ba le: difeme tse kgethilweng ho tswa lethathamong le felletseng la difeme tse thathamisitsweng ho JSE, tse tsepamisitseng maikutlo ho RGC kamora Morena wa III le IV; phello e entsweng teko ya RGC; di-FPM tse bapisitsweng le di-KPI; sekgeo sa meputso se ithutilweng lehaeng; le tshebediso ya baemedi

ba difeme ba tshebetso e tsamaellanang le tlwaelo. Phuputso ena e boetse e hlwaile mefokolo ya mekgwa le ho phephetsa kgopolo ya setsi.

Mantswe a sehlooho*: Moputso, batsamaisi, meputso ya batsamaisi, tshebetso ya feme, lehokela la tshebetso ya meputso, sekgeo sa meputso, feme, mehato ya tshebetso ya feme, matshwao a mantlha a tshebetso, puso, puso ya meputso, puso ya koporasi, taolo ya kgwebo, tumellano ya taolo ya meputso.*

ACKNOWLEDGEMENTS

- I would like to acknowledge the undefinable contribution of my supervisor, Prof. Cosmas Ambe in compiling, refining, and finalising this thesis, his patience, guidance, support and understanding kept me encouraged throughout the research journey.
- Appreciation also goes to the Department of Higher Education's nGAP program, which has always prioritised my learning and development needs, this made my Ph.D. journey much easier and less stressful.
- Without the Department of Accounting Sciences and Walter Sisulu University at large, this would not have been possible, their support in numerous ways including relieving me for sabbatical leave has played a huge role. I also owe a special thanks to my colleagues in the Financial Reporting Line for willingly sharing my workload while I was on leave, I have no words to describe their high level of kindness and commitment to the mandate of our department at the institution.
- My Ph.D. journey has been lighter and enjoyable because of my lovely husband, Mnoneleli Rulwa, I thank him for everything, I lose words whenever I try to describe his amazing level of support and love.
- I would like to acknowledge my parents, my late dad, Mr Dabula Mnyaka, and my mom, Ms Nomaphelo Mnyaka, together with all my siblings, I am grounded and fearless because they are all my pillar of strength in all aspects of life. I appreciate their continued prayers.
- To my son and daughter (Nako & Lona), their distractions have been all I needed to regain strength and keep on going, otherwise, this journey would have been more stressful without you.
- I would also like to thank my Lord and saviour Jesus Christ, from whom I gained daily resilience, patience and good spirit which kept me on track with my Ph.D. project.

LIST OF TABLES

LIST OF FIGURES

LIST OF ANNEXURES

LIST OF ACRONYMS OR ABBREVIATIONS

CG:	Corporate governance
CGI:	Corporate governance index
CGC:	Corporate governance compliance
RGC:	Remuneration governance compliance’
FPMs:	Firm performance measures
Gap:	Pay-gap
HEPS:	Headline earnings per share
JSE:	Johannesburg Stock Exchange
KPIs:	Key performance indicators
LTIP	Long term incentive plans
RG:	Remuneration governance
RGCI:	Remuneration governance compliance index
RGCI-JSE:	Remuneration governance compliance index for JSE-listed firms
ROA:	Return on assets
ROE:	Return on equity
SA:	South Africa
SH%:	Percentage of executive directors’ shareholding
Size:	Firm size
SP:	Share price
STI:	Short term incentives
US:	United States of America
UK:	United Kingdom
%IND:	Percentage of independent directors

TABLE OF CONTENTS

CHAPTER ONE: INTRODUCTION

1.1. BACKGROUND

The regular amendment of the King Code, a South African corporate governance (CG) code, indicates that its objectives are being shaped continuously to clarify an enhanced expected outcome of good governance for firms. The most recent provisions of this code are detailed in the King IV Report, which was issued in 2016 for implementation on 1 April 2017. The current code is preceded by three (3) codes, the first of which was issued in 1994. CG is believed to have emerged to mitigate challenges that exist by default when ownership is separate from control of the firm; initially, these challenges were never anticipated. Hence, the system of separate ownership from control seems to have been initially favoured since it was believed that it is effective in achieving long-term shareholders' wealth. However, it became apparent that this system fails as corporate scandals continued to emerge as those entrusted with management mostly prioritised personal enrichment. The collapse of WorldCom (Agrawal & Cooper 2017:2), a telecommunications firm in 2002; the collapse of an Italian-listed bank named Banca Popolare di Lodi in 2005 following a failed takeover which led to the arrest of its then chief executive officer (CEO) (Zona, Minoja & Coda 2013:270); the collapse of Enron, an energy, commodities and services firm in 2005; and the scandal of Steinhoff in South Africa (SA) (Naudé, Hamilton, Ungerer, Malan & De Klerk 2018:13), can be cited as examples although the list is endless.

Corporate scandals are rare incidents, even though they have recently become more usual events which occur when managements' mischief suddenly gets exposed, revealing a noteworthy difference between a disguised corporate success and the real corporate position (Zona et al 2013:265). Zona et al (2013:265) is among the authors who has extensively highlighted, discussed, investigated, and commented on the corporate scandals that have occurred in the past decades. Different views exist as to where exactly the loopholes were in the management system as there were suspicions of weak controls (Agyei-Mensah 2016:90), poor CG (Rossouw & Styan 2019:169), poor monitoring (Zona et al 2013:280) and/or pure executive greed (Ndzi 2019:987). However, there was a clear need for government and other stakeholders to join efforts that sought to uphold high standards of good behaviour (Agrawal & Cooper 2017:2), which mostly emanated in the form of CG and legislation. For instance, the Sarbanes-Oxley Act was introduced in 2002 (Hail, Tahoun & Wang 2018:655) not only as a CG code but was passed into law in the United States of America (USA). The United Kingdom (UK) CG code was introduced in 2010 and revised in 2012, this did not fuel the level of confidence of investors as the code was still not mandatory (O'Dwyer 2014:113-114). SA CG

is no exception, the King IV Report was published in 2016 with an advancement of '*apply and explain*' replacing '*comply or explain*' in the previous code (Institute of Directors South Africa 2016:37). However, it still does not mean that the King IV Report has escaped evasion as '*apply and explain*' governance is also not binding.

Following the emergence and regular amendments of CG in different countries, scholars' attention gradually shifted to CGs' ability to create value for shareholders. This is grounded on the coherent belief that these advancements aim to protect shareholders' investments and wealth by creating an enabling environment for long-term survival of firms. Consequently, different studies, as indicated in section 1.2 below, began to assess CGs' impact, role, influence, effect, and contribution on a firm's value. The concern is whether greater corporate governance compliance (CGC) leads to increased firm performance or more reasonable executive pay and pay-gap. Elmagrhi (2016:16) confirms that the UK CG aimed at ultimately resolving issues connected to questionable executive pay practices, with particular focus on improving pay-performance link through requiring detailed disclosure of executive pay policies and amounts. This study examines whether compliance to governance leads to the reduction of executive pay and pay-gap while improving pay-performance link and firm performance in SA. This unveils the interconnectedness of these variables and expand the debate on the effectiveness of governance on the variables of interest. The SA context in particular, JSE-listed firms were used as their annual reports are publicly available. The study has a potential to influence pay, productivity policies and researchers' views.

1.2. LITERATURE REVIEW

Following acknowledgement of accounting irregularities by firms in their own accounting systems (Agrawal & Cooper 2017:2), regulation and CG became stringent to help firms better manage executive remuneration (Odzak & Skog 2017:1) in an attempt to eliminate the agency problem. For instance, the UK promulgated a more advanced code (O'Dwyer 2014:121-125), which requires firms to grant their shareholders' a right to approve or disapprove executive pay through voting at the annual general meeting (AGM) (Norman, Rose, Rose & Suh 2020:4). In SA, the King Code was advanced through King III Report in 2010 (Crafford 2015:107) and later to King IV Report in 2016 to enhance CG through better transparency, strong leadership and detailed disclosure. Consequently, scholars like Padia and Callaghan (2020:1); Elmagrhi, Ntim, Wang, Abdou and Zalata (2018:121); Ntim, Opong, Danbolt and Thomas (2012:1) began to conduct studies on the effects of different provisions of CG on executive pay and/or performance. Most often these studies were based on the agency theory which assumes that

managers are opportunistic and always prioritise individual interests over that of shareholders. Pay-gap is determined by taking the remuneration of executive members and comparing it to the remuneration of the average employee (Conyon & Read 2000:4-5).

Some of the results indicate a positive effect, others a negative or no effect while some observed mixed results between CGC and either executive pay, performance, or pay-performance link. For instance, Ashwin (2015:73) evidenced a very strong connection between CGC and firm performance when Tobin's is used as a performance measure but no connection when return on assets (ROA) was being used in SA. Tshipa and Mokoaleli-Mokoteli (2015:164) also witnessed enhanced firm performance in firms with higher CGC in SA between 2002 and 2011. Marais and Strydom (2018:52) partly confirm these results as they observed a higher pay-performance link in firms with greater independence of remuneration committees in SA consumer and technology sectors, this despite the absence of a link with executive pay. However, it should be noted that the results in Marais and Strydom's study only stood when observed against one measure of firm performance namely, shareholders' return, but not with ROA. The notable common factor in Ashwin's and Marais and Strydom's studies is that CGC has no connection to ROA, which seems to confirm the observation by Tshipa, Brummer, Wolmarans and Du Toit (2018:380) that CGC boosts the market value of JSE-listed firms.

On the other hand, Urson (2016:56) who studied the relationship between pay-gap and firm performance in the SA consumer sector, found no effect of high or low pay-gap on firm performance. Indicating that there is no detriment to firm performance in firms that have normalised a practise of disregarding employees' pay when determining CEOs' pay. Put differently; Urson (2016:56) witnessed no harm to firm performance in firms with CEOs who were excessively paid more than their employees compared to firms that considered their employees' pay in determining CEO remuneration. This suggests that there may be no alignment benefit with firm performance in pushing for the reduction of pay-gaps, advising that reduced pay-gaps should; therefore, be pursued independently of firm performance.

The prevalence of the agency theory in examining associations involving governance, executive pay, firm performance, pay-performance link and/or pay-gap has led to the criticism of CG when authors' findings become different from expectations. This criticism originates from a complete disregard of a possibility that the associations can also be explained by alternative theories like stewardship theory and tournament theory. Something that is likely to

have contributed to the mixed results that the literature has portrayed. A detailed literature review is presented in chapter three.

1.3. PROBLEM STATEMENT

Without taking away the possibility that CG may influence executive pay, firm performance, pay-performance and/or pay-gap in favour of shareholders, as witnessed by some of the scholars in this study, it is appealing to make a deep reflection of whether this influence should always exist or be one sided. The aim is to get a broad understanding of the behaviour of executive pay, firm performance, pay-performance and/or pay-gap when levels of governance vary. It is also important to find out if the expected variation in those variables is in line with the aim of CG since there may be other factors outside CG that have a potential to moderate the connection between CG and firm performance, executive pay pay-performance link and/or pay-gap (Filatotchev & Wright 2017:3-16).

Relying on the agency theory in assessing compliance to governance and its effect on firm performance, executive pay and/or pay-gap necessitates a deeper insight as it has methodological implications, which are likely to be different had alternative theories been considered. Equally important is to consider that there are factors in the development of CG which may not necessarily relate to executive pay, performance, pay-performance link and/or pay-gap individually, coupled with other factors which are likely to moderate the relationship. It is necessary to evaluate whether it is as obvious as generally expected that remuneration governance (RG) ought to lead to the increased firm performance and/or reduction of executive pay and pay-gap. Prior literature has evaluated either provisions of CG individually or collectively using a governance index against either executive pay, firm performance, or pay-performance link. There is currently no study to the knowledge of the researcher that has demonstrated the interconnectedness of compliance to governance, executive pay, performance, pay-gap, and pay-performance link. Also, prior literature, most of which has been conducted abroad, has focused mostly on constructing a governance index that covers corporate governance in its entirety, most of which is beyond the regulation pay. Pay-gap has also been ignored in the current literature despite it being at the centre of current regulations locally and internationally. This study addresses these gaps by focusing only on RG, which is a section on the King Code that regulates how pay should be handled. Therefore, the aim of the study is to develop a conceptual model linking RG compliance (RGC), executive pay, performance, pay-performance, and executive-employee pay-gap. A remuneration governance compliance index (RGCI) has been constructed to measure RGC. JSE-listed firms

were targeted population since their annual reports from which data was extracted are readily available in the public domain.

1.4. RESEARCH AIM, OBJECTIVES AND RESEARCH QUESTIONS

1.4.1. Aim of the study

The aim of the study is to develop a conceptual model that explains and predicts whether RGC enhances firm performance and pay-performance link and/or reduces executive pay and pay-gap of the selected JSE-listed firms between 2011 and 2020.

1.4.2. Research objectives

The aim of the study above has been supported by the following objectives, to:

1. determine the extent of RGC of the selected JSE-listed firms between 2011 and 2020.
2. assess if there is a relationship between RGC and firm performance.
3. evaluate if there is a connection between RGC and executive pay.
4. examine if there is a relationship between executive pay and firm performance and to assess the moderating effect of RGC on this relationship.
5. investigate if there is a relationship between executive-employee pay-gap and firm performance and assess the moderating effect of RGC on this relationship; and
6. investigate similarities and divergences between firm performance measures (FPMs) of researchers on associations involving governance, pay, performance, pay-performance link, and pay-gap against key performance indicators (KPIs) of the selected JSE-listed firms between 2011 and 2020.

1.4.3. Research questions

The research questions are as follows:

1. To what extent do the selected JSE-listed firms comply with remuneration governance between 2011 and 2020?
2. Does a relationship exist between RGC and firm performance of the selected JSE-listed firms?
3. Does a connection exist between RGC and executive pay of the selected JSE-listed firms?
4. What is the relationship between executive pay and firm performance? Does RGC moderate this relationship?
5. Is there a relationship between pay-gap and firm performance? Does RGC moderate this relationship?

6. To what extent are FPMs of researchers on associations involving governance, pay, performance, pay-performance link, and pay-gap similar to the KPIs of JSE-listed firms?

1.5. SUMMARISED METHODOLOGY

The aim of the study was achieved by following a convergent mixed method based on the pragmatism ontology, more information can be found in sections 4.2 and 4.3 of chapter four. Mixed method was motivated by the level of complexity in the RG subject, which is exacerbated by the broad nature of KPIs that are utilised by JSE listed firms to determine executive pay as observed in this study. Secondary data was collected between 2011 and 2020, the research instruments used integrated annual reports (IAR), IRESS Database and journal articles, sections 4.4 and 4.5 of chapter four provide more details. Sample size was 77 JSE listed firms from different sectors, this was selected from a full list of firms in the primary JSE listing using a criterion which excluded firms listed in the financial sector, firms that reported in foreign currencies, firms that were subsidiaries of other JSE listed firms and firms that did not have full ten years annual reports.

Before the main study was conducted, a pilot study was done on 9 firms that were randomly chosen from the main sample. The aim was to test the appropriateness of the data analysis approach to answer the research questions, which also assisted in enhancing the validity and reliability of the research. The results of the pilot study were similar to those of the main study and a decision was made not to present them separately. The pilot study improved the research in particular; as far as selecting the variables of the study is concerned, benefits of the pilot study are detailed in section 4.9 of chapter four. For the main study, data was incorporated into the excel spreadsheets before it was analysed, detailed explanation of the steps taken to collect data for each variable featured in this study can be found in section 4.10 of chapter four. Data was a panel data and featured dependent variables, independent variables, control variables, a moderator variable as well as comparative variables, the later was for the qualitative aspect of the study, more information about this can be found in section 4.8 of chapter four. Data was analysed using quantitative and qualitative research, this included descriptive statistics, Pearson's and Spearman's correlations, OLS regression as well as comparative qualitative analysis, section 4.12 of chapter four provides all the details about data analyses. Results of the data analyses are presented in chapter five and concluded in chapter six.

1.6. THESIS STATEMENT

High RGC should not be expected to enhance firm performance, improve pay-performance link, and/or reduce executive pay and pay-gap as the focus of RG is to enhance governance of pay, while there are many other factors outside RG that can shape these variables.

1.7. SIGNIFICANCE OF THE STUDY

The study contributes to the existing literature in the form of a new conceptual model that looks at the interconnectedness of RGC, executive pay, firm performance, pay-performance link, and pay-gap with the focus of predicting and explaining the connections among these variables. The study is useful to firms, whether listed or not, private, or public, profit or non-profit firms when formulating productivity goals and pay policies. This is since the objectives about pay-performance link and pay-gap have unveiled the influence of RGC on these two variables. It is also useful to government and related agencies when shaping current legislation, governance codes and pay and/or governance related frameworks in the future. The study is likely of great use to academics and other researchers as it motivates for a review of theory foundations and careful selection and/or measurement of variables in the governance and/or pay and/or performance subjects. This is since the agency theory has long dominated the field of finance even when it is failing to explain and predict what happens in practice.

1.8. CHAPTER OVERVIEW

The thesis contains the following chapters:

- Chapter one contains the background, brief literature review, problem statement, aim, research objectives, research questions, brief methodology, thesis statement as well as the significance of the study.
- Chapter two focuses on three theories that have been featured in this study namely, the agency theory, stewardship theory and tournament theory. Each of these theories have been discussed looking at their broad definitions, tests in practice, relevance to the study and links with each other, and such like.
- Chapter three covers the literature review related to the objectives of this study. It broadly discusses the concept of RG and pay policy as a component of RG. The two other components of RG have been discussed looking at their effect on executive pay, firm performance, pay-performance link and/or pay-gap. This is followed by a discussion of the endogeneity problem that can arise from different factors including

the neglect of executive KPIs when selecting FPMs. This chapter ends with the discussion of the gap that this study aims to fulfil.

- Chapter four presents the research methodology which includes but is not limited to the research paradigm, research approach, research design, research instruments, pilot study, sampling approach, data collection, data analyses, validity, reliability, and ethical considerations.
- Chapter five presents and discusses the results towards achieving the research objectives. Objective one results were obtained and discussed from descriptive statistics only, the results of objectives two to five included descriptive statistics, correlations, and regression analyses while the results of objective six were obtained from a comparison of FPMs and executive KPIs.
- Chapter six focuses on a single item of presenting a conceptual model that the study sought to develop, this was done by first highlighting the summary of the study's results.
- Chapter seven covers the summary of results for each of the six objectives of the study, a presentation of the conceptual model both in a discussion and diagrammatic format, the study's implications, recommendations, contribution to knowledge, study's limitations, and suggestions for future research and conclusion.

1.9. CONCLUSION

This chapter provided a motivation for the study's aim by first presenting a background (section 1.1) that flows from the issues of separating ownership from control, which the authorities addressed by introducing CG among other approaches. The views about the extent to which CG has been successful in addressing this problem were briefly highlighted in section 1.2, which was also used as a basis for the problem statement. This was followed by outlining the problem statement, research objectives and research questions. The approach used to achieve research objectives of the study is briefly outlined in section 1.5 and detailed in chapter four. Chapter two below covers the theoretical grounds of the study.

CHAPTER TWO: THEORETICAL FRAMEWORK

2.1. INTRODUCTION

A theoretical framework is the pillar of every research study and a basis on which knowledge is built, its level of importance cannot be stressed enough (Grant & Osanloo 2014:12). In management research like this study, theories are crucial (Mayer & Sparrowe 2013:917). Numerous studies including Dumay, Torre and Farneti (2019:20); Keay (2017:1296); Glinkowska and Kaczmarek (2015:88); Pepper, Gosling and Gore (2015:30); Brueckner and Neumark (2014:198); Wiseman, Cuevas-Rodríguez and Gomez-Mejia (2012:217); Gilsdorf & Sukhatme (2011:2405); Chen, Ezzamel and Cai (2011:1178); Jiraporn, Miller, Yoon and Kim (2008:622); Berger and Bonaccorsi di Patti (2006:1065); Zsidisin and Ellram (2003:15); Dicke and Ott (2002:463); Bognanno (2001:290); Wright, Mukherji and Kroll (2001:415) have relied on theory/ies to conduct research and make conclusions.

Several theories as highlighted by Yusoff and Alhaji (2012:53-58) have been mostly used to study executive pay in the finance field. Clarke (2004:1) call these 'theories of corporate governance (CG)' since the argument is that they likely have all contributed to the provisions of remuneration governance (RG) either individually and, or collectively though the contributions may have been limited to a particular aspect of RG instead of the whole governance code. The emergence and advancement of RG has arguable been motivated by corporate scandals or failures (Agrawal & Cooper 2017:2), which are often the symptom of the agency problem and usually manifests in the form of excessive executive pay and/or a poor pay-performance link (Carter, Li, Marcus & Tehranian 2016:10).

Since the focus of the study is on various variables that include RGC, executive pay, firm performance, pay-performance link and pay-gap, its theoretical grounds need not be too much constrained such that it is impossible to adequately achieve the objectives of the study. Simultaneously, the theoretical choice need not be too wide or unnecessarily broad such that the focus of the study is vague. Ngulube (2020:26-27) warns about theory diversification while supports the application of theory triangulation. Theory diversification refers to using many theories without connecting their concepts to the study while theory triangulation refers to the effective use of more than one theory to investigate and interpret the study (Ngulube 2020:26-27). Different theoretical perspectives are crucial, as acknowledged by Ngulube (2020:22) when highlighting that by default, every theory is lacking as there are no theories that can explain every existing life issue or practicality. This means that dependent and/or independent capabilities of a theory are limited to a particular reality and are therefore, not always broad

enough to cover all facts associated with a specific subject. The contradiction in the results as noted in the background of this study may be due to the limitation of a single theory.

The other common foundation in the research space is conceptual framework, which "*… allows you to draw your own conclusions, mapping out the variables you may use in your study and the interplay between them*" (Scribbr No date). Since this study did not attempt to derive concepts from the chosen theories to answer the research questions, the approach has been that of a theoretical framework. This chapter has therefore, used three theories which are presented in the sections that follow. Section 2.2 presents the agency theory, section 2.3 covers the stewardship theory, section 2.4 discusses the alignment of interest, section 2.5 covers the tournament theory and lastly section 2.6 outlines the conclusion of this chapter. The three selected theories have been discussed and linked to the study and to each other to explain their usefulness in the achievement of the study's objectives.

2.2. AGENCY THEORY

Agency relationship arises when firm owners (principals) delegate to managers (agents) the authority to run the firm on the principals' behalf (Jensen & Meckling 1976:308). Agency theory basically exists because agents and principals both strive to extend their individual utility (Kanzow 2014:26). The theory states that managers tend to take measures to by-pass the board with the intention of scoring as high salary as possible, this is often referred to as the agency problem and Deschenes et al (2015:67) calls it cronyistic conduct. The agency problem exists because the separation of management and ownership causes incompatibility in the interests of shareholders and managers. The latter then choose to misuse their authority of managerial discretion by pursuing personal goals (Hassen, El Ouakdi & Omri 2015:593). Eisenhardt (1989:58) highlights two complications that exist in the agency relationships, the first one being the issue of risk-sharing when the principal and agent have different approaches towards risk. Generally in the agency theory, principals are believed to be risk-neutral while agents are viewed as risk-averse with the intention to reduce the risk towards own wealth (Wright et al 2001:413-414). This incompatibility in risk attitudes exacerbates the challenges that are inherent in the agency relationships.

The second complication that Eisenhardt (1989:58) highlights is the issue of the agency problem, existence of which is commonly confirmed by the presence of either or both of the two symptoms. The first symptom being the conflicting objectives between the principal and the agent and the second symptom being the situation where the principal is not able to validate the actions of the agent, whether due to complications or significant costs. The second

symptom is one of the factors that motivates this study as it confirms that principals' inability or unaffordability to validate agents' actions is sometimes compensated by assuming that the agency problem exists without further investigation of the owner-manager relationship, something that is less likely to always be the case. Put differently, although an agency problem may not exist in a particular firm, it may still be assumed to exist if principals are not confident or resourced in their approaches to validate the actions of agents. Perhaps this is the reason some of the studies could not find the appropriate link between RGC and firm performance and, or executive pay. How can there be say a reduction in executive pay post-RGC if the agency problem that RG sought to minimise by curbing pay never existed?

If the agency problem exists, it is best for owners to run companies themselves (Davis, Schoorman & Donaldson 1997:22) and create as much wealth as they can. However, continuous growth of firms tend to exceed the capabilities of a single owner (Davis et al 1997:22). This necessitates the hiring of agents to strategically integrate the goals of numerous owners to maximise the overall wealth of the firm. Agency problem can then be resolved by either finding the needed missing information or by granting agents enticements (Kanzow 2014:27) for their interests to be aligned with those of principals. The latter is the most popular. Enticements may include high salaries, piece-work pay, commissions, share ownership, generous bonuses, stock options, sharecropping, share in short- or long-term profits, pension funds and deductibles (Needle 2014:1; Shapiro 2005:265). Thus, leading to agency costs (to be discussed in sub-section 2.2.4 below).

With this theory being perceived as a corporate governance theory, it is vital that it forms part of this study. Below in this section are assumptions of the agency theory, explanation of the agency problem and agency costs, how the theory recommends that an agency problem be reduced, criticisms of the agency theory, test of the agency theory in practice, suggestions to improve the agency theory and lastly, link of the agency theory to the study.

2.2.1. Assumptions of the agency theory

Assumptions in the agency theory as outlined by Bosse and Phillips (2016:276) are that: (i). Parties are narrowly self-interested, which according to Cullen, Kirwan and Brennan (2007:12) means that principals and agents both want to maximise their wealth. Then agents who are viewed as opportunistic tend to take advantage of their positions to prioritise their interests over those of their principals, something that they can enforce at whatever expense; (ii). The rationality of the parties is bounded, which Bahli and Rivard (2003:213) understands as referring to the limitations of the human mind to foresee all possible consequences of their

decisions; hence the agency problem usually ends up getting exposed in firms at some point; and (iii). Agents are risk-averse, which means that they are less inclined to take high risks.

Wright et al (2001:415) also identify opportunism as one of the assumptions in the agency theory. Opportunism is portrayed as dangerous in that despite incentives and monitoring costs, it could still drive agents to disguise, misrepresent, misinform, exploit, trick, and manipulate processes in their favour. Opportunism is currently controlled by mandating companies to separate the role of chairman from that of CEO and enforcing that the chairman must be an independent non-executive member (Kim, Al-shammari, Kim & Lee 2009:1174). Petra and Dorata (2008:142) believe that in line with the agency theory, separating ownership from control by its very nature leads to more agency costs if the parent and the agent are both utility maximisers, something which many companies always aim to minimise through improving the pay-performance link.

2.2.2. Agency problem

Agency problem exists because the separation of management and ownership causes an incompatibility in the interests of shareholders and managers. The latter then could misuse their authority of managerial discretion to pursue personal goals (Hassen et al 2015:593). In other words, agency problem is an exploitation of shareholders' wealth directly or indirectly by displaying intentions that purport to be genuine when they are actually disguised by managers. Ndzi (2019:987) associates this with greed. Zona et al (2013:268) associates this attitude with the behaviour of psychopaths, who they describe as appealing, sophisticated, and crafty manipulators who are not ashamed to heartlessly chase own goals, which may include authority and supremacy when allocating benefits and status, regardless of the cost to other parties.

The agency problem can manifest in various ways for example, Carter et al (2016:1) deduced that abnormal CEO pay which inversely varies with firm performance is an indication of an unsolved agency problem. Whereas it was discussed in the background of this study that corporate scandals for instance, the case of Steinhoff, as outlined by Rossouw and Styan (2019:169), are another alarm for the existence of the agency problem. Most often, embedded in the corporate scandals is a complex mixture of circumstances, usually involving the side-lining of individuals who once had confidence in the CEO long before the scandal. Thus, taking for granted stakeholders' trust, disregarding the significant impact of economic damages, removal of executives from their positions, legal prosecutions, bankruptcy and sometimes switching of ownership and control to others (Zona et al 2013:265). Observations from

previous scandals, as highlighted in the background, indicate that unfortunately, shareholders do not know in advance whether their precious investments are trapped in the firm that is dominated by the agency problem.

This is among the reasons why CG and legislation became stringent (Hail et al 2018:618; Hill 2002:368-369), while finding its way into influencing how firms must be run. For instance, The Companies Act 71 of 2008 published by Republic of South Africa (2009:69) requires all listed firms to disclose all the details of executive pay. The King IV Report requires firms to further explain how they have considered ordinary employees in determining executive remuneration (Institute of Directors South Africa 2016:65). This is great progress towards improving the governance system in SA even though this code is still not binding. Elmagrhi (2016:16) indicates that in the United Kingdom (UK) various pieces of legislation were invented to re-establish confidence of investors by enhancing accountability and transparency. However, it is not clear whether there is a reward in this effort of advancing CG as far as minimising the agency problem is concerned, as the literature divulges contradicting views. These diverse views have been presented in the literature review chapter as they relate to different areas of focus of this study.

From the background of this study, one can sense that the literature has associated the development and advancement of RG more with the agency theory than with other theories like stewardship theory, contingency theory, and virtue ethics theory, for example. This creates an assumption that RG was mainly meant to address the agency problem; hence it gets easily criticised when high compliance to governance does not result in high firm performance and pay-performance link or reduced executive pay and pay-gap. This chapter has used theories to discuss this perception with regards to the link between RGC and firm performance, executive pay, pay-performance link and/or pay-gap.

2.2.3. Agency costs

Agency costs are the costs associated with managing the agency relationship and/or reducing the agency problem (Jensen & Meckling 1976:308). These costs may include costs of recruitment, specifying preferences, managing the achievement of preferences, designing and handling incentives, reducing self-interest, stealing, deceit, monitoring, policy development, insurance, agents who monitor agents and agents who monitor those who monitor other agents, and the cost of failure in all these efforts, amongst others (Shapiro 2005:281). According to Kanzow (2014:27), agency costs typically include monitoring costs, which are costs associated with controlling, managing, observing and, or measuring the behaviour of

agents. Also bonding costs, which are related to providing and following systems that are meant to observe the agent to work in the best interest of principals (Kanzow 2014:27). Residual loss is also part of the agency costs and is incurred as a result of failed monitoring and/or bonding processes, the author further highlighted.

Though agency costs are difficult to measure, they are definitely substantial (Bosse & Phillips 2016:277). Part of the agency costs involve incurring more rewards to induce executives to pursue shareholders' interests above their own (Rampling 2015:16). The literature has paid particular attention to bonding-related costs since according to Pecher (2012:5), they can mitigate the agency problem effectively by linking pay to firm performance and thus, give executives incentives to be productive. Variable executive pay is clearly part of bonding costs since according to Barbosa, Bucione and Souza (2014:6), it was initially introduced with the aim of mitigating the agency problem.

Petra and Dorata (2008:142) believe that CG exacerbates agency costs by recommending the separation of chairman from the CEO position which Donaldson and Davis (1991:51) finds unnecessary as they witnessed that an independent chairman does not improve shareholders' wealth but CEO does. There is also an argument around principals assuming that agency problem exists in the firm just because they fail to verify what agents are doing, leading to more agency costs which may sometimes be unnecessary. This chapter also debates the implications of twisting the positions of managers from those of stewards to those of agents and vice versa together with the possible effect of this on RGC, executive pay, firm performance, and pay-gap.

2.2.4. Proposals to reduce the agency problem

The agency theory posits that leverage, monitoring as well as incentives which include stock options are capable of preventing agents from exploiting firms by aligning their interests with that of principals and thus enhance pay-performance link (Bosse & Phillips 2016:279; Li 2016:4). Adhiambo (2011:36-37) concurs as they believe that financial rewards are an effective tool to minimise the agency problem. However; Mnyaka-Rulwa (2019:62) failed to witness that stock options can minimise the agency problem in their study of performance-based CEO pay and firm performance in the SA mining sector. Nevertheless, Nyberg, Fulmer, Gerhart and Carpenter (2010:1044) defends the agency theory arguing that it was neither meant to ensure every firm's success nor the panacea to guarantee solutions to every corporate mess.

The other approach to reduce the agency problem is to minimise the information asymmetry (Kanzow 2014:26-27) either by finding the needed missing information as earlier outlined by Eisenhardt (1989:58) or by granting agents enticements in the form of incentives. On the other hand, Kim et al (2009:1174) think that opportunism, previously referred to as narrow focus, may be controlled by mandating companies to separate the role of chairman from that of CEO and enforcing that the chairman must be an independent non-executive member.

2.2.5. Criticism of the agency theory

Shapiro (2005:278) cites the fact that the agency theory highlights principals as the victims of circumstances in the principal-agent relationships which might not always be realistic. This leads to the neglect of the perspective of agents, who may perceive the agency problem differently, as they usually find themselves having to serve numerous masters or shareholders to create firm's wealth. As a result, the author believes that even if agents could manage to overcome their self-interests, challenges may arise in attempting to balance the varying interests of different principals sometimes with irreconcilable differences, which agency theory misunderstands. The author further believes that it is wrong for the agency theory to anticipate that agents are always opportunistic or that there will always be agency problems while the nature of these problems cannot be clarified. Shapiro (2005:281) further argued that to expect that the agents will be somewhat disinterested to avoid making wrong preferences for principals' works to the detriment of the firm's reputation, goodwill and most importantly, profitability.

Although it is fair to admit that there may be agents who are unashamedly opportunistic, it is simultaneously unfair to assume that none of the agents can constrain themselves and preserve ethics or follow their conscience (Noreen 1988:359). Again, it is important to note that not all agents are self-interested, some principals might oppose this because they sometimes unconsciously and unfairly act towards the agents (Bosse & Phillips 2016:294). Bosse and Phillips (2016:294) further believe that mistreating executives is likely to result in significant costs which even the agency theory fails to foresee.

Panda and Leepsa (2017:79) highlights that the agency theory encourages ultimate contracting with executives hoping to eradicate the agency problem when in practice, it is failing due to different factors including opportunism and information asymmetry. Also, the agency theory fails to eliminate unfortunate behaviour by managers through its trusted but sometimes futile incentives (Grundei 2008:144). Lan and Heracleous (2010:309-310) believe that agency theory needs a critical re-examination due to its debatable assumptions and lack

of support from empirical research. The narrow focus of this theory is a concern as it is built in the context of one principal and agent, which makes it irrelevant to particular social agency relationships (Wright et al 2001:414). However, Wiseman et al (2012:217) perceived the narrow focus issue as unfounded as it would be overcome by introducing institutional perspective into the agency theory. Bosse and Phillips (2016:281) concur with this perception on the basis that critics tend to inaccurately attack a theory assumption without considering alternatives.

Another criticism come from Pouryousefi and Frooman (2017:2-3) who argue that the agency theory has been hijacked by business ethicists who think that economic activities cannot be appropriately carried out when agents' behaviour is independent of ethical foundations. Although it is uncommon to find arguments in favour of unethical beliefs, the fact that CG has minimised room for unethical behaviour to work in favour of the unethical executives makes it less crucial whether the executives are actually ethical or not, making the argument by Pouryousefi and Frooman (2017:2-3) reasonable.

Eisenhardt (1989:58) implied that the agency theory is not a perfect theory; this is based on its perceived level of influence in the finance field when it is simultaneously found to be controversial. Heath (2009:498-499) cautions that the agency theory has been abused and used in situations where it is irrelevant. Its main role was to indicate how principals can be in a distinctly vulnerable situation compared to agents (Heath 2009:498-499). This justifies the intervention of regulations and laws and does not mean that principals are indeed or always in the defenceless positions. This supports the argument that sometimes there may not be an agency problem in the firm. As such, greater RGC might not improve firm performance or reduce executive pay and pay-gap.

2.2.6. Test of the Agency theory in practice

Globally, different studies such as Arthurs and Busenitz (2018:159); Shapiro (2005:281); Tosi and Gomez-Mejia (1989:181) have tested the application of the agency theory to identify particular circumstances in which it stands or fails. Agency theory recommends monitoring (Ataay 2018:1154) as one of the tools to enhance governance and thus, constrain executive pay. Tosi and Gomez-Mejia (1989:181-182) discovered that monitoring is tighter in firms that are owner-controlled and as a result, pay alignment practices are more prevalent than in firms that are controlled by agents. The opposite would obviously be expected according to Jensen and Meckling (1976:308), as monitoring is designed to prevent the aberrant behaviour of agents, and not of the owner as there is no agency problem in an owner-controlled firm. This

clearly indicates that firms may have different views and apply varying ways to manage agents. These may not necessarily be in line with the agency theory, perhaps suggesting that the agency theory misunderstands how monitoring works or how firms manage agents' behaviour.

Shapiro (2005:280) on the other hand argues that most of the approaches adopted to ensure effective monitoring end up intensifying the hardships inherent in the agency relationships as they need monitoring as well. These approaches include but are not limited to audits, internal control functions, compliance officers, rating agencies, amongst others. Also, intensifying monitoring of agents encourages them to shift focus towards achieving key performance indicators (KPIs) (Shapiro 2005:281-282), which might not be what the monitoring exercise intended. That is the reason principals often choose to rather convince agents with the aim of saving on these infinite agency costs (Bosse & Phillips 2016:286).

Jensen (1994:41) promotes incentive-based pay with the hope that it would effectively align the interests of agents with those of principals. Scholtz and Engelbrecht (2015:46); Sapp (2008:741) confirmed this in their discovery that the higher the shareholding by CEOs, the more CEOs' pay becomes reasonable. With no share ownership, it practically means that managers are less if at all exposed to financial risk if the firms they run fail to create the intended shareholders' wealth. One would say there is progress with long-term incentive plans (LTIP) as Bussin and Blair (2015:546) witnessed the alignment; however several studies including Mnyaka-Rulwa (2019:62); Buck, Bruce, Main and Udueni (2003:1724) failed to witness the said alignment, highlighting that it is not always the case that LTIP are able to align pay to performance.

At the same time, Arthurs and Busenitz (2018:159) discovered that although the agency theory is able to explain agency relationships in venture capitalist firms, limitations of this theory emerge as soon as the venture capitalist invests in a new venture. The author believes this happens because the goals of the parties are likely perfectly aligned until the investment in a new venture is actioned.

2.2.7. Suggestions to improve the agency theory

To overcome the limitations of the agency theory, Pepper and Gore (2015:30) suggest a different version of this theory called 'behavioural agency theory' which they believe would better explain pay-performance link, agents' individual performance and shareholders' interests. According to the authors, this would address the lack of agents' motivation on the

traditional agency theory and thus, lead to maximum performance. This proposed model of the agency theory would assume that (i). Agents are boundedly rational as opposed to simply rational in the traditional agency theory, which means that agents' mindful abilities are limited, (ii). Agents' motivation can be intrinsic and extrinsic while neither independent nor combinable; this is opposed to the assumption in the traditional agency theory that motivation is mostly monitory, (iii). Agents are loss averse as opposed to the traditional agency theory which believes that agents are risk-averse, (iv). Agents are inequity averse, which means that agents dislike injustice; there is no similar assumption to this one in the traditional agency theory.

2.2.8. Link of the agency theory to the study

The dominant factor in the agency theory is opportunism, whereby agents are believed to be driven by the opportunistic attitude in their management approach, which may lead to them generating high rewards even when a firm collapses. This opportunistic attitude can be noticed from the background of this study where the consequences of a separate ownership and control are highlighted. These consequences manifest mostly in the form of excessive pay (Kanapathippillai, Johl & Wines 2016:385) and reduced firm performance (Carter et al 2016:10) which is usually assessed through the pay-performance link. These are believed to have necessitated the emergence of RG.

Additionally, the agency theory posits that the opportunistic attitude of agents is managed by introducing monitoring mechanisms and incentives (M+I) with the hope that the interests of managers will be aligned with those of agents (Cullen et al 2007:10). This means that in an ideal situation, there should be perfect alignment of interests between agents and owners post the introduction of effective monitoring and reasonable incentives. Unfortunately, an ideal situation is rarely achievable in real life, this is in line with Heath (2009:497) who indicates that a proper alignment is hard to reach in practice, which may be among the reason why pay-performance link still seems to be underachieved even post M+I. One of the ways to intensify monitoring has been CG (Yusoff & Alhaji 2012:53), providing the logic behind the common expectation of reduced executive pay and pay-gap as well as enhanced firm performance and pay-performance link in firms with high level of RGC.

In summary, there is a general belief that CG was built upon the agency theory with some authors even calling it a corporate governance theory. This is confirmed by its dominance in numerous studies that have investigated associations involving governance, firm performance, executive pay, pay-performance link, and pay-gap. However, its flaws as have been highlighted in sub-section 2.2.6 and its minimal effect on firms that are highly compliant

to CG as highlighted in section 1.2 above, make this belief questionable, suggesting that other theories may be relevant although neglected. This study has also explored the stewardship theory, which is also the theory of managerial behaviour with contradicting assumptions to that of the agency theory. This study aims to develop a conceptual model linking RG with executive pay, firm performance, pay-performance link, and pay-gap by investigating among other things, the relationship between RGC and firm performance, connection between RGC and executive pay, pay-performance link and the association between firm performance and pay-gap.

2.3. STEWARDSHIP THEORY

2.3.1. Why stewardship theory?

Studies that have assessed executive pay, performance and pay-performance link are mostly grounded on the agency theory (Olaniyi & Obembe 2017:330), supporting a belief that this theory is the cornerstone of CG (Cullen et al 2007:5). The literature also portrays a general assumption that the main focus of CG is to eliminate the existing agency problem in firms (Martin & Butler 2017:1), when there is not always proof that the agency problem exists. The absence of the agency problem in firms that are assumed to have it might be among the reasons why CG has been accused of being ineffective. It cannot be disputed that some managers may become agents who intend to prioritise personal goals at the expense of firms' goals and end up extracting maximum rents possible. At the same time, it cannot be ignored that there may be managers with a different mind-set from that of agents, whom Martin and Butler (2017:4) assert carry out their duties with honesty and integrity. Using a blanket approach and adoption that all managers are agents leads to mixed results (Davis et al 1997:26) as observed in the background of this study, something that may perhaps worsen in the case of a large sample.

With this said, the concern is whether it is fair to attribute mixed results to CG's failure that has mostly been studied from a single perspective while neglecting the possibility that the agency theory may have been insufficient to explain the results. Davis et al (1997:20) concur that the entire reliance on the agency theory may be unrealistic as its concepts may not hold true for all managers. Besides, firm relationships may be difficult beyond the ability of an agency theory, necessitating the involvement of a stewardship theory (Davis et al 1997:43). Martynov (2009:239) acknowledges this and concurs that both agency and stewardship theories are not adequately comprehensive to be applied individually. This implies that neither of the two

theories are individually adequate in developing appropriate governance systems (Grundei 2008:150).

Therefore, different theoretical perspectives about the conduct of managers are necessary in this study. The agency theory has been utilised to explain the results from the perspective of agents or managers that are driven by self-interest. On the other hand, the stewardship theory has been used to explain the results from the perspective of managers whose interest may be aligned to that of owners. Detailed discussion of the stewardship theory is presented in the sub-sections below broken into the explanation of the stewardship theory; followed by its assumptions; then a comparison of agency and stewardship theory; after which a discussion of whether or not accountability features in the stewardship theory; followed by stewardship theory in practice; the link of the stewardship theory to the study; and lastly, the link between stewardship and the agency theory is presented.

2.3.2. Stewardship theory explained

Stewardship theory is built on the belief that managers' satisfaction is driven by the job well done in the firm (Glinkowska & Kaczmarek 2015:88-89). This means that the priority of the firm is the priority of the manager, the long-term goals of the firm are the same as the long-term goals of the manager. There is therefore, absolutely no misalignment of interests (Glinkowska & Kaczmarek 2015:88-89). Thus, there is a significant positive correlation between managers and shareholders' wealth, which also mostly leads to the successful satisfaction of other stakeholders (Yusoff & Alhaji 2012:57). Even if opportunities arise for managers to loot or for interests to get misaligned, stewards do not diverge from corporate goals as they place more value on collectiveness or cooperation than on self-interest (Davis et al 1997:24). Though this type of conduct may sound too good to be achievable in practice, Davis, Frankforter, Vollrath and Hill (2012:40-41) attest that steward oriented behaviours do exist. Hernandez (2012:174) describes *"…stewardship as the extent to which an individual willingly subjugates his or her personal interests to act in protection of others' long-term welfare".*

2.3.3. Assumptions of stewardship theory

The main assumption in the stewardship theory is the covenantal relationship between owners and managers; this is a commitment that binds both parties to honesty and is grounded on moral obligations and a sense of internalised pressure, which is sometimes called social contract (Hernandez 2012:173). Hernandez (2012:173) further indicated that this contract does not need to be formalised although it is a powerful foundation to direct the roles of the

parties and determine the future of the firm. Inherent in the stewardship theory is also intrinsic motivation of managers as opposed to monetary motivation in the agency theory (Cullen et al 2007:14). This means that managers' drive to work hard is not tied to reward systems of the firm or any other form of external recognition, but to the individual mandate to achieve agreed goals. In the stewardship theory, the only factor that is capable of influencing steward performance is the structural position of the firm as stewards always wish to operate in a firm whose structural position promotes their effective action (Davis et al 1997:25) in order to achieve maximum firm goals. The challenge with the stewardship theory is that opportunism, if it happens to exist is unfortunately likely to remain undetected due to the excessive – or say –blind trust of managers (Grundei 2008:149-150).

2.3.4. Stewardship versus agency theory

Dumay et al (2019:2) asserted that, *"Economic approaches to governance such as agency theory tend to assume some form of homo-economicus, which depict subordinates as individualistic, opportunistic, and self- serving. Alternatively, sociological and psychological approaches to governance such as stewardship theory depict subordinates as collectivists, pro-organizational, and trustworthy"*. These two theories clearly oppose each other as the foundations of stewardship theory are different from those of the agency theory. Keay (2017:1296) highlighted that stewardship theory is complementary to the agency theory while Dumay et al (2019:29) believe that it an alternative to the agency theory. Table 2.1 below outlines opposing foundations of these two theories as they both attempt to explain managers' behaviours.

Table 2.1: Comparison between the agency and stewardship theory

	Agency theory	**Stewardship theory**
Opportunism	Opportunistic managers	No opportunism
Trust of managers	Rigid distrust	Absolute trust
Conflict of interests	Assumed to always exist	Assumes mutual interests
Monitoring	Is trusted as the solution	Consultation, co-operation, and collaboration is emphasised
Manager motivation	Extrinsic and purely financial	Intrinsic

Source: (Grundei 2008:143)

Davis et al (1997:42-43) argue that precise characteristics of the manager and situations in which each of these two theories perfectly fit need to be explained instead of being criticised. This argument makes sense as these theories tend to become similar at some point. This is

the point where there is effective monitoring as recommended by Jensen and Meckling (1976:308) such that the agency problem is eliminated in the firm.

2.3.5. Relevance of accountability in the stewardship theory

Since accountability is at the centre of many governance codes (Keay 2017:1293), it makes sense to wonder whether stewards need to account or not. This is based on the fact that stewardship theory is built on trust that managers always perform the way firms' owners would. Grundei (2008:149) questions this trust and expresses doubt of its ability to stand in practice. Stewardship trust is a matter of debate that is beyond the scope of this study. Dumay et al (2019:29) on the other hand are of the view that accountability may not be at the forefront of CG, which tempts a reflection on the role of pay disclosure, an element of RG. Keay (2017:1298) believes that accountability is equally essential in the stewardship theory as it is in the agency theory because it is not meant to abolish or undermine the good spirit of trust upon which stewardship theory is built but aims to ensure that executives can explain their decisions. There are limited studies on accountability and stewardship theory; hence this discussion could not be expanded further. There have also been limited attempts to explain accountability in the literature although the term has been frequently used in the King IV Report.

2.3.6. Stewardship theory in practice

Lindqvist and Mijovski (2012:3) who investigated whether stewardship and agency theory apply in venture capitalist firms witnessed that venture capitalists use contracting to avoid owner-manager challenges and end up achieving a stewardship position where agency costs do not exist. De Falco and Renzi (2007:40) who studied residual rights against stewardship and agency theory discovered that in the case where the stewardship theory is practiced to the extreme, it tends to result in similar situations to those of the agency theory. These findings are similar to those of Pastoriza and Montreal (2008:3) who noticed that although the behaviour of stewards is attractive for firms' success, agents do not get inspired to the extent of being willing to deviate from their positions towards those of stewards. Meanwhile Sánchez (2001:16-17) who studied managerial behaviour versus power distance against agency and stewardship theories discovered that higher power is associated with agency theory while minimal power drives the behaviour of managers to those of stewards. This is consistent with the presentation by Schillemans (2013:545) who demonstrated that steward oriented goals are achievable in situations where managerial power is low and that high power is applicable in agency relationships.

Kuppelwieser (2011:287) who studied the role of stewardship versus agency theory in influencing employees' productivity witnessed that stewardship theory is more effective, concluding that the leadership style managers decide to follow is crucial as it can determine the success or failure of firms. Madison (2014:151-153) witnessed that both stewardship and agency theory are effective in their distinguished ways of enhancing firm performance within a family context. This is since according to the authors, the agency theory managed to ensure that only reasonable pay is paid to managers while stewardship theory ensured that steward conduct was maintained to enhance firm performance.

2.3.7. Link of the stewardship theory to the study

There are three dominant features in the stewardship theory, the first feature is the covenantal agreement, which is regarded as a tight commitment between the owner and the steward such that no circumstance is valid enough to encourage the steward to contravene or break this covenant (Davis et al 1997:24). The second feature in the stewardship theory is intrinsic motivation instead of explicit rewards like money and other popular incentives, which Martin and Butler (2017:5) refer to as good feelings after hard work and achievement of intended goals. The third feature is a firm's structural position (Madison 2014:14) that must be able to facilitate effectiveness in operations, Davis et al (1997:25) highlighted that only this feature is capable of influencing executive performance under the stewardship theory. The presence of intrinsic motivation and structural position features suggests that executive pay is irrelevant in influencing executive performance in the stewardship theory.

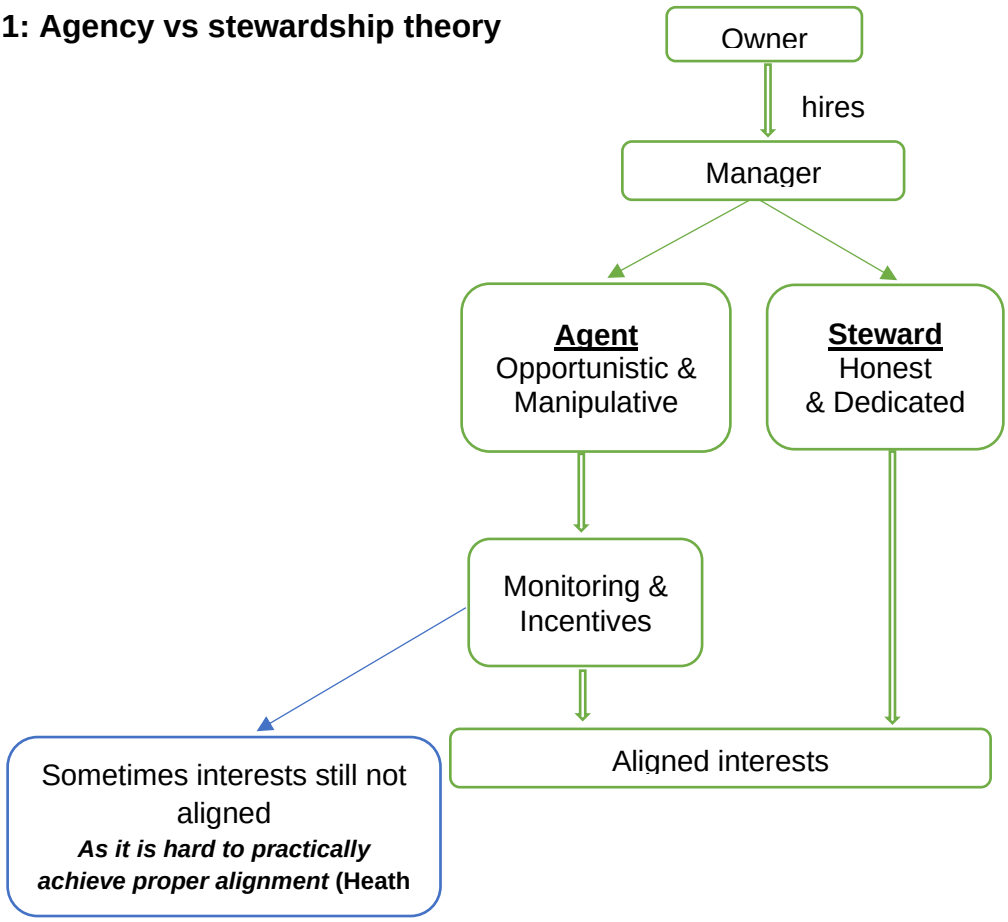
Stewardship theory therefore, assumes a perfect alignment of interests between owners and managers (Boon 2018:100; Snippert et al 2015:574; Mills & Keast 2009:14) initially and subsequently during the course of the owner-manager covenant or relationship. The need to monitor the manager is absent (Davis et al 1997:25), and therefore, M+I are irrelevant. The implication of this is that in a perfect stewardship world, a firm that is controlled by a steward is likely have the same results pre- and post-RGC, something that in most cases is associated with a failed RG. Hence, this theory is part of the study.

2.3.8. Link between the stewardship and the agency theory

Both the agency and stewardship theories attempt to interpret the behaviour of managers (Martynov 2009:239) from different perspectives. These theories are built on different foundations and are driven by contradictory assumptions; however, at some point they tend to find each other. This happens when M+I under the agency theory manages to align the interests of owners and managers while those of the stewards are aligned by default. Different

interests exist in these theories with the managers choosing to address them differently, agents tend to pursue an individual or self-interest while stewards tend to pursue collective interest (Martynov 2009:241-242). The extent to which pay is aligned to performance is mostly assessed through pay-performance link under the agency theory. The absence of extrinsic motivation in the stewardship theory, which indicates that executive pay is determined independently of firm performance suggests that the use of a pay-performance link and the interpretation of results should be done with caution under this theory. Figure 2.1 below depicts the comparison between the agency and the stewardship theory to show a point where these two theories converge.

Figure 2.1: Agency vs stewardship theory



Source: Author's conceptualisation (2021)

Figure 2.1 above depicts the process towards the point at which agency and stewardship theory find each other, i.e., this is the point at which the interests of owners and managers are aligned. Perfect alignment post monitoring and incentives initiatives is a subject of debate in the finance field as some of the studies including Padia and Callaghan (2020:12); Ataay (2018:1152); Osei-Bonsu and Lutta (2016:82) fail to confirm it. Heath (2009:497) highlights

that achievement of proper alignment is a struggle in practice while Davis et al (1997:23) argue that the agency theory does not advocate full control of agents anyway.

Stewardship theory has not been very popular to test practicalities related to managerial behaviour in the finance field, despite its relevance to real life situations and perhaps to the policies that relate to executive pay and firm performance. The unique perspective provided by this theory may advance an understanding of the effect of RG on executive pay, firm performance, pay-performance link, and pay-gap. Stewardship theory posits that managers are honest beings throughout the lifetime of the firm, something that is being refuted by some of the authors like Grundei (2008:149-150). This study does not attempt to join this debate, instead, it attempts to evaluate the extent to which this theory manages to explain and, or predict the relationships between RGC and executive pay, RGC and firm performance, pay-performance link and the relationship between firm performance and pay-gap.

2.4. ALIGNED INTERESTS VERSUS PAY-PERFORMANCE LINK MEASURE

Agency theory has been and continues to be a dominant theory in studying managerial behaviour (Davis et al 1997:20); so is pay-performance link (McConvill 2011:4) in assessing the alignment of interests between owners and managers. This is despite the fact that pay-performance principle is rooted only in the agency theory (McConvill 2011:4). Therefore, this suggests that using pay-performance tool, even in studies which are not grounded on the agency theory needs caution. This is crucial because the way in which managerial behaviour is explained and interpreted has serious implications for governance (Martin & Butler 2017:9). The following sub-section discusses the causes of misalignment of owner-manager interests, followed by the meaning of misaligned interests, then the complications that come with choosing either the agency or stewardship theory are discussed, and lastly; the interconnection between the agency and stewardship theories is presented.

2.4.1. A reminder of what causes a misalignment of interests

Eisenhardt (1989:61) highlights that the agency problem is mainly caused by the divergence in the goals of the principal and the agent, coupled by the inability of principals to assess whether the agents have conducted themselves appropriately or not. The agency theory states that this divergence in interests which gives birth to the agency problem (Carnell 2018:126), is overcome through the introduction of monitoring, which RG is part of (Yamina & Mohamed 2017:63) while also intensifying executives' incentives (Ataay 2018:1152; Tosi, Werner, Katz & Gomez-Mejia 2000:304). The ultimate aim of managing divergence of interests is to persuade agents towards goal congruence with the owners (Tosi et al 2000:304) such that

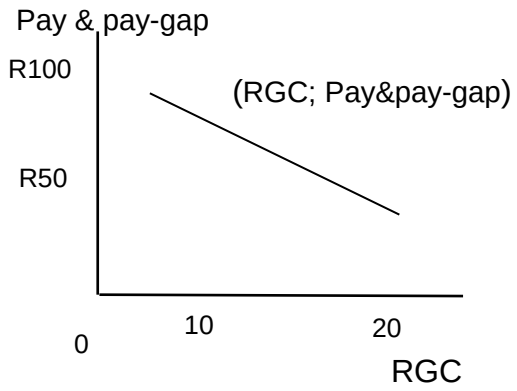
their approach of maximising pay coincides with maximising firm performance (Osei-Bonsu & Lutta 2016:82; Zalewska 2016:323). This approach makes sense as it shifts risks to a risk-averse agent (Tosi et al 2000:305).

2.4.2. Meaning of aligned interests in owner-manager relationships

2.4.2.1. According to the agency theory

Based on the preceding section, pay-performance link is an agency theory principle (McConvill 2011:4) as it aims to control divergence of interests by linking executive pay to firm performance. Assuming that RG is effective as a monitoring mechanism, in the perfect world, the following graphs depict what the situation would be between RGC and executive pay, RGC and firm performance as well as on pay-performance link in an agent-led firm post the implementation of RG. The assumption is that all other factors that are likely to affect pay and performance remain constant:

Figure 2.2. Agency theory: RGC and executive pay

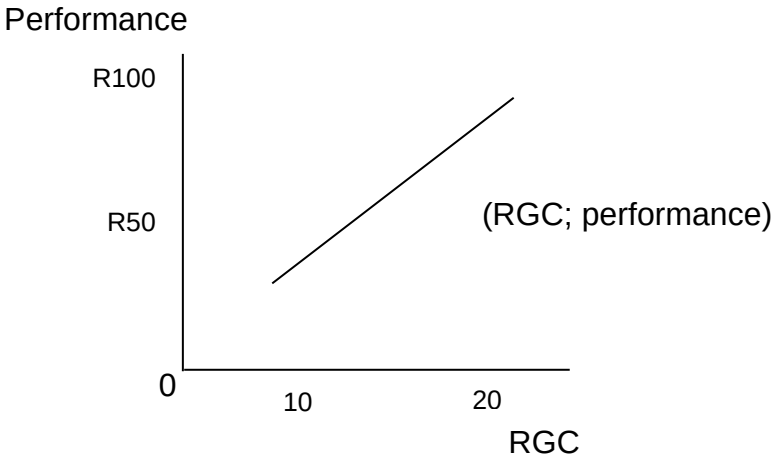


Source: Author's conceptualisation (2021)

Figure 2.2 depicts a negative relationship between RGC and executive pay since the theory posits that monitoring interventions like RG manages opportunistic behaviour, which if effective should curb excessive executive pay.

Figure 2.3 below depicts the relationship between firm performance and RGC

Figure 2.3: Agency theory: RGC and firm performance

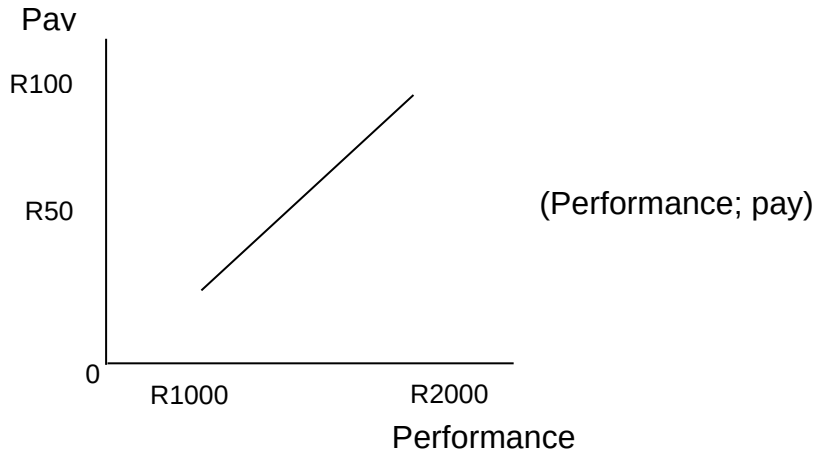


Source: Author's conceptualisation (2021)

Figure 2.3 above depicts a positive relationship between RGC and firm performance since the agency theory aims to maximise firm performance through pay-performance link. Theoretically, the intensification of RG as one of the monitoring mechanisms should, therefore, lead to enhanced firm performance.

Figure 2.4 below depicts the connection between executive pay and firm performance if M+I as proposed by the agency theory are effective in a firm

Figure 2.4. Agency theory: Executive pay and firm performance



Source: Author's conceptualisation (2021)

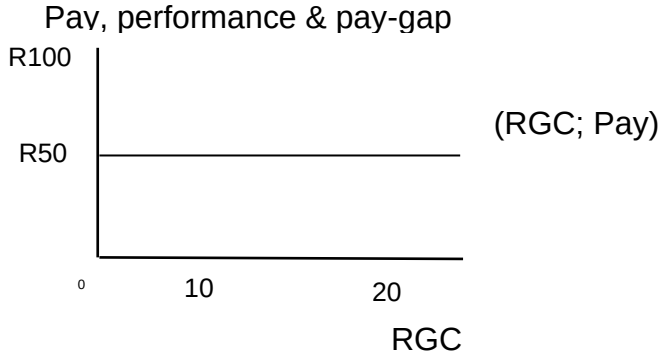
2.4.2.2. According to the stewardship theory

Although the focus of stewards is also to maximise firm performance (Kuppelwieser 2011:275), their ultimate goal is to achieve this through satisfying owners or shareholders (Davis et al 1997:25) compared to agents who maximise firm performance by chasing highest possible pay. Executives' extrinsic motivation is generally absent in the stewardship theory (Donaldson & Davis 1991:51). This refers to monetary motivations (De Falco & Renzi 2007:40) in particular. Put differently, issues of performance influencing pay and vice versa or RGC influencing either pay or performance do not have a place in the stewardship theory. Stewardship theory posits that owner-manager interests are perfectly or tightly aligned by default. (Kuppelwieser 2011:275).

The absence of monetary motivation may be interpreted to also imply that in this theory, interests are aligned even if executives are paid more or less than those of competitors. This is based on the understanding that the stewardship theory, while built on intrinsic motivation does not posit that under no circumstances is the executive pay of a steward more or less than that of competitors, which suggests that a higher executive pay is also possible. Davis et al (1997:25) in fact encourage more pay for stewards because a firm can save a lot on monitoring costs. This study, therefore, believes that pay-performance link cannot be an absolute measure of alignment in the stewardship theory as it is irrelevant.

It is then fair to believe that under the stewardship theory, a firm that is compliant to RG is likely to show same levels of executive pay, firm performance, pay-performance, and pay-gap pre- and post-implementation of RG. This is since Donaldson and Davis (1991:51) highlighted that only structural positions and their variations are capable of impacting these variables. Assuming that other factors that are likely to affect pay and performance remain constant, the following graphs are likely to depict the position of a stewardship theory post RGC.

Figure 2.5: Stewardship theory: RGC and executive pay/performance/pay-gap



Source: Author's conceptualisation (2021)

Figure 2.5 above indicates the stance of the stewardship theory which posits that the intensification of RGC would in no way influence executive pay, performance, pay-performance link, and pay-gap since interests between owners and managers are aligned by default, in other words; there is no need for RG in the first place. Only one graph has been prepared for the stewardship theory as the effect pre- and post-RG is the same in all the variables.

2.4.3. Complications with choosing either the agency or stewardship theory

Unfortunately; it is impossible for a firm to know in advance whether the hired manager is an agent or steward (Davis et al 1997:22) despite this information being crucial (Martin & Butler 2017:9) for the future of the firm. Even if it was possible, the challenge would be that since people's attitudes and approaches towards life can change with time (Albarracin, Johnson, Zanna & Kumkale 2005:4-5), managers' conducts are not immune to change owing to different circumstances (Martynov 2009:246). Unfortunately, this complication remains prevalent as long as the future conduct of management cannot be precisely anticipated (Grundei 2008:142). The other complication is that the board of directors may assume an agent attitude in a steward oriented manager (Davis et al 1997:39) and unnecessarily adopts M+I to manage the steward in an attempt to maximise shareholders' wealth. At the same time, there is an equal chance that the board may ignore M+I, hoping that a manager is a steward when it is actually an agent, which has a potential of intensifying the agency problem.

This does not leave out the likelihood that a manager may have qualities of a steward and an agent simultaneously (Martynov 2009:241) with the attitude of taking advantage of situations where possible (Heath 2009:502). Here, there is incompatibility not in the way in which a firm is run, but in the way in which it is perceived to be run. This highlights a possible mismatch in monitoring managers or in choosing the relevant theory to follow which has a potential to bring undesirable results. For instance, assume that the focus is to examine relationships between variables of interest post the adoption of RG, perhaps the study of the effects of RG on firm performance or executive pay using the agency theory instead of the stewardship theory. The expectation would be for an enhanced positive relationship due to the assumed effect of RG on the agency problem. However, the actual results would likely show an opposite association since the firm is run by stewards who are perceived as agents. Put differently, the agency problem that would have been assessed or that RG had hoped to address did not exist as stewards always prioritise the interests of owners above their own. Leading to flawed conclusions that RG may be ineffective to improve firm performance or reduce executive pay.

2.4.4. Interconnection between the agency and stewardship theories

In any study with the aim of assessing the extent to which RG has managed to reduce executive pay and/or pay-gap, there is a possibility of the results showing either a reduction, no effect and, or an increase in executive pay and/or a pay-gap. According to the agency theory, a negative link for instance, between RGC and executive pay would be associated with effective RG as in the studies by Srivastava and Kathuria (2020:10); Ntim, Lindop, Thomas, Abdou and Opong (2019:956-958); Munisi and Randøy (2013:107). The opposite is obviously associated with ineffective and, or a failing RG as in the studies by Padia and Callaghan (2020:12); Aslam, Haron and Tahir (2019:193-194); Detthamrong, Chancharat and Vithessonthi 2017:707). The difference with the stewardship theory would be that the same level of alignment of interests would have existed pre- and post-RG, or sometimes the case would be that RG do not actually exist in a firm as the stewardship theory suggests that it is unnecessary (Kuppelwieser 2011:275). This is since the covenantal agreement highlighted by Hernandez (2012:173) suggests that both the owner and the steward are happy with the level of executive pay whether high or low.

From the above, it can be noted that it is not always fair to associate a poor pay-performance link with a misalignment of interests or a failed RG due to the possibility of a stewardship interpretation in the results. Likewise, it may not always be fair to expect a positive relationship between RGC and firm performance, a negative relationship between RGC and executive pay and/or negative relationship between firm performance and pay-gap because according to the stewardship theory, monitoring, which includes RG is not expected to influence these variables. This study continues to explore the literature and associated theories with the intention of presenting a more reasonable approach of explaining and predicting these relationships.

In this section we have seen a connection between stewardship and agency theories, mostly to highlight possible misinterpretations and misunderstandings of the relationships between RGC and executive pay, RGC and firm performance, pay-performance link and relationship between firm performance and pay-gap. The overall view supports Martynov (2009:239); Davis et al (1997:43) that neither the agency nor the stewardship theory can separately provide adequate explanations and predictions about the effect of RG on executive pay, firm performance, pay-performance link and pay-gap.

2.5. TOURNAMENT THEORY

2.5.1. Why tournament theory?

Both the agency and stewardship theories attempt to predict the behaviour of managers. Tournament theory on the other hand does not focus on management behaviour, nor does it focus on how firms should be governed. Its focus is rather on the overall employees' pay compared to those of managers (pay-gap) (Conyon & Read 2000:4-5). This theory has been selected since one of this study's objectives focuses on pay-gap. The aim of the study is to develop a conceptual model that links RGC with executive pay, performance, pay-performance link, and pay-gap. Pay-gap has been mostly explained using tournament theory in the finance field and it seems like this is the only theory that specifically focuses on pay-gap. This means that this theory has been used for complementary purposes in this study. The sub-sections below present the explanation of the tournament theory, tournament theory in practice, and lastly, link between the tournament theory and the agency theory.

2.5.2. Tournament theory explained

In relation to other available theories, tournament theory defends high pay-gaps to design a proper corporate pay system (Lin, Yeh & Shih 2013:586-587) which prevail when executive pay increases at a higher rate than the pay of ordinary workers in a firm. Tournament theory suggests that where there are several available positions in the firm leading to a promotion of some employees, the promoted employees are encouraged to work harder and compete for the next promotion to the next level in the hierarchy and their pay keeps on growing (Lin et al 2013:586). This highlights that the hierarchy of the firm has a greater influence on the culture of that firm towards success. The more employees chase better levels in the hierarchy, the more the pay-gaps grow larger; hence CEOs as individuals in the highest rank of the hierarchy are paid unapologetically high salaries as it is believed they have earned it (Lin et al 2013:586-587). Tournament theory argues that high pay-gaps motivate employees to be more productive and/or competitive by ensuring that they devote more time to their work with the hope of earning a promotion while the firm enjoys improved production or performance (Urson 2016:55).

To put it differently, the competition for the next hierarchical level is judged based on the performance of runners or contestants and only the first runner gets awarded, and that award converts into becoming the pay-gap between the winner and the loser (Zhang & Gao 2015:49). Practically, since executives are the top management, they are regarded as first runners and automatically the winners of the rewards, in this way, employees become the losers by default

(Zhang & Gao 2015:49). The award is therefore, not based on the amount or quality of the current productivity, but somewhat focuses on the extent to which it is able to persuade others to compete for senior positions (Stabile 2002:23).

Tournament theory supports a culture of the largest pay-gaps in an attempt to instil a drive on employees to work the hardest in order to get continuous promotions (Conyon, Peck & Sadler 2001:807). This theory also asserts that high pay-gaps have great potential to positively influence employees' productivity and thus, improve firm performance (Guo 2019:1563). Based on this theory, it therefore, becomes more economical for firms to rely on the tournament rather than on a performance-driven approach in motivating employees and executives because it promotes firm-focused development and investment in human capital while simultaneously results in lower information costs and low pay risks (Anabtawi 2005:1588).

2.5.3. Tournament theory in practice

Crawford, Nelson and Rountree (2016:26) demonstrated the impact of pay-gap disclosure by presenting that shareholders' vote in favour of executive pay diminishes in firms with high pay-gap, meaning that shareholders are in favour of declining pay-gaps. At the same time, Harvey, Maclean and Price (2020:16) lamented the RG requirement of pay disclosure, demonstrating that it does not improve accountability but rather tends to accelerate executive pay as opposed to curbing it. According to Lee, Lev and Yeo (2005:33), high executive pay levels are not always the symptom of poor RG as they witnessed a strong link between pay-gap and firm performance in firms with strong CG, which led to their belief that strong CG inspires high pay-gaps and enhanced performance. Sanchez-Marin and Baixauli-Soler (2015:453) strongly support high pay-gaps claiming that it improves firm performance in owner-controlled firms.

On the contrary, Lin et al (2013:591) discovered that high pay-gaps are inverse to firm performance in high technology firms. Reducing high pay-gaps seems to be one of the endeavours of the King IV Report. It recommends that firms should explain how they have considered average workers' salaries when executive pay was determined (Institute of Directors South Africa 2016:65). It is not clear whether this recommendation aims to reduce executive pay and/or enhance firm performance or not, as the literature is also divided on this. This study hopefully gives more clarity conceptually and quantitatively.

2.5.4. Link between tournament theory and agency theory

Tournament theory is about pay-gap and how it influences employees' behaviour. Two variables, namely executive pay and employee pay are used to calculate pay-gap by dividing executive pay by employee pay (Conyon & Read 2000:4-5). This means that changes in executive pay have a direct impact on pay-gaps. It has been discussed in sub-section 2.2.1 above that the agency theory aims to curb executive pay through monitoring and incentives, something that unquestionably would affect pay-gaps. Therefore, the success and failure of the agency theory to hold true in practice should have a major impact on pay-gaps. A firm that has adopted the tournament theory and assumes an agency theory for its executives should find a balance to apply both these theories in practice. In the perfect world, a firm that applies monitoring and incentives in line with the agency theory should report reducing pay-gaps. Stewardship theory brings no effect on either the level of executive pay, firm performance and/or pay-gap pre- and post-RGC, therefore, it does not affect the levels of pay-gap or the concepts of tournament theory.

There is a notable similarity and difference between tournament theory and the agency theory. Both theories encourage that workers be fairly compensated for their efforts in the firm. However, tournament theory posits that workers and executives be compensated to the extent that other workers get inspired to work harder and improve firm performance, which suggests that pay-gap precedes performance and therefore, firm performance becomes a dependent variable, this is in line with Yu and Van Luu (2016:607); Yang, Yang and Su (2015:18). In contrast, the agency theory posits that executives should be compensated to the extent of the level of firm performance achieved in a specific period, which means that pay succeeds performance and therefore, firm performance becomes an independent variable, this is in line with Buck et al (2003:1719); Tosi and Gomez-Nejia (1989:185).

Interesting to also note is that in these two theories, fair pay is not understood the same way. In tournament theory, a fair pay is any level of pay up to the point that is deemed enough to inspire other workers to work hard (Chen et al 2011:1178). In agency theory, a fair pay is pay that does not exceed the level of firm performance (Kanapathippillai, Gul, Mihret & Muttakin 2019:3). This highlights some contradiction as the agency theory is in favour of a pay-performance link (Aslam et al 2019:188) while the tournament theory seems to disfavour the pay-performance link. Thinking through these lines, if tournament theory is also one of the pillars of RG simultaneously with the agency theory, should the results of a relationship between pay-gap or executive pay and firm performance be negative or positive? This is one

of the contradictions this study aims to portray and explain as the focus of the study is to explain the interconnectedness of RGC, executive pay, performance, pay-performance link, and pay-gap with the intention of providing a better understanding of these relationships at the end of this study.

Tournament theory seems to be the only theory that focuses on pay-gaps in the finance field despite the subject being crucial in analysing the most popular subject, executive pay. This theory encourages high pay-gaps while the agency theory is in favour of low pay-gaps through encouraging M+I that aim to curb excessive pay. It is not obvious from the literature which one between high or low pay-gaps leads to higher firm performance, which perhaps varies from firm to firm and the theories firms adopt. However, this study makes it possible to reach a conclusion about the effect of pay-gaps on firm performance as one of the objectives focuses on the relationship between firm performance and pay-gap.

2.6. CONCLUSION

CG is crucial as it assures investors that entities are directed honestly and transparently, so is the RG, and this makes the theories on which it is build critical. Agency and stewardship theories are unique in the way in which they explain and predict executive behaviour although they later converge towards an aligned owner-manager interests. The three theories explored in this chapter are all important in assessing RG as far as executive pay, performance, pay-performance link, and pay-gap are concerned. The agency theory explains the situation of an opportunistic manager, which CG/RG has among other things, recommended the separation of CEO and chairman positions, say on pay (SoP) and pay disclosure. The stewardship theory explains the position of an honest and/or a dedicated manager, which supports the combination of a CEO and chairman positions to strengthen the structure of firms. Stewardship theory posits that firm performance is improved if the structural position of a firm empowers the manager.

In contrast, tournament theory explains the pay-gap between the manager and an average employee, SA RG recommends that firms explain how they have considered average workers in determining executive pay. Hence, the study of the influence of RG on firm performance, executive pay, pay-performance link, and pay-gap needs a balanced perspective instead of a common rigid or one-sided insight of the theory. This has been found lacking in similar previous studies. This study aims to explain these relationships considering different theories as presented in this chapter with the hope of coming up with a clearer understanding of these relationships.

The next chapter extends the literature review and focus on RGC, firm performance, executive pay, pay-performance link, and pay-gap.

CHAPTER THREE: LITERATURE REVIEW

3.1. INTRODUCTION

Regulation and RG have become stringent as a result of accounting irregularities which was even acknowledged by firms in their own accounting systems (Agrawal & Cooper 2017:2). This advancement is meant to help firms to better manage executive pay (Odzak & Skog 2017:1) and therefore, eliminate the agency problem. Different countries initially invented and later regularly advanced their governance codes. For instance, United Kingdom (UK) brought a more enforcing code. This code mandated listed firms to grant their shareholders a right to approve or disapprove executive pay through voting at the annual general meeting (Al-Najjar 2017:10). In SA, The Companies Act of 2008 requires all listed firms to disclose all the details of executive pay. In addition to this, King IV Report requires firms to explain how they have considered ordinary employees in determining executive pay (Institute of Directors South Africa 2016:31). Advancement of RG seems like a great progress towards improving the governance system in SA even though this code remains a list of voluntary principles that are not binding.

McConvill (2005:1777) ridicules the basis of all forms of laws and regulations of executive pay arguing that it is full of negativity as it portrays executives as individuals whose focus is to milk firms, something that is not always the case. The author suggests that RG should rather focus on embracing the good deeds and attitudes of executives as this would naturally overcome all the concerns associated with executive behaviour and excessive pay. Conyon and He (2016:688-689) evidence that fraud is committed in firms with low executive pay in China.

Nevertheless, regulations including RG continue to intensify. Concerns begin to arise when there is a doubt about increased firms' wealth even after they have followed enhanced provisions of RG. The doubt is mostly caused by contradictory results in the investigations involving governance, executive pay, performance, pay-performance link and pay-gap. For instance Chu, Gupta and Livne (2021:30) who evaluated the impact of RG in the UK, witnessed no positive effect on pay-performance link and no decrease on executive pay, which indicates a failing RG according to the agency theory. On the other hand, Clarkson, Walker and Nicholls (2011:47) evidence an improved pay-performance link as a result of increased oversight that is founded on RG in Australia. Such contradictions indicate the need for more research on RG and its impact on executive pay, firm performance, and executive pay-gap.

In line with the aim of this study, this chapter presents the literature review exploring all the significant components of RG and executive pay, firm performance, pay-performance link, and

pay-gap as they form part of this study. The next section covers an explanation of what RG is and what it entails, then pay policy is presented looking at local and international aspects. Thereafter pay structure is covered, followed by a link between RGC and firm performance and a link between RGC and executive pay. Then the effect of RGC on the pay-performance link and on pay-gap to performance and/or executive pay link is discussed, after which the alignment of FPMs to KPIs is explored. The neglected factors that can possibly influence the conclusions about the effectiveness of governance are uncovered, followed by the role of a theory in applying RG. Lastly, in the final section of this chapter, the research gap and conclusion is.

3.2. UNDERSTANDING RG

RG is a cornerstone of this study as it affects all the objectives being pursued, the first objective being to measure the level of RGC by JSE-listed firms in a period of ten consecutive years from 2011 to 2020. Understanding its meaning and scope is therefore, important. The following sub-sections present the meaning of RG, followed by a sub-section on the aim of RG, then lastly, a discussion on the link of RG to executive pay and firm performance is covered.

3.2.1. Meaning of RG

Prior to looking at RG, it is fair to first visit the definition of CG and its relation to RG. Turnbull (1997:181) describes CG as the influence on the way of conducting business, designing internal firm processes, appointment of executives and shaping its self-regulation. It involves "*the exercise of ethical and effective leadership by the governing body towards the achievement of ethical culture, good performance, effective control and legitimacy*" (Institute of Directors South Africa 2016:20). According to King III Report, CG refers to the development of effective and sustainable structures, systems and processes such that the leadership of the firm is capable of legally exercising its duties (Institute of Directors South Africa 2009:8). Meanwhile BPP Learning Media (2017:39) describes CG as "*a set of processes, customs, policies, laws and institutions affecting the way in which an entity is directed, administered and controlled*". Though these definitions sound too general and perhaps diverse, they all have an implied element of intentional influence in the way in which firms conduct their business. Therefore, this study conceptualises CG to refer to all the forces that are integrated to influence firm processes in developing its governance philosophy, setting leadership, implementing its policies, and monitoring its practices towards creating an ethical long-term shareholders' wealth.

RG at the same time is an aspect of CG. Kanzow (2014:21) who conducted a study in UK and Germany describe RG as a system that guides the setting, implementation and monitoring of executive pay which includes but is not limited to pay design, terms of employment, pay structure, its link to performance and consequences of poor performance. It is made up of pay practices such as pay policies, setting and executing employment contracts, pay disclosure and SoP (Institute of Directors South Africa 2016:65-67; Sheehan 2012a:20). Riaz (2016:539-540) who explored the hybrid approach to regulation with the focus on pay disclosure in Australia describes RG in two parts, the first part being 'remuneration', which refers to the pay of directors including executive and non-executive, the second part being 'governance', which refers to attempts to regulate pay that may come in the form of legislation, governance codes and self-regulation. This portrays RG as governance of pay generally. Similarly, Wu (2011:113) describes RG as a governance system that intertwines remuneration committee function, transparency, monitoring of different stakeholders and disclosure such that it is capable of preventing reward for unnecessary risk-taking and ultimately, excessive executive pay.

Bussin and Christos (2018:36) do not specifically prescribe what RG should comprise but rather highlight the elements that they consider as necessary for RG to be effective. These include a diverse remuneration committee, clear board role, and regular meetings which they suggest should be held at least four times annually for bigger firms and twice for smaller ones. The authors further highlight that these should be coupled with preparation for talent succession and how this would have an impact on the current RG as well as clear firm goals in the long and short term. This suggests that RG and CG are interconnected and that one is essential for the success of the other. This is supported by Nienaber (2016:388) who scrutinized sections related to executive pay and its governance in King III Report, where the author highlights that RG is meant to strengthen CG by providing a foundation upon which pay policies should be developed and pay practices based.

Clearly, there is no universally accepted scope of RG, authors rely on the tailor-made view. For the purposes of this study, the scope of RG as outlined on the Institute of Directors South Africa (2016:65-66) has been followed. This comprises a pay policy, which is an outline of a firm's direction on how the overall pay should be designed and administered; followed by pay disclosure, which refers to the comprehensiveness and transparency of pay report and lastly; SoP, which gives shareholders a non-binding vote on executive pay (Institute of Directors South Africa 2016:64-67). Details of these elements are discussed further in section 3.3 below.

Although many studies like Nazir and Afza (2018:151); Bhatt and Bhatt (2017:906); Elmagrhi (2016:1); Malik and Makhdoom (2016:747); Outa and Waweru (2016:908) examined the effectiveness of CG in its entirety, with a particular focus on CGC [measured by constructing a corporate governance index (CGI)]. This study focuses specifically on RG, precisely on RGC and its relation to executive pay, performance, pay-performance link, and pay-gap. A RGCI has been constructed based on the extent to which JSE-listed firms comply with RG components. Therefore RG, RGC and RGCI have appeared more often than other acronyms in this study.

3.2.2. Aim of RG according to King IV Report

Institute of Directors South Africa (2016:20) defines CG as "…*the exercise of ethical and effective leadership by the governing body towards the achievement of*…" ethical culture, good performance, effective control, and legitimacy. It further explains that ethical leadership is distinguished by integrity, fairness, competence, accountability, responsibility, and transparency while effective leadership is characterised by achieving strategic positive outcomes. These outcomes should take into account the triple context within which firms operate, which includes economy, social and environmental aspects (Institute of Directors South Africa 2016:105). It also specifies that ethical leadership includes prevention of negative effects that may emanate from the firms' actions of the triple context.

Clearly, firms' goals are sometimes broader than financial gain, however, the current literature fails to recognise triple context in evaluating relationships involving RG, executive pay, performance, pay-performance link, and pay-gap. Perhaps one of the causes for this may be the complexity in measuring the extent to which each of the triple context aspects contributes to the long-term wealth of firms. Nevertheless, this does not justify the neglect as according to King IV Report, triple context should feature in measuring executive performance. A detailed explanation of factors that, when neglected; may also have a potential to influence the relationships involving RG, executive pay, performance, pay-performance link, and pay-gap is provided in section 3.9 below.

3.2.3. Linkages of RG to executive pay and firm performance

3.2.3.1. Executive pay

According to Mdingi (2017:4) who conducted a study in SA, executive pay is an integral part of RG and has dominated CG and global circles for quite some time. The author further alludes that dominance is due to its popular excessiveness which triggered the necessity to constrain it through regulation. This supports the idea that RG should be able to constrain executive

pay. Firm scandals often manifest through ridiculous executive pay and manipulated financial reports (Osterloh & Frey 2005:1). Bebchuk and Fried (2004:ix) are convinced that questionable executive pay is a symptom of crippled RG, which suggests that RG is responsible for curbing executive pay. In line with this, Scholtz and Engelbrecht (2015:46) evidence the effectiveness of King III Report in curbing executive pay and thus creating long-term shareholders' wealth in SA.

On the other hand, Kanzow (2014:297) argues that reducing executive pay is not anywhere closer to the aim of the UK and Germany RG, but rather is the reduction of agency costs. Paletta and Alimehmeti (2018:277) investigated the effect of the internal controls prescribed by the US Sarbanes Oxley Act on executive pay and witnessed a significant positive link between executive pay and internal control systems after controlling for macroeconomic pay factors, firm specific factors, governance factors and personal traits of executives. This highlights that RG may not always constrain executive pay.

3.2.3.2. Firm performance

With regards to RG enhancing performance, McKinsey and Company (2000:1) investigated the extent to which institutional investors from different countries have confidence in firms that value RG and observed that out of 200 investors, at least 80% are attracted to firms whose governance affairs are in order. These investors are also prepared to pay extra for share prices in such firms if there is a track record of satisfactory financial performance, the authors added. The authors also observe that a single unit of standard deviation of CG influences firms' valuation by a minimum of 18% in firms operating in Organisation for Economic Co-operation and Development (OECD) markets, this figure almost double for firms in developing markets. This is confirmed by Passador and Riganti (2018:618); Talab, Manaf and Malak (2017:1132), the former confirm that the rejection of executive pay through SoP leads to increased share value, highlighting an increase in shareholders' confidence. Talab et al (2017:1132), who conducted the study in Iraq observe that effective CG leads to the efficient utilisation of firm resources, which ultimately enhances firm performance. This argument is because among other things, CG promotes the availability of the internal and external audit functions which the authors believe somehow safeguards the assets of firms.

Citing back to the issue of possible indefinite agency costs highlighted by Shapiro (2005:281) when firms attempt to create a good governance environment which is believed to enhance firm performance, Talab et al (2017:1132); McKinsey and Company (2000:1) do not seem to have considered the likely negative impact of these unending costs on the overall firm

performance. Weighing costs to benefits is always crucial in every business activity (Passador & Riganti 2018:618). Also, the scarcity of research that highlights a similar positive impact of RGC to the profitability of firms may be due to the high cost of maintaining a good governance environment.

3.2.3.3. Firm failure

There is a general belief that firm collapses and scandals are inevitable without some form of regulation, which McConvill (2005:1777) unapologetically disputes. This assertion is argued to be a limited view of those who only embrace negativity in how firms are run. Nevertheless, some of the authors still believe that RG should be able to prevent firm failure. For example, Rossouw and Styan (2019:169) who investigated the collapse of Steinhoff in SA attributed the collapse to flaws in CG. It remains unclear whether RG is able to prevent firm failure altogether. Muzata (2018:178) who performed an analysis on JSE Top40 firms observed that though the level of CGC was satisfactory high in certain firms, there was still 23,91% of the firms that encountered CG failure in SA between 2008 and 2016.

The nature of the scandals that emanated from these firms reveal the prevalence of the agency problems despite high compliance according to Muzata (2018:178), supporting the argument of a failed CG. However, the conclusion of this study needs to be received with caution as it is also complicated by SA non-mandatory CG code, which was exacerbated by a now replaced King III Report. King III Report credited firms for bypassing certain CG provisions if they managed to explain it in the annual reports. This makes the situation tricky as there is no clear line between firms that complied through practice and those that complied through explanation. Due to this, it is therefore, hard to get a sense of the extent to which CG, of which RG is a major part, failed.

On the other hand, Wixley, Everingham and Louw (2019:10) is of the view that CG is meant to simply ensure that all firm's risks are appropriately disclosed to reflect the extent of executives' commitment, capability and integrity to mitigate those risks, rather than to overcome corporate failure. Perhaps firms ought to view CG as an ethical investment with a possibility and not as a guarantee of wealth benefit in the long-term and nor as a vehicle towards creating long-term wealth as "*…complying with CG principles does not necessarily translate into a significant economic benefit*" (Dzingai & Fakoya 2017:1). Hail et al (2018:667) argue that indeed, regulation fails to prevent firm failure. In fact, the authors believe that stringent regulation intensifies opportunity for managerial misconduct and suggests that future

scandals are imminent. Tan, Chapple and Walsh (2017:616-617) who studied fraud culture in Australia support the argument that CG cannot prevent fraud and/or firm failure.

The literature is vague on whether RG is meant to increase firm performance, reduce executive pay and/or prevent firm failure. For instance, Mdingi (2017); Osterloh and Frey (2005); Bebchuk and Fried (2004) who employed a literature review methodology and Scholtz and Engelbrecht (2015) who used correlation and regression analyses in SA seem to support the argument that RG should constrain executive pay although they do not explicitly posit this. Talab et al (2017); McKinsey and Company (2000) utilised the literature review methodology and Passador and Riganti (2018) who employed the survey approach on institutional investors argued that RG does improve performance in the US. However, the interest of this study is more on whether RG should improve performance and not on whether it does not. Unfortunately, no article was found by the author of this study to this effect. At the same time, no study was found to support that RG should prevent firm failure.

Contrary to the above, Kanzow (2014:297) used the literature review methodology to analyse RG in the UK found its purpose far from reducing executive pay, while no study has been found that isolates RG from improving firm performance. At the same time, the following authors who did not support that RG is responsible for preventing firm failure included Wixley et al (2019); McConvill (2005) who employed a literature methodology, Muzata (2018) who utilised concurrent and exploratory sequential mixed methods in SA, Dzingai and Fakoya (2017) who adopted a random effects regression model in SA and Tan et al (2017) who used generalized method of moments (GMM) model in Australia.

The above highlight that there is a contradiction in the way in which the role of RG is understood locally and internationally, while others argue that it should constrain executive pay while others argue that it should not. There is no study that indicates whether it should improve performance or not although there is limited evidence that market value does increase for compliant firms. With regards to firm failure, there is limited literature, and all indicates that RG cannot be expected to prevent firm failure, but this does not detail why, which provides limited meaning.

3.3. PAY POLICY

Policy is crucial as it is able to direct immediate and long-term practices towards the desired outcomes (Nolan & Valenzuela 2019:421). RG influences pay policies which influence pay practices, and pay practice is the construct that usually gets examined to assess whether RG

is effective or not. This section is, therefore, relevant to objective one of the study which seeks to construct a RGCI of JSE-listed firms. RGCI is a tool that has been used to measure the firms' level of compliance with the full RG including the pay policy as it is among the provisions that firms are required to meet. Common to this is research that assesses the effectiveness of pay practices therefore, the literature in this section is limited to the reviews of RG codes, pay regulations and laws. All the articles that have been reviewed have followed a similar methodology of either a literature review or a commentary approach in reaching conclusions about pay policy.

The dominant view is that executive pay should be fair from the perspective of both the firm and executives. Pay policy intends to assist firms in achieving strategic goals by providing guidance on how to attract and retain quality staff, balance activities so that objectives can be achieved within the defined risk appetite, maximum productivity, and desired ethical behaviour while acting responsibly towards different stakeholders (Wixley et al 2019:296). Fairness of pay is judged by its ability to attract and retain executives and employees of good calibre (Wixley et al 2019:296). Fairness of performance is not defined but perhaps could be considered as the achievement of key performance indicators set for executives.

Although requiring firms to design pay policies is a good practice, there are uncountable reported challenges that accompany the implementation of pay policy in practice. These challenges are associated with the fact that theory does not always correctly predict what happens in practice. Many developments that have occurred towards advancement of RG have only managed to improve RG policies instead of the individual's conduct (Jones & Government 2017:11). Those policies however, may still negatively affect the firm (Nienaber & Bussin 2016:1).

South Africa is among many countries whose governance is a hybrid of state regulation (Companies Act) and professional (King Code) regulation, indicating a symbiotic relationship whereby both regulations benefit from one another. Although King Code is still voluntary, it strengthens governance of firms as confirmed by Riaz and Kirkbride (2017:66) who evidenced an enhanced level of disclosure in Australia. Below is a summary of RG recommendations that are found in the SA Companies Act of 2008, followed by those contained in the SA RG, then a glance of the distinct RG provisions from selected international jurisdictions is presented.

3.3.1. Companies Act of 2008

The following are provisions related to RG that are recommended in section 30 of the SA Companies Act of 2008, Republic of South Africa (2009:68-71).

The Act requires:

- That firms ought to publish financial statements within six months after the end of the financial year. Although this period may not be early enough for some of the investors, this provision still ensures that users of annual reports are catered for within reasonable time frames.
- That among other things, the size of the firm's workforce be disclosed in the annual reports. This relates to the information needed to determine firms' pay-gaps, a variable of great interest in analysing the spread of the wealth in the SA economy. It is believed that most of SA's wealth belongs to very few individuals, while most of the people become poorer with time. SA has been cited among the most unequal societies in the world (The World Bank 2022:1). So the importance of paying attention to pay-gaps cannot be underestimated.
- That executive pay be disclosed showing at least the salary, bonus, performance-based pay, expense allowances, pension, pay in respect of loss of office, securities issued to executives, fees paid for services rendered, the value of options or rights given to executives and waved interest on loan to executives.

Source: (Republic of South Africa 2009:68-71)

Regarding the objectives of this study, this information assists in meeting objective two to five as most of the data pertains to executive pay and firm performance, which has been examined in those objectives.

3.3.2. SA King Code

The objective of the study is to conceptualise the link involving RGC, executive pay, firm performance, pay-performance link, and pay-gap on JSE-listed firms over a period of ten consecutive years beginning from 2011 to 2020. In this period, King III Report was in force up until 31 March 2017, when the King IV Report took over and became applicable to date. Although the King Report was first issued in 1994 and later in 2002, 2009 and 2016, this study has only covered RG found in the latest two governance codes as they are the only ones that relate to the period covered in this study. The following sub-sections summarise RG found in both the latest governance codes in SA.

3.3.2.1. Pay-performance sensitivity

Table 3.1 below provides a comparison of the requirements of King III and IV Report on pay to performance link followed by discussion.

Table 3.1: Pay to performance

Policy requirement	King III Report	King IV Report
Gives direction with regards to how pay is designed and implemented. Also, advocates for pay that is aligned to performance where performance measures are detailed together with the weight of those measures (Institute of Directors South Africa 2009:48, 2016:65).	Places emphasis on the link of pay to performance considering the mix of fixed and performance-based pay in cash and otherwise. King III Report highlights that pay may also be based on non-financial measures like sustainability targets although this is not much emphasised in the code (Institute of Directors South Africa 2009:48)	To link pay to performance, King IV Report emphasises the use of performance measures that consider triple context perspective covering economic, social and environmental factors of firms, i.e. promotion of ethical conduct and responsible citizenship among other things (Institute of Directors South Africa 2016:65).

Source: (Institute of Directors South Africa 2009, 2016)

Pay that is aligned to performance is capable of boosting employees' confidence, convince employees to stay in the firm rather than to seek employment elsewhere, to motivate employees to maximise productivity and encourage engagement (Nienaber & Bussin 2016:6). However, not all the authors support performance-based pay, McConvill (2005:1803) criticises it for its baseless popularity and posits that it is less likely to work anytime in the future as it is unrealistic and built only on the assumption that executives are always self-interested. Nevertheless, RG globally embraces pay for performance principle although its imperfection has been highlighted by the literature. Shan and Walter (2016:668) highlight that there is bound to be a measurement error in evaluating performance although this is rarely acknowledged in the pay process. Among other things, the error is also fuelled by the challenge of separating the effects of key performance indicators (KPIs) from the other factors that may have had an effect on performance (Gerhart 2017:131-132), this indicates that performance-based pay is not a flawless system.

King IV Report proposes performance indicators that consider triple context of firms which should include economic, social, and environmental aspects whereas in King III, no guidance on performance measures is provided. Since it is well known that accounting and market-based KPIs have been generally the most popular until recently, the expansion to triple context

should help firms to capture the contribution of executives more realistically. This is heading in the right direction as Gerhart (2017:131) highlights that firms utilise a variety of performance measures to conclude executive pay.

However, the current literature has not yet adequately adopted triple context as firm performance measures (FPMs) in studying relationships involving RG, executive pay, performance, pay-performance link, and pay-gap even though King IV Report was adopted in 2017. Most studies still adopt accounting market-based FPMs. Among the reasons for the delay in adopting these triple context FPMs might be the factors presented in 3.9 below. However, these factors do not justify the neglect of KPIs as this is likely to lead to flawed methodologies, results, and conclusions if the sample of the study include firms that use triple context executive KPIs.

3.3.2.2. Firm wide pay policy

Table 3.2 below provides a comparison of the requirements of King III and IV Reports on firm wide pay policy followed by discussion.

Table 3.2: Firm wide pay policy

Policy requirement	King III Report	King IV Report
Advocates for a firm wide pay policy (Institute of Directors South Africa 2009:49, 2016:65).	Supports a firm wide pay policy which prioritises executive pay, followed by the pay of non-executive directors (Institute of Directors South Africa 2009:49).	Supports a firm wide pay policy that focuses on both executive and employees' pay (Institute of Directors South Africa 2016:65).

Source: (Institute of Directors South Africa 2009, 2016)

The major difference between the two codes is that King III Report focuses only on executive pay while King IV Report also promotes the empowerment of ordinary employees as far as pay policy is concerned, the popular pay term for this in King IV Report is called 'fair and responsible' pay. In fact, 'fair', 'responsible' and 'transparent pay are key terms in King IV Report (Wixley et al 2019:295). The word 'fair' refers to the fairness of pay from one employee to the next and from one firm to another, 'responsible' refers to the need to avoid extremely high or low pay while 'transparent' refers to the need to freely provide details of pay and the factors that influenced its levels (Wixley et al 2019:295-296). This is hopefully progressive in addressing concerns of high pay-gaps that continue to be a dominant subject locally and internationally. Whether reduced pay-gaps lead to increased performance or not has been examined in objective five of this study.

Locally and internationally, there is limited literature on the relationships involving pay-gaps against variables like performance, pay and/or pay-performance link. Lee (2017:200) conducted a literature review-based study in SA which supports the reduction of pay-gaps and proposes a rise in the minimum salary of low-level employees to address this issue. The author acknowledges that this may be ineffective if executive pay is not well managed, which highlights the necessity to simultaneously tackle the challenges associated with executive pay. This is in line with King IV Report which requires that employees' pay is considered when executive pay is determined. King IV Report seems to be well-founded as it does not simply require that employees' pay be also considered but rather that it be considered simultaneously when executive pay is determined.

The risk acknowledged by the author is that raising employees' pay has the potential to congest the total salary bill of firms, triggering retrenchments and thereby, undermining the very brave attempt of fighting social injustice through increasing minimum salaries. This perhaps suggests that the time has come for RG to consider persuading firms to allocate shares to ordinary employees so that they could also benefit in ways other than salaries (Lee 2017:202). Hopkins and Ebrahimi (2017:31) on the other hand believe that there are more pressing ethical issues such as the need to tackle high unemployment in South Africa rather than the need to scrutinize pay-gaps as this discourages employment of lower-level employees. The authors further argue that unemployment fuels inequality and social injustice which intensifies the daily struggle of South Africans in the lower classes more than high pay-gaps do. Hopkins and Ebrahimi (2017:31) call for future research to focus on defining how to set reasonable levels of ordinary employees' pay as this is still lacking in both the literature and current governance codes, the study was conducted in SA.

3.3.2.3. Transparency of pay practices

Table 3.3 below provides a comparison of the requirements of King III and IV Report on transparency on the implementation of pay policy followed by discussion.

Table 3.3: Transparency on the implementation of pay policy

Policy requirement	King III Report	King IV Report
Advocates for transparency of pay practices (Institute of Directors South Africa 2009:52, 2016:65-66)	King III Report requires that pay policy and the way it has been implemented be disclosed in the annual reports (Institute of Directors South Africa 2009:52).	King IV Report requires the same as in King III Report and above that, requires a detailed disclosure of the deviations from the policy and a background statement that details among other things, (i) changes to the pay policy, (ii) specific decisions that relate to pay, (iii) factors (internal and external) that were considered in concluding pay, (iv) statement on whether the pay policy has achieved its objectives (v) recent SoP results, the manner in which engagements following pay rejections were conducted and the approaches adopted to address these (Institute of Directors South Africa 2016:65-66).

Source: (Institute of Directors South Africa 2009, 2016)

The King Code requires detailed disclosure of the pay policy and its practices coupled with the details of the reasoning behind those practices. According to the pay policy, firms should be able to justify all the elements of executive pay in line with the policy and explain how performance-based pay has been linked to the predefined performance indicators. However, the literature does not always observe high levels of transparency as envisaged in the governance codes. Mans-Kemp and Viviers (2018:170); Hooghiemstra, Kuang and Qin (2017:695) observe that firms deliberately obscure information with the intention of misleading the users of financial statements. This leads to the RG serving a minimal purpose than initially intended. Moyo (2010:146) in SA calls for the RG to also develop regulations pertaining to the disclosure of whistleblowing information in the annual reports.

3.3.2.4. Inclusion of benchmarks

A pay policy should include the use of benchmarks and explain above average executive pay (Institute of Directors South Africa 2009:52, 2016:66). The two latest SA governance codes require that firms' pay policies give guidance (with justification) of the circumstances that are likely to give rise to the benchmarking of executive pay. This should obviously also include what should be benchmarked, how to benchmark and the extent to which benchmarking should be made taking into account the total executive pay. This would make it easy to justify above average executive pay and ensure RGC.

3.3.2.5. Coherent pay policy and termination benefits

Table 3.4 below provides a comparison of the requirements of King III and IV Reports on firm-wide pay policy link followed by discussion.

Table 3.4: Elements of pay and exit benefits

Policy requirement	King III Report	King IV Report
The elements of pay should be clear in the pay policy. This should include commitments that are likely to arise at the termination of executives' contracts (Institute of Directors South Africa 2009:52, 2016:65-66).	King III Report does not specify the elements of pay but rather cautions for commitments not to cover cases where the termination of the contract is due to the deficiency and/or misconduct of executives. This code also disapproves balloon payments of any nature to minimise loopholes in the pay policy (Institute of Directors South Africa 2009:52).	Like The Companies Act, for board members, King Report IV Report requires full details of the basic salary, package benefits including the non-financial ones, short- and long-term performance-based pay, allowances, commissions, forfeiture provisions, pay to non-executive directors among other things. King IV Report also requires that employees' pay be presented at a high level instead of details (Institute of Directors South Africa 2016:65-66).

Source: (Institute of Directors South Africa 2009, 2016)

These two codes differ slightly in the way in which they require the pay policy to provide a breakdown of executive pay to satisfy disclosure requirements. King III Report has no exact specifications while King IV Report specifies the details to be covered if they are relevant to a firm. This means that during the King III Report era, any form of disclosure of pay was acceptable, which compromises uniformity in the annual reports, something that has the potential to cause confusion to the users of the information.

3.3.2.6. Non-binding vote

Both King III and IV Reports requires that pay policy and its implementation should be subject to a non-binding shareholders' vote every year (Institute of Directors South Africa 2009:52, 2016:67). King IV Report also specifies that if the executive pay or its implementation has been rejected by at least 25% of the shareholders, the rejection should be investigated, after which reasonable concerns of shareholders should be addressed. This seems like a powerful provision of RG as far as constraining executive pay is concerned, however, Choi, Lund and Schonlau (2020:266) witness that SoP is ineffective when it comes to exit packages of executives in US.

Moyo (2010:143) argues that SoP regulation in SA is enough to empower shareholders' involvement in pay matters however, its full potential has not yet been witnessed as shareholders tend to hesitate to challenge executive pay. It seems like RG still needs to incorporate a task of educating shareholders in an attempt to promote necessary dialogue before SoP can be effective as intended (Moyo 2010:143). However, Passador and Riganti (2018:618) who scrutinised pay regulations in the European Union believe that the non-binding nature of SoP makes it deficient, in fact, the non-binding nature of the whole CG has been questioned locally and internationally with others proposing that it should be passed into law. On the contrary, Belcredi, Bozzi, Ciavarella and Novembre (2014:26) who conducted the study in Italy believe that the non-binding nature of SoP does not compromise its effectiveness, because more often than not, boards usually address shareholders' concerns where necessary due to either the pressure or respect of the outcomes of SoP (Hemphill 2019:70). Badgett, Brunarski, Campbell and Harman (2017:38-39) found SoP effective in the US while Mangen and Magnan (2012:99-100) argue that SoP is only effective if it can compress executive power.

Tingle (2017:418) calls for a lesser opportunity for shareholders to participate in pay related matters due to the presumption that they never have sufficient time to invest in fully understanding firms' practices and how these are linked to the executive pay, which renders their voting results flawed as they undermine efforts that have already been made to conclude pay. Zhao and Li's (2019:220) study focused on pay regulation in UK confirm that investors usually experience hardships in making sense of pay information. Back to the argument raised by Moyo (2010:143), it goes without saying that less participation of shareholders in challenging executive pay has a potential to render SoP ineffective which in turn has a potential to cripple RG. If SoP or any other provision of RG is ineffective, it practically suggests that there is no difference between a firm that complies with a certain RG provision and the one that does not comply at all, even though the compliance rating of the firm that is perceived to comply would be higher. This renders the expected relationship between RGC, and executive pay, performance, pay-performance link, and pay-gap to be flawed.

3.3.2.7. Remuneration committees

Both King III and IV Reports require firms to have remuneration committees (Institute of Directors South Africa 2009:49, 2016:66)**.** The two governance codes make references to remuneration committees although it is not a straight away requirement for firms to have them on both codes. Sheehan (2012b:64) analysed pay regulations in the UK and Australia and

highlights that it is a norm for governance regulations not to prescribe it as a requirement for firms to have specific committees, although permission is there that committees may be allocated certain board tasks. King III Report provides a detailed guidance on how the remuneration committees should operate including the recommendation that the board chairman cannot be the committee's chairman. King IV Report on the other hand is silent about the responsibilities of remuneration committees. However, it is implied in both codes that the major responsibility of these committees is to ensure that pay policies are adequately and objectively designed and implemented.

A debate of whether remuneration committees are balanced enough to effectively carry out their mandate is ongoing. Jensen, Murphy and Wruck (2005:50) indicate that remuneration committees cannot be as effective as intended due to their lack of time to capacitate themselves about pay practices outside the firm, and they are then bound to rely on the firm's human resources practices to make pay recommendations. However, it can be agreed that the committees that are effective are the ones with members who are not reluctant to disagree where necessary (Jones & Government 2017:11). Even for people outside remuneration committees, like the internal stakeholders, it should be the norm to challenge remuneration committees. This enables such committees to diligently attend to all matters pertaining to executive pay including pay-performance link and benchmarking (Moyo 2010:145).

In summary, Certain challenges that hinder the achievement of the aim of the pay policy have been reported and include over or insufficient levels of independence in the remuneration committees, lack of commitment and/or qualified independent members in the remuneration committees and lack of transparency in how executive pay is determined (Kanzow 2014:295).

3.3.3. Remuneration governance internationally

RG is continuously advancing with many countries that were previously without one are finding ways to develop their own governance codes that are relevant and useful to their unique contexts. The ways in which these codes have been designed differ especially when it comes to how they should be applied in practice. For instance, OECD (2021:33) discovered that 94% of 50 jurisdictions studied follow a 'comply or explain' approach, three countries (India, US and China) follow a mandatory approach while five countries (Mexico, Turkey, Israel, Saudi Arabia and Costa Rica) follow a combination of voluntary and binding provisions. Countries like SA and Malaysia that follow a 'comply and explain' approach were counted under the 'comply or explain' approach in OECD study, which is less likely to bring any harm.

Due to their dominance in the RG subject and following previous studies, this study briefly touches on the RG of three countries namely, the UK, US, and Germany by noting mostly the elements that are uncommon to the SA governance code. King Code was already discussed above and therefore, a reference can be made to it for the sections that are not discussed below as it suggests that they are like those of the selected three countries.

3.3.3.1. Pay policy

The following uncommon aspects about pay policy have been noted from the RG of the three countries' RG codes:

- In the UK, executive contracts and/or termination periods are not allowed to exceed twelve months (Financial Reporting Council 2018:14). If it happens that new executives were initially given a longer period, this should be reduced to at most twelve months after those executives are familiar with the firm. This reduces the chance of paying high exit fees and hopefully improves pay-performance link.
- In the UK and US, a remuneration committee is a requirement (Financial Reporting Council 2018:13; Compensia Inc. 2010:3), which assists in ensuring that pay-related matters are attended to by a dedicated team. In the UK, remuneration committees should consist of at least two members for small firms and at least three for larger firms who must be independent non-executive directors. Unique to the US is that the members of the committee should not only be independent but also meet certain pre-set independence standards. In the perfect world, this should add to the efficiency of the firm however, challenges like over independence, lack of balance, experience and dedication from the members have been cited by Kanzow (2014:295) as hindrances among other things.
- Germany requires that total executive pay for different managers be capped after appropriate benchmarking has been done. Germany's governance code also stipulates that for all managers, termination pay should be limited to the lesser of twice the annual pay, and this should be compared to pay that is equivalent to the number of months that were remaining at the termination date of the contract (Deutscher Corporate Governance Kodex 2019:16). This leads to the curb of executive pay which hopefully leads to a good pay-performance link.

3.3.3.2. Say on pay (SoP)

The code that governs RG in the US, Securities and Exchange Commission (SEC) in the form of the Dodd-Frank Act regulates that firms should present executive pay for shareholders' non-

binding engagement and support through voting at least once in three years (Barreca 2020:352; Compensia Inc. 2010:1). SEC also requires that shareholders be granted an opportunity to vote on the regularity of the SoP vote, the code only allows that at most, SoP opportunities can be semi-annually and also on the severance pay post mergers and acquisitions (Barreca 2020:353). The latter two voting points are not available in SA. The similarity between the US and SA is that both RG require shareholders' vote on executive pay. However, in the US, this should take place at least once in three years as opposed to the SA requirement of once a year. SA followed the United Kingdom (UK) and Australia (Sheehan 2012c:1) in its SoP approach.

3.3.3.3. Pay disclosure

In the US, pay disclosure requirements found in SEC include the provision of the salary and bonus elements of executive pay, brief explanation and analysis of the factors that guide pay policy and direct pay decisions and the extent to which pay is designed to respond to performance (Barreca 2020:349). The US also requires the existence and a disclosure of a pay repossession policy for all listed firms, this policy is meant to assist in recovering pay-outs that were made to executives in the event that financial measures on which the pay-outs were based later needed to be restated (Compensia Inc. 2010:4).

Although disclosure is popular for escalating executive pay as opposed to reducing it, it still has some advantages which include limiting information asymmetry, promoting uniformity and efficiency across markets (Sheehan 2012a:24). The major challenge with pay disclosure is that firms fail to provide a clear picture of which variables were used to link pay to performance, how were these variables measured and what value was allocated to these variables before pay was finalised (Sheehan 2012d:116).

3.3.3.4. Pay-gap

The US governance code requires firms to disclose pay-gaps in their report while the King Code has no direct requirement regarding pay-gap. This highlights that pay-gaps are less regulated in SA than in the US.

In summary, pay policy focuses on pay related matters so that executive pay is justifiable in relation to performance and how much others are paid within the firm. The views about what pay policy should entail, how it should be implemented, monitored and the extent to which it is effective in practice vary across studies and jurisdictions. Performance related pay being at the centre of pay policy design is arguably effective. Gerhart (2017:131); Nienaber and Bussin

(2016:6) who utilised a literature review methodology with sources from different countries believe that performance-based pay has a potential to favourably drive executive behaviour, enhance effectiveness and retain quality staff if it is appropriately designed although this comes with potential risks.

On the other hand, McConvill (2005:1777) who also employed a literature methodology, mocks the pay-performance system as they argue that it is useless since what it attempts to achieve can be mastered using a less draining approach like embracing intrinsic motivation in the firm. Tingle (2017:417) also utilised a literature review approach and partly supports McConvill (2005:1777) as far as performance-based pay is concerned, they perceive RG as unrealistic in promoting pay policies that drive pay-performance link. Also, pay-gap is blamed for neglecting factors like the level of contract related risk that executives face, factors that even if they are likely to affect performance; may be beyond executives' control and firm specific factors to name a few.

With regard to pay-gaps, the literature seems to agree that pay policies should be designed in a way that aims to reduce pay-gaps however, there is a contradiction in the approach in which this should be done. Barreca (2020); Lee (2017) both followed a literature review approach and believe that pay-gap should be minimised through regulation and/or boosting salaries of ordinary employees. Conflicting views have been presented by Hopkins and Ebrahimi (2017) who conducted a generic study in the form of an opinion poll in SA. They argue that pay-gap is not the most pressing issue as the level of unemployment in SA, and therefore, regulators should not complicate the lives of employers as this would increase the unemployment if salaries became too expensive to honour.

Looking at SoP, Sheehan (2012a,b,c,d,e); Moyo (2010) utilised a literature review methodology together with Badgett et al (2017); Belcredi et al (2014) who adopted ordinary least squares (OLS) regression among other models in Italy and the US with a sample of 2 722 firm observations and 226 firms respectively. They argue that SoP is useful and effective for the same reason that it empowers shareholders, as it leads to many benefits in governance, including the balance of power. A divergent view has been reported by Passador and Riganti (2018:618); Sheehan (2012a,b,c,d,e) who followed a literature review approach Their argument is that SoP is deficient due to its non-binding nature and the unclear information from firms for shareholders to vote on, which creates a high chance of shareholders voting incorrectly.

Even though the literature has unveiled several flaws of RG like obscuring information to influence its readability such that shareholders' vote is affected, and the argument that pay disclosure has led to excessive pay instead of the opposite, there is clearly no uniformity in how the authors, and probably the firms and shareholders value the different elements of RG. Then one would ask if in such cases, it is possible for the relationships involving RGC, executive pay, performance, pay-performance link, and pay-gap to be as expected.

3.4. PAY STRUCTURE

The most important feature in RG is to appropriately design pay practices (Ndzi 2016:349) which can be achieved by adopting an effective pay structure. Pay structure is generally expected to have a mix of fixed and performance-based pay which according to Kecskes and Halasz (2014:70); Sheehan (2012e:80), is also a standard expectation for a pay strategy as it ensures a proper balance of pay. In order for a pay structure to be well designed, it should be able to attract and retain good executives at the most cost effective manner while also motivating them to make decisions that create firm value over time (Jensen et al 2005:19). Pay structure should be designed such that executives are encouraged to strategize continuously (Kecskes & Halasz 2014:70). However, it should be noted that no matter how best pay structure can be designed, it still can be exploited as flaws are always inherent in any approach (Jensen et al 2005:50).

More than the pay-performance link that the agency theory advocates for, there are other factors that should be incorporated into the pay structure, for instance, the level of risk to which executives are exposed, the fact that firm performance may not be wholly affected by the conduct of executives, distinguished factors of the firm or industry (Tingle 2017:415), non-financial or non-measurable factors (Holmstrom 2017:1753), natural motivators like executive's pride (McConvill 2006:437) and compensation for retention amongst others. These factors are usually ignored when performance-based pay is assessed for effectiveness. Hence Riaz, Ray, Ray and Kirkbride (2013:258) call for calibration so that personal attributes may also be considered when regulating pay. Taking into account all the suggested factors to better design pay-performance link, it seems that getting it perfect is beyond practical means such that McConvill (2011:41) slams the idea of pay for performance altogether and labels it as a false promise.

In relation to the objectives of this study, this section is relevant to objective three to five where executive pay has been featured. The executive pay variable has been a combination of fixed and variable executive pay. Below is a presentation of these two elements of executive pay.

3.4.1. Fixed pay

Fixed pay refers to pay that is not influenced by managerial discretion or the level of performance (Madhani 2009:2) for example basic pay, birthday bonus, pension allowance, medical aid allowance, and so on (Li 2016:20). This kind of pay is short term and mostly influenced by the experiences, educational level, peers' pay, job description as well as the reputation of individuals (Li 2016:20). With fixed pay, there is less risk for employees as their pay is almost guaranteed for every period if they remain employees of a firm. From this explanation, the logic suggests that firms that only rely on fixed pay to remunerate their employees fit the characteristics of the stewardship theory since extra efforts in this theory are not rewarded in monetary terms. Employees tend to be satisfied with the same level of pay whether there has been a substantial improvement in firm performance or not. This is because stewards rely on intrinsic motivation to perform daily work. Firms that follow the stewardship theory have no intention of matching pay to performance as performance is a non-significant factor in concluding pay structure.

This poses a question of whether the dominant furore about the poor pay-performance link, which is a principle of the agency theory is as significant as portrayed in public.

3.4.2. Performance-based pay

Here, the risk is more for employees as performance-based pay is discretionary and determined based on the quality and quantity of performance (Madhani 2009:2). Performance-based pay can take the form of short-term incentives (STI) for example, bonus that is established and paid within a period of a year. This is usually based on performance and available budget in a firm, hence there is sometimes a lack of a link when annual bonus is examined against performance (Sheehan 2012e:83). Performance-based pay can also be in the form of a long-term, e.g., stock options, restricted stocks, and long-term performance plans. If performance-based pay is predominantly used in a firm, the more relevant theory to better explain the pay practices is the agency theory since it promotes reliance on performance when pay is determined. This with the hope of achieving alignment between pay and performance. Tahir, Ibrahim and Nurullah (2019:165-166) observe that long-term measures are more effective than short term FPMs in structuring pay as they reduce the possibility of manipulation in profits.

The existence of challenges associated with implementing performance-based pay in practice has been acknowledged in the literature with Tingle (2017:415) highlighting that it usually ignores the risk executives are exposed to when entering into a contract with a firm. Bailey,

Fessler and Laird (2019:105) observe that it promotes dishonest behaviour if monitoring is loose in a firm, otherwise in a tight monitoring space, dishonesty disappears. Another challenge is that it tends to worsen the agency problem if easily distorted KPIs are used. This is indicated in the study by Tahir et al (2019:165-166) who witnessed that the manipulation of firms' earnings (usually referred to as 'management earnings') is prevalent if financial executive KPIs are dominant, and this begins to reduce if non-financial KPIs are adopted to determine executive pay.

However, Cho, Ibrahim and Yan (2019:313) evidence that the adoption of non-financial KPIs into pay structure leads to more cash bonuses being paid out to executives compared to when financial KPIs are utilised alone. At the end of the day, pay for performance has for a long time been debatably effective (Feng et al 2019:1037). This despite its global popularity and support, leaving an unclear direction of whether it is effective in managing the agency problem.

Lee (2017:202) suggests the scrapping of executive share-based rewards due to complexities associated with administering thereof and recommends that shares be rather given out to ordinary employees so that if it becomes too costly for a firm to increase employees' pay to a reasonable level, there is at least another way in which employees could benefit from the firm. The author also proposes that a greater portion of performance-based pay be delayed closer to the exit date of the executive member so that firm value could be created and monitored over time while uncertainty around performance-based pay is reduced. Then from this exercise, an executive member could be denied continuing with a service if performance standards are not met.

Literature that has tested the effectiveness of pay structure in practice is limited, hence only a few sources have been cited in this study, all of which report on its weaknesses. Tahir et al (2019) utilised a two-stage regression model on a sample of 188 firms in London; Bailey et al (2019), utilised a logistic multiple regression on a two stage experiment on a sample of 88 university participants in a simulated work environment in an undisclosed country and Cho et al (2019), used OLS regression on 204 firms in the UK all highlighting the weaknesses of a performance-based system. These include a claim that financial KPIs can be easily manipulated to escalate executive pay, while non-financial KPIs have also been witnessed to escalate executive pay than financial KPIs in one of the studies. This is likely to lead to a compromised pay-performance link and ineffective RG. This all points to the importance of carefully structuring executive pay and considering a broad range of activities that can influence performance.

Poorly designed executive pay and flawed performance measures are likely to affect the relationships involving RGC, executive pay, performance, pay-performance link, and pay-gap such that it is not obvious which direction these relationships are likely to take.

3.5. RGC AND FIRM PERFORMANCE

The first objective of this study is to investigate whether high compliant firms report improved firm performance by assessing the connection between RGC and firm performance of JSE-listed firms. Firm performance is another variable that RGC is arguably expected to influence by improving it according to the agency theory. Among other things, the study first constructs the RGCI for each firm in the sample to determine the level of RGC and use this information to assess the relationship between RGC and firm performance. The purpose is to gain insight on the effect of RGC on firm performance. The following sub-section presents the literature review on the effectiveness of SoP in improving firm performance, this is followed by the effectiveness of pay disclosure in improving firm performance and lastly, the influence of CGI in enhancing firm performance.

3.5.1. SoP versus firm performance

SoP and pay disclosure are RG provisions and the belief is that they are both meant to constrain executive pay and thus, lead to the positive relationship between SoP and/or pay disclosure and firm performance since the reduction of executive pay leads to more retained profits. Fisch, Palia and Davidoff Solomon (2018:101) evidence that shareholders have less concern about pay levels unless performance is bad, this is supported by Borthwick, Jun and Ma (2020:828) who posit that good performance predicts few chances of SoP dissent. This favours a pay-performance link that is predominant in RG. The sample of both studies consisted of firms from different countries. At the same time, Kimbro and Xu (2016:37-38); Alissa (2015:750) witnessed that high SoP assent or vote is positively connected to firm performance. This is supported by Cai and Walkling (2011:334) who observe that the markets tend to show favourable signals post SoP in the US especially in firms with poor governance practices. This indicates that SoP is effective in enhancing firm performance.

While Cuñat, Giné and Guadalupe (2016:32-34) evidenced that the implementation of SoP significantly boosts market related long-term performance and employee productivity, and that it reduces overheads, regardless of whether shareholders end up approving or disapproving executive pay in S&P1 500 firms. Meaning that the direction of SoP sometimes does not matter if the opportunity to vote on executive pay has been granted to shareholders, firm performance is likely to improve.

3.5.2. Pay disclosure versus firm performance

Increased disclosure should lead to increased accountability and monitoring, which should ultimately positively influence firm performance (De Franco, Hope & Larocque 2013:337), hence the relationship between disclosure and performance is expected to be positive. However, Kang and Nanda (2018:19) who utilised disclosure index to analyse pay disclosure versus firm performance, witnessed no connection between the two variables in India. This indicates that pay disclosure plays no role in improving firm performance. SoP and pay disclosure have a particular focus on executive pay, hence there are few studies of this provision against firm performance.

3.5.3. RGCI and firm performance

A governance index is an assessment tool used by researchers or analysts to measure the level of compliance with RG/CG of firms for a particular period. RGCI allows for the rating of both compliance and non-compliance by firms using for instance, 1 for compliance and 0 for non-compliance or vice versa. These scores are then added to find the degree of compliance to governance. This sub-section explores the literature on the association between governance and firm performance. Most studies have measured CGC in general rather than RGC. High compliant firms are expected to report increased performance as highlighted in sub-section 3.2.3.2 above. As indicated, Nazir and Afza (2018:151-153); Bhatt and Bhatt (2017:906); Malik and Makhdoom (2016:747); Outa and Waweru (2016:908-909) witness a significant positive link while Elmagrhi (2016:289-299) witnesses just a positive link between CGI and firm performance. This highlights the great impact of CGC on firm performance and on reducing the agency problem. On the other hand, Tshipa et al (2018:380); Kaspereit, Lopatta and Onnen (2017:176) witness that CGC boosts the market value of firms in SA and Germany respectively. While Tshipa and Mokoaleli-Mokoteli (2015:164-165) observe that the overall CGC enhances firm performance in Indonesia, also in Indonesia and SA respectively. This is an indication that investors put confidence in CG and that they might be attracted to highly compliant firms because of the positive effect compliance has on improving firm performance.

Contrary to the above, Buallay, Hamdan and Zureigat (2017:94) witness a minimal impact of CG on firm performance, indicating a weak effect of CGC on firm performance. While Madanoglu, Kizildag and Ozdemir (2018:105) witness that CG provisions do not collectively enhance performance of restaurant firms in the US, instead; they need to be unbundled into different pieces and exclude certain provisions before it can arrive at a particular combination

that leads to enhanced firm performance. The contradictory results in the same study indicate inconclusive evidence. Overall, the evidence by Madanoglu et al (2018:105) highlights that investors can react differently in different contexts due to factors that may be unique to a particular firm or country. Meanwhile Wanniarachchige and De Silva (2022:33) evidenced inconclusive evidence between the governance index and firm performance in Sri Lanka.

Akbar, Poletti-Hughes, El-Faitouri and Shah (2016:428) evidenced that CGC is not related to firm performance in the UK, and link this finding to their approach of having controlled for endogeneity which they believe many previous studies have ignored. Detthamrong et al (2017:707) witnessed similar results in Thailand, where they also controlled for endogeneity as a possible moderator of the relationship. Bauwhede (2009:498) argues that a negative relationship between CGC and firm performance is also influenced by the inclusion of unusual items like asset disposal when accounting based measures are used, which leads to flawed conclusions. Meanwhile Serban (2018:711) obtained inconclusive evidence in the US.

In summary, the results present opposing views about the effectiveness of CGC in enhancing firm performance. This is since Kimbro and Xu (2016) adopted an OLS regression on 2 235 firms from the UK and US; Alissa (2015) who also employed an OLS on 217 firms in the UK; Cai and Walkling (2011) who used an OLS on 1 270 firms in the US together with Cuñat et al (2016) who utilised a non-parametric regression on 250 cases of SoP proposals in the US, all observe that SoP is effective in improving performance even though the last authors witness this improvement only on market-based measures of performance. This all indicates that SoP is effective in improving firm performance. There is no article that evidenced that pay disclosure manages to enhance firm performance.

In support of CG and with regards to CGI and firm performance, Kaspereit et al (2017) who utilised an uncommon model called Feltham and Ohlson 1995 model on 421 CDAX firms in Germany; and Nazir and Afza (2018) who employed Arellano-Bover/Blundell-Bond linear dynamic panel data estimation on 162 firms in Pakistan; Bhatt and Bhatt (2017) who employed a two-stage least squares regression on 113 firms in Malaysia; Malik and Makhdoom (2016) who used a random effect model on 100 firms from different countries; Outa and Waweru (2016) who adopted a general least squares regression (GLS) on 520 firm year observations in Kenya; Elmagrhi (2016) who adopted an OLS on 600 firm observations in the UK; Tshipa et al (2018) who adopted fixed effect GLS regression on 90 firms in SA; Tanjung (2020) utilised GMM on 135 firms in Indonesia and Tshipa who employed an OLS on 137 firms in SA, all evidence that CCI or CGC leads to the improvement of firm performance. However, Kaspereit

et al (2017) only observed this in market-based measures of performance. This highlights an effective CG as highly compliant firms are found to experience increased performance.

Simultaneously, opposing views on CGI and firm performance were reported. Kang and Nanda (2018) who adopted a generalised estimating equation approach on 134 firms in India; Madanoglu et al (2018:105) who utilised a qualitative comparative analysis on 23 restaurant firms in the US; Akbar et al (2016) who applied a GMM model on 435 firms in the UK and Detthamrong et al (2017) who used an OLS regression on 493 firms in Thailand, witnessed no effect of compliance on firm performance. Wanniarachchige and De Silva (2022) witnessed inconclusive evidence on 100 firms in Sri Lanka between 2016 and 2020, in a study that used random effects regression. The last two authors controlled for endogeneity in their studies and argue that a positive relationship between CGC and performance is caused by failing to control for endogeneity in the data. Buallay et al (2017) who utilised fixed effects regression on 171 firms in Saudi Arabia witnessed a poor connection between CGC and performance. This all suggests a failing CG according to the agency theory. No studies have produced results against the capability of SoP and pay disclosure to enhance firm performance. This study incorporates all the elements of RG including SoP and pay disclosure provisions into the RGCI to assess if RG can reduce executive pay and pay-gap while enhancing firm performance and pay-performance link of the selected JSE listed firms.

3.6. RGC AND EXECUTIVE PAY

The third objective of this study is to explore literature on whether firms that comply with RG more than others report reduced executive pay. Sub-section 3.2.2.1 unveils an expectation of a decreased executive pay on compliant firms. This objective has been achieved by examining the association between RGC and executive pay of JSE-listed firms. Excessive executive pay has long been the major concern in the finance field as it is believed to be the main way through which the agency problem manifests. Abudy, Amiram, Rozenbaum and Shust (2020:2); Kazan (2016:2) confirm the recurring concern of the agency problem by reporting excessive executive pay, even when firm performance deteriorates. Fabbri and Marin (2016:237) cite three (3) reasons among others that explain this excessiveness: (i) sectorial levels that are often used as a basis for executive pay more than firm specific factors, (ii) raising executive pay when a firm struggles to survive in order to attract executives of high calibre, and, (iii) competition for managers, locally and internationally, which also drives executive pay.

Further to this, Jensen et al (2005:50) reveals that excessive executive pay may also be fuelled by pay processes that are flawed, this is based on the authors' observation that remuneration committees often do not set executive pay from scratch. They normally rely on the human resource policies of firms (which are run by firms' staff members) due to time constraints. This tends to cripple the effectiveness of remuneration committees as they are the ones who should influence human resource policies. The battle against excessive executive pay is likely to be successful only when setting processes of pay are properly conducted (Ndzi 2016:349). Olaniyi and Obembe (2017:343) observed a significant positive link between executive pay and the previous period of executive pay, which supports the disregard for firm performance and RG when executive pay is being determined.

This section reviews the literature by looking at SoP versus executive pay, followed by pay disclosure against executive pay and lastly presents RGCI against executive pay.

3.6.1. SoP and executive pay

RG requires that shareholders should be granted an opportunity to approve or disapprove executive pay (Elst & Lafarre 2017:52) with the hope that this would prevent unnecessary executive pay-outs (Mason, Medinets & Palmon 2016: 273). Basically SoP is meant to enhance the effectiveness of RG in the form of a neutral voice when firms are finalising executive pay (Stathopoulos & Voulgaris 2016: 359) and therefore, an effective SoP should lead to a reduced executive pay. Accordingly, Atif, Huang and Liu (2019:1); Balsam, Boone, Liu and Yin (2016:188) witnessed that firms which previously overpaid their executives reduced the packages and made them more performance-based after SoP was introduced in Australia and the US respectively. The latter authors also witnessed that this is something normal prior to the first meeting of shareholders.

Similar results were reported by Baixauli-Soler, Lozano-Reina and Sánchez-Marín (2020:1354) who observed that SoP is capable of creating long-term wealth as SoP dissent tends to pressurise boards to design a more performance-driven pay and to review their pay policies to avoid a SoP dissent in the future. Obermann (2018:1622-1624) agrees that SoP does not always reduce executive pay, instead, it assists shareholders to structure it in line with their preferences. For instance, after SoP meetings in Germany; executive pay was found to be more long-term focused than originally presented by the board, while original executive pay levels did not change, the author further alluded. Viviers, Mans-Kemp, Kallis and McKenzie (2019:8); Correa and Lel (2016:518); Alissa (2015:750); Scholtz and Engelbrecht (2015:46) also witnessed that SoP is effective in reducing executive pay in SA, 38 different

countries and in SA and the UK respectively, which is an indication of greater accountability. Kimbro and Xu (2016:37-38) evidence that high SoP assent, where shareholders vote in favour of executive pay, leads to lower executive pay in the US. These studies all indicate a negative impact of SoP on executive pay, suggesting an effective RG. Even when SoP seldom leads to a decrease in executive pay, the right to vote alone may have a greater influence on the executive pay policies (Elst & Lafarre 2017:77).

On contrary, Cuñat et al (2016:32-34) witnessed no change in executive pay post SoP in S&P1 500 firms in US. This is confirmed by Chu et al (2021:30); Iliev and Vitanova (2017:26-27); Sanchez-Marin, Lozano-Reina, Baixauli-Soler and Lucas-Perez (2017:236-237) who witnessed that SoP fails to make meaningful reduction on executive pay in the UK, US and Spain respectively. Burns and Minnick (2013:256) observe that SoP fails to reduce total executive pay but is rather effective in restructuring it from a cash-based to a more performance-based pay, something that is also in line with the goal of RG.

Interestingly, Brunarski, Campbell and Harman (2015:132) evidenced that SoP accelerates executive pay whether the outcome is negative or positive in the US, highlighting a deficiency in RG. This may be attributed to the non-binding vote if boards still decide to proceed with the level of pay that was rejected by shareholders. For instance, this occurred in a firm named Fragon in Belgium where executive pay failed to gain shareholders' support three times in a row (Van der Elst 2017:184). Such ignorance is likely to affect shareholders' confidence and impair the market value of shares (Bowlin, Christ & Griffin 2020:26). This means that the rejection of executive pay by shareholders is sometimes deemed meaningless as the board can continue to disburse it anyway, undermining the purpose of SoP and the role of RG.

SoP can also be deliberately made ineffective by firms with excessive executive pay whereby the information presented is obscured with the intention to impact its readability and interpretation. thereby misleading shareholders to perhaps vote in favour of executive pay (Hooghiemstra et al 2017:695). Sanchez-Marin et al (2017:236) highlights that for some strange reason, it is not rare for firms with overpaid executives to find shareholders' vote in favour of executive pay even in cases where it is unreasonable. Mason et al (2016:309) highlights that sometimes shareholders themselves, without being manipulated, can choose to make SoP dysfunctional by voting in favour of the board, even if executive pay is unreasonably excessive. The authors further hinted that they could do this to communicate their rejection of the voting opportunity altogether if they believe that the board is capable of properly finalising executive pay. This means that the solution may not be in making attempts

to curb executive pay but to focus on facilitating the relationship between shareholders and management (Mason et al 2016:309).

According to Barreca (2020:355) who analysed the US pay policy, there are a number of reasons why SoP may not be meaningful to investors, leading to its deficiency, (i) investors may have a limited knowledge about pay disclosure, (ii) investors may be less bothered about the levels of executive pay as long as they are satisfied about returns, (iii) investors may be discouraged to challenge executive pay when the firm's share price is dong well as this would likely have a negative effect on its performance, (iv) SoP tends to promote inequality and excessive risk-taking if shareholders end up supporting high executive pay that is dispersed in the short term. Stathopoulos and Voulgaris (2016:29) indicate that SoP's effectiveness on executive pay remains unclear as the different studies were conducted in different settings.

3.6.2. Pay disclosure and executive pay

Pay disclosure aims to enhance transparency and market efficiency because markets and the economy generally function better when participants have the same information as managers and thereby reduces the agency problem through managing information asymmetry (Marino 2016:1379). Therefore, an effective pay disclosure should lead to a decrease in executive pay. The author further highlighted that pay disclosure has become a double-edged sword as remuneration committees tend to use this information to pay their executives higher than those of competitors, leading to a counterproductive contribution.

Kim, Lee and Shin (2017:82) discover that executive pay continued to escalate instead of decreasing after enhanced disclosure rules were implemented in Korea, also encouraging the escalation of executive pay in firms that previously had lower executive pay. This study only considered executives who earned above KRW500 million (about R7 million). This is in line with the Korean pay disclosure requirement which Ra and Kim (2018:26) criticise due to its ability to encourage executives to rather opt for a salary cut than to have their names and earnings publicly scrutinised. The argument of an escalating pay post pay-disclosure is supported by Mas (2016:1) who witnessed no reduced executive pay post disclosure laws in New York. As a result, Harvey et al (2020:1) condemn pay disclosure as they believe it is dysfunctional in its attempts to act as panacea of corporate governance failure.

Although Craighead, Magnan and Thorne (2004:390-391) agreed with the rest of the studies on the issue of higher executive pay post disclosure laws, they are of the view that pay disclosure has not entirely failed. This is based on their evidence of an improvement in

performance-based executive pay post disclosure law implementations than was previously the case in Canada. Meanwhile Thomson, Carpenter, Harber and Graham (2018:53-55) witnessed that the level of pay disclosure is poor in SA compared to the UK, which signals that accountability requirement through pay disclosure is loose in SA.

3.6.3. RGCI and executive pay

One of the objectives of this study is to use RGCI to assess the relationship between RGC and executive pay in an attempt to understand the extent to which greater RGC impacts executive pay of the selected JSE-listed firms. The description of the RGCI is like that given in sub-section 3.5.3. The expectation is that firms with high RGC should report decreasing executive pay. A number of studies from different countries including Outa and Waweru (2016:908); Akinkoye and Olasanmi (2014:22); Bhuiyan, Roudaki and Clark (2013:101); Bin and Abbas (2013:357); Kercher 2013:1) have utilised CGI witnessing varying levels of compliance. For instance, Akinkoye and Olasanmi (2014:20-23) observed an average compliance level of over 72% followed by a firm growth rate of over 5,5% post the implementation of the 2003 governance code in Nigeria.

Elmagrhi (2016:289-299) witnessed a negative link between CGC and executive pay in the UK. This indicates that RGC has managed to curb executive pay, highlighting an effective role of RG. Similar results were evidenced by Scholtz and Engelbrecht (2015:46) who observe the effectiveness of King III Report in curbing executive pay and thus creating long-term shareholders' wealth in SA. Ahn (2016:661) concurs as they observed high probability of unnecessary CEO long-term pay when CG is poor, the study was conducted on S&P 500 firms in Korea. The results all suggest that RGC leads to reduced executive pay.

In summary, divergent results have been reported in favour of RGC and executive pay as presented above. Looking at studies that are in favour of SoP, Atif et al (2019) used a logistic OLS regression on a sample of 3 064 firm observations in Australia; Balsam et al (2016) used an OLS regression and Pearson's correlation on 981 firms in the US; Baixauli-Soler et al (2020) used a regression and correlation models on 3 445 firm observations in the UK; Scholtz and Engelbrecht (2015) employed a regression model on 100 firm in SA; Viviers et al (2019) followed a mixed method model on a sample of 92 events and 65 executives in SA; Alissa (2015) employed an OLS on 217 firms in the UK; Kimbro and Xu (2016) who adopted an OLS regression on 2 235 firms from the UK and the US; and Correa and Lel (2016) who used regression analysis on 17 614 firms from 38 different countries to reveal that SoP is effective in reducing executive pay. The three first authors also evidenced that SoP tends to influence

firms to design pay packages that are more performance-driven. This highlights the fact that RG has been successful in constraining executive pay through SoP.

Contrary to the above, Chu et al (2021:30) adopted an OLS regression on 386 firms with 1 802 observations in the UK; Iliev and Vitanova (2017) employed a cross sectional regression on a sample of 425 in the US; Sanchez-Marin et al (2017) utilised linear regression models on a sample of 114 firms in Spain; Burns and Minnick (2013) who used a logistic regression analysis on 76 firms with 108 SoP proposals in the US discover that SoP fails to reduce executive pay with the last author also observing that SoP is better at restructuring executive pay to be more performance-based, which is in line with the results of other authors. At the same time, Brunarski et al (2015) who employed an OLS regression on up to 822 observations in the US reveal that SoP actually fuels executive pay. This highlights that SoP is deficient in reducing executive pay.

Regarding pay disclosure, there is no study that is completely in favour of pay disclosure and executive pay. Kim et al (2017) employed Spearman correlation and OLS regression on a sample of 204 firms in Korea and Mas (2016) who used OLS regression on 369 firms in New York, evidenced no reduction of executive pay from pay disclosure. This highlights that pay disclosure is deficient in controlling executive pay. Craighead et al (2004) who utilised a generalised least squares regression on a sample of 100 firms in Canada argue that pay disclosure has not dismally failed as it manages to influence executive pay to be more performance-based. This works in favour of a pay disclosure as it is an aim of RG for executive pay to be performance driven.

RG is effective regarding CGI and executive pay, as reported by Elmagrhi (2016) who adopted an OLS on 600 firm observations in the UK where they witnessed a negative link between CRI and executive pay, Scholtz and Engelbrecht (2015) who employed a regression model on 100 firms evidence a decreased executive pay post King III Report in SA. This highlights an effective RG in controlling executive pay. No sources were found that witness the opposite.

3.7. RGC AND PAY-PERFORMANCE LINK

The Fourth objective of this study is to investigate the pay-performance link of the selected JSE-listed firms. The agency theory being recognised as the foundation of RG, posits that a pay-performance link is a tool to achieve the alignment of interests between owners and managers. Studying the pay-performance link is, therefore, of great interest to discover if firms that are more compliant than others report an improved pay-performance link. This is because

ridiculous pay packages granted to executives continue to raise global concerns (Kanapathippillai et al 2016:387) as in most circumstances, it anticipates a worsening firm performance (Carter et al 2016:1). Among the reasons why pay can be perceived as excessive is because executives are sometimes paid for luck. This is the case when high performance has also been influenced by factors beyond the control of executives and yet they are still get rewarded for it (Jouber & Fakhfakh 2012:499-500).

A poor pay-performance link is an alarm of the agency clashes, poor CG approaches and/or practices, managerialism and sometimes nepotism (Eklund 2015:10). In spite the advancement to RG, executive pay continues to reach unexplainable levels. Hughen, Malik and Shim (2019:263) confirmed that total executive pay increased by 30% while long-term executive pay increased by 127% following the adoption of the Sarbanes Oxley Act (SOX) in all sectors studied, except in the financial sector of the US. It seems as if RG, through pay disclosure regulation, encourages firms to rely more on the social comparison theory. This is where executive pay is driven by what other counterparts are earning, disregarding the contingency theory, which places the distinct features of individual firms at the centre of executive pay. However, contingent factors may still not prevent excessive executive pay according to Carter et al (2016:3) who evidenced abnormally high performance-contingent executive pay in the US. Nevertheless, employers somehow feel obliged to match market salaries in order to avoid undesirable consequences (Gerhart 2017:99-100).

Bebchuk and Fried (2004:ix) argue that the issue of executive pay being excessive has been exaggerated as they believe that firstly, it concerns few firms and secondly, that excess pay sometimes arises from honest boards or executives' engagements. This argument, however, does not address the issue of excess executive pay or suggest ways in which pay may be aligned to performance. On this note, Deschenes et al (2015:74-75) suggest that in order to improve pay-performance link, RG ought to ensure that a significant portion of executive pay is performance-based as opposed to fixed. This is what some of the studies have witnessed with SoP and pay disclosure, which indicates their positive impact. The general view is that executive pay should be tied to the long-term success of the firm.

Kirsten and Du Toit (2018:8); Roode (2016:62-63) are of the view that despite the regulations, RG or literature recommendations, firms still choose to adopt pay systems they deem fit for their situations, whether they perfectly align pay to performance or not. This is perhaps encouraged by the fact that at the end of the day RG is voluntary. This makes generalisations about pay systems; in particular aligning pay to performance, appear as a weak principle. The

argument by Kirsten and Du Toit (2018:8); Roode (2016:62-63) seems to be in favour of the stewardship theory, which completely disregards the level of firm performance when setting executive pay levels.

Nevertheless, the pay-performance link has been the focus of numerous studies, especially after the emergence of RG, and studies continue to report contradictory results. Al Farooque, Buachoom and Hoang (2019:1111); Saravanan, Srikanth and Avabruth (2017:545-546) observe a significant pay-performance link in Asia and India respectively, indicating a perfect alignment of pay to performance and an effective RG. Tröger and Walz (2019:24-25) witnessed a moderately aligned executive pay to accounting-based measures of firm performance in Germany, highlighting a promising RG, however, with loopholes. On the other hand, Yahya and Ghazali (2018:37); Roode (2016:62-63) report a minimal positive pay-performance association in Asia, SA and SA respectively, indicating an ambiguous effect of performance on executive pay. At the same time, Hou, Priem and Goranova (2015:1) who conducted the study in the US observe that pay for performance becomes ineffective the longer the CEO stays in one firm, as they also tend to accumulate more wealth in the form of share ownership.

The other way to achieve effectiveness of incentive plans related to enhancing pay-performance link is good planning, accompanied by goal-setting as the first step (Cook, Ramón, Ruiz, Sirvent & Zhu 2019:45). The authors further alluded that this should be followed by a consistent monitoring and controlling approach which focuses on performance evaluation before the last step of establishing and disbursing incentives. Caution is also crucial in choosing executive performance indicators as Smirnova and Zavertiaeva (2017:671) witness that accounting-based FPMs are more successful than market measures in enhancing pay-performance link, even though they can be easily manipulated. While Elmagrhi et al (2018:24) witness that the quality of monitoring in line with CG provisions lowers executive pay and improves pay-performance link in the UK.

This section continues to review the literature by further looking into SoP versus pay-performance link, followed by pay disclosure and pay-performance link as well as the governance index versus pay-performance link.

3.7.1. SoP and pay-performance link

SoP is one of the ways of regulating executive pay and a fair executive pay should lead to the improved pay-performance link as shareholders are given an opportunity to push executive

pay to the level of firm performance through voting. As expected, extant literature such as Yuan, Lin and Oriaku (2017:85); Correa and Lel (2016:518) evidence an improved pay-performance link post SoP regulations in the US and 38 different countries respectively. This indicates a positive impact of SoP on pay-performance link and therefore, an effective RG. Similar to this, Liang, Moroney and Rankin (2020:964) observe that shareholders tend to vote in favour of executive pay that builds a greater pay-performance link as opposed to a poor or no link. This study was conducted through an experiment with senior accounting students posing as shareholders of listed firms at an Australian university, which may be a weakness as the validity of the study may be questionable. Nevertheless Collins, Marquardt and Niu (2019:757-758); Sanchez-Marin et al (2017:236) confirmed the observation by Liang et al (2020:964) that SoP allows shareholders to shape the future of executive pay towards a more reasonable pay-performance link through voting against a current executive pay that seems excessive. Liang et al (2020:964) also witnessed that a previous rejection of executive pay by shareholders lessens their focus on pay-performance link in the next vote since they think that whatever they voted against in a previous period was addressed.

Contrary to this, Brunarski et al (2015:132) evidenced no effect of boards' reaction to future SoP outcomes and firm performance in the US, indicating that boards are not always shaken by SoP dissent and therefore, do not always address it in their decisions. Iliev and Vitanova (2017:26-27) evidence an accelerated CEO pay and a very minimal positive effect of SoP on pay-performance link in the US. This highlights a weak though still positive effect of SoP on the pay-performance link.

3.7.2. Pay disclosure and pay-performance link

Pay disclosure is one of the ways recommended by RG to curb executive pay. There should, therefore, be a positive relationship between pay disclosure and pay-performance link. There has been a debate on whether pay disclosure is effective in preventing excessive pay or not as some of the firms tend to use it as an opportunity to further escalate executive pay. Such revelations led to Harvey et al (2020:16) arguing that pay disclosure is a poor tool towards pay accountability, further highlighting that the positive pay-performance link it sometimes causes should not be confused with increased pay accountability. Despite this, Kanapathippillai et al (2016:385-386) believe that pay disclosure is necessary as the information it explicitly provides to shareholders is vital for judging the extent of a firm's commitment to aligning pay-performance.

Harvey et al (2020:17) then proposed four conditions under which they believe proper pay accountability would be achieved, (i) there must be an appetite to hold executives to account; (ii) requisite information should be available to hold executives accountable; (iii) there should be shared level of understanding of the available information between the parties involved; and (iv) it must be possible to punish underperformance using agreed standards between the parties.

Kim et al (2017:82); Clarkson et al (2011:63) witnessed minor improvements to the pay-performance link post disclosure requirements in Australia and Korea respectively. They only observed this in firms that demonstrated good RG, indicating that performance was amongst other factors that influenced executive pay increases but not to a significant extent. Since only firms with good governance were selected, but still failed to show a significant relationship, RG in this regard seems deficient. In SA, Ulrich (2010:381-384) is of the view that listed firms underutilise executive pay disclosure as they do not realise its full potential as a governance monitoring and control tool, hence it looks less effective. To strengthen disclosure, Moyo (2010:146) suggests that RG should develop guidelines that are specific to promoting and reporting whistle-blowing findings.

3.7.3. RGCI and pay-performance link

RGCI measures the extent to which firms comply with RG, so its relationship with pay-performance link should, therefore, be positive. Strangely, Bin, Chen and Ngo (2020:21) assessed CGC against pay-performance link pre- and post-CG in China which evidenced mixed results. The results post-CG indicate no link if market values of firm performance are utilised, while pay-performance link was only observed pre-CG on both accounting and market-based measures of firm performance. This highlights a less effective RG than expected.

Padia and Callaghan (2020:11-12) who studied pay-performance link post King III Report, witnessed no relationship of executive pay with FPMs they deem meaningful like ROA and Tobin's Q, but only with revenue; a performance measure that they consider to be very weak. While Motepe (2018:46-48) evidenced a minimal positive link between CG and pay policy and between firm performance and pay policy, indicating a minimal effect of RG on executive pay and a disregard of pay-performance link when executive pay is being determined in SA. The prevalence of market measures of firm performance in coinciding with CGC was also observed by Tshipa et al (2018:380); Ashwin (2015:72-74) who witness a positive relationship between

CGI and market FPMs while no relationship was observed between CGI and accounting-based FPMs, both studies were conducted in SA.

In summary, the results are mixed and contradictory such that it is not clear which aspect of RG has been more effective in strengthening the pay-performance link. Some of the studies, including Yuan et al (2017), used binary logistic regression and correlation analysis on 3 307 firm observations in the US. Correa and Lel (2016) employed regression analysis on 17 614 firms from 38 different countries and witnessed a significant and positive association between SoP and the pay-performance link. This clearly indicates an effective SoP in boosting the pay-performance link. Conflicting results are reported by some of the authors like Iliev and Vitanova (2017) who employed a cross sectional regression on a sample of 425 in the US, where they evidenced an increased executive pay and minor positive effect of SoP on pay-performance link.

Looking at the relationship of pay disclosure and/or RGCI and pay-performance link, Clarkson et al (2011) who adopted a base and augmented model regression on 240 firms in Australia, and Kim et al (2017) who employed Spearman correlation and OLS regression on a sample of 204 firms in Korea, observed a minimal effect of pay disclosure on pay-performance link. Similar results were reported by Motepe (2018) who utilised SAS structural equation modelling on a sample of 81 firms in SA as they also evidence a weak effect of RGCI on pay-performance link. Some of the results are mixed for instance, Bin et al (2020) who employed an OLS and fixed effect regression on sample of 10 152 firm observations in China on the study that scrutinised the impact on pay-performance link pre and post CG, discovered that CGI shows no relationship if market FPMs are used post-CG, otherwise a positive pay performance link is observed pre-CG on both measures of performance.

Padia and Callaghan (2020) who employed GMM regression on 11 319 firm observations in SA, observe a positive relationship between CGI and pay-performance link if revenue is used as a measure of performance, otherwise no association was found if other measures are used. Tshipa et al (2018) who adopted fixed effect GLS regression on 90 firms in SA and Ashwin (2015) who adopted an OLS regression on 30 firms in SA evidence a positive connection between CGI and pay-performance link only if market-based measures of performance are used. This highlights an ambiguous effect of CGI on pay-performance link.

3.8. EXECUTIVE-EMPLOYEE PAY-GAP TO FIRM PERFORMANCE AND/OR EXECUTIVE PAY

The fifth objective of this study is to explore pay-gap and firm performance of JSE-listed firms for the ten years from 2011 to 2020. This objective is important since SA is popular as being the most unequal society in the world (The World Bank 2018 2022:1) with large pay-gaps being one of the contributing factors. King IV Report which was implemented on 1 April 2017 aims for reduced pay-gaps as it requires firms to consider ordinary employees when determining executive pay. The code also requires firms to disclose the extent to which they have done so. This was followed by the implementation of the minimum wage regulation at the beginning of 2019 (National Minimum Wage Panel 2016:7-8). However, less is known about the extent to which pay-gaps can influence firm performance, especially in the SA context. The agency theory and RG seek to constrain executive pay, which is an essential variable in determining pay-gaps such that an increase in executive pay leads to an increase in pay-gaps and vice versa. Therefore, an effective RG should lead to reduced pay-gaps and a negative association between pay-gaps and firm performance. However, the tournament theory posits that higher pay-gaps are useful in enhancing firm performance. Examining the association between pay-gap and firm performance is, therefore, necessary in the interest of firms and regulators.

Executives and ordinary employees are all contracted as firm staff members who are expected to deliver a certain service for payment and should, therefore, be treated equally in all matters including those related to pay (Magnan & Martin 2019:89). A large executive pay-gap, which disregards ordinary staff, indicates that employees are deprived a fair share in the firms' wealth they created which destroys their morale and discourages them from exerting maximum effort (Chan, Kawada, Shin & Wang 2020:282). As such, the general public is negative towards a high pay-gap as Benedetti and Chen (2018:392) evidenced where people are less inclined to buy products and seek employment from firms with a high pay-gap. However, Bloom (2017:34) argues that comparing executive and employees' pay is unrealistic as executive pay needs to incorporate many strategic factors which are not normally part of employees' pay. It seems like RG has failed to address the pay-gap issue as pay disclosure requirements and other RG provisions are aimed at curbing executive pay, and which directly benefits shareholders (Schofield-Georgeson 2018:115) while completely disregarding other stakeholders like employees in this instance.

Though supported by the tournament theory, the broadening pay-gap between the more and the less fortunate individuals has fuelled conflicts in society as it mocks hard efforts towards economic stability (Guo 2019:1560). Though it has not been possible to gain an insight of the acceptable levels of pay-gap from the available literature, ridiculous levels could be easily spotted. Anderson (2018:1) alerts that in some of the US firms, it would take more than two thousand years (two millenniums) for some of the ordinary staff members to accumulate their CEO's pay in 2017. This indicates that pay-gap calculated on annual packages was above two thousand. Hecht (2021:1) discovered that top earners feel justified in the amounts they receive as they believe that it is in line with the level of their effort. High pay-gap may also be related to the level of complexity that continues to be embedded in a firm's operations coupled with the high firm size (Gómez-Bezares, Przychodzen & Przychodzen 2019:1) or even to the complexity of executive pay (Oberpaul, Tichy & Weller 2022:1). Whatever the case, "*paying executives hundreds of times what other employees get is inherently unfair and unacceptable*" (Bebchuk & Fried 2004:8). Gómez-Bezares et al (2019:1); Hopkins and Ebrahimi (2017:31) call for a pronouncement of acceptable pay-gaps to fast track solving issues related to pay injustice.

Sheehan (2012c:7) however, argues that it is impossible to perfectly regulate pay levels due to varying contexts in which firms operate and is worsened by their sectoral, country-specific, and geographical factors. Sadly, there is less hope of a change in high pay-gaps despite regulators' focus on reduction because most firms have already formulated certain systems to determine executive pay levels (Marino 2016:1382). Graefe-Anderson, Pyo and Zhu (2018:448-449) witness that firms with higher pay-performance links are more likely to depress salaries of ordinary employees when they begin to show signs of instability. This highlights that CEOs either do not also see the need to increase ordinary staffs' salaries or do not regard share options as equivalent to cash earnings that should entitle ordinary staff to an increase in salaries.

Conyon and Read (2000:13) indicate a pay-gap of seven to nineteen in the UK in 1984-1988, PricewaterhouseCoopers reported an average pay-gap of 12,7 to 64,7 for JSE-listed firms in 2018. Pay-gap tends to be larger in privately owned firms than state owned (Jiang, Lin, Liu & Xu 2019:261). Hopkins and Ebrahimi (2017:31) argue that high pay-gaps are not a symptom of unethical behaviour as it prevents firms from hiring lower-level individuals, which positively contributes to the economy. Hopkins and Ebrahimi (2017:31) in their study made no reference to any source whether academic or not, except for a database from which they obtained pay-

related data. This makes their work a generic article which reduces their recommendations to the level of simply an opinion.

This section continues to review pay-gap related literature, the following sub-section covers pay-gap and firm performance, followed by a sub-section on pay-gap versus executive pay, and lastly the sub-section on SoP and/or pay disclosure versus pay-gap is presented.

3.8.1. Pay-gap and firm performance

RG was introduced to lessen the impact of opportunism which Ndzi (2019:987); Mdingi (2017:4); Bebchuk and Fried (2004:ix) concur that mostly manifests in the form of excessive executive pay. Provisions like SoP aim to grant shareholders an opportunity to reject excessive pay and push for a pay-performance link. Therefore a firm that is compliant with RG is expected to report declining pay-gaps and a negative relationship between pay-gap and firm performance. Sanchez-Marin and Baixauli-Soler (2015:450-455); Pissaris, Jeffus and Gleason (2010:307) concurred that the strength of the relationship between pay-gap and firm performance depends on the effectiveness of RG. A negative association between pay-gap and performance is in line with the agency theory which posits that effective monitoring aligns pay to performance through better management of executive pay. This supports what was previously indicated that one of the aims of RG is to curb executive pay to reasonable levels. Yu and Van Luu (2016:607) concluded that RG is failing after witnessing a negative association between pay-gap and firm performance, their argument supports the tournament theory as it advocates for higher pay-gaps with the hope that performance would improve.

On the other hand Luo, Xiang and Zhu (2020:19) observed a u-shaped relationship between pay-gap and firm performance in China which means that firm performance cannot be explained by pay-gap as there is no linear relationship. Meanwhile Pissaris et al (2010:307) observed a significant while Cheng, Ranasinghe and Zhao (2017:29-31); Rouen (2017:4); Banker, Bu and Mehta (2016:501); He and Fang (2016:371) witnessed just a positive association between pay-gap and firm performance in US, and China which indicates a failing RG. Aligned to the tournament theory, this indicates that some firms may perceive large pay-gaps as beneficial in maximising a firm's wealth. This can motivate firms to regard the criticism of high pay-gaps as minor noise that they can easily conquer simply by focusing on creating more wealth for shareholders at the expense of addressing large pay-gaps.

Contradictory results were reported by Urson (2016:56-58) who evidenced no effect of pay-gaps (either high or low) on firm performance in the consumer sector in SA. Graefe-Anderson

et al (2018:448-449) witness that it is common practice for CEOs with higher equity tied pay to depress salaries of ordinary staff even if there is no pressing issue like recession or firms' instability.

There is limited literature on pay-gaps generally and this becomes worse when a relationship between pay-gap and another variable is being examined.

3.8.2. Pay-gap and executive pay

To indicate that firms are sensitive when dealing with the issue of pay-gaps, the Institute of Directors South Africa (2016:31) recommends that they at least consider ordinary staffs' pay when they attend to the executive pay. This, therefore, suggests that a firm that is compliant with RG should report a positive relationship between pay-gaps and executive pay. Kubo (2000:271-275) who conducted a study in firms based in the UK and Japan found a positive relationship between executive pay and ordinary staffs' pay for firms in Japan but no relationship for firms in the UK. This indicates that there is improvement in addressing pay-gaps by firms in Japan, indicating an impactful RG. In the same study but contra to Japan's results, firms seem to disregard pay-gaps when finalising executive pay in the UK. This is confirmed by Park, Kim and Sung (2017:1) who observed that large pay-gaps are prevalent in Korea and Taiwan. While Chu et al (2021:30) witnessed no positive effect of RG on pay-gaps in the UK. This all alludes to the indication that RG is failing.

Graefe-Anderson et al (2018:448-449) evidence a suppression of staff salaries to cover CEO equity-based pay. This shows that not all firms regard pay-gap as a matter of priority and urgency and in fact, as a beneficial exercise altogether in firms. Fan, Song and Zhou (2019:23-24) evidence reducing pay-gaps and curbed executive pay in Chinese universities, which confirms results by Jiang et al (2019:261) who witnessed a lower pay-gap in state-owned entities.

3.8.3. Say on pay and pay-gap

Among the aims of RG is restoring social injustices associated with excessive executive pay which came in the form of depriving ordinary employees and even shareholders of their fair dues (Mason et al 2016:309). The level of pay-gap in a firm is expected to have an influence on shareholders' vote for or against executive pay, and this is the case because pay-gap provides more information about executive pay which is of great interest to shareholders. This indicates that high compliant firms to RG should report a negative relationship between pay-gap and SoP votes. As stated, Norman et al (2020:470-472) witness that pay-gap influences

SoP decisions in the US as shareholders tend to support executive pay when pay-gap is within the industry average. From the few articles reviewed on this subject, it suggests that RG is effective in reducing pay-gaps. As previously highlighted, the literature is very limited on the pay-gap subject.

3.8.4. Pay disclosure and pay-gap

Pay-gap disclosure is directly mandated in other jurisdictions like the US while in other jurisdictions like SA, it is indirectly mandated through the requirement of executive pay disclosure. This makes no big difference whether it is directly or indirectly regulated as pay-gap can still be determined from the executive pay information provided in the annual reports. Although pay disclosure laws are meant to curb pay-gap (Schofield-Georgeson 2018:96), the literature, as presented in other sections of this study shows the opposite. Loh (2017:448) criticised pay-gap disclosure as it brings unpremeditated consequences of extensive executive pay which cripples shareholders' finances further than imagined. While Ra and Kim (2018:26) who conducted the study in Korea where only executive pay above KRW500 million was disclosed highlights that in firms which are mostly family run, executives tend to rather design or opt for a reduced pay than to earn pay levels that forces them to disclose their pay, which they believe is a weakness of RG.

Norman et al (2020:470-472) find pay-disclosure effective in controlling pay-gaps in the US as they observe that boards tend to be reluctant to set executive pay levels that are beyond the industry average pay-gaps. This is supported by Chang, Dambra, Schonberger and Suk (2019:1) who witness that pay disclosure leads to the reduction in executive pay in the US. In the same study, Chang et al (2019:1) also evidenced that pay disclosure leads to poor pay-performance link, which is strange as declining executive pay should lead to increased performance. In contradiction, Bank and Georgiev (2019:1125) believe that the pay-gap disclosure rule is completely flawed due to the difficulty on the side of shareholders to interpret it correctly and make informed decisions, making it less effective. It seems that pay-gap disclosure only works in firms that are ashamed of bad image arising from high pay-gaps (Kelly & Seow 2016:107).

In summary, the results in this section are mixed as some of the authors are in favour while others are against pay-gaps. Yu and Van Luu (2016:607) who utilised time-fixed effects on a sample of 92 banks from different countries observed a negative association between pay-gap and performance; Kubo (2000) who employed a regression analysis on a sample of 8 979 employees witnessed a positive association between employees' pay and executive pay in

Japan; Fan et al (2019:23) who utilised regression analysis on 2 362 firms in China and Jiang et al (2019) who applied fixed effect regression on a sample of 1 370 firms in China both observed curbed executive pay and reduced pay-gaps; Norman et al (2020) utilised an experiment on a sample of 75 directors in the US confirmed that SoP vote and pay disclosure tends to work in favour of firms with pay-gaps which are within industry averages. This all indicates that RG is effective in its attempt to minimise pay-gaps.

Contra to the above, Luo et al (2020) adopted a fixed effect regression on 2 237 firms in China and observed no explainable relationship between pay-gaps and performance as the relationship was u-shaped. This is similar to results of Urson (2016) who used pooled OLS regression on 51 firms with 325 observations in SA; Kubo (2000) who employed a regression analysis on a sample of 8 979 employees; Chu et al (2021) adopted an OLS regression on 386 firms with 1 802 observations in SA, and the UK, respectively as they evidenced no effect of pay-gaps on performance and/or executive pay. At the same time, Pissaris et al (2010:307) utilised a panel regression on 475 firms from different countries; Cheng et al (2017) who adopted an OLS and logit regression on a sample of 817 firms in the US; Rouen (2017) applied a logit and OLS regression on S&P 1 500 firms in the US; Banker et al (2016) used a regression analyses on a sample of 5 835 firm observations from the US and China; and He and Fang (2016) who employed an OLS regression on 1 688 firms in China, all evidenced a positive connection between pay-gap and firm performance, indicative of a failing RG.

3.9. LINKAGES BETWEEN FPMs AND KPIs

The last objective of this study is to investigate similarities and/or divergencies of FPMs that firms adopt in the scientific inquiries involving RG, firm performance, executive pay, pay-gap, and pay-performance link from KPIs that JSE listed firms prefer to use to measure executives' performance and thereby, determine executive pay. This objective is necessary since the Institute of Directors South Africa (2009:48, 2016:65) recommends that KPIs which firms use to assess executive performance should include non-financial measures considering triple context aspects in which firms operate. This necessitates an investigation of whether researchers consider the type and nature of KPIs when they choose FPMs especially since the literature which includes Chu et al (2021:30); Abudy et al (2020:2); Yahya and Ghazali (2018:37); Iliev and Vitanova (2017:27); Kim et al (2017:82); Sanchez-Marin et al (2017:231); Kazan (2016); Mas (2016:1); Roode (2016:63); Hou et al (2015:1); Brunarski et al (2015:132); Burns and Minnick (2013:256) has rarely explained the reasons behind their choice of FPMs. This investigation is important because the appropriateness of the research instrument, which

would be enhanced if FPMs at least resemble executive KPIs in this case according to Chenhall and Moers (2007:173) who emphasise the importance of flawless choice of variables, is at the heart of every research as it would confirm the quality of validity (Mohajan 2017:14-15). The following sub-section explores the nature and types of executive KPIs prevalent in the JSE listed firms, this is followed by a sub-section about the nature and type of FPMs usually preferred by researchers in examining the subjects of governance, executive pay, pay-gap, performance and pay-performance link, and the last sub-section provides a discussion of whether there are similarities between KPIs and FPMs. Table 3.5 below has been used to support the explanations in the sub-sections that follow. This table provides an overview of the results for nine piloted journal articles and JSE listed firms. Pilot sample has been presented in section 4.9 of chapter four.

Table 3.5: Pilot Sample-Summary of KPIs vs FPMs

Pilot sample-Summary of KPIs vs FPMs					
KPIs (9 firms)			**FPMs (9 articles)**		
KPI	**Out of 9**	**%**	**FPM**	**Out of 8**	**%**
Other (Non-financial)	9	100%	ROA	8	89%
HEPS	8	89%	ROE	4	44%
EBITDA	7	78%	Tobin's Q	4	44%
Other (Financial)	7	78%	EPS	2	22%
BBBEE	6	67%	ROCE	2	22%
Production	6	67%	Other (Financial)	2	22%
Safety	5	56%	TSR	2	22%
Cash	5	56%	MC	2	22%
TSR	4	44%	HEPS	2	22%
ROIC	3	33%	Other (Non-financial)	0	0%
ROCE	2	22%			
Revenue	2	22%			
Free cash flow	2	22%			

Author's conceptualisation (2021)

3.9.1. Executives' KPIs

King IV Report emphasises the importance of including triple context measures in executives' KPIs, which cover social, economic and environmental firms' aspects (Institute of Directors South Africa 2016:31). Looking at the nature of the triple context, this should mainly be non-financial measures in addition to the traditional financial measures that are common in the finance field. A practical example of a non-financial executive KPI can be noted from a case of BP where at some point its CEO pay was based on health and safety measures (BBC News 2016:1). The preceding event in deciding on this KPI was a health and safety scandal which led to BP creating a pay fund (provision) of about $20 billion and incurring a further $8 billion

in cleaning costs in 2010 (BPP Learning Media 2017:103). This is proof that firms need to prioritise all their stakeholders in order to minimise risks that may emerge from neglect (Nigam, Benetti & Mbarek 2018:571). Cho et al (2019:301) observed that combining financial and non-financial KPIs produces more committed executives whose pay easily aligns to performance. Firms are gradually adopting non-financial KPIs, as evidenced by Maas and Rosendaal (2016:390) that on average, 33% of firms around the world used sustainability KPIs in determining executive pay, which is one of the non-financial KPIs. According to Abdelmotaal and Abdel-Kader (2016:327), sustainability incentives positively influence a firm's return.

There is no existing study that has assessed which KPIs are dominant in JSE listed firms and the nature and/or type of these KPIs as far as being financial or non-financial is concerned, which is partly objective six of this study. This means that there is no literature on this yet, however, a brief observation of nine firms that were included in the pilot study which preceded the main study was done. More information about the pilot study can be found in section 4.9 of chapter four. The observation revealed that the nine firms in the pilot study all had more than one non-financial KPI among executive KPIs they adopted to measure executive pay, and these KPIs were mostly detailed for direct measurement. This means that firms have been progressive in implementing triple-context executive KPIs recommended by the King Code. The pilot study also revealed two most popular financial executive KPIs, namely, headline earnings per share (HEPS) and earnings before interest and tax (EBIT) and/or earnings before interest and tax depreciation and amortisation (EBITDA) among the piloted JSE listed firms. HEPS has been utilised by 89% and EBIT/EBITDA by 78% of the piloted firms. This means that these firms rely on both financial and non-financial executive KPIs to measure executive's performance and determine executive pay.

3.9.2. Firm performance measures (FPMs)

In the context of this study, FPMs are measures commonly used by researchers who examine relationships involving governance, executive pay, firm performance, pay-performance link, and pay-gap. These FPMs are usually used to assess the extent of an alignment between executive pay and firm performance and thus, measure the agency problem. For decades, an examination of this alignment has been a popular inquiry in the finance field, with researchers often relying on the previous studies to select FPMs, which is scientifically acceptable. However, there is no evidence that the preferred FPMs have been a fair measurement of executive performance, against which levels of executive pay are assessed. There is also no study that has indicated its consideration of the executive KPIs in assessing this alignment.

This despite the 2010 UK CG and King IV Report recommending the use of non-financial KPIs as they are more realistic in assessing strategic positions of firms (Tahir et al 2019:148). This sub-section briefly discusses the nature and type of FPMs that are prevalent in the nine piloted journal articles.

Table 3.5 shows that the most popular FPM among the nine piloted articles is ROA, having been used by 89% of the piloted articles, this is followed by return on equity (ROE) and Tobin's Q, having been both utilised by 44% of the piloted articles. Meaning that among others, researchers have relied mostly on FPMs in assessing connections involving governance, executive pay, firm performance, pay-performance link and pay-gap. There has been no non-financial FPMs that has been utilised by the piloted articles.

3.9.3. Link between executive's KPIs and FPMs

The absence of a study that has explored if FPMs resemble KPIs has necessitated objective six of this study. The intention is to discover the extent to which FPMs that researchers commonly select in their investigations of the connections involving governance, executive pay, firm performance, pay-gap and pay-performance link, are similar to the KPIs that are utilised by JSE listed firms to assess executive's performance, and thereby, measure executive pay. As there is no directly linked literature for this objective, results discussed in the two preceding sub-sections have been merged to demonstrate if there are any similarities between FPMs and KPIs.

Executive KPIs revealed that HEPS and varying non-financial KPIs are most preferred by the piloted JSE listed firms to measure executive's performance and determine executive pay. On the other hand, ROA is the most dominant FPM preferred by researchers among the piloted nine journal articles. Also, it was revealed by the pilot study that the nature of KPIs is distinct from that of FPMs as the former include non-financial KPIs that are either detailed or not straightforward for direct measurement. FPMs on the other hand did not include a single non-financial measure. This means that FPMs of the researchers as noted in the pilot results do not resemble executive KPIs utilised by the piloted JSE listed firms. This necessitates detailed investigation, which has been presented in the results chapter as objective six.

3.10. NEGLECTED FACTORS THAT ARE LIKELY TO INFLUENCE RGC, EXECUTIVE PAY, FIRM PERFORMANCE AND PAY-GAP RELATIONSHIPS

This section does not focus on the common variables or factors that are mostly studied in relationships involving RGC, executive pay, firm performance, pay-performance link, and pay-

gap. Rather, it unpacks the least studied variables or factors that are mostly ignored when they are likely to impact those relationships. These factors are in addition to the endogeneity problem discussed in the previous sub-section. Following below is a sub-section on non-measurable factors, followed by firms' agility, then RG being treated as a simple compliance exercise is discussed, followed by the issue of fixed executive pay and lastly, a discussion on the 'comply or explain' principle.

3.10.1. Endogeneity

A flaw in the choice of variables is an element of the endogeneity problem (Chenhall & Moers 2007:179). Endogeneity seems to involve a broad range of issues or factors that are likely to influence the results if they are not addressed in the study. It arises as a result of omitted explanatory or predictor variables in the regression analysis, which leads to the error term being correlated with independent variables (Abdallah, Goergen & O'Sullivan 2015:791). It can also arise due to the unobserved heterogeneity and/or when an omitted variable is related to both the dependent and independent variables (Sorensen 2012:1). Further to this, endogeneity can also exist if the dependent and independent variables influence one another (Abdallah et al 2015:791), where for example, an independent variable X predicts an outcome variable Y which in turn predicts variable X.

Vartiainen et al (2008:3) agrees that there are numerous factors that can moderate the relationship involving RGC, executive pay, firm performance, pay-performance link and pay-gap. It is common for studies in CG research to fail to consider endogeneity (Akbar et al 2016:417; Elmagrhi 2016:93). Endogeneity may include but is not limited to CEO entrenchment (Ammari, Ayed & Ellouze 2016:3-4), firm size (Paniagua, Rivelles & Sapena 2018:230-231), firm specific factors (Alves, Couto & Francisco 2016:185), time-variant firm characteristics (Detthamrong et al 2017:696), institutional ownership (Pucheta-Martínez & Chiva-Ortells 2019:1), discretionary earning management (Nazir & Afza 2018:141), accounting conservatism (Li, Henry & Wu 2019:393), ownership concentration (Ataay 2018:1152; Baixauli-Soler & Sanchez-Marin 2014:115), executive performance evaluation (Mans-Kemp & Viviers 2018:170), internal control systems (Paletta & Alimehmeti 2018:277), several directorships held by executives outside the firm (Saravanan et al 2017:531) and family ownership (Nazir & Afza 2018:146). Practically, it is impossible to eliminate endogeneity in any research (Chenhall & Moers 2007:179). However, it is obvious that the intention should always be to minimise endogeneity given its potential to dilute the results and conclusions of the research.

3.10.2. Non-measurable factors or variables

There are obviously numerous factors or variables that can influence RGC, executive pay, firm performance, pay-performance link, and pay-gap, some of which have been extensively studied while others have been neglected in the literature. There are many reasons researchers may choose to neglect a variable. One of them is when there is uncertainty in how it should be measured (Lehn 2018:66) for example; an ineffective board as highlighted by Zorn et al (2017:2623). Other examples are highlighted by Al-Najjar (2017:9); Hengartner (2006:1) and include higher executive qualifications or exposure, capabilities, more complex and/or demanding jobs. This leads to researchers accepting the temptation to focusing mainly on the easy-to-measure variables when others are also capable of influencing the relationships under study. Mans-Kemp, Erasmus and Viviers (2017:34) concur believing that most researchers of the CG subject have paid more attention to board-specific variables and have been easily swayed by simplified accounting and market-based FPMs.

At this point, it is important to remember a famous phrase by Albert Einstein that '*Not everything that counts can be counted and not everything that can be counted counts'*. Meaning that variables that cannot be counted or measured may not necessarily be the ones that do not count or could not add value to the relevant studies. This has the potential of influencing the literature towards biasness and overemphasis of certain subjects or variables, which could create an unbalanced narrative about a certain subject matter.

3.10.3. Firms' agility

Firms' agility refers to the firm's capability to successfully adjust to unanticipated changes whether rapid or slow-paced, such that firms are able to continue with operations into the long-term future (Lehn 2018:66). Someone may think of the Covid-19 pandemic, the 2008 global financial crisis, the fourth industrial revolution, KwaZulu Natal (KZN) 2021 looting, 2022 KZN floods and rapid price changes in SA (like petrol, electricity, interest rate and food prices) post the Covid-19 pandemic as practical examples. Kale, Aknar and Başar (2019:276); Nemkova (2017:257); Cegarra-Navarro, Soto-Acosta and Wensley (2016:1544) observed that firms' agility is directly or indirectly related to firm performance. Firm's agility is one of the concepts where there is limited literature (Nemkova 2017:257) in the finance field. Other examples of firm agility include but are not limited to changes in consumer behaviour (Lehn 2018:66), not accounting for or incorrectly accounting for uncontrollable factors like macroeconomic, political, regulation and natural factors (Dhliwayo & Bussin 2019:6).

3.10.4. Treating RG as a simple compliance exercise

It is well known that not every scholar in a uniform is a dedicated student. A similar situation exists with RGC; not every firm that purports to have its governance affairs in order is indeed compliant as perceived with CG code. Firms may choose to comply just for the purposes of ticking all the boxes in the compliance checklist (Langeni 2018:16). It is less likely that compliance for the purposes of just reporting to stakeholders could improve how a firm is run, and therefore, manage to curb executive pay or increase firm performance. Mans-Kemp et al (2017:33) agrees that "*If a firm merely attempts to comply with the basic King recommendations, the benefits of effective corporate governance compliance might not be obtained*".

3.10.5. Fixed executives' pay

Kashif and Lone (2018:26) highlight that overseeing executive performance is the most crucial duty of the board as it improves control. The agency theory suggests that in overseeing executive performance, pay should be at the centre and performance should be used as a tool to determine executive pay. RG on the other hand emphasises fair executive pay through the pay-performance link. On the other hand, fixed pay is a fundamental component of executive pay in most of the listed firms and is one of the popular variables used by researchers to study the subject of executive pay. Fixed pay basically means that executive pay remains the same or at a certain level regardless of circumstances within the firm or its performance. With the continuous examination of executive pay coupled with the call to design good pay policies while tightening the role of remuneration committees, it is fair for regulators and/or researchers to define the role of fixed pay in the pay structure. Something similar to what Shan and Walter (2016:667) attempted to do, where they proposed the role of base pay to focus on rewarding executives for managerial talent, which would need to be amended as the firm's goals require new talents.

Revisiting fixed pay is important perhaps to clarify the level of risk that executives are exposed to when taking into account the factors that are beyond the control of executives (Tingle 2017:415), staff retention, and so on. Defining fixed pay would also assist in defining fixed performance as this is necessary to improve pay systems. If the role of fixed pay continues to be ignored, it is easy to incorrectly judge executive pay as excessive, or suspect that boards/remuneration committees are ineffective, executives are still dominant, and shareholders' activeness is inadequate, among other things. This is obviously likely to interfere

in the examination of the relationships involving RGC, executive pay, firm performance, pay-performance link, and pay-gap.

3.10.6. King III Report 'Comply or explain' principle

Ndzi (2016:349) views CG as being weakened by poorly enforcing its principles or its reluctance to enforce them. A practical example is the '*Comply or explain'* principle that was applicable to JSE-listed firms between 2009 and 2016 under King III Report. It meant that during this period, firms were regarded as having complied if they explained their governance practices which had a way of encouraging non-compliance as firms were likely to disguise compliance using this opportunity. Shrives and Brennan (2017:53) highlight that firm leadership tends to conceal information behind the '*explain*' part of '*comply or explain'* principle as it is often difficult to differentiate between the necessary disclosure as required by accounting standards and explanations of non-performance as required by the King Code. Manipulators with their twisted agenda actually damaged the '*comply or explain'* principle (Shrives & Brennan 2017:31). This principle is no different to self-regulation criticised by Harvey et al (2020:17) for its risky flexibility in governance. The issue is that there is too much at stake in ensuring sound corporate governance if compliance is voluntary. Such governance codes and regulations are similar to a house that is built on the sand which cannot stand during heavy rains and storms (Ndzi 2016:349).

3.11. THEORY AND PRACTICE

It is with no doubt that firms tend to follow certain or a combination of theories in their pay practices although they may sometimes do this unconsciously. Whatever beliefs that a firm holds regarding the extent to which its manager/s are likely to be effective in carrying out their daily duties, can possibly be linked to an existing theory. In this way, applying RG then becomes limited to the theory being followed (Kanzow 2014:34) or the boards' understanding of that theory or sections of the theory. In chapter two, agency and stewardship theories were scrutinised and their influence or lack thereof on RG was discussed. From the observation of the literature, the stewardship theory has not attracted as many scholars as the agency theory did, which may be due to the complexities that are likely to accompany the test or application of this theory in practice. These complexities may include the challenges of having to decide about which of the variables to utilise in a study as there is no relation of pay to performance in the stewardship theory. Kanzow (2014:297) refers to the stewardship theory as nothing more than just a hope to curb executive pay. Arguably, this is just an attempt to throw a shadow

on the stewardship theory and its ability to explain how a firm is run, as this is a theory of managerial behaviour just like the agency theory.

Some of the authors argue that the agency theory also fails to explain the poor pay-performance link that continues to be evident post the adoption of M+I that was targeted to improve it. Kanzow (2014:297) is of the view that the stewardship theory is associated with lower executive pay, but this is incorrect as none of the founders of the stewardship theory advocate for low pay. Instead, stewardship theory posits that stewards focus entirely on maximising firm performance, regardless of how much they receive in return, which might be more or less than that of their counterparts. The literature concurs that the agency theory remains the foundation of RG in almost all countries around the world. This theory has been the departure as well as the destination for most of the studies with the objective of investigating relationships involving RGC, executive pay, firm performance, pay-performance link, and pay-gap. However, concerns arise when this theory consistently fails to hold in practice, which necessitates more scrutiny of the variables that are normally involved or should be involved in assessing the effectiveness of this theory. Also, its dominance in the literature does not imply the same in practice, something that supports the need for its continuous scrutiny.

3.12. CONCLUSION AND GAP

The stance of the literature is that RG has collectively not been as impactful as intended as none of its components is praised by a significant number of scholars for being effective in either constraining executive pay, enhancing performance, strengthening pay-performance link and/or reducing pay-gaps. Something that Chenhall and Moers (2007:179) suggested might be a symptom of endogeneity. RG advocates for an aligned pay to performance through the regulation of executive pay and monitoring mechanisms. Its focus is for firms to dispense appropriate incentives that have been designed within an effective monitoring system. The issue begins when the terms 'appropriate incentives' and 'effective monitoring' are defined, designed and/or applied differently in practice, which leads to diverse outcomes for firms. This is also exacerbated by the different contexts in which firms operate such that what is perceived as appropriate or effective in one firm, sector or country may be different from that of another firm and leading to some of the firms rather adopting a tailor-made RG. Assessment by the literature of whether RG is effective or not also demonstrates some loopholes as it not only tends to ignore the above-mentioned differences, but also has flaws in how it chooses FPMs

to use in evaluating the appropriateness of executive pay and performance levels. Something that is likely to exacerbate the poor pay-performance link that already seems prevalent.

There are also theory implications at play as the agency theory advocates for a pay-performance link while the stewardship theory advocates for maximum performance, regardless of pay levels. The latter tends to persuade scholars to believe that the agency theory is the only appropriate theory to assess the alignment of interests between owners and managers. There is also a misconception that stewardship theory supports lower pay levels, which is not the case as the founders of this theory do not advocate for this. This leads to the baseless assumption that the pay-performance principle is suitable for all firms including those that may be grounded on the stewardship theory. This assumption has implications on the views about RG and its effectiveness in practice, which is of utmost importance to the finance field and as such, is a continuing debate.

Despite the above-mentioned points, there has been a general belief that RG should lead to reduced executive pay, improved firm performance, a greater pay-performance link, and reduced pay-gaps across firms. Since there has been little or no attempt to explain the link of RG to these variables in the context of the above-mentioned differences, this study therefore, aims to develop a conceptual model linking RGC, executive pay, firm performance, pay-performance link, and pay-gap of the selected JSE-listed firms. Over and above adding to the current debates, the study is substantial in the current endeavours of trying to understand executive pay and how it can be utilised to create long-term shareholders' wealth.

The next chapter extensively discusses the methodology of this study.

CHAPTER FOUR: RESEARCH METHODOLOGY

4.1. INTRODUCTION

The purpose of this chapter is to explain how the research objectives have been addressed and therefore, how the aim of this study has been achieved. The literature review has presented diverse and contradictory views and results regarding the effect of RGC on firm performance, pay-performance link, executive pay, and pay-gap. Some studies including Rossouw and Styan (2019:169); Passador and Riganti (2018:618); Talab et al (2017:1132); Bebchuk and Fried (2004:ix); McKinsey and Company (2000:1) posit that RGC ought to improve firm performance and reduce executive pay. While other studies including Hail et al (2018:667); Tan et al (2017:617); McConvill (2005:1777) reject this as they find it unfair and unrealistic in practice. Hail et al (2018:667) argue that governance laws do not limit misbehaviour in a firm but rather increase opportunities for it to happen in the future. Tan et al (2017:616-617) witnessed that a firm's commitment to good governance has no bearing on its performance. However, McConvill (2005:1777) discourages heavy regulation and criticises the pay-performance principle with the view that these are incapable of positively contributing towards the desired outcomes of an improved performance, reduced pay and pay-gap.

The aim of the study is re-stated as follows:

To develop a conceptual model that links RGC, firm performance, executive pay, pay-performance link, and executive-employee pay-gap of JSE-listed firms

This aim has been supported by the following objectives, to:

1. Determine the extent of RGC of the selected JSE-listed firms.
2. Assess if there is a relationship between RGC and firm performance.
3. Evaluate if there is a connection between RGC and executive pay.
4. Examine if there is a relationship between executive pay and firm performance and assess the moderating effect of RGC on this relationship.
5. Investigate if there is a relationship between pay-gap and firm performance and assess the moderating effect of RGC on this relationship; and
6. Investigate similarities and/or divergences between firm performance measures that are mostly selected by researchers to examine relationships involving RGC, pay, performance, pay-performance link and pay-gap and key performance indicators that firms normally use to evaluate executive performance.

This section outlines the rationale of the chapter and objectives of the study. Section 4.2 which

follows explains the research paradigm, followed by section 4.3 which focuses on the research approach. Then section 4.4 provides an outline of the research design of the study, followed by a discussion of the research instrument/s in section 4.5. A rationale behind the use of a quantitative content analysis is provided in section 4.6, followed by the discussion of the comparative research in section 4.7. Variables used in the study are covered in section 4.8, followed by information about a pilot study in section 4.9. Thereafter the data collection process is detailed in section 4.10, followed by the sampling approach in section 4.11. This is followed by the approach to data analysis in section 4.12, and section 4.13 which discusses how the validity and reliability has been maximised in this study. An explanation of how the ethical considerations have been satisfied is covered in section 4.14, followed by the conclusion of the study in section 4.15.

4.2. RESEARCH PARADIGM

The previous two chapters demonstrate that the subject of RGC, executive pay, firm performance, pay-performance link, and pay-gap is more complex and needs a broader perspective than has been portrayed in most of the current literature. This study therefore, follows a methodological ontology approach called objectivism or pragmatism, which combines positivism and interpretivism epistemologies (Mitchell 2018:115) as compared to a realist ontology (purely positivism), or relativist ontology (purely interpretivism) (Tsang 2013:128). Objectivism is based on the belief that reality is free of people's involvement (Tsang 2013:129). This approach grants flexibility to answer a diverse range of research questions (Brierley 2017:17), which were traditionally answered using either positivism or interpretivism paradigms. Positivism and interpretivism epistemologies are traditionally known as contradictory (Tsang 2013:128) although through time, they emerged as meaningful and complimentary if applied objectively (Dieronitou 2014:3). Ontology refers to the reality based on the beliefs and/or assumptions of the researcher (Rehman & Alharthi 2016:51; Scotland 2012:9). Epistemology looks at how knowledge can be drawn, produced, obtained and communicated (Kivunja & Kuyini 2017:27; Scotland 2012:9). Therefore it is not possible to empirically favour or disfavour them (Scotland 2012:9) since they are based purely on assumptions and/or the beliefs of a researcher (Kivunja & Kuyini 2017:27; Rehman & Alharthi 2016:51; Al-Saadi 2014:1-2).

Positivism follows a research approach that is objective and independent of a researcher (Rehman & Alharthi 2016:53), that seeks to trace direct observations in a phenomenon, leading to a study that is quantifiable and the conclusion that is most of the time generalizable

(Dieronitou 2014:6), this approach is often considered as deductive (Kivunja & Kuyini 2017:30). An interpretivism approach, on the other hand, relies on views, insights and/or ideas of others to study a phenomena, disapproves generalisability (Dieronitou 2014:5; Tsang 2013:129) and is usually categorised as inductive (Al-Saadi 2014:4). The combination of positivism and interpretivism in one study is commonly known as pragmatism (Mitchell 2018:106) and is driven by what the researcher deems to be suitable looking at the purpose of the study (Dieronitou 2014:3). According to Brierley (2017:2), pragmatism is the best philosophical approach for a hybrid method in behavioural accounting research.

Objectivism is the same as pragmatism (Rehman & Alharthi 2016:53) and this study has taken this position in addressing the research problem. This direction is motivated by the two competing theories on which this study is based. The first being the agency theory, which posits that pay-performance link should be used as a tool to align the interests of executives to those of the shareholders for all firms. This shows an inclination towards the positivism approach which seeks to measure and anticipate reality while at the same time, pursues generalisability. The second theory is the stewardship theory, which posits that interests of executives are already aligned to those of shareholders and therefore, disregards the pay-performance link. Stewardship theory is more inclined towards interpretivism as it implies the lesser need to measure pay against performance, which supports that the world should be studied using views, ideas or any other similar method as there is no correct reality and/or possible generalisations (Dieronitou 2014:7).

4.3. RESEARCH APPROACH

Pandey and Pandey (2015:9) outlines that "*The main aim of research is to find out the truth which is hidden and which has not been discovered as yet*". The way research is conducted should be guided by the nature of the problem being addressed or questions being answered (Creswell 2014:31). The traditional rigid approach of sticking to either a qualitative or quantitative method, even if it is not perfectly aligned to the nature of the research problem, is clearly outdated. Some of the research problems necessitate a hybrid approach called mixed methods as it is found half way through both qualitative and quantitative research. Tsang (2013:128) questions the combination of qualitative and quantitative approaches as they emphasise the contradictory epistemological grounds on which these two approaches are based. Creswell (2014:32) on the other hand believes otherwise as they argue that qualitative, quantitative, and mixed methods are not as distinct, diverse, and rigid as they may seem at

first value. This is because the goal in all of them may be to answer the same research question with just different preferences when it comes to the research approaches.

The study has applied a mixed method research in line with Muzata (2018:60) as data has been analysed through qualitative and quantitative research methods. Mixed methods research allows for the use of both quantitative and qualitative research approaches in a single study (Schoonenboom & Johnson 2017:107). It is used as an alternative approach to investigate complex phenomena (Halcomb & Hickman 2015:8). The objectives of the study cannot be achieved with either of the methods as the nature of questions leads to mixed kinds of variables. Some of the variables are suitable for quantitative approach as they can be measured numerically (Watson 2015:1) and some are not precisely measurable. The strength of using mixed methods is that limited generalisation, which is a common feature of qualitative research and limited understanding of complex results, and which is commonly associated with quantitative research, are both minimised (Green et al 2016:2). Quantitative research has been utilised to achieve objectives one to five and qualitative research has been applied to achieve objective six of the study.

The typology of mixed research followed in this study is called ‘convergent parallel research design’ as qualitative and quantitative data have been analysed separately to complement the findings of the study (Halcomb & Hickman 2015:8). The approach of the three other available mixed methods namely sequential explanatory, sequential exploratory and embedded research design are not suitable for this research as they all require qualitative and quantitative data collection and/or analysis process to be interconnected, which is not the case in this study. According to Bian (2011:1-72), the difference among these designs is that convergent parallel design independently collects and analyses qualitative and quantitative data; in explanatory sequential design, qualitative analysis relies on the quantitative results to proceed; and with exploratory sequential design, quantitative analyses depends on the qualitative results to proceed. Embedded design focuses on answering a single research question using both qualitative and quantitative approaches (Halcomb & Hickman 2015:8).

In this study, quantitative and qualitative data collected remained distinct initially and throughout the analysis stage, and the six research objectives and/or questions were individually and adequately addressed using either the qualitative or quantitative approach. There is not a single research objective that simultaneously required the use of both the approaches. At the same time, only the findings and/or results of each of the study’s research objectives have been integrated to formulate the conclusion, this better fits the qualities of the

convergent parallel research design. The benefit of using 'convergent parallel research design' is that it improves validity of the data, and conclusions about phenomena can be drawn from a broad perspective through the integration of findings, while the disadvantage is that it requires expertise and a great amount of effort to produce a sound research (Bian 2011:11). It is reasonable to use this kind of research design as it has improved efficiency from utilisation of different research methods (Almalki 2016:292).

4.4. RESEARCH DESIGN

Research design covers the research technique the researcher intends to use, the purpose of using it as well as its advantages and disadvantages (Hofstee 2015:113-114). This research technique can come in the form of primary or secondary data. Primary data is data that is developed or collected by the researcher specifically for the purpose of the study being conducted (Boslaugh 2007:1). Secondary data refers to data whereby the researcher is or was not involved in the process of creating (Church 2002:33) because it was meant for a different purpose other than the current research (Johnston 2014:619). Primary and secondary data analyses are both empirical and follow the same research processes (Johnston 2014:619). Secondary data is the research technique that has been utilised in this study as all the research questions can be answered from this information, indicating that the technique is sufficient and suited to address the research problem. Although secondary data is not primarily meant for research purposes (Hox & Boeije 2005:596), which may lead to loopholes like lack of suitability or insufficiency, it can be valuable for research (Rabianski 2003:44). A lot of rich information comes in the form of secondary data and Johnston (2014:619) believes that its moment in the research space is now. Since some of it is already in the public domain, it becomes easy to access, saves time and costs while the biasness of the study gets reduced. Also to note is that the sample size can be larger which improves representativeness (Boslaugh 2007:3; Sorensen, Sabroe & Jorn 1996:435).

Although secondary data is broad (legislation, published policies, articles, reports, etc., as highlighted by Church (2002:33), this study has utilised annual reports that are published by JSE-listed firms as well as articles that are published in peer-reviewed journals. The above provided definition implies that the literature, if used as a data source to answer one or more of the research questions, also qualifies as secondary data. Detailed information on the annual reports and journal articles are provided in section 4.5 below. A challenge that comes with secondary data is that the researcher needs to assess and validate the quality of the data and the extent to which it can objectively answer the research question/s (Sorensen et al

1996:435). Another challenge is associated with locating and/or accessing the data (Hox & Boeije 2005:596). These challenges have not been an issue in this study as the research questions have been sufficiently answered from the information that firms are regulated to provide according to the Companies Act of 2008 and/or the King Code, and from the peer reviewed articles available in the journals that the researcher can access through a licence from the institution of study. Less control of the researcher on the whole process of data collection has also been highlighted as a concern in the literature (Sorensen et al 1996:435). This is also not a limitation in this research as the information from which the data has been extracted is unconditionally available in the public domain.

4.5. RESEARCH INSTRUMENTS

The types of secondary data that have been utilised in this study is called integrated IAR and journal articles. IAR is a comprehensive document that is annually issued by firms and normally includes at least a strategic report, governance report, annual financial statements, and executive pay reports. Journal articles are peer reviewed articles that are published in the journals for public access. These data instruments are deemed sufficient to answer the research questions as all the necessary information is available in the journal articles and the firms' IAR.

4.5.1. Quantitative research

The approach of quantitative research is a presumption that there a variable exists that is measurable and then attempts to seek good indicators that may have a relationship with that variable (Goertz & Mahoney 2012:206). For research objectives one to five, the study has utilised IAR and the IRESS Database to collect data and answer the research questions. The IRESS Database is an approved database which provides information like that contained in the IAR in the sense that it collates the contents of IARs into one source for simplified use. IAR has information that is issued by listed firms yearly to report on their business activities and performance. IAR is widely accepted as a research instrument in the finance field as it is believed to carry reliable and quality information about firms (Unerman 2000:669).

4.5.2. Qualitative research

According to Goertz and Mahoney (2012:206), "*Qualitative researchers adopt a semantic approach and work hard to identify the intrinsic necessary defining attributes of a concept*", this is usually achieved through generating people's ideas, tracing their reasoning and/or scrutinising documents (Steckler, Mcleroy, Goodman, Bird & Mccormick 1992:2). The qualitative aspect of the study aims at the scrutiny of the two documents through comparison,

one being the IARs as explained above with the intention finding the executive KPIs that JSE-listed firms commonly used in assessing the performance of their executives between 2011 and 2020. The other document being the journal articles used to track FPMs researchers preferred in the examination of the relationships involving RGC, executive pay, performance, pay-performance link, and pay-gap. The aim of this exercise is to complement the quantitative aspect of the study (Bowen 2009:30) towards answering the research problem. The research instruments in this section, therefore, are IAR and journal articles. IAR are the same as explained in the preceding section, only published and peer-reviewed journal articles were considered with a specific focus on firm performance and featuring variables that are within the scope of RG. More details on the criterion used to select journal articles is found in sub-section 4.11.2. The whole exercise explained in this section has assisted in answering objective six of the study.

4.6. QUANTITATIVE CONTENT ANALYSIS: RGCI

Content analysis is a formal and scientific way of scrutinising text (Beck, Campbell & Shrives 2010:207; Hsieh & Shannon 2005:1277). The text may come in the form of documents (Beck et al 2010:207) or otherwise. It enables the researcher to examine secondary data content in an attempt to create meaning (Lock & Seele 2015:527). Although this method is rooted in communication sciences (Lock & Seele 2015:525), it has found its way through all fields including accounting sciences, where it has become popular (Beck et al 2010:207). One of the challenges with content analysis is choosing the document/s to work on (Unerman 2000:669). This is not the case in this study as all the variables of interest can be obtained or determined from the IAR, therefore, there is no hesitancy when it comes to choosing the document for research. Content analysis may come in the form of qualitative, quantitative analysis or a hybrid approach of the two (Lock & Seele 2015:526; Elo & Kyngäs 2008:107; White & Marsh 2006:22). Qualitative approach usually includes semi-structured interviews, ethnography and focus groups (Jacoby & Siminoff 2008:6), it relies on coding to describe and interpret data (Assarroudi, Heshmati Nabavi, Armat, Ebadi & Vaismoradi 2018:43) and usually involves a smaller sample (Jacoby & Siminoff 2008:43). On the other hand, quantitative approach focuses on measurements (Rourke & Anderson 2004:6) and relies on the statistical and/or quantitative approaches to analyse data (Jacoby & Siminoff 2008:40).

This study has constructed an unweighted RGCI, which attempted to measure the degree to which JSE-listed firms have complied with RG between 2011 and 2020. Details about RGCI are found in sub-section 4.8.1 and 4.10.1 of this chapter. This exercise fits the characteristics

of a quantitative content analysis. Many studies like Dzingai and Fakoya (2017:1); Agyei-Mensah (2016:90); Akbar et al (2016:417); Elmagrhi (2016:129); Munisi and Randøy (2013:107) did a similar exercise in answering similar research questions, although they rarely explained the construction of the index as a research approach in their studies. The weakness of a quantitative content analysis is a lack of uniformity when it comes to how the coding of text is done (Vourvachis & Woodward 2015:184). This is evident in the studies by Elmagrhi (2016:330-380); Bin and Abbas (2013:567) who used unweighted and weighted indexes respectively to measure the contents of the IAR. Unweighted index refers to equal weights while weighted index refers to varying weights (Cory 2021:1).

Distinct approaches to coding increase the chances of error which has the potential to distort the meaning the study intends to give (Vourvachis & Woodward 2015:186). Rourke and Anderson (2004:5) emphasised that coding should be theoretically motivated. This study has adopted an unweighted approach similar to Elmagrhi (2016:330-380), motivated by the fact that the King Code does not place any emphasis on certain principles and/provisions of RG, which suggests that no provision is superior/inferior than the other to deserve a higher/lower weight. Unweighted indexing controls for the undesirable levels of biasness towards certain provisions of RG (Ntim et al 2012:129).

4.7. QUALITATIVE COMPARATIVE APPROACH

Comparative research refers to the contrast of at least two cases with the purpose of tracing similarities and/or divergences (Azarian 2011:114; Pickvance 2001:7). Comparison is a basic research activity (Weber 2014:151) that is fundamental and widely integral to almost all fields of study and can be applicable to any kind of research (Azarian 2011:113). Mills, van de Bunt and Bruijn (2006:619) think it is impossible not to compare in a scientific enquiry. "*Thinking without comparison is unthinkable*" (Miri & Shahrokh 2019:1). Comparison is therefore, almost a default activity such that studies that relied on this approach in the finance field which include Edmans, Gabaix and Jenter (2017:8); Mdingi (2017:6); Bebchuk and Weisbach (2010:939); Delman (2010:586); Cullen et al (2007:2); Conyon (2001:276) omitted the section on methodology altogether in their studies. The majority of those studies focused on the similar subjects related to RG, CG, executive pay, firm performance, pay-performance link and/or pay-gap. Almhmoud (2015:5) who studied remuneration practices using a comparative research approach happened to include the methodology section in their study but made no attempts to explain it. Although this is strange, it seems like a common practice in the finance field, perhaps is motivated by the basic nature of this research approach. Comparative

research can take the form of either qualitative or quantitative research or both (Miri & Shahrokh 2019:1; Mills et al 2006:621). Qualitative research focuses on the scrutiny of cases while quantitative research focuses on the establishment of variables as an approach to conduct comparative research (Miri & Shahrokh 2019:1). In the context of comparative research, cases refer to anything that the researcher intends to compare for example households, firms, nationalities, schools and so forth (Pickvance 2001:11).

Although comparison is an integral part of research as highlighted above, several weaknesses have been reported. Included among them is the fact that it is likely to be challenging to conduct a comparative study, and costly when it comes to time and money, it has limitations when it comes to the type of data that one can collect, it is less likely to accommodate random sampling due to data related issues and it can only allow the application (and not testing) of a theory (Miri & Shahrokh 2019:13; Azarian 2011:120-123). These limitations did not have power in this study. For instance, the comparison process was not as complex as highlighted since there was no analysis of data; the study was not costly since accessing it was sponsored by the institution of study throughout the research period; the process was also not that time-consuming as the data used was secondary data and therefore, did not need the involvement and/consent of other people; data availability was also not an issue since firms are obliged to disclose KPIs in the IAR while journal articles always include the FPMs that researchers use to assess any relationships in research. This study used purposeful sampling as explained in sub-section 4.11.2 of this chapter and lastly, the study has integrated the outcomes of this activity to that of the other five objectives to address the research problem.

The two documents (IAR and journal articles) as highlighted in sub-section 4.5.2 were scrutinised following qualitative approach of the comparative research with the aim of identifying similarities and/or convergences between the KPIs that firms have used to determine executive pay and the FPMs that researchers usually utilise in the investigation of the associations involving RGC, executive pay, firm performance pay-performance link and pay-gap between 2011-2020. The motive was to use the raw outcome (without any form of analysis) of this comparison to intensify the argument towards a conceptual model that the study aims to develop. This exercise was made to achieve objective six of the study, more details on KPIs and FPMs are provided in sub-section 4.10.5 of this chapter.

4.8. LIST OF VARIABLES

Objective one to five of this study has been achieved through conducting quantitative research while objective six has been achieved through qualitative research. Variables that feature in

the quantitative objectives include RGC, firm performance, executive pay and pay-gap while those of the qualitative objectives includes FPMs and KPIs. There are five control variables that have been incorporated into the quantitative objectives two to five and a moderator variable that has been incorporated into objectives four and five. The variables are as follows:

4.8.1. RGC

In the context of this study, RGC refers to the extent to which firms have applied with the recommendations of the King Code between 2011 and 2020 as they relate to the RG, details of what constitutes RG is provided in sub-section 3.2.1 of chapter three. The level of compliance has been measured using RGCI, this has been constructed for each firm that is part of the sample and for each of the ten years using the provisions of RG as they reflect in King III Report (see Annexure 4.2) and King IV Report (see Annexure 4.1). Annexure 4.1 and 4.2 contains a list of provisions that together summarise RG of the King Code, this reflects a total of 27 provisions for King III Report and 43 provisions for King IV Report. These provisions have been used to assess whether firms complied with the code or not. A score of 1 was awarded if a firm had complied and zero if not, then the scores were added together per firm per year and thereafter divided by the total number of provisions per governance code to establish the degree of compliance in percentage. Previous studies that have utilised this approach include but are not limited to Nazir and Afza (2018:141); Bhatt and Bhatt (2017:906); Elmagrhi (2016:330); Malik and Makhdoom (2016:747); Outa and Waweru (2016:908). This has been the most popular research tool to integrate and summarise the level of RGC or CGC in the finance field. Constructing RGCI is objective one of this study, which has also assisted in examining the associations in objectives two to five. According to the agency theory, RGC is expected to influence firm performance upwards, executive pay and pay-gap downwards.

4.8.2. Firm performance

The literature is contradictory with regards to the influence of both accounting and market-based FPMs on RGC, executive pay, performance, pay-performance link and/or pay-gap with some of the studies like Tshipa et al (2018:380); Ashwin (2015:72-74) in favour of the market than accounting-based FPMs. The study has utilised both these measures as is popular in the literature. The previous attempts to link firm performance to either RGC, executive pay, performance, pay-performance link and/or pay-gap have yielded contradictory results and have rarely been in the South African (SA) context. It has also ignored the interconnectedness of these variables. No study to the knowledge of the researcher has attempted to examine part or all of those links post King IV Report in the SA context. Few such studies that were

published post King IV Report which include Ntim et al (2019:935); Mans-Kemp and Viviers (2018:160); Marais and Strydom (2018:46); Tshipa et al (2018:369); Mans-Kemp et al (2017:36) have only considered firms that were listed up to 2016 or before, which is the period pre-King IV Report, and their focus also did not include the interconnectedness of the variables of interest, which is the integral part of this study. Padia and Callaghan (2021:829) whose sample included firms that were listed up to 2017, only focused on the effect of King III and not King IV Report, without measuring levels of compliance or any consideration of the interconnectedness among the variables of interest.

The study has utilised the following two measures of firm performance:

Headline earnings per share

This is an accounting-based FPM which has been more popular in SA studies than in other settings. Previous similar studies that utilised this measure include Steenkamp and Wesson (2018:58); Bussin (2015:239); Bussin and Modau (2015:5); Scholtz and Engelbrecht (2015:36); Modau (2014:30); Shaw (2012:54) who have witnessed mixed results. Interestingly, there is more to this variable than just being a preferred FPM by researchers. It transpired that this variable has been adopted by most of the sampled JSE-listed firms as one of their KPIs to determine executive pay. This was discovered upon scrutiny of the IAR for a pilot study and hence this variable has been preferred as one of the independent variables in this study.

Share price (SP)

This is a market-based FPM which indicates the market price per ordinary share in a firm. Although the impact of RGC on firm performance has been vague in the literature, SP has been specifically evidenced as positively responsive to high CGC by Passador and Riganti (2018:618); McKinsey and Company (2000:1) as opposed to Tobin's Q, another market-based measure that has been rarely associated with governance. This variable is also the only market-based measure that has been preferred as an executive KPI by some of the JSE-listed firms between 2011 and 2020. Therefore this study has utilised this measure in line with Gupta and Sharma (2014:5); Larmou and Vafeas (2010:61); Buck, Liu and Skovoroda (2008:833).

4.8.3. Executive pay

This variable has been divided into two components as explained below, the reason to separately study the components of fixed pay is that their nature is different as detailed in

section 3.4 of chapter three. According to the agency theory, both the components of executive pay are expected to respond negatively to high RGC/CGI.

Fixed executive pay (fix-pay)

This is a pay that is standard and is paid to executives regardless of their level of performance in the firm (Madhani 2009:2). Detailed explanation of fixed pay is provided in sub-section 3.4.1. of chapter three. This has been studied separately from the other executive pay component discussed below.

Performance-based executive pay

This relates to executive pay that is not fixed, which usually includes short and long-term variable pay. Short term incentive (STI) or variable pay refers to executive pay that is awarded as a standard or discretionary bonus for a good performance in a given period and is usually paid in cash within twelve months from the date it became due (Madhani 2009:2). Long-term variable pay usually refers to non-cash executive rewards in the form of share options; this reward leads to executives accumulating a number of ordinary shares in the firm over a number of years (Madhani 2009:2). In this study, share options have been excluded following Bin et al (2020:16); Ndofirepi (2015:1); Skanes (2015:1). This is because financial statements do not always explicitly disclose the value of share options vested and awarded to executives in a given period, the IRESS database also does not provide such information while it is not straightforward how to estimate their value, past studies also rarely explain how valuation of share options is determined (Urson 2016:17). Ely (1991:43) deduced that including or excluding long-term components of executive pay does not significantly alter the results more than it increases the level of bias and chance of error, and in this way outweighs the benefit of including this component. Therefore, only STI has been considered in this study.

4.8.4. Pay-gap

Pay-gap has been defined as executive pay divided by the salary of an ordinary employee (Conyon & Read 2000:5). Other studies like Liu, Hosain and Li (2020:298); Luo et al (2020:8) describe it as executive pay less employees' pay. The literature presents no uniformity in how this variable is determined. This study has applied the first definition as the interest is on the number of times it would take an ordinary employee to reach the earning levels of the firms' executive members. Since this study focuses on the pay of all the executive members and that of all the employees, average figures have been used, the formula used for pay-gap has therefore, been $(\text{Average executive pay})/(\text{Average employees}'\text{pay})$. This is in line with Liu et al (2020:298); Zhang, Guo and Hu (2017:3). Average executive pay has considered the sum of

fixed and STI divided by the number of executive directors per firm in each period, i.e., $(\text{Total executive pay})/(\text{Number of executive directors})$. While the average employee pay has been determined by taking the annual salary bill of the firm less the sum of fixed pay and STI paid to executives, and then dividing this figure by the number of employees excluding executive directors (Chan et al 2020:271; Zhang & Guo 2017:341), i.e. $\left[\frac{\text{Salaries}-\text{Total executive pay}}{\text{Number of employees}-\text{Number of executive directors}}\right]$. The agency theory expects high pay-gaps to impair firm performance in highly compliant firms.

4.8.5. Control variables

The purpose of including control variables in the study is to neutralise their influence on the results of the relationship being studied and in that way, enhance the regression models' statistical power (Becker 2005:274). This aids in providing explanations that only focus on the variables of interest. Control variables are also known to mitigate endogeneity challenges (Barros, Bergmann, Henrique Castro & da Silveira 2020:440) which is like treating nuisance in the model (Carlson and Wu 2012:413). If ignored, this nuisance would lead to distorted results. This study has controlled for the following variables as the literature has proven them to have an influence on either the executive pay, firm performance, pay-performance link and/or pay-gap. The selected control variables are as follows:

4.8.5.1. Executive shareholding percentage (%SH)

This variable measures the percentage share ownership of executives in the firms they run. In the case of executive members being more than one in a firm, a total %SH has been utilised. Each director's %SH is usually disclosed in the IAR which enabled the researcher to combine all the directors' shareholdings. If not, the variable was calculated by dividing the total number of ordinary shares executive directors hold in a firm by the total number of ordinary shares issued i.e. $\left[\frac{\text{Number of ordinary shares held by executive directors}}{\text{Number of ordinary shares issued}}\right]$.

The agency theory implies that increasing %SH for executives leads to more reasonable executive pay and would lead to a better pay-performance link in the long-term, and therefore, indicating that this variable ought to reduce executive pay and improve firm performance. Contra to this, Liu et al (2020:295) argues that %SH increases executive power in the firm and therefore, compromises the pay processes in favour of executives, thereby increasing executive pay and reducing performance. As a result, Liu et al (2020:303) used this variable as one of the measures of CEO or executive power while Ntim et al (2019:938) utilised it as one of the governance measures.

Whatever the case, there is evidence that this variable can influence executive pay, performance and/or pay-gap. This variable has therefore, been controlled following Liu et al (2020:295); Luo et al (2020:9); Ntim et al (2019:938); Zhang et al (2017:3). In agreement with the fact that this variable enhances governance while having a potential to improve pay-performance link as argued by Lemma, Mlilo and Gwatidzo (2020:491); Liu et al (2020:312); Ntim et al (2019:921), therefore, this variable should have a negative relationship with executive pay and pay-gap while a positive connection with performance and pay-performance link. However, the interpretation of results does not focus on this variable as it has been simply used as a control and not the main variable.

4.8.5.2. Board independence percentage (%IND)

RG requires that most board members be independent non-executive directors from the firm. The Institute of Directors South Africa (2016:13) explains independence as a situation where a director is perceived by a third party as having no link and/or any form of interest that is capable of interfering with the way they deal with the firm. This variable is a measure of the extent to which board members have been independent in a firm and has been determined by dividing the number of independent board members by the number of total board members, i.e. $(\text{Number of independent board members})/(\text{Number of total board members})$.

Previous literature including Bin et al (2020:20-21); Ogunsanwo (2019:95); Nazir and Afza (2018:152-153); Sarpong-Danquah, Gyimah, Afriyie and Asiama (2018:116); Sanchez-Marin et al (2017:236-237); Slomka-Golębiowska (2016:87); Alves et al (2016:194-195); Banker et al (2016:501); He and Fang (2016:371); Yu and Van Luu (2016:607); Tshipa and Mokoaleli-Mokoteli (2015:164-165); Rambajan (2011:63-69); Pissaris et al (2010:307); Mashayekhi and Bazaz (2008:167) showed evidence that this variable is capable of influencing executive pay, performance and/or pay-gap. Conclusions about the effect of this variable on executive pay, performance and/or pay-gaps are contradictory. Similar studies that have controlled for this variable include Luo et al (2020:9); Blanes, de Fuentes and Porcuna (2019:14); Sanchez-Marin et al (2017:231); Zhang and Guo (2017:341); Zhang et al (2017:3); Li (2010:46). Since this variable has been argued to enhance governance, it is expected to have a negative association with executive pay and pay-gap, while a positive relationship with performance, which should ultimately increase pay-performance link according to the agency theory.

4.8.5.3. Tobin's Q

One of the popular market-based FPMs in the literature is Tobin's Q, which can be determined using the formula $((\text{Total assets} - \text{book value of equity} + \text{market value of equity})/$

(total assets)) (Ammari et al (2016:6). Many studies including Obermann (2020:118); Buallay et al (2017:88); Yu and Van Luu (2016:619); Hassan and Halbouni (2013:129); Manders (2012:13) have proven that this variable has the potential to influence the relationships of interest in this study although it has not been selected as an independent variable. Varying results have been reported about Tobin's Q for instance, Ammari et al (2016:11); Nguyen (2015:1) evidence inconclusive results, Naik, Padia and Callaghan (2020:1); Buallay et al (2017:78); Hassan and Halbouni (2013:132); Iyengar and Zampelli (2009:1092) witness weak results, Dogan, Elitas, Agca and Ogel (2013:149) witness negative non-significant results while Bin et al (2020:21); Obermann (2020:118); Manders (2012:13) observe positive, non-significant results. Strangely, previous studies have rarely motivated for the inclusion of this variable. Therefore, Tobin's Q has been added as one of the control variables together with other four variables.

4.8.5.4. Firm size (Size)

Firm size is a dominant variable of interest in analysing associations involving executive pay as it is popular for having a positive, and often significant connection with executive pay (Hill, Lopez & Reitenga 2016:36). This is also likely to influence performance and/or pay-gap. This variable has often been used in similar studies and for some reason, there is an argument that it has been overused. Its popularity has been highlighted by Atinc, Simmering and Kroll (2012:60) as isomorphism because it is found in most of the similar studies in the finance field. According to Atinc et al (2012:60), it seems like researchers feel either compelled to use it or regard its use as a standard practice, DiMaggio and Powell (1983:151-154) call such practice as mimic, coercive and/or normative use.

However, many studies have proven this variable to have an influence on executive pay and/or performance, albeit in different ways, leading to mixed results. These studies include Bin et al (2020:12); Abdelmotaal and Abdel-Kader (2016:312); Fabbri and Marin (2016:259); Hill et al (2016:35); Ilaboya and Ohiokha (2016:29); Gill and Mathur (2011:3); Parthasarathy, Bhattacherjee and Menon (2006:4142); Andjelkovic, Boyle and McNoe (2002:97); Tosi et al (2000:301). Firm size, therefore, cannot be overlooked and has been added as one of the control variables in this study. Similar studies that have controlled for firm size include Luo et al (2020:9); Naimah and Hamidah (2017:1); Banker et al (2016:510); Li (2010:46); Andjelkovic et al (2002:104).

It is important to note that the literature has measured firm size differently. For instance Fabbri and Marin (2016:259); Hill et al (2016:35); Tosi et al (2000:301) measured it using market

value of shares, Bin et al (2020:17); Parthasarathy et al (2006:4139); Andjelkovic et al (2002:104); Tosi et al (2000:301) utilised sales while others like Luo et al (2020:9); Abdelmotaal and Abdel-Kader (2016:319); Banker et al (2016:510); Ilaboya and Ohiokha (2016:33); Gill and Mathur (2011:6); Tosi et al (2000:301) utilised the book value of total assets. Since total assets (book value) is less volatile than sales and market value of shares as it is less affected by market forces and demand for products and/services, this study deemed the book value of total assets a better measure of firm size and has therefore, utilised it. It is believed that executive pay levels increase with firm size (Hill et al 2016:36), therefore, firm size should have a positive association with executive pay and pay-gap, which should result to a better pay-performance link.

4.8.5.5. Return on assets

Profitability is regarded as the utmost indicator of firm performance in the finance field (Kaplan Financial Limited 2019:20). ROA indicates the extent to which the total assets of the firm have been profitable in a given period (Kew & Alex 2017:582). This ratio is calculated using the formula $((\text{profit before interest and tax})/(\text{total assets}))$ (Vigario et al 2014:287). ROA has been one of the most popular ratios in the finance field which has also been utilised in similar studies like Bin et al (2020:17); Luo et al (2020:9); Cheng et al (2017:29); Banker et al (2016:510); Gill and Mathur (2011:6). Other profitability ratios that have been utilised by similar studies, although on very few occasions compared to ROA, is ROE and earnings per share (EPS). ROE measures how well a firm's total equity has managed to maximise profits (Kew & Alex 2017:583, 595). ROE and EPS have not been selected for this study because they have been rarely utilised in previous similar research and therefore, there is no clear evidence of their relations to the variables of interest in this study.

4.8.6. Moderator variable: RGC

A moderator is a variable whose variation has a theoretically driven effect on the relationship between a dependent and an independent variable (Andersson, Cuervo-Cazurra & Nielsen 2014:1064). The moderator helps to explain the conditions under which the connection between a dependent and an independent variable holds (Chin 2006:3). So, the inclusion of a moderator provides more information about a relationship (Andersson et al 2014:1064) such that the way it is being understood changes (Renner 2001:611). What can be noted from the explanations given is that the main difference between a moderator and a control variable is that a moderator should be a variable of interest in the study and how it impacts the connection between the dependent and independent variables should be theoretically motivated

(Andersson et al 2014:1064). A control variable can be any variable that is not in the interest of the study but, has a potential to influence the dependant variable under study, control variables need no theoretical justification although empirical evidence may be crucial to support it (Nielsen & Raswant 2018:958). It is necessary to first test if a variable is a moderator before it can be adopted as one in the study. RGC has been used as a moderator for objectives four and five. This is because these objectives do not include RGC as either the dependent or independent variable.

The choice of RGC as a moderator is motivated by the agency theory as it posits that monitoring of executives and giving them incentives would help align executive pay to performance. Detailed discussion of the agency theory is provided in section 2.2 of chapter three. This monitoring and incentives principle is among others that are at the centre of most of the codes of governance in the form of set standards and/or principles on RG and executives' monitoring generally. According to the agency theory, firm's compliance to these principles, referred to as 'RGC' in this study, should therefore, lead to a more reasonable executive pay and an improved pay-performance link. Likewise, they should lead to a more reasonable pay-gap for at least two reasons, firstly; a more reasonable executive pay should lead to a reasonable or reduced pay-gap because of a pay-gap formula which places executive pay at the centre. Secondly, King IV Report requires firms to consider ordinary employees' pay when determining executive pay (Institute of Directors South Africa 2016:31), this is an implied appeal by the King Code that there must be a relationship, which perhaps should be positive between an executive pay and employees' pay, and indicating that highly compliant firms should report more of this relationship, it should be noted that investigating this relationship is not part of this study.

The explanations provided in this section highlight that RGC should influence the relationships involving executive pay, performance, pay-performance link and/or pay-gap. For instance, Blanes et al (2019:1) observed that governance measures moderate pay-performance link as they evidence a weak effect of the Cadbury Report and Sarbanes Oxley Act on the executive pay. The study was conducted using a meta-analysis that included a sample of 104 publications from different journals around the world. Elmagrhi et al (2018:1) witnessed that pay-performance link increases in firms that are well governed, the study was conducted in the UK. Sanchez-Marin and Baixauli-Soler (2015:436) conducted the study in Spain and observed that the connection between pay-gap and performance is contingent on the effectiveness of the firm's governance. Pissaris et al (2010:307) witnessed that firms with weak

governance face poor performance and high pay-gap compared to firms with strong governance in the US.

4.8.7. Key performance indicators

In the context of this study, KPIs refer to all the performance measures (financial, non-financial, quantitative and/or qualitative) the selected JSE-listed firms have adopted to measure executives' performance. These are contained in the IARs as prescribed in the Companies Act of 2008. These were collected over the period of the study for comparison purposes against FPMs to identify similarities and/or divergences to answer objective six.

4.8.8. Firm performance measures

These are performance measures that have been preferred by researchers who have attempted to investigate relationships involving RGC, executive pay, firm performance, pay-performance link, and pay-gap. These were found in the journal articles that were published between 2011 and 2020. Only journal articles that featured firm performance as either an independent or a dependent variable were considered. The purpose was to compare these with KPIs to achieve objective six of the study.

4.9. PILOT STUDY

A pilot enquiry answers a question of whether a study should be conducted or a particular approach to conduct it should be followed. It also helps in giving guidance on how something should be done and in that way, enhances the quality of the main research (Junyong 2017:601). In other words, a pilot study provides a path and a sense of direction for the main study. To be beneficial, a pilot study needs to include all the features, procedures and approaches of the main study (Junyong 2017:601; Connelly 2008:411) so that they can be tested and verified. A pilot study usually has a smaller sample than the main study, however, the inadequacy of data in research should not be the reason a study is called a pilot study (Connelly 2008:411), fortunately this is not the case in this study. The literature provides no standardised sampling approach for a pilot study. According to Connelly (2008:411), it can be 10% of the sample for the main study. While Junyong (2017:604) highlights that it does not necessarily need to be calculated, indicating that its quantity should not be an issue, perhaps that is why Long (2016:83) piloted a linear regression with no explained sampling approach.

This study has conducted a pilot study to fully test the data analysis processes and their ability to address the research problem. A sample of nine firms and nine journal articles, which is between 11% and 12% of the sample of the main study, was selected. This was done

randomly using Excel 365 Software on Windows 2010 Pro through a '*data analysis*' tool that allows one to select the method of sampling, which in this case is *random approach* as well as the sample size, which has been decided to be nine, covering at least 10% of the population. The process led to the following firms to be utilised in the pilot study:

Table 4.1: Sample of the pilot study-JSE listed firms

	Name	**Sector**
1	Adcock Ingram Holdings	Health Care
2	AECI	Basic Materials
3	Distell Group	Consumer Goods
4	enX Group	Industrials
5	Harmony Gold Mining Company	Basic Materials
6	Impala Platinum Holdings	Basic Materials
7	Mr Price Group	Consumer Services
8	Royal Bafokeng Platinum	Basic Materials
9	Sasol	Oil & Gas

Source: Author's conceptualisation (2021)

Table 4.2: Sample of the pilot study-Journal articles

	Article title	**Author/s**	**Year**
1	Excess pay and deficient performance	Carter, ME, Li, L, Marcus, AJ & Tehranian, H	2016
2	Financial indicators of company performance in different industries that affect CEO remuneration in South Africa	Bussin, M & Blair, C	2015
3	Compliance and multidimensional firm performance: Evaluating the efficacy of rule-based code of corporate governance	Bin, Y & Abbas, Z	2013
4	The impact of corporate governance practices on firm's performance: An empirical evidence from Indian tourism sector	Yameen, M, Farhan, NH & Tabash, MI	2019
5	Chief Executive Officer remuneration and financial performance of Australian and South African publicly listed companies	Desfontaines	2018
6	Corporate governance guidelines compliance and firm financial performance Kenya listed companies	Outa, ER & Waweru, NM. 2016	2016
7	The Impact of Firm Performance on Executive Compensation in France	Yamina, A & Mohamed, B	2017
8	Executive director remuneration and company performance: panel evidence from South Africa for the years following King III	Padia, N & Callaghan, CW. 2020	2020
9	Investigating the associations between executive compensation and firm performance: Agency theory or tournament theory	Elsayed, N & Elbardan, H	2018

Source: Author's conceptualisation (2021)

Data was analysed using descriptive, correlation and regression analyses for objectives one to five while a comparative research approach was conducted for objective six. Results of the pilot were omitted from this study to lessen congestion in the thesis, but they are available on request.

4.9.1. Benefits of having conducted a pilot study

The pilot study led to the improvement in the way in which endogeneity was handled in the overall study. Endogeneity has been defined and explained in sub-section 3.9.4 of chapter three. The extent to which the study has improved is indicated below:

I. The collection process revealed areas that needed to be improved or corrected for instance,
   a. A redundancy in the list that was a summary of King IV Report RG to construct RGCI was identified, and the redundant sections were removed and/or edited before the construction of RGCI.
   b. ROA was initially chosen as an accounting-based measure of firm performance based on previous research; this was later changed to HEPS upon the scrutiny of IARs which provided evidence that HEPS has been a preferred KPI among the selected JSE-listed firms to measure executive performance. At least 90% of the sampled firms in the pilot had adopted HEPS as one of their executive KPIs between 2011 and 2020. Only one firm had adopted ROA while one other had adopted return on net assets (RONA) as a KPI. Since the pilot sample was randomly selected, the view was that the features of its IAR were highly likely to be like those of the main study. Indeed, it was evidenced during the data collection process of the main study that HEPS was a dominant KPI for the full study's sample. ROA was then added as one of the control variables instead.
   c. CEO duality was initially selected as one of the control variables for the study, however, after collecting pilot data, it was learnt that none of the firms in the pilot sample had duality. Also, during the data collection process of the main study, CEO duality was absent in all the sampled firms between 2011 and 2020, suggesting that this variable was redundant. CEO duality was then eliminated from both the pilot and the main study as a control variable.
   d. The data collection process also assisted in identifying firms that were erroneously in the sample as they did not meet all the sampling criterion, these firms were removed from the sample. This included firms whose IAR did not contain the required information. For objective six only, firms that did not disclose their KPIs were eliminated and the comparison between KPIs and FPMs was conducted only on 59 of the 77 initially sampled firms.

II. Learning about endogeneity and the necessity to manage it led to the researcher revisiting the variables of the study and journal articles in the finance field to check if

there were no influential variables that had been omitted. This process led to the addition of Tobin's Q as one of the control variables as a notable amount of the literature had proven its influence on the variables of interest.

III. Regarding data analysis, the pilot study managed to expose the researcher to better understand and handle data in line with its features, considering the necessity to make an appropriate decision regarding the subject and time-specific effects that are largely associated with longitudinal data while realising the importance of incorporating relevant theory/ies in analysing and interpreting the results.

4.10. DATA COLLECTION

The main source of data for this study has been IAR, this is motivated by the fact that IAR is the only document through which firms convey the extent to which they have performed and complied with the current laws and regulations in each period. Therefore IAR has been a good reference point for measuring compliance levels of all firms (Botosan 1997:229). IARs have, for a long time been the main data source for numerous research studies including Srivastava and Kathuria (2020:6); Tanjung (2020:627); Elmagrhi et al (2018:8); Mardnly, Mouselli and Abdulraouf (2018:597); Thomson et al (2018:34); Rutledge, Karim and Lu (2016:56) in the field of finance. This source has been supplemented by two other sources, the first being the IRESS database. Most research studies including Desfontaines (2018:42); Kirsten and Du Toit (2018:5); Marais (2018:47); Steenkamp and Wesson (2018:48); Dube and Maroun (2017:28); Dzingai and Fakoya (2017:5); Mans-Kemp et al (2017:37); Bussin and Modau (2015:7); Guillet, Seo, Kucukusta and Lee (2013:342) have relied on IRESS and other similar sources for data.

The third source to supplement IAR and the IRESS database has been the literature on RG, executive pay, performance, pay-performance link, and pay-gap, however; the use of the literature has been limited to meeting only objective six of the study. This is because this objective cannot be achieved through quantitative analysis, but by the analysis of parts of the literature and IAR. The literature as a data source has, over the years become a necessity as it can lead to invaluable synthesis (Pautasso 2013:1) that can positively contribute to the knowledge economy. Similar studies that have relied on the literature as the data source include Barreca (2020:338); Lozano-Reina and Sánchez-Marín (2020:1); Chalaczkiewicz-Ladna (2019:1); Ferri and Göx (2018:5); Stathopoulos and Voulgaris (2016:2); Jentsch (2015:733).

The data collection process has been conducted for each variable of the study as follows:

4.10.1. Construction of the RGCI

A quantitative content analysis has been performed with the aim of constructing the RGCI, the intention was to measure the level of compliance to RG of JSE-listed firms. The researcher found no standardised RGCI from the literature, Bin and Abbas (2013:567) highlighted that there is currently no such measurement tool in existence. As much as measuring the contents of IAR is an old approach in the finance field, "*no uniform method of measurement has evolved*" (Unerman 2000:669). Following similar studies which include but are not limited to Srivastava and Kathuria (2020:1); Tanjung (2020:622); Elmagrhi et al (2018:2); Akbar et al (2016:418); Laksmana (2008:1148), the researcher has constructed a tailor-made RGCI in reference to the index developed by Elmagrhi (2016:318-330) who investigated governance, compliance, firm performance and pay in the UK. The constructed index has been referred to as a remuneration governance compliance index for JSE-listed firms (RGCI-JSE). Developing a tailor-made index and giving it a special name is common in the finance field, for instance Elmagrhi (2016:2) named theirs a UK corporate governance index (UKCGI). Thomson et al (2018:38) who analysed the quality of the variable executive pay in SA named theirs a variable remuneration disclosure score (VRDSCORE) while Bin and Abbas (2013:570) who studied CGC and performance in Pakistan called it the CG compliance index (CGCI) among others. The unique approach in constructing the indexes is also motivated by the obvious fact that each study has distinct objectives that focused on certain information or aspect/s of CG (Vourvachis & Woodward 2015:186).

The collection process of this variable was determined manually (using an Excel spreadsheet) by creating a list of the sampled firms over a period of ten years with firm names in the rows and the number of provisions (43 for King IV Report and 27 for King III Report) in the columns, the demonstration of the data extraction sheet is attached as Annexure 4.3. From a critical review of the literature and the King Code, three categories of RG emerged namely, pay policy, pay disclosure, and say on pay. RGCI-JSE was then developed which covered 43 indicators for King IV Report and 27 for King III Report, this was then used to extract data from IAR between 2017 and 2020 for King IV Report and between 2011 and 2016 for King III Report, see Annexure 4.1 and 4.2 for a list of the provisions firms were measured against. A binary coding of "1" was allocated with the identification of the RGC measurement item/s and "0" otherwise using quantitative content analysis, this qualifies as an unweighted measurement, see section 4.6 for details. The score was then used as a measure of RGCI-JSE, which is a proxy for RGC. The construction of RGCI-JSE responds to research objective one and the

index itself has been among the variables that have been used to develop statistical models to assess the relationships in objectives two to five.

During the data collection process, there were provisions in the index that were not applicable to certain firms, for instance, provisions that related to share options whereas a firm's pay policy highlighted that no payments other than fixed pay is made to executives. In such provisions, a credit (i.e., a score of '1') was given for all the provisions that were not applicable as another score would have indicated that a firm is non-compliant, which was not true, this had a potential to flaw the measurement of RGC.

4.10.2. Executive pay: Fixed pay and STI

SA regulations which are contained in the Companies Act 71 of 2008 and the King Code require firms to disclose benefits paid to each executive director each year (Institute of Directors South Africa 2009:65, 2016:52; Republic of South Africa 2009:70). These benefits are required to be disclosed in the form of fixed, variable, cash and otherwise (Institute of Directors South Africa 2016:67; Republic of South Africa 2009:70). Fixed and STI variables have, therefore, been hand-picked without alteration from the IARs. These have been manually incorporated into the Excel data extraction spreadsheet together with other several variables of the study, the demonstration of the data extraction tool appears as Annexure 4.4 at the end of this study. Fixed pay included basic salary, monthly benefits as well as leave pay. Leave pay, where applicable was also included because it is a payment that relates to leave days that executives accumulate from normal daily work. It is not clear how the previous studies have treated leave pay as none of them in the knowledge of the researcher has provided an explanation about leave pay. STI has included all short-term intensives including discretionary bonuses.

4.10.3. Firm performance: HEPS and SP

Among the data that can be found from the IRESS Database are the financial ratios of firms, which include SP as this is part of the information that IRESS integrates and summarises from the IAR for research purposes. SP has therefore, been hand-picked without alteration from the IRESS Database and incorporated into the data extraction Excel spreadsheet. HEPS has been hand-picked mostly from IARs without alteration and incorporated into the data extraction Excel spreadsheet as firms often disclose it among other ratios in the IARs. For firms that did not disclose these two ratios when not provided by IRESS were determined using the formulas explained in sub-section 4.8.2 of chapter four. A copy of the data extraction spreadsheet appears as Annexure 4.4 in the attachments.

4.10.4. Pay-gap

Pay-gap variable has been calculated (as it is not readily available) from the information disclosed in the IARs, this information includes salaries expense, total executive pay, and the number of firm's employees for each year. A quotient obtained from the average total executive pay and the average employees' pay has been used as a measure of this variable as explained in sub-section 4.6.4 of chapter four. All the variables that were used as input in the calculation of pay-gap have been incorporated into the data extraction spreadsheet (see Annexure 4.4) and the calculation has been performed following the pay-gap formula explained in sub-section 4.8.4 of chapter four and using Excel software. The inputs were finalised as follows:

- Number of employees: This referred to the total number of employees at the end of each year per firm including employees on contract. However, the number of executive directors at the end of each year was deducted before this input was applied in the pay-gap formula. Executive directors in some firms were more than the top three popular executives, i.e., the chief executive officer, chief financial officer, and chief operations officer, the total number of executives was deducted from the number of employees.
- Salary bill: This considered the salaries and wages expense paid to employees per year excluding employee benefits that related to share options or plans, it is important to note that this was only done to firms that disclosed their ordinary employees' LTIP. Amounts that were paid to executives were also deducted from the salary bill.
- Executive pay: This is a total of fixed pay and STI as explained in sub-section 3.4.1 above.

4.10.5. Control variables

Control variables included %SH, %IND, ROA, Tobin's Q and Size. Two of these variables were not readily available either on the IRESS Database or in IAR except for ROA, Tobin's Q and Size (total assets), Size is always disclosed as it forms part of the IAR that firms are regulated to provide. Tobin's Q and ROA was obtained from the IRESS Database. Therefore Size, ROA and Tobin's Q were incorporated into the main Excel spreadsheet without alteration, primarily IRESS Database was used and IAR was used as a supplement. To determine %SH, inputs such as directors' shareholding, which mostly came in the form of the number of shares executive directors held, together with the total number of the firm's issued number of ordinary shares were applied in the formula provided in sub-section 4.8.5.1 to determine %SH. In few instances where the number of issued shares was not disclosed, the

weighted number of ordinary shares was used instead on the same formula to determine %SH. Only the balances of shares at the year-end were utilised in the formula. %SH was then incorporated into the main Excel spreadsheet.

For %IND, inputs like the board size and the number of independent directors had to be obtained before the variable was determined as explained in sub-section 4.8.5.2, the result was then incorporated into the main Excel spreadsheet. A demonstration of the main spreadsheet appears as Annexure 4.4.

The main spreadsheet with all the explained variables was then used in performing data analyses to meet objectives one to five, data analyses included descriptive statistics, correlation, and regression analyses, for more details, refer to sub-section 4.12.1.1, 4.12.1.3 and 4.12.1.4. Prior to this, data screening was performed as described in sub-section 4.12.1.2.

4.10.6. Key performance indicators vs firm performance measures

KPIs and FPMs have been hand-picked from the IAR and journal articles respectively and incorporated into the Excel document with the intention to compare them as raw data through qualitative comparative research as explained in section 4.7 above, this means that there was no deep analysis for objective six. Only basic tables and descriptive basic graphs were used to aid interpretation of results. The intention was to interpret the data conceptually and critically in relation to the literature as reviewed in chapter three, the results of the other objectives and the King Code. The copy of the document into which FPMs and KPIs were incorporated is attached at the end of this thesis as Annexure 4.9.

Table 4.3 below provides a summary of the main variables and their respective data extraction process.

Table 4.3: Data collection summary of the main variables

No	Variables	Data extraction process
1	RGC	**Content Analysis Process flow for RGC:** i. A critical review of the literature and the King Code on RG was conducted to establish three categories (pay policy, pay disclosure, and say on pay) and related measurement items. ii. RGCI-JSE measurement checklist has been developed in reference to the extant literature, King IV Report and King III Report. This had 43 indicators for King IV Report and 27 for King III Report and has been used to extract data from IAR between 2017 to 2020 for King IV Report and 2011-2016 for King III Report, see Annexure 4.1 and 4.2 for an illustration. iii. A binary coding of "1" was allocated with the identification of the RGC measurement item/s and "0" otherwise using quantitative content analysis. iv. The total score for each JSE-listed firm for each year has been expressed as a percentage of the total possible score of 43 for King IV Report and 27 for King III Report. This has then been used as a measure of RGC. v. The calculated RGC index respond to research objective one and has been among the variables that have been used to develop statistical models to assess the relationships in objectives two to five.
2	Firm performance	HEPS and SP have been used as proxies for firm performance, these were directly extracted from IRESS Database as explained in sub-section 4.10.3.
3	Executive pay	The breakdown of executive pay into fixed and variable elements becomes part of the IAR as required by statutory requirements in terms of Companies Act of 2008, JSE listing requirements and the King Code. See sub-section 4.6.3 and 4.7.2 for details.
4	Pay-gap	An expression of the average executive pay (in 3 above) was divided by the average employee pay [calculated by taking the (total executive pay less executive pay) divided by (number of employees less no. of executives)]. These variables were all extracted from IAR, see sub-section 4.8.4 and 4.10.4 for details.
5	KPIs and FPM	These were hand-picked from IAR and journal articles and incorporated into the Excel document for critical description and comparison.

Source: Author's conceptualisation (2021)

4.11. POPULATION AND SAMPLE

Convergent parallel design allows for the use of the same or a different sample in the study depending on whether the overall purpose is comparison, relationship analysis or integration of findings (Bian 2011:20). In this study, the purpose was to integrate the results and/or findings that were obtained from objective one, which covers the construction of the RGCI, objectives two to five, which focused on the examination of relationships and objective six, which focused on the comparison of KPIs and FPMs. A uniform population and sample,

therefore, was less likely to adequately serve all this purpose since the objectives were dissimilar in nature and as others were quantitative while one was qualitative.

4.11.1. Quantitative research: Population and sample

The quantitative research has initially focused on constructing RGCI-JSE, this was achieved as objective one, which was then used in meeting objective one and in examining the relationships to meet objective two to five. The population for this purpose were firms that were listed on the JSE main listing. These firms add up to a total of 358 as at 16 November 2021 according to List Corp (2021:1). The sample was determined as follows:

- Firms that operate purely in the financial services sector were all excluded as they have distinct regulations in addition to the Companies Act of 2008 and the King Code. This is done to minimise bias in the construction of RGCI-JSE as these firms' levels of compliance may be influenced by the specific regulations in their sector. Similar studies that have excluded firms in the financial services sector for similar reasons include Ntim et al (2019:935); Sanchez-Marin et al (2017:230); Ahn (2016:664); Carter et al (2016:3); Elvin and Hamid (2015:99); Akinkoye and Olasanmi (2014:17). On 16 November 2021, these firms were 125 according to List Corp (2021:1) and the list is attached as Annexure 4.5.

- Firms that were subsidiaries of those listed were also excluded from the sample and only the parent firms which account for the whole group of firms under it were considered. '*Group of firms*' refers to a single holding firm that accounts for all its subsidiaries (Republic of South Africa 2009:16) in a single report. A subsidiary is a firm whose control of the general voting rights is at the hands of another firm (Republic of South Africa 2009:25). The main reason for the exclusion is because subsidiaries' reports are always part of the holding firm's reports as this is required by International Financial Reporting standards IFRS 3 which sets out the accounting standards for *group of firms* (Binnekade, Koppeschaar, Stegmann, Rossouw & Wright 2015:4-504). Commonly, such firms tend to publish the same IAR for instance, Anglo American Plc and Anglo-American Platinum were two separately listed firms, however, and their 2020 IAR is the same for both firms. Meaning that if by any chance they would both be included in the study, it would lead to double counting of variables as one report has already considered the performance of both firms. Even if such firms happen not to publish the same IAR, the effect is still the same as it still amounts to double counting. Firms that were excluded because of this criterion amount to 23 and appear as follows:

Table 4.4: Subsidiaries of the other listed firms

	Firm name	Sector	Subsidiary of:
1	Anglo American Platinum	Basic Materials	Anglo American plc
2	Barloworld P	Industrials	Barloworld
3	Coal of Africa	Basic Materials	MC Mining
4	Curro Holdings	Consumer Services	PSG Group
5	eMedia Holdings	Media	eMedia
6	Grindrod	Industrials	Grindrod
7	Grindrod Shipping Holdings	Industrials	Grindrod
8	Hosken Passenger Log. and Rail	Industrials	Hosken Consolidated investments
9	Invicta Holdings	Industrials	Invicta Holdings
10	Kumba Iron Ore	Basic Materials	Anglo American plc
11	Lonmin	Basic Materials	Sibanye
12	Nampak	Industrials	Nampak
13	Nampak	Industrials	Nampak
14	Netcare	Health Care	Netcare
15	Rex Trueform Group N	Consumer Services	Trueform Group
16	Rex Trueform Group Prep	Consumer Services	Trueform Group
17	Royal Bafokeng Platinum	Basic Materials	Royal Bafokeng Platinum
18	SAB Zenzele Kabili Holdings	Consumer goods	SAB InBev
19	Steinhoff Investment Holdings	Consumer Goods	Steinhoff Holdings
20	The Foschini Group Prep	Consumer Goods	Foschini Group
21	Tsogo Sun Gaming	Consumer Services	Tsogo Sun
22	YeboYethu	Telecom	Vodacom
23	Zambezi Platinum	Basic Materials	Northam

Source: Author's conceptualisation (2021)

- Since the study is for a period of ten years from 2011 to 2020, firms that do not have IAR for the full ten years were excluded since their data was not sufficient for the study. Such firms make a total of 112 and the list is attached as Annexure 4.6.

- Also, firms that had not reported in SA currency (Rand) were excluded as this increases chances of error, impairs comparability and therefore, reliability of the results, a similar study that did this is Kanapathippillai, Mihret and Johl (2019:1069). Translation of foreign currencies into SA Rand would be full of uncertainties about which exchange rates to use as the currency market is highly volatile, coupled with the challenge that financial year ends of firms also differ, among other things. Firms that were excluded because of this criterion make a total of 21 and the list is as follows:

Table 4.5: Firms that report in foreign currencies

	Firm	Sector	Currency
1	AB InBev	Consumer Goods	US dollar
2	Anglo American Plc	Basic Materials	US dollar
3	AngloGold Ashanti	Basic Materials	US dollar
4	Arden Capital	Hospitality, real estate, logistics	US dollar
5	British American Tobacco Plc	Consumer Goods	British pound
6	CAFCA	Industrials	Zim dollar
7	Compagnie Financière Richemont SA	Consumer Goods	Euro
8	Datatec	Technology	US dollar
9	Europa Metals	Basic Materials	AUS$
10	Gemfields Group	Industrials	US dollar
11	Glencore Plc	Basic Materials	US dollar
12	Gold Fields	Basic Materials	US dollar
13	Hammerson Plc	Property	British pound
14	Kibo Mining Plc	Basic Materials	British pound
15	MC Mining	Basic Materials	AUS$
16	Mondi Plc	Industrials	Euro
17	Naspers	Consumer Services	US dollar
18	Pan African Resources Plc	Basic Materials	US dollar
19	Sappi	Basic Materials	US dollar
20	Super Group	Consumer Services	British pound
21	Textainer Group Holdings	Industrials	US dollar

Source: Author's conceptualisation (2021)

Considering all the criterion that has been explained above, the final sample numbers 77 listed firms, the list is attached in this study as Annexure 4.7. This sampling approach fits the characteristics of a purposeful sample as firms needed to meet a defined criterion for inclusion. The intention in this study has been to avoid range-based sampling criterion that has been common in the finance field as this has been criticised for biasness. For instance, Kanapathippillai et al (2019:1064); Muzata (2018:1); Thomson et al (2018:55); Scholtz and Engelbrecht (2015:22) included only the top performing firms in their sample. Aguinis, Edwards and Bradley (2016:5) who analysed articles that were published in the journal called *Strategic Management Journal and Organisation* between 2005 and 2014 discourage this sampling approach. They criticise it as weak due to its trait of not creating a fair chance of inclusion for certain firms, leading to a sample that fails to represent the population, something that has a potential to impair the intended contribution of the study. They also highlighted that the negative effect of the range-based sampling approach has more effect if the study involves a moderator variable because the statistical power gets impaired. This study features RGC as a moderator variable for objectives four and five.

4.11.2. Qualitative research: Population and sample

The qualitative research, which was conducted to meet only objective six focused on critically comparing the executive KPIs that firms have used as bases to determine variable executive pay against the FPMs that researchers have used when they examined the relationships involving RGC, executive pay, performance, pay-performance link and pay-gap. This is motivated by the fact that King IV Report encourages firms to consider triple context measures when they set executives' targets. While researchers do not seem to have shifted towards the triple context in selecting FPMs in the quantitative studies that involve RGC, executive pay, performance, pay-performance link and/or pay-gap. This exercise enhances the understanding of the extent to which FPMs preferred by researchers have been likely to explain and predict what is happening in practice. Hence the scrutiny of the literature that has quantitatively assessed the relationships involving RGC, executive pay, firm performance, pay-performance link, and pay-gap. The sample for the literature has been selected using the criterion below:

1. Firstly, with regards to finding articles, the author used the following key words:
   i. corporate governance AND executive pay
   ii. corporate governance AND firm performance
   iii. corporate governance AND pay-gap
   iv. corporate governance AND pay-performance
   v. corporate governance AND pay-performance compliance
   vi. remuneration governance AND executive pay
   vii. remuneration governance AND firm performance
   viii. remuneration governance AND pay-gap
   ix. remuneration governance AND pay-performance
   x. remuneration governance compliance
   xi. ("corporate governance" OR "remuneration governance") AND (executive pay OR firm performance OR pay-gap OR pay-performance)

The articles were sought from Google Scholar and several other journals that UNISA has subscribed to, which included but was not limited to Encore Library Catalogue, National ETD Portal-South African theses, and dissertations, ProQuest Dissertations & Theses Global, Sabinet African Journals and researchgate.net. A literature search was also requested from the UNISA librarian using the same key words to ensure that all the possible avenues were reached to obtain the relevant literature. This was received and reconciled with the literature

that the author had already collected. Proof of the literature search from the UNISA librarian is available with the researcher upon request. Total articles that were obtained in this regard amounted to 263. Articles in the financial services sector were excluded from the search.

2. Only the articles whose title focused on one or more of the aspects of RG namely, pay policy, pay disclosure, and say on pay with the aim of quantitatively examining the relationship/s involving either RGC, executive pay, firm performance, pay-performance link and/or pay-gap were included. This was to ensure that the study does not lose its focus. This criterion led to the exclusion of 98 articles.
3. Another criterion was that the articles had to include the word '*performance*' or '*efficiency*' or '*value*' in their title. This is key because the focus of the qualitative research is only on FPMs that have been common in the literature, so articles with other key words have been less likely to be relevant to achieve this objective. This led to the exclusion of 58 more articles.
4. Since the study was for the period of ten years from 2011 to 2020, it was undeniable that sticking to the journal articles that were published only during this period would not only maintain the focus of the study but would also enhance the interpretation of findings. Therefore, further journal articles (6 in total) with a publication date before 2011 were excluded.
5. Also, articles that did not clearly specify the firm performance measures and those that could not be retrieved for various reasons were eliminated, this led to the exclusion of 21 more articles.

6. These eliminations led to the final sample of journal articles being 80 for FPMs. Firms that did not disclose their executive KPIs were eliminated from the 77 firms used for quantitative research, this led to 59 firms being utilised for KPIs. Therefore, objective six was met by comparing FPMs from 80 journal articles and KPIs from 59 JSE-listed firms.

The sampling process meets the definition of a purposeful sample due to the criterion that has been applied to select the articles for inclusion in the study. The list of articles in the sample is attached as Annexure 4.8.

4.12. DATA ANALYSIS

4.12.1. Quantitative data

The data was collected from 77 selected JSE-listed firms for a period of ten consecutive years between 2011 and 2020 to meet objectives one to five, this therefore, meets the criterion of a panel data that has features of both time series and cross-sectional data. The data was a balanced panel since all the firms were observed for each of the ten years (Torres-Reyna 2007:5) although there were missing values (Hurlin 2018:18). Panel data allows for the observation of several firms or individuals in which data is collected and observed for consecutive multiple periods (Hurlin 2018:8). Time series data refers to observations of the single firm at different periods that are equally distant from one another while cross-sectional refers to data of many entities at a single period of time (Varma 2016:1). Similar studies that have relied on this type of data include Kirsten and Du Toit (2018:5); Serban (2018:711); Carter et al (2016:10); Ashwin (2015:72). SPSS Software Version 28 was used as an analysis tool for the quantitative data analysis. The detail of statistical approaches used are described below.

4.12.1.1. Descriptive statistics

Descriptive statistics aims to provide a simple summary of the sample through basic description (Sharma 2019:4). Descriptive analysis was conducted for objectives one to six of the study following several other studies including Elmagrhi (2016); Outa and Waweru (2016:906); Shaw (2015:1).

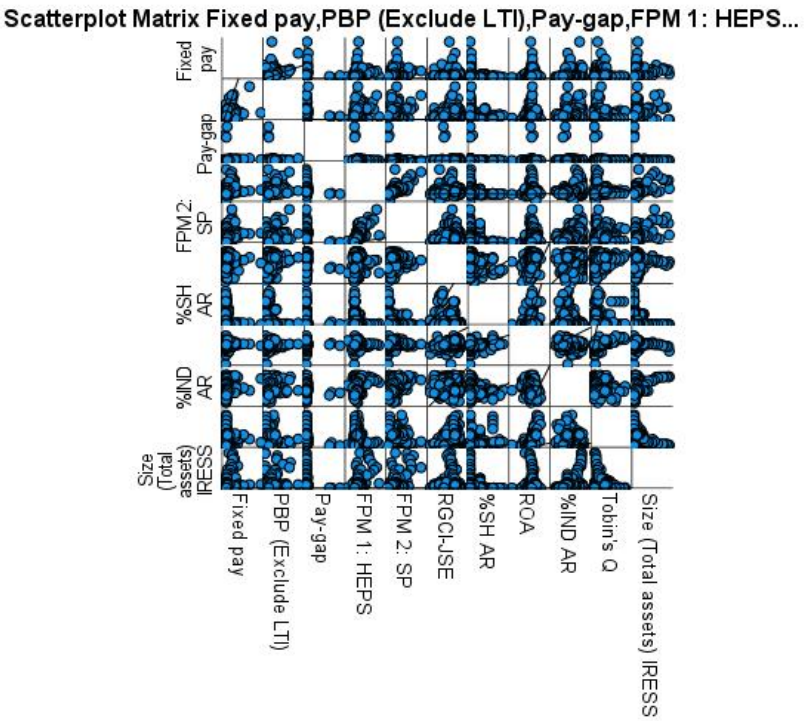
4.12.1.2. Data screening

After descriptive analysis, data was screened thoroughly prior to correlation and regression analyses being performed. Data screening is necessary to improve efficiency and accuracy of the regression estimate (Leslie & Robin 2002:i). Data screening involved the following steps:

I. **Normality test**: This is one of the fundamental assumptions of a regression analysis, violation of which increases the opportunity of incorrect results (Jarque & Bera 1980:255). The assumption is that the error of the distribution should be normal (Osborne & Waters 2003:1). However, this assumption falls away if the sample is big enough (Field 2018:388), which should at least be 30 cases (Greener 2020:no page). Therefore, this study is regarded as having met this assumption by default as the data was collected from 77 firms over a period of ten years, indicating that there were about 770 observations per variable.

II. **Linearity**: This refers to the assumption that dependent and independent variables have a linear association (Osborne & Waters 2003:1). Testing for this feature is essential and should precede other screening tests in preparing data (Flora, LaBrish & Chalmers 2012:19) because its violation calls for a reconsideration of a chosen data analysis approach. Since there are numerous independent variables and more than one dependent variable in this study, a matrix scatter graph has been recommended (Raghavan 2018:1-6; ArcGIS Pro No date). The matrix scatter graph shows all the relationships variables have among each other (NCSS WPengine No date:1). For a data to be regarded as linear, there must be some linearity that can be spotted or connected through the dots that appear in the graphs in the matrix (McDaniel 2022:1). The rule of thumb is that the absence of a parabolic curve in the matrix is a sign of linearity. The focus of this study in this section is only on the linear relationship between RGCI-JSE and firm performance (HEPS and SP), RGCI-JSE and executive pay (fixed pay and STI), executive pay and firm performance as well as pay-gap and firm performance. Results of the matrix scatterplot depicted in Figure 4.1 below.

Figure 4.1: Linearity results (pre data transformation)



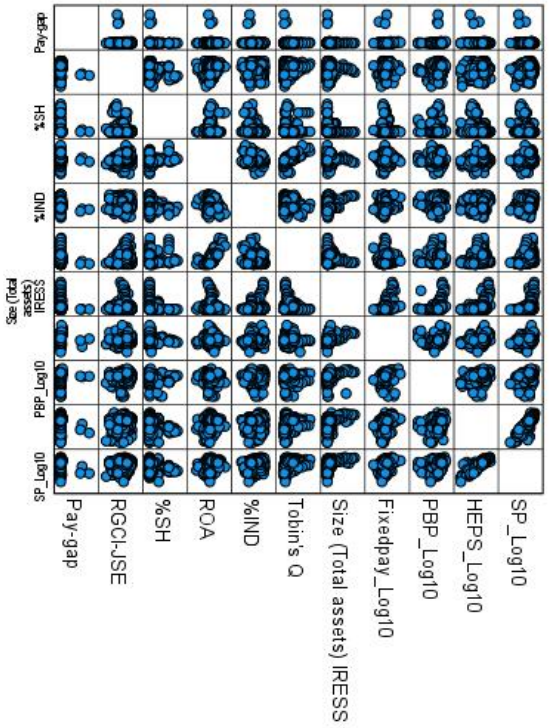
Source: Author's conceptualisation (2022)

As evident in the matrix scatter graph above, the data does not meet the condition of linearity as some of the plots show an element of parabolic and/or curvilinear feature. To improve

linearity, data transformation of Fixed pay, STI, HEPS and SP was conducted using natural log10 as endorsed by Eberly College of Science (2022:1). Skantz (2012:2164) is among similar studies that have log transformed their data.

Figure 4.2 below depicts matrix scatter plot after data transformation.

Figure 4.2: Linearity results (post data transformation)



Source: Author's conceptualisation (2022)

As evident in the diagram above, the linearity has improved as the plots, especially those that correspond to the four quantitative objectives of this study, no longer suggest a parabolic curve, and therefore, there is no evidence that linearity assumption has not been met in this regard.

III. **Collinearity**: In regression analysis, independent variables need not show positive association or correlation with each other, if they do, collinearity exists, (Dormann et al 2013:27; Flora et al 2012:8). This is usually due to a shallow attention of the researcher in selecting variables of the study, and the solution is to reconsider variable selection (Flora et al 2012:9). If unresolved, it tends to overestimate the regression variance (Dormann et al 2013:27) which could lead to incorrect conclusions about a variable (Mason & Perreault 1991:268). This test is applicable only to the regression models that have more than one independent variable (Field 2018:388). Therefore, it only applies to objective four of the

study as it is the only one with more than one independent variable. The intention is to assess multicollinearity of the independent variables (Mason & Perreault 1991:268), multicollinearity on control variables should be ignored (Allison 2012:2) although they may be included in the diagnosis process to check if they are not correlated with the independent variables. Also, moderator variables should not be featured in collinearity tests as this is unnecessary and irrelevant (McClelland, Irwin, Disatnik & Sivan 2017:394).

The most popular collinearity diagnostic tool in multiple regression is variance inflation factor (VIF) (Thompson, Kim, Aloe & Becker 2017:81). VIF was therefore, used in this test to assess collinearity, previous similar studies that used this tool include Li, Crook, Andreeva and Tang (2020:10); Liu et al (2020:306); Srivastava and Kathuria (2020:7); Gordon, Loeb and Tseng (2009:303); Vafeas and Afxentiou (1998:45). Multicollinearity exists if VIF values exceed a threshold of ten (Thompson et al 2017:83; Mason & Perreault 1991:270). Tables 4.6 and 4.7 below provide a summary of collinearity results according to the two regression models that relate to objective four, both of which confirm the absence of multicollinearity, detailed results are attached as Annexure 4.10:

Table 4.6: Collinearity Results-Firm performance vs Fixed pay_Log10

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	6.761	.063		106.878	.000		
	RGCIJSE	.188	.068	.107	2.787	.006	.848	1.179
	SH	.005	.001	.153	3.917	<,001	.815	1.227
	ROA	-.377	.123	-.155	-3.080	.002	.492	2.033
	IND	4.727E-5	.001	.002	.062	.950	.806	1.241
	TobinsQ	.006	.012	.026	.478	.633	.428	2.337
	SizeTotalassets	1.341E-12	.000	.274	6.876	<,001	.788	1.270
	HEPS_Log10	.052	.034	.142	1.554	.121	.150	6.671
	SP_Log10	.111	.036	.302	3.048	.002	.127	7.852
a. Dependent Variable: Fixedpay_Log10								

Source: Author's conceptualisation (2022)

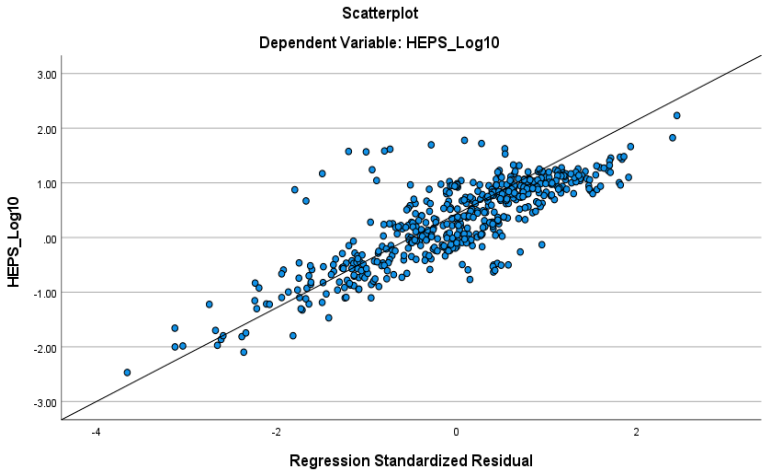
Table 4.7: Collinearity Results-Firm performance vs STI_Log10

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	6.375	.144		44.197	<,001		
	RGCIJSE	.343	.150	.107	2.288	.023	.853	1.173
	SH	.000	.003	.005	.096	.924	.795	1.259
	ROA	-.413	.291	-.091	-1.420	.156	.454	2.202
	IND	-.003	.002	-.082	-1.705	.089	.810	1.235
	TobinsQ	-.024	.027	-.060	-.865	.387	.384	2.604
	SizeTotalassets	1.106E-12	.000	.116	2.367	.018	.780	1.282
	HEPS_Log10	.081	.075	.117	1.082	.280	.160	6.231
	SP_Log10	.214	.081	.311	2.631	.009	.133	7.500
a. Dependent Variable: STI_Log10								

Source: Author's conceptualisation (2022)

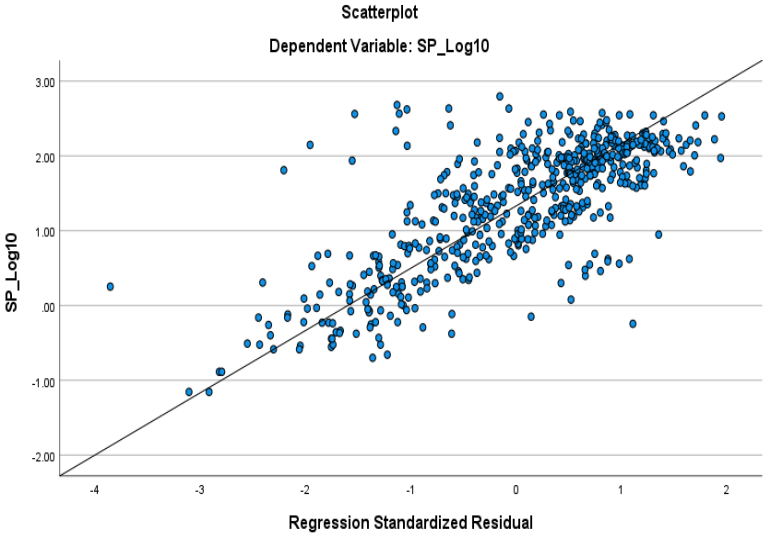
IV. **Homoscedasticity**: "*Homoscedasticity means that the variance of errors is the same across all levels of the independent variables*" (Osborne & Waters 2003:4), absence of which indicates the presence of heteroscedasticity. This is a feature that increases the chance of bias in the standard errors (Leslie & Robin 2002:13), which is a violation of a regression assumption. Homoscedasticity test was performed using a scatterplot that tested standardised residuals as highlighted by Statistics Solutions (2022:4). For a data to be homoscedastic, the rule of thumb is that the number of dots/points should be almost equal below and above the line as well as to the left and right of zero in the graph (Statistics Solutions 2022:5). Homoscedasticity test was performed for each of the four quantitative objectives with each objective having two regression models, this then led to eight homoscedasticity tests being performed. Figures 4.3 to 4.10 below present a summary of the homoscedasticity results; detailed results are attached to this work as Annexure 4.11.

Figure 4.3: Objective 2.1-RGCI-JSE vs HEPS_Log10



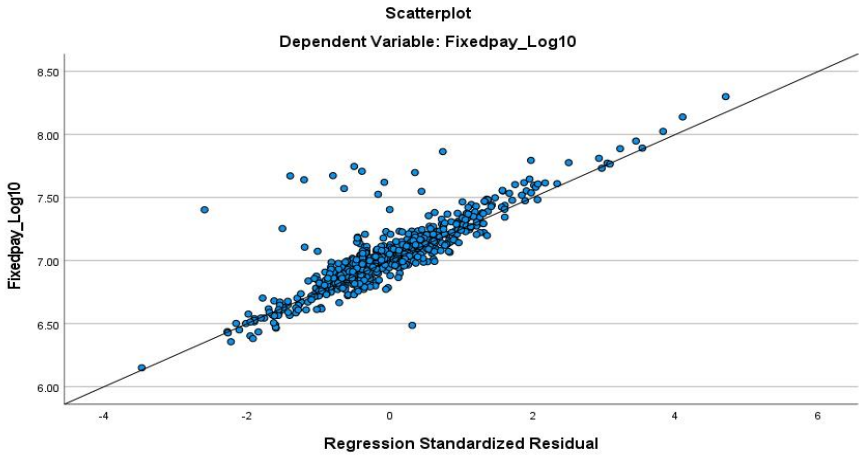
Source: Author's conceptualisation (2022)

Figure 4.4: Objective 2.2-RGCI-JSE vs SP_Log10



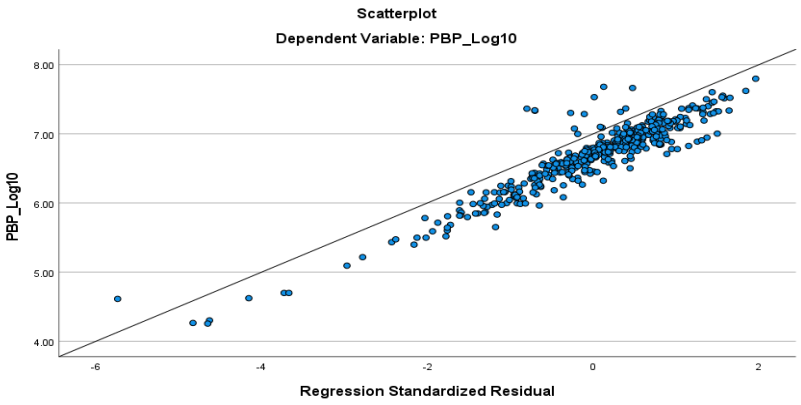
Source: Author's conceptualisation (2022)

Figure 4.5: Objective 3.1-RGCI-JSE vs Fixed pay_Log10



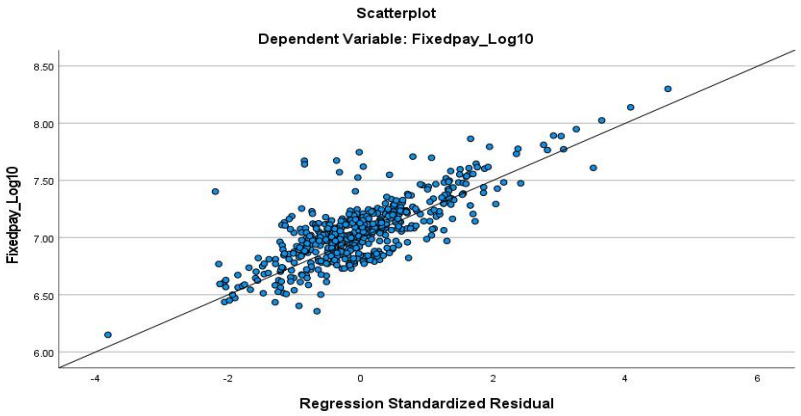
Source: Author's conceptualisation (2022)

Figure 4.6: Objective 3.2-RGCI-JSE vs STI_Log10



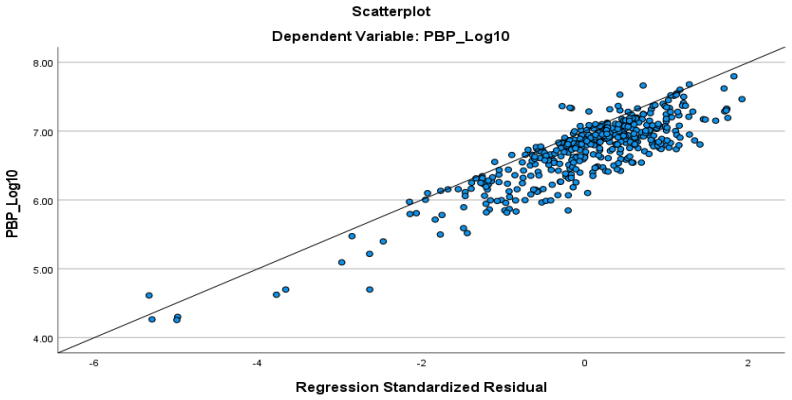
Source: Author's conceptualisation (2022)

Figure 4.7: Objective 4.1-Firm performance vs Fixed pay_Log10



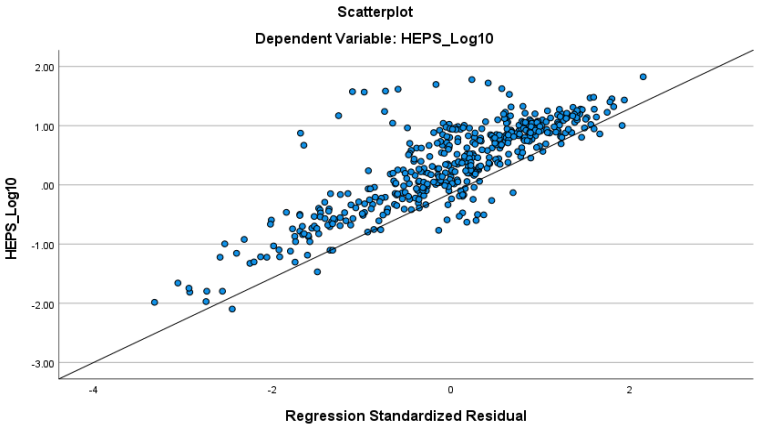
Source: Author's conceptualisation (2022)

Figure 4.8 Objective 4.2-Firm performance vs STI_Log10



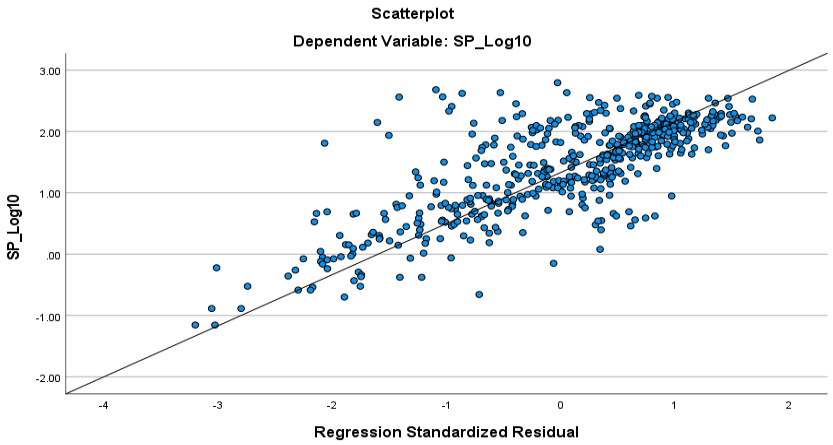
Source: Author's conceptualisation (2022)

Figure 4.9: Objective 5.1-Pay-gap vs HEPS_Log10



Source: Author's conceptualisation (2022)

Figure 4.10: Objective 5.2-Pay-gap vs SP_Log10



Source: Author's conceptualisation (2022)

Figures 4.3 to 4.10 above indicates that the data is unevenly spread above and below zero as well as to the left and right of some of the graphs, suggesting that this assumption is not met. It is important to note that heteroscedasticity does not bias the slopes, r square and/or adjusted r square of the linear regression model, but rather the t statistic and confidence intervals (Fall 2008:3). To overcome this, the option of '*robust standard errors*' when a linear regression model is being run needs to be selected (González & Orbe 2014:37). This was done for all the regression models run in this study.

V. **Outliers**: An outlier is an abnormal outcome that is too big or too small compared to other outcomes in the dataset (Beckman & Cook 1983:120). Outliers may need to be removed (Leslie & Robin 2002:6) which minimises the chances of error and enhances the accuracy of the results (Osborne & Waters 2003:1). Since there was more than one independent variable (also taking into account control variables) in the study, a multivariate outlier detector called Mahalanobis Distance (Filzmoser 2004:1) was used to assess if there were outliers in the data. Different outlier detectors are available however, they all serve the same purpose. Mahalanobis Distance was performed, followed by the calculation of the standard critical values of the Chi-square distribution which takes into account the degrees of freedom (Çakmakçı, Kemmerich, Ahmed & Baykal 2020; Diaconis & Efron 1985). The rule of thumb is that if the critical value of the Chi-square distribution is less than 0,001, the row on which that value is found contains an outlier. This process led to the revelation of at least 26 outliers in the data, which means that this assumption was not met. Full results are attached as Annexure

4.12, critical values of Chi-square distribution that identify the rows in which outliers are found are marked in yellow colour.

Investigation of whether the outliers were caused by error in the data collection process was conducted as suggested by Frost (2021:1) and no error was identified. The current literature in the finance field has rarely explained how they detected and handled outliers, in fact, explanations about how the assumptions of normality were tested and rectified have been very scarce in the articles with similar objectives. Some of the relevant studies that have reported on outliers have opted to either remove or winsorise outliers (Cho et al 2019:301; Yahya & Ghazali 2018:37). Winsorising is an alternative to removing outliers from the dataset by amending or trimming them such that they are equal to the last or first value that is not an outlier (Field 2018:262). Since 26 outliers is regarded as quite high, data was then winsorised at 1st and 99th percentile following similar studies like Luo et al (2020:9); Grosman, Aguilera and Wright (2019:263); Kent, Kercher and Routledge (2018:455); Kim et al (2017:76); Scholtz and Engelbrecht (2015:38). Therefore, this assumption is regarded as having been met after data trimming. The following is the summary of the cut-off points at 1st and 99th percentile per variable:

Table 4.8: Cut-off points at 1st and 99th percentile

Statistics												
		Paygap	RGCIJSE	SH	ROA	IND	Tobins Q	SizeTotalassets	Fixedpay_Log10	STI_Log10	HEPS_Log10	SP_Log10
N	Valid	660	765	631	758	759	705	765	761	583	676	730
	Missing	110	5	139	12	11	65	5	9	187	94	40
Percentiles	1	2.1856	.1429	0.000000%	-.3900	12.5000%	.2500	43610043.62	6.1610	4.6095	-1.9869	-.6351
	99	335.6050	.8519	52.195938%	.4878	83.3333%	7.2152	309548920000.00	7.8311	7.6053	1.6350	2.5722

Source: Author's conceptualisation (2022)

VI. **Autocorrelation**: This refers to the degree to which the outcomes of a single variable are related to one another across time, put differently; this is the extent to which the outcome of a variable in the current period is similar to that of the previous period (Kioya 2020:1). This is common in time series data (Statistics Solutions No date:1-6). Autocorrelation is undesired as it results in inefficient estimates (Breusch 1978:334). Durbin Watson is an autocorrelation diagnostic tool that is highly recommended (Statistics Solutions 2021:2; Field 2018:387) and most popular to test autocorrelation in research. Durbin Watson values can range between 0 and 4, with the value of 2 indicating an absence of autocorrelation, less than 2 a positive autocorrelation and more than 2 a negative autocorrelation (Kioya 2020:3). The rule of thumb is that values

less than 1 and more than three indicate serious autocorrelation (Field 2018:387). Tables 4.9 to 4.16 below reflect eight results of Durbin Watson, the tests were run according to the number of regression models of the study, detailed results are attached at the end of this research as Annexure 4.13.

Table 4.9: Autocorrelation-Objective 2.1 < RGCI-JSE vs HEPS>

Model Summary[b]					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.580[a]	.337	.329	.634	1.782
a. Predictors: (Constant), SizeTotalassets, TobinsQ, SH, RGCIJSE, IND, ROA					
b. Dependent Variable: HEPS_Log10					

Source: Author's conceptualisation (2022)

Table 4.10: Autocorrelation-Objective 2.2 < RGCI-JSE vs SP>

Model Summary[b]					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.674[a]	.454	.448	.610	1.712
a. Predictors: (Constant), SizeTotalassets, ROA, SH, RGCIJSE, IND, TobinsQ					
b. Dependent Variable: SP_Log10					

Source: Author's conceptualisation (2022)

Table 4.11: Autocorrelation-Objective 3.1 < RGCI-JSE vs Fixed pay>

Model Summary[b]					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.537[a]	.288	.280	.236	1.630
a. Predictors: (Constant), SizeTotalassets, ROA, SH, RGCIJSE, IND, TobinsQ					
b. Dependent Variable: Fixedpay_Log10					

Source: Author's conceptualisation (2022)

Table 4.12: Autocorrelation-Objective 3.2 < RGCI-JSE vs STI>

Model Summary[b]					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.376[a]	.142	.130	.481	1.722
a. Predictors: (Constant), SizeTotalassets, ROA, SH, RGCIJSE, IND, TobinsQ					
b. Dependent Variable: STI_Log10					

Source: Author's conceptualisation (2022)

Table 4.13: Autocorrelation-Objective 4.1<Firm performance vs Fixed pay>

Model Summary[b]					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.614[a]	.377	.368	.221	1.617
a. Predictors: (Constant), SP_Log10, ROA, SH, IND, SizeTotalassets, TobinsQ, HEPS_Log10					
b. Dependent Variable: Fixedpay_Log10					

Source: Author's conceptualisation (2022)

Table 4.14: Autocorrelation-Objective 4.2 < Firm performance vs STI>

Model Summary[b]					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.483[a]	.234	.221	.448	1.790
a. Predictors: (Constant), SP_Log10, ROA, SH, IND, SizeTotalassets, TobinsQ, HEPS_Log10					
b. Dependent Variable: STI_Log10					

Source: Author's conceptualisation (2022)

Table 4.15: Autocorrelation-Objective 5.1 < Pay-gap vs HEPS>

Model Summary[b]					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.557[a]	.310	.301	.614	1.884
a. Predictors: (Constant), Paygap, IND, TobinsQ, SizeTotalassets, SH, ROA					
b. Dependent Variable: HEPS_Log10					

Source: Author's conceptualisation (2022)

Table 4.16: Autocorrelation-Objective 5.2 < Pay-gap vs SP>

Model Summary[b]					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.658[a]	.433	.426	.587	1.856
a. Predictors: (Constant), Paygap, IND, TobinsQ, SizeTotalassets, SH, ROA					
b. Dependent Variable: SP_Log10					

Source: Author's conceptualisation (2022)

Of the eight tests conducted, none of the Durbin Watson results were either less than 1 or more than 3, therefore, there are no reasonable grounds to believe that the data possesses autocorrelation. In other words, the data is regarded as having met this assumption of linear regression.

4.12.1.3. Correlation analysis

Correlation aims to investigate the connection between dependent and independent variables for the purposes of interpretation (Mukaka 2012:69). Statistics Solutions (No date:1) explains it as a bivariate analysis as it measures the extent of the connection between two variables. In the finance field, researchers who have used correlation as an analysis tool have either adopted Pearson's or Spearman's correlation. Pearson's correlation is used where both variables are normally distributed, while Spearman correlation is used for non-normal, sometimes ordinal data and/or on data with outliers (Schober, Boer & Schwarte 2018:1764-1765).

Since the data partly met the assumptions of linear regression, both Pearson's correlation and Spearman's correlation were conducted following a new custom in the finance field of conducting both. Similar studies that have used both correlations include Gerged, Beddewela and Cowton (2020:192); Rouen (2017:24); Banker et al (2016:514); Magang (2012:36); Laksmana (2008:1166). 2-tailed tests were performed since the interest was on tracing both negative and positive correlations. Correlation analysis measures the strength as well as the direction of the relationship between a dependent and an independent variable (Senthilnathan 2019:1-2). The strength ranges between 0 and 1 with 0 indicating an absence of correlation and 1 a perfect correlation while the direction can either be negative or positive (Zaid 2015:8). Since there are no universally accepted ranges of correlation coefficients to aid the interpretation of the results, this study has used those suggested by Schober et al (2018:1765) which are as follows:

Table 4.17: Interpretation of correlation coefficient

Correlation coefficient	Interpretation
0,00-0,10	No correlation
0,11-0,39	Weak correlation
0,40-0,69	Moderate correlation
0,70-0,89	Strong correlation
0,90-1,00	Very strong correlation

Source: Schober et al (2018:1765)

This applies to all the correlation interpretations and explanations on this study.

4.12.1.4. Linear regression analysis

Sarstedt and Mooi (2014:194) describes linear regression analysis as a model that analyses relationships between dependent and independent variables with the aim of assessing their strength and direction. This is relevant and necessary in this study as four out of six objectives focus on examining relationships. Many studies including Abudy et al (2020:2); Gómez-Bezares et al (2019:1); Jiang and Zhang (2018:131); Rouen (2017:24); He and Fang (2016:371); Ji and Oh (2014:70); Jouber and Fakhfakh (2012:499) have used linear regression to answer similar research questions. The following regression analyses were conducted on objectives two to five of the study as explained below:

Objective two: Relationship between RGCI-JSE and firm performance

RGC was used as an independent variable with firm performance as a dependent variable in line with Rose (2016:202); Teh (2009:1) as highly compliant firms have been theoretically expected to improve performance. Multivariate regression analysis has been used because

there was one independent variable and five control variables while there were also two components of dependent variables (HEPS and SP). Bin and Abbas (2013:357); Kercher (2013:1) have been among the studies that have used this model to reach conclusions. The regression models used to analyse this association appear in Table 4.18 below under objective two.

Objective three: Connection between RGCI-JSE and executive pay

This is similar to the previous case, RGC is an independent variable while executive pay is a dependent variable in line with Long (2016:83), this is because RGC is expected to constrain executive pay. In assessing this link, the study also adopted a multivariate linear regression analysis as there is one dependent variable that is divided into two measures, leading to two dependent variables in total and one independent variable with five control variables. Studies with similar objectives that have used this model include Agyei-Boapeah, Ntim and Fosu (2019:12); Jiang and Zhang (2018:131). Table 4.18 below contains regression models that were used to assess the relationship for objective three.

Objective four: Association between executive pay and firm performance

For objective four, executive pay, which is divided into two measures is a dependent variable while firm performance, which is also divided into two measures is an independent variable, coupled with five control variables. The reason for this is that theoretically, the level of executive pay should depend on the level of executives' performance. Control variables and a moderator variable were also incorporated in the evaluation of this relationship. Multivariate regression analysis has been used for this relationship since there were many components of independent and more than one component of dependent variable. Studies like Nannicini, Ferraz and Lopes (2018:1); Qadorah and Fadzil (2018:16); Yahya (2017:1); Modau (2014:45); Shaw (2012:54) have adopted this model to achieve similar research objectives. Regression models used to study this connection are presented in Table 4.18 below next to objective four.

Objective five: Relationship between pay-gap and firm performance

In this relationship, firm performance is the dependent variable while pay-gap is an independent variable because the level of pay-gap is theoretically expected to influence firm performance. Similar studies include Luo et al (2020:9); Cheng et al (2017:29); Kim et al (2017:82); Banker et al (2016:514); Shaw (2015:1); Zalewska (2014:40); Yanadori and Cui (2013:1502); Li (2010:46). The reasoning is that firms first set a specific pay-gap then begin to remunerate its executives and employees towards it. The study also incorporated five control variables and one moderator variable. Multivariate regression was used as there is

one independent variable, control variables and more than one dependent variable. This model has been used by Gómez-Bezares et al (2019:1); Rouen (2017:24) for similar research objectives. Table 4.18 below depicts the regression models that have been used to investigate the connection for objective five.

The regression analysis towards the examination of the relationships in objectives two to five was conducted using OLS regression. This is a regression analysis approach that is considered the most appropriate for this purpose (Simon Fraser University No date:1-3). However, data that has a group or subject-specific features like longitudinal data is likely to have variations that standard OLS is incapable of explaining (Clark & Linzer 2015:399), leading to unreliable estimates. This necessitates the incorporation of subject/firm and/or time effects into the OLS model, which can be done by adopting either a fixed or random effects approach (Sitlani 2016:112). Fixed effects is suitable for cases where there are omitted variables and random effects is relevant if there are no omitted variables (Williams 2018:1).

This study follows the notion that it is not practical to include all the possible variables in the model as items such as executive's talent cannot be easily measured, also; the data has shown some unique features in firms and across time, therefore, a fixed effects model has been considered the most appropriate for this study. Fixed effects regression model enables for the control of issues like firm-based culture, pay levels, governance styles and so on (Ntim et al 2019:940). This model is better than other similar regression models as it controls for unintended biases and unobserved effects (Collischon & Eberl 2020: 293). This study incorporated time effects to control for time variation into the OLS regression following Velte (2019:507). Incorporating firm effects was abandoned because it led to the results that failed to estimate robust standard errors, t-statistic, and significant levels for three of the eight models that were performed before incorporating the interaction effect/s, leading to biased confidence intervals. Sectoral classification is not the focus of this study and therefore, its effects were ignored in all the regression models conducted in this study.

Regression analyses was performed on IBM SPSS Statistics 28.0.0.0 Software version 29 using a general linear model and a univariate regression option with time effects and with the selection of *parameter estimates with robust standard errors* option to neutralise the effect of heteroscedasticity. All the models include five control variables as explained in sub-section 4.8.5 of this chapter. For all the objectives, results have been presented according to the dependent variable of a particular model based on the objective being answered.

Table 4.18 below presents a summary of the objectives with their respective regression models.

Table 4.18: Summary of research objectives and variables

Objectives	Dependent variable/s	Independent variable/s	Control variables	Moderator variable	Regression model
Objective 1	N/A	N/A	N/A	N/A	N/A
Objective 2	1. HEPS 2. SP	1. RGCI-JSE	1. %SH 2. ROA 3. %IND 4. Firm size 5. Tobin's Q	N/A	i. $HEPS = \beta_0 + \beta_1 RGC + \beta_2 \%SH + \beta_3 ROA + \beta_4 \%IND + \beta_5 Size + \beta_6 Tobin's\ Q + \beta_7 T_1 + \varepsilon_1$ ii. $SP = \beta_8 + \beta_9 RGC + \beta_{10} \%SH + \beta_{11} Dual + \beta_{12} \%IND + \beta_{13} Size + \beta_{14} Tobin's\ Q + \beta_{15} T_2 + \varepsilon_2$
Objective 3	1. Fix-pay 2. STI	1. RGCI-JSE	1. %SH 2. ROA 3. %IND 4. Firm size 5. Tobin's Q	N/A	1. $Fix\text{-}pay = \beta_{16} + \beta_{17} RGC + \beta_{18} \%SH + \beta_{19} ROA + \beta_{20} \%IND + \beta_{21} Size + \beta_{22} Tobin's\ Q + \beta_{23} T_3 + \varepsilon_3$ 2. $STI = \beta_{24} + \beta_{25} RGC + \beta_{26} \%SH + \beta_{27} ROA + \beta_{28} \%IND + \beta_{29} Size + \beta_{30} Tobin's\ Q + \beta_{31} T_4 + \varepsilon_4$
Objective 4	1. Fix-pay 2. STI	1. HEPS 2. SP	1. %SH 2. ROA 3. %IND 4. Firm size 5. Tobin's Q	RGCI-JSE	1. $Fix\text{-}pay = \beta_{32} + \beta_{33} HEPS + \beta_{34} SP + \beta_{35} \%SH + \beta_{36} ROA + \beta_{37} \%IND + \beta_{38} Size + \beta_{39} Tobin's\ Q + \beta_{40} T_5 + \varepsilon_5$ 2. $STI = \beta_{41} + \beta_{42} HEPS + \beta_{43} SP + \beta_{44} \%SH + \beta_{45} ROA + \beta_{46} \%IND + \beta_{47} Size + \beta_{48} Tobin's\ Q + \beta_{49} T_5 + \varepsilon_5$ 3. $Fix\text{-}pay = \beta_{50} + \beta_{51} HEPS + \beta_{52} SP + \beta_{53} \%SH + \beta_{54} ROA + \beta_{55} \%IND + \beta_{56} Size + \beta_{57} Tobin's\ Q + \beta_{58} RGC + \beta_{59} RGC \times HEPS + \beta_{60} RGC \times SP + \beta_{61} T_5 + \varepsilon_5$ 4. $STI = \beta_{62} + \beta_{63} HEPS + \beta_{64} SP + \beta_{65} \%SH + \beta_{66} ROA + \beta_{67} \%IND + \beta_{68} Size + \beta_{69} Tobin's\ Q + \beta_{70} RGC + \beta_{71} RGC \times HEPS + \beta_{72} RGC \times SP + \beta_{73} T_6 + \varepsilon_6$

Objective 5	1. HEPS 2. SP	1. Pay-gap	1. %SH 2. ROA 3. %IND 4. Firm size 5. Tobin's Q	RGCI-JSE	1. $HEPS = \beta_{74} + \beta_{75}Gap + \beta_{76}\%SH + \beta_{77}ROA + \beta_{78}\%IND + \beta_{79}Size + \beta_{80}$ Tobin's Q $+\beta_{81}T_7 + \varepsilon_7$ 2. $SP = \beta_{82} + \beta_{83}Gap + \beta_{84}\%SH + \beta_{85}ROA + \beta_{86}\%IND + \beta_{87}Size + \beta_{88}$ Tobin's Q $+ \beta_{89}T_7 + \varepsilon_7$ 3. $HEPS = \beta_{90} + \beta_{91}Gap + \beta_{92}\%SH + \beta_{93}ROA + \beta_{94}\%IND + \beta_{95}Size + \beta_{96}$ Tobin's Q $+ \beta_{97}RGC + \beta_{98}RGC \times Gap + \beta_{99}T_7 + \varepsilon_7$ 4. $SP = \beta_{100} + \beta_{101}Gap + \beta_{102}\%SH + \beta_{103}ROA + \beta_{104}\%IND + \beta_{105}Size + \beta_{106}$ Tobin's Q $+ \beta_{107}RGC + \beta_{108}RGC \times Gap + \beta_{109}T_8 + \varepsilon_8$
Objective 6	N/A	N/A	N/A	N/A	N/A

Source: Author's conceptualisation (2021)

4.12.2. Qualitative data: Comparative research

The comparative approach alone was sufficient to meet objective six without any form of deep analysis as explained in sub-section 4.10.5. Therefore, there was no data analysis for objective six, only few graphs were used to clarify some positions about similarities and/or divergences between KPIs and FPMs.

4.13. VALIDITY AND RELIABILITY

Validity focuses on the instrument, what it measures and the extent to which it can properly do so (Mohajan 2017:14-15). According to Biggam (2011:143), validity is the utilisation of tested research strategies in the research process. This is understood to mean the utilisation or adoption of appropriate research instruments, which can be linked to the approaches that have been utilised in previous studies and have produced meaningful results and/or findings. In this study, research approaches were used which included IAR, IRESS Database and journal articles, and were not new, the route that has been previously followed by other studies to answer similar research questions was utilised in this study. However, the previous use of these approaches has not been the only basis on which to judge appropriateness for this study, but also the suitability of the selected approaches has been investigated, matched to the research objectives, and supported by the relevant literature.

A pilot study was conducted before the data collection and analysis process were extended to the full study, which improved the quality and efficiency of the main research (Junyong 2017:601) and therefore, the overall validity and reliability of the main study. The use of mixed methods, which is the case in this study, also addresses the issue of validity (Bian 2011:11). The study also incorporated control variables, which is argued to enhance the internal validity of research (Nielsen & Raswant 2018:958). According to Shaw (2012:52), it still lies with the researcher to conclude about the validity of the study.

Reliability refers to the proof or evidence that the researcher has conducted the research in a fair and responsible manner, the proof must be sufficient, kept and provided when needed (Biggam 2011:45). The study has been grounded on the literature, which has been properly cited using UNISA College of Accounting Sciences adopted Harvard referencing style. Details about the data collection process have been provided in the preceding sections and the data extraction tools have been attached as the accompanying annexures. During the actual research, every process and every stage of the research process was documented and stored in electronic format and on the cloud. The researcher relied on the already highlighted approach of transparency by explaining all the steps and approaches that were followed in collecting, handling and interpreting data, also safely keeping all the evidence was prioritised as far as possible. This is based on Mohajan (2017:10) who highlights that in qualitative research, reliability is also the extent to which the research work is trustworthy or lacks biasness.

4.14. ETHICAL CONSIDERATIONS

According to UNISA's ethics guide, ethical considerations refer to all aspects of research that involve the researcher's honesty during the research project, this ranges from proper referencing and citation, handling data with integrity, interpreting results objectively and obtaining ethics approval to conduct research, etc. (UNISA 2003:1-2). As research that dealt only with data that is already in the public domain, the importance of the principle of integrity and objectivity towards obtaining reliable results and making proper conclusions has been preserved. Also, considering that this research forms part of the literature in the future, the researcher has upheld these principles from the beginning of this research project right up to completion. In acknowledging the hard work that has been done by other researchers, the researcher has properly cited every idea and/or work and/or quotation from the work of other researchers. The list of all the researchers or authors who have been cited in-text has been included. Two ethics approvals for secondary data and conceptual research were obtained,

see Annexure 4.14 and 4.15. The study also went through language editing and Turnitin check, see Annexure 4.16 and 4.17.

4.15. CONCLUSION

The study has followed a mixed method design with the quantitative research having been conducted on the panel data that is both cross-sectional and time series, while the qualitative research was conducted on the data that is on the nominal level of scale. Both quantitative and qualitative research covered a period of ten consecutive years from 2011 and 2020, which is the time when King III and IV Reports were applicable. Data sources were IAR and the IRESS Database for the quantitative research, and for the qualitative, it was the IAR and the journal articles. Data was drawn from 77 JSE-listed firms for quantitative research, 59 listed firms and 80 journal articles were used for qualitative research.

The following chapter presents the results and findings per research objective, this is accompanied by a discussion and then followed by a conclusion.

CHAPTER FIVE: FINDINGS AND DISCUSSION

5.1. INTRODUCTION

Prior literature such as Bin et al (2020:17); Bui (2020:13); Harkin, Mare and Crook (2020:1); Srivastava and Kathuria (2020:7); Ntim et al (2019:956); Gaitán, Herrera-Echeverri and Pablo (2018:173); Detthamrong et al (2017:707); Dzingai and Fakoya (2017:5); Zorn et al (2017:2623); Kimbro and Xu (2016:37) evaluated different pieces of RG against either executive pay and/or firm performance. Executive pay and performance link was studied by Abudy et al (2020:2); Cook et al (2019:45); Elmagrhi et al (2018:2); Kim et al (2017:82); Zhou, Fan, An and Zhong (2017:23); Fabbri and Marin (2016:237); Kazan (2016:2) among others. Other studies assessed the link between pay-gap and firm performance (Jiang et al 2019:261; Gómez-Bezares et al 2019:1; Graefe-Anderson et al 2018:448; Cheng et al 2017:28; Bradley 2013:137). Considering that there are factors in the development of RGC that may not necessarily relate to the pay-performance link, executive pay, firm performance and/or pay-gap specifically, and considering that there are factors which are likely to moderate the relationship, it is necessary to evaluate whether it is as apparent as generally expected that RGC should maximise firm performance, pay-performance link and/or reduce executive pay and pay-gap.

Therefore, the study aimed at developing a conceptual model that explains whether RGC enhances firm performance and pay-performance link while reducing executive pay and pay-gap in selected JSE-listed firms. The aim of the study has been achieved by addressing the following research questions:

I. To what extent do the selected JSE-listed firms comply with remuneration governance between 2011 and 2020?
II. Does a relationship exist between RGC and firm performance in the selected JSE-listed firms between 2011 and 2020?
III. Does a connection exist between RGC and executive pay in the selected JSE-listed firms between 2011 and 2020?
IV. What is the relationship between executive pay and firm performance among the selected JSE-listed firms between 2011 and 2020 and does RGC moderate this relationship?
V. Is there a relationship between pay-gap and firm performance in the selected JSE-listed firms between 2011 and 2020 and does RGC moderate this relationship? And

VI. To what extent are FPMs of researchers who have investigated associations involving governance, pay, performance, pay-performance link, and pay-gap similar to executives' KPIs of the selected JSE-listed firms?

To answer the above research questions, data analyses which included descriptive statistics, Pearson's, and Spearman's correlations as well as regression analyses with time effects were conducted. The validity and reliability features were enhanced through triangulation which came in three forms, the first being different competing theories which include the agency, the stewardship, and the tournament theories. The second being the application of a mixed method approach. The third being the three sets of data which included the data that relates to the quantitative variables (dependent, independent, control and moderator variable/s) and the data that was used for qualitative analyses which included KPIs and FPMs. Descriptive statistics came in the form of graphs and descriptives for objectives one to five. Pearson's and Spearman's correlations were also conducted for objectives two to five, accompanied by twelve OLS regression models with fixed time effects which related to objectives two to five. Objective six was analysed qualitatively through a comparison of FPMs with KPIs. All quantitative analyses were conducted after data screening, including linearity tests, collinearity tests, homoscedasticity tests, outlier detection tests, and autocorrelation tests. Chapter four sub-section 4.12.1.2 and Appendix 4.10 to 4.13 contain the results and details of these tests and how the relevant issues associated with assumptions of linear regression were handled.

Section 5.2 below presents and discusses the findings on objective one, which focused on providing the basic descriptive analysis of the extent to which the selected JSE-listed firms complied with RG. The linkages between RGC and firm performance have been presented and discussed in section 5.3. Section 5.4 has been devoted to results and discussions on RGC and the executive pay connection. Details about the findings on the association between executive pay and firm performance are presented and discussed in section 5.5. The findings and discussions of the relationship between pay-gap and firm performance are found in section 5.6. Section 5.7 is devoted to discussions of the similarities and divergences between the KPIs of the selected JSE-listed firms and the FPMs of the selected articles, and a conclusion of the chapter has been drawn in section 5.8.

5.2. RGC OF THE SELECTED JSE FIRMS

Objective one has focused on developing a RGCI-JSE and using this index to assess how the selected JSE-listed firms complied with RG. RGCI-JSE was developed manually by allocating "1" if a firm complied with a certain point listed in the index or "0" if not. RGCI-JSE covered

three aspects of RG namely, pay policy, pay disclosure and SoP, these were taken from the two most recent King Codes namely, King III and IV Reports. King III Report RG was summarised in 27 points which were used to assess RGC from 2011 to 2016. King IV Report had 43 points which were used to measure RGC from 2017 to 2020. This resulted in a single index that measured RGC of the selected JSE-listed firms between 2011 and 2020, a copy of the Excel spreadsheet that was used for this purpose appears in Annexures 4.1 and 4.2. This process qualifies as quantitative content analysis, which is an approach that focuses on variables that can be measured. See section 4.6 of chapter four for details on quantitative content analysis employed to construct this index. There were some missing data in this variable (about 0,65%) since not all the sampled firms complied with RG in every one of the ten years as far as disclosing their pay practices is concerned. Refer to sub-sections 4.8.1 and 4.10.1 for details about constructing RGCI-JSE and collecting data on this variable.

The data related to this objective has been analysed quantitatively using basic descriptive statistics since there was only one variable. Details of the approach to data analyses are provided in sub-section 4.12.1 of chapter four.

Table 5.1 below shows descriptive results for RGCI-JSE.

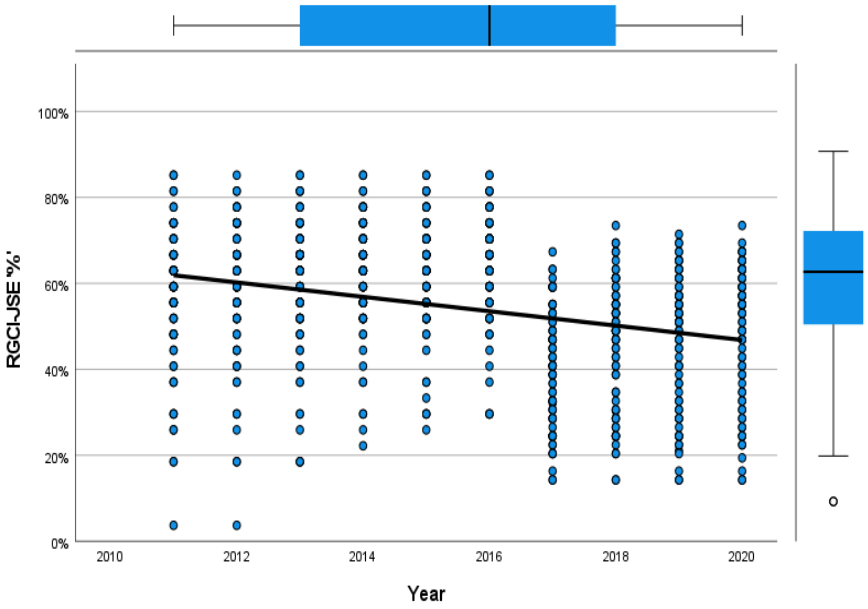
Table 5.1: Descriptive statistics for RGCI-JSE

Descriptive Statistics						
	N	Minimum	Maximum	Mean	Std. Deviation	Variance
RGCI-JSE '%'	765	4%	85%	54.35%	16.291%	265.389
Valid N (listwise)	765					

Source: Author’s conceptualisation (2022)

Figure 5.1 below depicts movements of RGCI-JSE between 2011 and 2020.

Figure 5.1: RGCI-JSE



Source: Author's conceptualisation (2022)

As can be noted in Table 5.1 above, the selected JSE-listed firms had an average RGCI compliance rate of 54,35% between 2011 and 2020, indicating that on average, firms complied at this level over the period of the study. Although an average compliance rate of around 54% is far from perfection (Munisi & Randøy 2013:100), SA firms comply at a similar rate to other countries. Munisi and Randøy (2013:100) evidenced an average compliance rate of 56,4% in Sub-Saharan African countries between 2005 and 2009. Additionally, Elmagrhi (2016:141) also observed an average compliance level of 61,73% in the United Kingdom (UK) between 2008 and 2013 while Outa and Waweru (2016:902) witnessed an average compliance rate of 59% in Kenya between 2005 and 2014. The highest level of RGC was 85% in this study, while the lowest was 4% for the selected JSE-listed between 2011 and 2020. Tizazu (2017:124) reported the highest and lowest compliance levels of 84% and 24% respectively on 42 Ethiopian firms between 2009 and 2013, while Munisi and Randøy (2013:100) observed a maximum compliance level of 92% and a minimum compliance level of 5%. Again, this is similar to that of other countries and shows that RGC is more firm-specific than country-specific as firms seem to choose how to comply with RG (Kirsten & Du Toit 2018:18; Roode 2016:62-63).

Similar to the results of this study, Kang and Nanda (2018:12) also observed that firms had not yet reached a 100% compliance level in India; the study was conducted between 2003 and 2012. Governance index of most of the studies cited in this sub-section was constructed on CGC as a whole and not necessarily on RG as this study was. Tizazu's governance index

mainly covered transparency, disclosure, ownership, and board structure, which is also a different portion of CG.

Looking at Figure 5.1 above, the results show that RGCI-JSE was stable for six years between 2011 and 2016, after which it began to decrease over one year to 2017, an increase is observed from 2017 to 2018 and then stability until the year 2020. Overall, the level of compliance decreased from 2011 to 2020. This is contrary to Elmagrhi (2016:141) who reported an increasing compliance level in the UK between 2008 and 2013. The implementation of King IV Report from 2017 onwards seems to have had an impact on firms' compliance as it came with more RG provisions to comply with, leading to a jump from 27 RG provisions in King III Report to 43 provisions in King IV Report.

Overall, the selected JSE-listed firms showed an average RGC rate of 54% while overall, a decline in RGC was observed from 2011 to 2020. In SA, it seems like firms had not yet perfected compliance with the King IV Report as there is a notable decrease in compliance from 2017 to 2020. It is important to note that RGCI-JSE measured the level of RGC only in terms of quantity and not quality, and it reflected the number of RG provisions firms managed to comply with against the total number of provisions in the King Code.

Implications: RGC does not look impressive among the selected JSE-listed firms, some of the RG provisions that came with King IV Report had not yet been complied with by most of the selected JSE-listed firms for instance, the requirement that firms ought to disclose how they considered average employees' pay has rarely been complied with by the firms in the sample. Thus necessitating either some form of enforcement (Elmagrhi 2016:300) or regular monitoring of firms' compliance levels by external bodies.

Contribution to knowledge: The first objective of the study bridges the gap, extend previous literature, and make a modest contribution to knowledge on RGC for the selected JSE-listed firms given that most prior literature focused on CGC generally. Also, post the implementation of King IV Report this study is the first to have attempted to measure compliance to governance in the SA context. The index created on objective one has a bearing on objectives two to five as it has been used to establish various relationships as listed in section 5.1 above.

The following section presents and discuss the results associated with objective two of the study.

5.3. LINKAGES OF RGC AND FIRM PERFORMANCE

The focus here is on investigating the link between RGC and firm performance with proxies of performance being HEPS and SP for descriptive statistics while HEPS_Log10 and SP_ Log10 for both correlation and regression analyses were used. This is because descriptive statistics were conducted before the data was transformed to address linearity-related issues identified in the data. Objective two data has been analysed quantitatively using descriptive statistics, correlation, and regression analysis as detailed in sub-section 4.12.1 of chapter four.

HEPS and SP are not the most popular FPMs in the literature, measures like ROA and Tobin's Q are more prevalent. However, HEPS is the most popular accounting-based KPI among the selected JSE-listed firms and SP is the only market-based KPI used more often than others by the selected JSE-listed firms (See section 5.7 below for more information). On these bases, HEPS and SP have been chosen as FPMs for this study. This is because the study focuses on the impact of RGC on executive pay, firm performance, pay-performance link, and pay-gap, which cannot be fairly achieved if the choice of variables is divorced from what is happening in practice. HEPS was hand-picked primarily from IAR, this was supplemented by the IRESS Database while SP was hand-picked primarily from the IRESS Database and supplemented by IAR. The kind of documents used to extract data for HEPS and SP among others, is included as Annexure 4.4. After collecting data for HEPS and SP, there were still some missing values of about 0,65% and 5,19% for HEPS and SP respectively as for some of the firms, the data was unavailable. The extent of data availability informed the choice of prioritising either IAR or the IRESS Database for data collection as the data was not equally available from both sources. For more information about HEPS and SP, including data collection on these two variables, refer to sub-sections 4.8.2 and 4.10.3 of chapter four.

The third variable that has been featured in this section is RGC, which has been proxied using RGCI-JSE. The relevant information for this variable is the same as presented in section 5.2 of this chapter and sub-sections 4.8.1 and 4.10.1 of chapter four.

The agency theory promotes M+I (which includes RG), hoping that these would favourably intensify alignment between executive pay and firm performance, this alignment is also encouraged by RG. This suggests that the relationship between RGC and firm performance should be positive. At the same time, the stewardship theory posits that firm performance is already maximised as managers are perceived as exerting maximum effort to create shareholders' wealth, suggesting that RGC should not influence firm performance. The following three sub-sections present findings and discussions towards achieving the study's

second objective with the first sub-section focusing on the descriptive statistics and the last two on correlation and regression analyses respectively. The intention is to establish whether the agency or the stewardship theory prevails regarding this objective.

5.3.1. Descriptive statistics

This sub-section presents and discuss fundamental analyses of objective two, which focuses on investigating a connection between RGC, a variable that has been proxied as RGCI-JSE and firm performance, with HEPS and SP as proxies. The basic analyses come in the form of descriptives and graphs. Descriptives have been presented using a table which includes a mean, standard deviation, variance, minimum and maximum figures about the three variables that have been featured in objective two. Graphs have been presented over the study period of ten years (i.e., 2011 to 2020), with discussions having focused on one variable at a time. RGCI-JSE has already been graphically analysed over ten years, and the results have been presented in section 5.2 above. Hence it has been omitted here. Descriptives have been discussed first, followed by graphs.

Table 5.2 below provides descriptives for these three variables associated with the second objective.

Table 5.2: Descriptives for objective two

Statistics				
		HEPS 'R'	SP 'R'	RGCIJSE
N	Valid	765	730	765
	Missing	5	40	5
Mean		4.6251	62.6458	.5435
Std. Deviation		9.46062	80.57414	.16291
Variance		89.503	6492.192	.027
Minimum		-18.18	.07	.04
Maximum		170.89	625.48	.85

Source: Author's conceptualisation (2022)

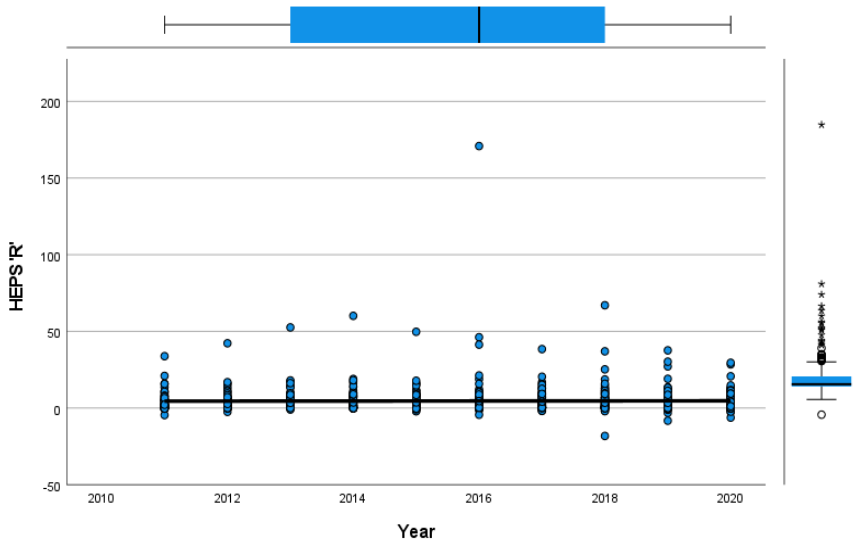
Table 5.2 shows that the sampled firms had an average of R4,63 in HEPS, indicating that the selected JSE-listed firms made a profit between 2011 and 2020. HEPS had a minimum value of R-18,18 and a maximum value of R170,89, which indicates that few firms were making good profits while few others were making losses during the study period. SP had an average of R62,65, which highlights that the SP of most of the selected JSE-listed firms were far from zero between 2011 and 2020, even with the effect of the Covid-19 pandemic. This is more than an average of R35,67 in SP observed by Rambajan (2011:46) on 21 JSE-listed

Consumer Goods firms between 2006 and 2010, indicating an apparent growth in SP over the years. The difference in results may likely be due to sectoral focus, which limited the firms to 21 for Rambajan, and the period of their study is likely to have also played a role. The minimum SP was R0,07 while the maximum was R625,48 for the selected JSE-listed firms between 2011 and 2020, suggesting that some firms were not doing well while others were thriving between 2011 and 2020. These figures are less than those observed by Tshipa et al (2018:12) of a maximum SP of about R1 910 and a minimum of about R10 in SA between 2002 and 2014. The substantial difference in figures is not surprising as SP is a highly volatile variable that can easily be affected by factors outside executives' control.

The third variable in objective two is RGC, which has been proxied as RGCI-JSE. Descriptive statistics that relate to this variable is the same that already provided in section 5.2 above.

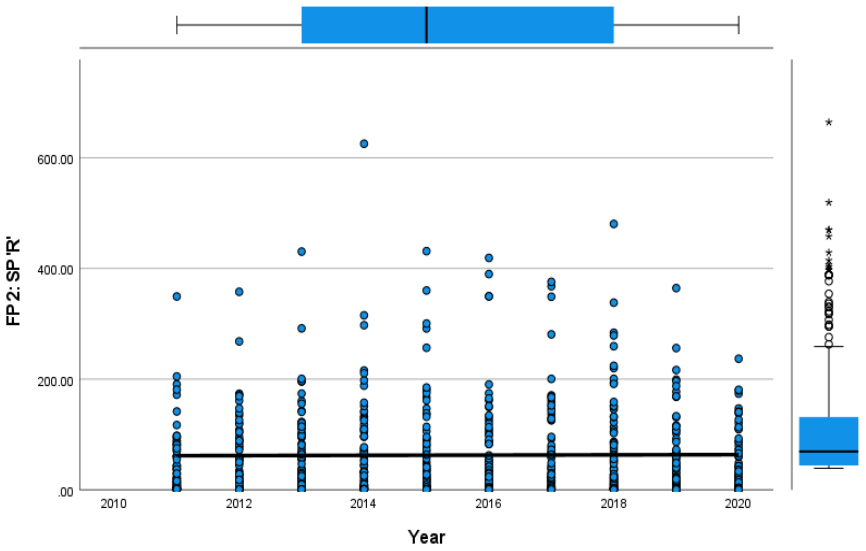
The movement in firm performance over the ten-year period of the study is depicted in figures 5.2 and 5.3 below.

Figure 5.2: HEPS



Source: Author's conceptualisation (2022)

Figure 5.3: SP



Source: Author's conceptualisation (2022)

For HEPS, most of the sample showed a decrease between 2011 and 2012, a very slight and steady increase was then observed until 2019 and was followed by a slight decrease in 2020. Conversely, SP showed an evolving movement for most of the firms as there was a decrease between 2011 and 2012. This was followed by an increase up to 2014 then a decrease in 2015, after which an increase was observed up to 2018 then a decrease in 2019 and 2020. On average, HEPS and SP showed a slight decrease for the selected JSE-listed firms between 2011 and 2020.

5.3.2. Correlation analysis

This sub-section presents correlation analysis results which cover both Pearson's and Spearman's correlation to assess the association between RGC, a single variable proxied as RGCI-JSE and firm performance with proxies, HEPS and SP. This analysis is two-tailed as the intention was to trace both positive and negative relationships. The results range between '0' and '1' which represents '*no correlation*' and '*perfect correlation*' respectively. Since there is no universally accepted guide on how to interpret the results, this study has adopted the guidance of Schober et al (2018:1765) which is restated as follows:

Table 4.16: Interpretation of correlation coefficient

Correlation coefficient	Interpretation
0,00-0,10	No correlation
0,11-0,39	Weak correlation
0,40-0,69	Moderate correlation
0,70-0,89	Strong correlation
0,90-1,00	Very strong correlation

Source: Schober et al (2018:1765)

More details about correlation analyses and the motivation behind this analysis tool are provided in sub-section 4.12.1.3 of chapter four. Correlation analyses have been conducted on a log-transformed data. To indicate this, firm performance measures have been labelled as HEPS_Log10 and SP_Log10. Table 5.3 and Table 5.4 below depict Pearson's and Spearman's results, respectively. Detailed correlation results have been attached as Annexure 5.1 and 5.2 for Pearson's and Spearman's results respectively.

Table 5.3: Objective two: Pearson's correlation

		RGCIJSE	HEPS_Log10	SP_Log10
RGCIJSE	Pearson Correlation	1	.311**	.346**
	Sig. (2-tailed)		<,001	<,001
	N	765	671	725

Source: Author's conceptualisation (2022)

Table 5.4: Objective two: Spearman's correlation

Spearman's Correlation		RGCIJSE	HEPS_Log10	SP_Log10
RGCIJSE	Correlation Coefficient	1.000	.300**	.344**
	Sig. (2-tailed)	.	<,001	<,001
	N	765	671	725

Source: Author's conceptualisation (2022)

As a reminder, HEPS_ Log10 represents an accounting-based measure and SP_ Log10 a market-based measure of firm performance. The results indicate that RGCI-JSE and HEPS_ Log10 have a weak positive correlation (0,311) on Pearson's and a weak positive correlation (0,300) on Spearman both of which are significant at 1%. Similar results were observed with SP_ Log10 as it also showed a weak positive correlation (0,346) on Pearson's and a weak positive correlation (0,344) on Spearman which were also significant at 1%. This shows that an increase in RGC leads to an increase in both accounting-based and market-based firm performance, although to a weak extent, which means that better compliant firms report better firm performance to some extent. This is consistent with Nazir and Afza (2018:151-153); Bhatt and Bhatt (2017: 906); Malik and Makhdoom (2016:747), although their results were obtained

through a regression rather than correlation analysis. No similar study to the researcher's knowledge has reported correlation analysis results on a similar objective as this one. Both market-based and accounting-based measures of firm performance behaved the same in their relationship with RGCI-JSE. Therefore, there is evidence of a weak positive direct effect of RGC on firm performance; this aligns more with the agency theory.

5.3.3. Regression analysis

This sub-section focuses on using regression analyses to assess the connection between RGC, with a proxy of RGCI-JSE, which has served as an independent variable, and firm performance with HEPS and SP as proxies which have served as dependent variables for objective two. This is based on the reasoning that firms are expected to be guided by RG in designing and implementing pay policies, which should positively influence firm performance. Making the governance index an independent variable is also consistent with previous studies. More information about variables and their categories is available in section 4.8 and sub-section 4.12.1.4 of chapter four. There are five control variables in the study namely, %IN), SH%, Tobin's Q, ROA and firm size which has been measured by total assets. More about control variables has been provided in sub-section 4.8.5 of chapter four. Similar to correlation analysis, regression analyses have been conducted on log-transformed data to address linearity issues discovered in the data. To indicate this, firm performance measures have been mostly labelled as HEPS_Log10 and SP_Log10. Detailed data screening to test the assumptions of regression analysis was conducted and is presented in sub-section 4.12.1.2 of chapter four. OLS with year effects using the general linear model and a univariate option on IBM SPSS version 28.0.1 was conducted on the following two models towards achieving objective two of this study.

1. $HEPS\_Log10 = \beta_0 + \beta_1 RGCIJSE + \beta_2 \%SH + \beta_3 ROA + \beta_4 \%IND + \beta_5 Size + \beta_6 \text{Tobin's Q} + \beta_7 T_1 + \varepsilon_1$

2. $SP\_Log10 = \beta_8 + \beta_9 RGCIJSE + \beta_{10} \%SH + \beta_{11} ROA + \beta_{12} \%IND + \beta_{13} Size + \beta_{14} \text{Tobin's Q} + \beta_{15} T_2 + \varepsilon_2$

Where HEPS_Log10 and SP_Log10 are dependent variables that have been log transformed to manage the issues of linearity; β_0 and β_8 are intercepts, which would be the value of HEPS_Log10 and SP_Log10 respectively if all other values in the respective models would be zero. RGCIJSE is an independent variable and a measure of RGC; %SH is the percentage of executive directors' share ownership and the first of the five control variables; ROA is return

on assets and the second of the five control variables; %IND is the percentage of independent board members and the third of the five control variables; Size refers to firm size which has been measured by total assets and is the fourth of the five control variables and Tobin's Q is the last control variable; *T* stands for time effects and ε stands for the standard error.

Table 5.5 below contains the summary of the regression results for objective two. Detailed regression results are attached as Annexure 5.3.

Table 5.5: Firm performance *as a dependent variable*

Parameter Estimates with Robust Standard Errors				
	HEPS_Log10		**SP_Log10**	
Parameter	B	Sig.	B	Sig.
Intercept	-.924	<,001	-.274	.083
RGCIJSE	.010	<,001	.010	<,001
Shareholding %	-.013	<,001	-.016	<,001
ROA	.013	.006	.018	<,001
IND	.006	.001	.011	<,001
TobinsQ	.081	.009	.094	.002
SizeTotalassets	5.547E-12	<,001	5.733E-12	<,001
[Year=2011]	-.058	.686	.060	.619
[Year=2012]	-.084	.547	.017	.884
[Year=2013]	-.065	.636	.058	.631
[Year=2014]	-.220	.141	-.010	.939
[Year=2015]	-.167	.251	.032	.795
[Year=2016]	-.151	.305	.001	.991
[Year=2017]	.055	.700	.195	.111
[Year=2018]	.060	.662	.153	.198
[Year=2019]	.040	.785	.078	.539
[Year=2020]	0[b]	.	0[b]	.
	R Squared = .348 (Adjusted R Squared = .329)		R Squared = .459 (Adjusted R Squared = .445)	

Source: Author's conceptualisation (2022)

As shown from Table 5.5 above, the connection of RGCI-JSE with both HEPS_ Log10 and SP_ Log10 is positive, this is evident from the slopes next to RGCI-JSE in the table. P-values are statistically significant (Nazir & Afza 2018:151; Bhatt & Bhatt 2017:906; Malik & Makhdoom 2016:747; Outa & Waweru 2016:906) at 1%, which is evidence that these connections did not occur by chance. This is consistent with Mans-Kemp et al (2017:37) who evidenced a significant relationship between CGI and HEPS in SA on data collected from 2002 to 2010. Elmagrhi (2016:289-299) also witnessed similar results in the United Kingdom (UK) between 2008 and 2013. However, the magnitude of the slopes of RGCI-JSE towards HEPS_ Log10 and SP_ Log10 is relatively small (0,010 on both variables). Since firm performance measures were log-transformed before conducting regression analysis, the University of Virginia Library

(2018:2) suggests that coefficients are first converted by exponentiation and then subtracting one before multiplying by 100 to produce meaningful interpretations. In other words, apply *e*^*x*-1 to each slope value where *e* is the mathematical exponential function, ^ is the power or exponent and *x* is the magnitude of the slope. This was done following a previous similar study by Yan (2015:133). The slope of RGCI-JSE towards predicting HEPS and SP now came to 1,01% for both variables. This means that an increase in RGC by one percent would lead to about 1,01% increase in both HEPS and SP. As can be noted, both the accounting-based and market-based measures of firm performance react the same way to RGCI-JSE with regards to p-values, the direction and magnitude of the relationship. This is consistent with the correlation results and supports an argument that RGC reliably improves firm performance, however, this happens only to a small extent. Tizazu (2017:152) evidenced a strong influence of the governance index on firm performance on 42 Ethiopian firms between 2009 and 2013.

Simultaneously, this study had an r^2 of 34,8% (adjusted r^2, 32,9%) for HEPS_Log10 and 45,9% (adjusted r^2, 44,5%) for SP_Log10, suggesting that the model which included two independent variables, five control variables and year effects could reliably explain only about 33% and 45% of the movements in HEPS and SP respectively. This means that about 67% and 55% of HEPS and SP respectively can be explained by factors not accounted for in the model. The results are not that different from those reported by Tizazu (2017:150); Outa and Waweru (2016:903), as their models also failed to explain the majority of the variation on dependent variables with Tizazu reporting about 41% and Outa and Waweru reporting about 29% adjusted r^2 values in Ethiopia and Kenya respectively.

Overall, descriptive statistics results showed a small decline in the levels of HEPS and SP between 2011 and 2020, correlation results revealed a weak positive connection (Buallay et al 2017:94), while regression results suggested a significant but small connection between RGC and firm performance. This partly supports the agency theory and partly confirms results by Nazir and Afza (2018:151); Bhatt and Bhatt (2017:906); Malik and Makhdoom (2016:747); Outa and Waweru (2016:908), who observed significant associations between CGC and firm performance, these studies were conducted abroad. Of note is that most of these studies do not seem to have considered the magnitudes of the slopes of predictors in their interpretations but have relied mainly on the significant levels of p-values, which leads to ambiguity in their findings as the extent to which the explanatory power of independent variables was strong is not clear. Significant p-values merely indicate that the relationship did not occur by chance (McLeod 2019:2). Tshipa et al (2018:380) who conducted the study in SA witnessed that highly

compliant firms report higher SP. Contradictory results were witnessed by Buallay et al (2017:97) who reported no significant impact of corporate governance on firm performance in Saudi Arabia while Akbar et al (2016:426) witnessed no connection at all between governance and performance in the UK between 1999 and 2009.

Implications: The results imply that policymakers should find ways of strengthening RG or enticing firms to increase levels of compliance such that even if compliance to governance does not seem to enhance performance, firms would still find an incentive to strengthen their compliance. This may be achieved by finding ways of punishing poor compliance, which would increase accountability (Nazir & Afza 2018:152).

Contribution to knowledge: The second objective of the study is unique in that it is the first to have assessed the association between RGC and firm performance especially in the SA context post the implementation of King IV Report, previous studies have focused on CG generally and have rarely been in the SA context. Also, this study bridges the gap, extending previous literature and advancing knowledge of this association through the adoption of the accounting-based measure and the market-based measure of performance that are more aligned to the KPIs preferred by the majority of the selected JSE-listed firms, something that has not been witnessed in previous studies.

The following section presents and discusses results associated with objective three.

5.4. RGC AND EXECUTIVE PAY CONNECTION

Objective three intends to assess the relationship between RGC proxied as RGCI-JSE and executive pay with proxies being fixed pay and STI for descriptive statistics and Fixed pay_Log10 and STI_Log10 for correlation and regression analyses. The objective three data have been analysed quantitatively using descriptive statistics, correlation, and regression analysis as detailed in sub-section 4.12.1 of chapter four. Both fixed pay and STI were hand-picked from IAR. The kind of document used to extract data for fixed pay and STI, among others, is included as Annexure 4.4. There were some missing values which were about 1,17% for each of the variables since not all the 770 IAR could be retrieved from the websites of the sampled firms. For more information about fixed pay and STI variables, including their data collection process, see sub-sections 4.8.3 and 4.10.2 of chapter four.

The agency theory, which is backed-up by RG, encourages firms to link pay to performance with the hope that this would prevent baseless and/or excessive executive pay. This supports that the relationship between RGC, and executive pay should be negative. On the other hand,

the stewardship theory implies that shareholders are satisfied with the level of firm performance regardless of how much they pay their executives, this suggests that RGC should not influence executive pay. The results presented in the following three sub-sections provides evidence of whether the agency or stewardship theory holds for the selected JSE-listed firms. The first sub-section presents descriptive statistics, this is followed by correlation results and then regression analysis.

5.4.1. Descriptive statistics

This sub-section presents and discusses analyses of objective three, which focuses on assessing the association between RGC and executive pay. Descriptives have been presented using a table which includes a mean, standard deviation, variance, minimum and maximum figures about the three variables that have been featured in objective three. Graphs provide analysis for each variable across the study period of ten years (i.e., 2011 to 2020) with discussions focusing on one variable at a time.

Table 5.6 below provides descriptives for the three variables associated with the third objective.

Table 5.6: Descriptives for objective three

		RGCIJSE	Fixed pay	STI
N	Valid	765	761	761
	Missing	5	9	9
Mean		.5435	13707126.85	6020662.37
Std. Deviation		.16291	13862710.113	7679300.396
Variance		.027	192174731675553.440	58971654570190.010
Minimum		.04	600000	0
Maximum		.85	199528000	62634000

Source: Author's conceptualisation (2022)

Table 5.6 above shows that executives of the sampled JSE-listed firms earned an average annual fixed pay of around R13,71 million (m) between 2011 and 2020. This is not different from the reports by Shaw (2012:63) who observed an average CEO pay of R4m in SA between 2005 and 2010 if inflationary effects are considered. On the other hand, Bussin and Modau (2015:8) evidenced an average CEO pay of about R8,3m in SA between 2006 and 2012 and Theku (2014:41) reported an average CEO pay of about R5,72m in the SA mining sector between 2009 and 2013. This shows that executive pay has been consistently growing in SA. The highest executive fixed pay disbursed to executives of the selected JSE-listed firms amounted to R199,53m and the lowest amounted to R0,6m between 2011 and 2020.

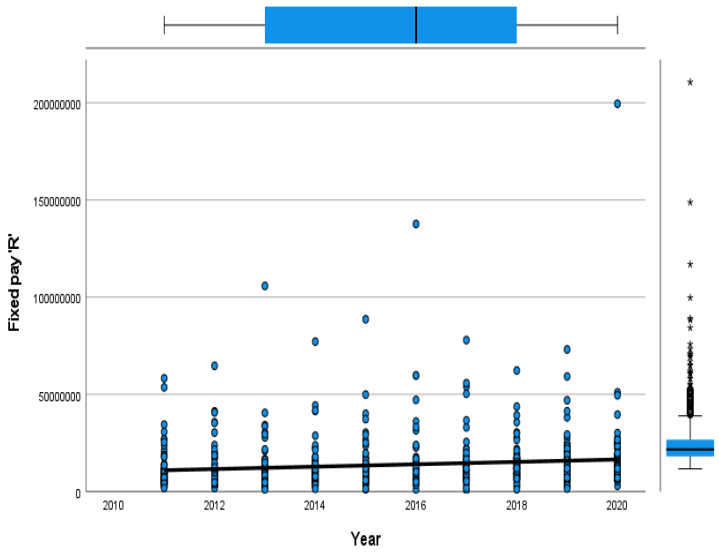
Comparison of this information with previous studies has been impossible as there is no SA study to the researcher's knowledge that has presented this information. Comparison is also impossible with studies that have utilised foreign currencies since the amounts are not comparable to those expressed in ZAR without conversion, which could not be done due to uncertainties involved.

Regarding STI, an average amount of about R6,02m was observed, which means that over and above fixed pay, executives of the selected JSE-listed firms earned a further amount of R6,02m between 2011 and 2020. Considering inflation effects, this amount is not far from an average STI figure of R3,7m reported by Shaw (2012:64) and R2.9m observed by Theku (2014:42). Bussin and Modau (2015:9) observed an average STI of about R8,3m, which seems high compared to other studies. The maximum and minimum STI were R62,63m and R0m respectively, among the 77 selected JSE-listed firms between 2011 and 2020. Comparison of this information with previous studies has been impossible for the reasons already stated.

Regarding RGCI-JSE, the relevant information is the same as that already provided in section 5.2 of this chapter and sub-sections 4.8.1 and 4.10.1 of chapter four and, therefore, it has not been repeated in this sub-section. Descriptives have been discussed first, followed by graphs.

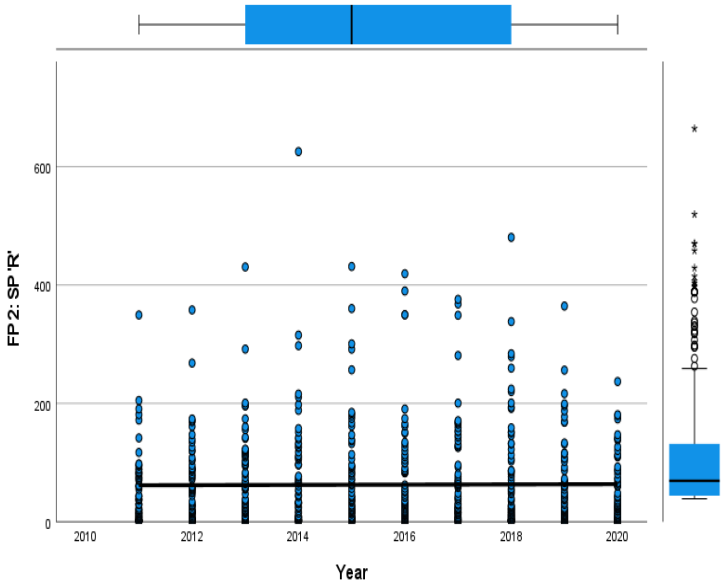
Figures 5.4 and 5.5 below depict the behaviour of fixed pay and STI behaviour among the sampled firms between 2011 and 2020.

Figure 5.4: Fixed pay



Source: Author’s conceptualisation (2022)

Figure 5.5: STI



Source: Author's conceptualisation (2022)

Fixed pay shows a steady but slow increase for the majority of the sample from 2011 to 2017 (El-Sayed 2013:122). After which instability is observed as fixed pay began to decrease in 2018 and increase in 2019, this was followed by a further decrease in 2020. On the other hand, STI demonstrates some instability as it showed a mix of increases and decreases over the ten-year period. For most of the firms, an increase is observed in STI from 2011 to 2016, after which there was stability up to 2018, followed by a decrease for one year and a slight increase up to 2020. Variations in pay across the study period were also observed by Elmagrhi (2016:240) between 2008 and 2013 in the UK. Overall, executive pay showed a slight blurry increase between 2011 and 2020. The results are partly consistent with the observations by Elmagrhi (2016:241), who reported a slight improvement in CEO basic pay and a notable improvement in CEO bonus. This is contra to Yan (2015:124), who witnessed a dramatic increase in executive pay in China between 2006 and 2011 and Bussin and Modau (2015:9), who witnessed a consistent increase in executive pay over seven years in SA. The following sub-section covers the presentation and discussion of the correlation results.

5.4.2. Correlation analysis

This sub-section presents correlation analysis results which cover both Pearson's and Spearman's correlation to assess the relationship between RGC and executive pay. A brief overview of the correlation analysis has already been provided in section 5.4 above. More details about correlation analyses are provided in sub-section 4.12.1.3 of chapter four. Correlation analyses have been conducted on log-transformed data to address issues of

linearity that were discovered in the data. Therefore, executive pay measures have been labelled as Fixed pay_Log10 and STI_Log10. Table 5.7 and Table 5.8 below depict Pearson's and Spearman's results, respectively. Detailed correlation results have been attached as Annexure 5.1 and 5.2 for Pearson's and Spearman's results, respectively.

Table 5.7: Objective three: Pearson's correlation

		RGCIJSE	Fixedpay_Log10	STI_Log10
RGCIJSE	Pearson Correlation	1	.271**	.234**
	Sig. (2-tailed)		<,001	<,001
	N	765	756	580

Source: Author's conceptualisation (2022)

Table 5.8: Objective three: Spearman correlation

Spearman's Correlation		RGCIJSE	Fixedpay_Log10	STI_Log10
RGCIJSE	Correlation Coefficient	1.000	.277**	.247**
	Sig. (2-tailed)	.	<,001	<,001
	N	765	756	580

Source: Author's conceptualisation (2022)

RGCI-JSE and Fixed pay_Log10 show a weak positive Pearson's correlation (0,271) and a weak positive Spearman's correlation (0,277) which are both statistically significant at 1%. Between RGCI-JSE and STI_ Log10, Pearson's correlation is also weak and positive at 0,234 and Spearman's correlation is weak and positive at 0,247, also, the results are significant at 1%. This means that RGCI-JSE has a positive effect as opposed to the adverse effect generally expected under the agency theory, which leads to the rejection of the argument that high RGC should be able to suppress executive pay. The results do not support the agency theory as monitoring (RG in this case) does not seems to assist in constraining executive pay. This is partly consistent with Yan (2015:133), who observed that governance variables positively and strongly correlate with executive pay in China. Contra results were witnessed by Elmagrhi (2016:289-299); Scholtz and Engelbrecht (2015:46) in SA and the UK, respectively. The following sub-section presents and discusses regression analysis results.

5.4.3. Regression analysis

This sub-section focuses on using regression analyses to assess the association between RGC with a proxy of RGCI-JSE, which has served as an independent variable and executive pay with fixed pay and STI as proxies which have served as dependent variables for objective three. This is based on the reasoning that firms are expected to be guided by RG in designing and implementing pay policies, which should assist in curbing executive pay that has been consistently reported as high. Making the governance index an independent variable is

consistent with previous studies. More details about proxies of executive pay and RGC are provided in sub-section 4.8.3, and more discussion about the reasoning behind categorising certain variables as dependent and others as independent has been provided in section 4.12.1.4 of chapter four. There are five control variables in the study, namely, %IND, SH%, Tobin's Q, ROA and firm size which has been measured by total assets, more about control variables has been explained in Sub-section 4.8.5 of chapter four. Similar to the previous sub-section, regression analyses have been conducted on a log-transformed data to address issues of linearity that were discovered in the data. Therefore, executive pay measures have been labelled as fixed pay_Log10 and STI_Log10. Detailed data screening to test the assumptions of a regression analysis was conducted and is presented in sub-section 4.12.1.2 of chapter four. OLS with year effects using the general linear model and a univariate option on IBM SPSS version 28.0.1 was conducted on the following two models towards achieving objective three of this study.

1. Fix-pay_Log10 = β_{16} + β_{17}RGCIJSE + β_{18}%SH + β_{19}ROA + β_{20}%IND + β_{21}Size+ β_{22}Tobin's Q + $\beta_{23}T_3$ + ε_3

2. STI_Log10 = β_{24} + β_{25}RGCIJSE + β_{26}%SH + β_{27}ROA + β_{28}%IND + β_{29}Size+ β_{30}Tobin's Q + $\beta_{31}T_4$ + ε_4

Where Fix-pay_Log10 and STI_Log10 are dependent variables that have been log transformed to manage the issues of linearity; β_{16} and β_{24} are intercepts, which would be the value of Fix-pay_Log10 and STI_Log10 respectively if all other values in the respective models would be zero; RGCIJSE is an independent variable and a measure of RGC; %SH is the percentage of executive directors' share ownership and the first of the five control variables; ROA is return on assets and the second of the five control variables; %IND is the percentage of independent board members and the third of the five control variables; Size refers to firm size which has been measured by total assets and is the fourth of the five control variables and Tobin's Q is the last control variable; *T* stands for time effects and ε stands for the standard error.

Table 5.9 below presents the regression results for objective three. Detailed regression results are attached in Annexure 5.3.

Table 5.9: Executive pay *as a dependent variable*

Parameter Estimates with Robust Standard Errors				
	Fixed pay_Log10		**STI_Log10**	
Parameter	B	Sig.	B	Sig.
Intercept	6.680	.000	6.194	<,001
RGCIJSE	.006	<,001	.005	.005
Shareholding %	.003	<,001	-.004	.285
ROA	.002	.021	.006	.028
IND	.001	.070	.001	.760
TobinsQ	-.012	.275	-.022	.358
SizeTotalassetsR	2.414E-12	<,001	2.969E-12	.001
[Year=2011]	-.180	<,001	.015	.890
[Year=2012]	-.168	<,001	.066	.576
[Year=2013]	-.161	<,001	.023	.840
[Year=2014]	-.181	<,001	.086	.448
[Year=2015]	-.149	<,001	.096	.364
[Year=2016]	-.139	<,001	.074	.536
[Year=2017]	.019	.656	.084	.516
[Year=2018]	.002	.970	.145	.220
[Year=2019]	.018	.646	.023	.872
[Year=2020]	0[b]	.	0[b]	.
	R Squared = .359 (Adjusted R Squared = .341)		R Squared = .148 (Adjusted R Squared = .118)	

Source: Author's conceptualisation (2022)

The direction of the slope of RGCI-JSE is positive for both Fixed pay_Log10 and STI_ Log10, indicating that executive pay increases with the levels of compliance to RG. The p-values are statistically significant at 1%, implying that RGCI-JSE positively and reliably predicts executive pay, and the associations did not occur by chance. This is contra to the results by Elmagrhi (2016:254), who observed a negative connection between the governance index and CEO pay in the UK between 2008 and 2013. Contradiction in the results may be attributed to the focus of the governance indices as Elmagrhi considered CG while this study focused only on RG. Broad comparison of the results with the literature is impossible as the connection between governance and executive pay is limited both locally and internationally. The magnitude of the slopes of RGCI-JSE towards Fixed pay_Log10 and STI_Log10 were 0,006 and 0,005, respectively. Since executive pay measures were log-transformed before conducting regression analysis, a similar approach of applying *e^x*-1 to each slope value was followed. The interpretation of this function is the same as explained in the preceding section. The results indicate that a one percent increase in RGC leads to a 0,6% increase in fixed pay and a 0,5% increase in STI, which is considered a small effect. Since both Fixed pay_Log10 and STI_Log10 demonstrate an increase when RGCI-JSE improves, this rejects an argument

that RGC is capable of curbing executive pay. The results contradict Elmagrhi et al (2018:24) who evidenced that governance as a monitoring tool can constrain executive pay.

Looking at the results from another perspective, r^2 was 35,9% (adjusted r^2, 34,1%) for Fixed pay_Log10 and 14,8% (adjusted r^2, 11,8%) for STI, suggesting that the model can reliably explain only about 34,1% of the movements associated with fixed pay and only about 11,8% of the variation associated with STI. This means that about 66% and 89% of fixed pay and STI respectively can be attributable to factors outside the model. Elmagrhi (2016:254) observed an adjusted r^2 of 49,9%, highlighting that their regression model could reliably explain about 50% of the variation in total CEO pay, with about 50% attributable to the factors outside the model. The difference in results is likely due to different settings, economies, and governance codes. There are limited studies that are comparable for a relationship between governance and executive pay.

In summary, descriptive statistics, correlation, and regression results of the connection between RGC and executive pay indicate that executive pay increases as RGC intensifies. This suggests that RGC is incapable of restricting executive pay but instead, the opposite is likely to manifest. Interestingly, there is no study to the researcher's knowledge that has reported similar results. However, the literature seems to have loose grounds to argue that RGC should constrain executive pay. Contradictory results were reported by Elmagrhi (2016:289); Scholtz and Engelbrecht (2015:46), who revealed a negative relationship between governance and executive pay in SA and UK, respectively. Studies that have examined this relationship are limited locally and abroad. This rejects the agency theory, which posits that M+I can curb executive pay. The results support the stewardship theory which posits that monitoring may be unnecessary if managers had already exerted the same level of effort that the monitoring exercise aimed to achieve.

Implications: Given the ongoing concerns over excessive executive pay even after numerous interventions in the form of governance have emerged, it is about time to acknowledge the limitations that come with one-sidedness in how the executive pay subject has been investigated. The reliance on the quantitative methods and the dominance of the agency theory with less consideration of what is happening in practice needs a review. This is exacerbated by the fact that the agency theory has largely influenced the formulation of the governance codes according to the literature. Perhaps a relook is necessary, especially since the current literature has neglected the way executive performance measurement unfolds in practice.

Contribution to knowledge: Objective three has expanded the literature and contributed to knowledge by having investigated the link between executive pay and compliance to governance, a test that is rare in the global literature whereas it is the first in the SA context. This study is more unique since it focused only on RGC rather than CGC generally, with results that have highlighted whether intensified RGC positively/negatively influences executive pay.

The following section presents and discusses results associated with objective four.

5.5. ASSOCIATION BETWEEN EXECUTIVE PAY AND FIRM PERFORMANCE WITH MODERATING EFFECT OF RGC

The fourth objective of the study intends to assess the relationship between executive pay (Fixedpay_Log10 and STI_Log10) and firm performance (HEPS_Log10 and SP_Log10). These have been used as Fixed pay, STI, HEPS and SP for descriptive statistics since it was conducted before the data was log transformed. Similar to objective two and three, objective four's data has been analysed quantitatively using descriptive statistics, correlation, and regression analyses as detailed in sub-section 4.12.1 of chapter four. The choice of measures related to executive pay and firm performance together with a brief overview of their collection process has already been covered in sections 5.3 and 5.4 above. This sub-section also features a moderator variable namely, RGC, which has been proxied using RGCI-JSE. The relevant information in explaining this variable is the same as in section 5.2 of this chapter and sub-sections 4.8.1 and 4.10.1 of chapter four.

The agency theory encourages firms to pursue a pay-performance link and encourages M+I with the hope that it would intensify this link. Pay-performance link does not feature in the stewardship theory. Descriptive statistics have been presented in the following sub-section, followed by the correlation and regression results in the subsequent sub-sections.

5.5.1. Descriptive statistics

This sub-section presents and discusses analysis of objective four, focusing on investigating the association between executive pay and firm performance with RGC as the moderating variable. Fixed pay and STI as proxies of executive pay and HEPS and SP as proxies of firm performance. Refer to sub-section 4.8.2 and 4.8.3 of chapter four for details about these measures. This fundamental analysis comes in the form of descriptives and graphs. Descriptives have been presented using a table which includes a mean, standard deviation, variance, minimum and maximum figures about the four variables that have been featured in objective four. All the variables in this section have already been graphically analysed over

ten years, and the results have been presented in sub-sections 5.2, 5.3 and 5.4 above. This sub-section has therefore, omitted the graphs and accompanying explanations.

Table 5.10 below provides descriptives for the four variables associated with the fourth objective.

Table 5.10: Descriptives related to objective four

Statistics					
		Fixed pay	STI	HEPS	SP
N	Valid	761	761	765	730
	Missing	9	9	5	40
Mean		13707126.85	6020662.37	4.6251	62.6458
Std. Deviation		13862710.113	7679300.396	9.46062	80.57414
Variance		192174731675553.440	58971654570190.010	89.503	6492.192
Minimum		600000	0	-18.18	.07
Maximum		199528000	62634000	170.89	625.48

Source: Author's conceptualisation (2022)

The explanation of descriptive statistics that relates to fixed pay and STI has already been provided in section 5.4 above and the one that relates to firm performance has also already been provided in section 5.3, hence omitted here.

The following sub-section covers the results and discussion of the correlation results.

5.5.2. Correlation analysis

This sub-section presents correlation results that cover both Pearson's and Spearman's correlation to investigate the association between executive pay and firm performance. Details about correlation analyses and the motivation behind this analysis tool are provided in sub-section 4.12.1.3 of chapter four. Correlation analyses have been conducted on a log-transformed data to address issues of linearity that were discovered in the data. Therefore, executive pay measures have been labelled as fixed pay_Log10 and STI_Log10 while firm performance measures such as HEPS_Log10 and SP_Log10 have been used. Table 5.11 and Table 5.12 below depict Pearson's and Spearman's results, respectively. Detailed correlation results have been attached as Annexure 5.1 and 5.2 for Pearson's and Spearman's results, respectively.

Table 5.11: Objective four: Pearson's correlation

		Fixedpay_Log10	STI_Log10	HEPS_Log10	SP_Log10
Fixedpay_Log10	Pearson Correlation	1	.452**	.511**	.545**
	Sig. (2-tailed)		<,001	<,001	<,001
	N	761	583	670	724
STI_Log10	Pearson Correlation	.452**	1	.453**	.514**
	Sig. (2-tailed)	<,001		<,001	<,001
	N	583	583	542	572

Source: Author's conceptualisation (2022)

Table 5.12: Objective four: Spearman's correlation

Spearman's Correlation		Fixedpay_Log10	STI_Log10	HEPS_Log10	SP_Log10
Fixedpay_Log10	Correlation Coefficient	1.000	.520**	.519**	.565**
	Sig. (2-tailed)	.	<,001	<,001	<,001
	N	761	583	670	724
STI_Log10	Correlation Coefficient	.520**	1.000	.476**	.538**
	Sig. (2-tailed)	<,001	.	<,001	<,001
	N	583	583	542	572

Source: Author's conceptualisation (2022)

Both Pearson's and Spearman's correlation results show that Fixed pay_Log10 had a moderate positive correlation with both HEPS_ Log10 (Pearson's: 0,511; Spearman's: 0,519) (Bussin & Modau 2015:15) and SP_ Log10 (Pearson's: 0,545; Spearman's: 0,565). Similar results were observed for STI_ Log10 as both Pearson's and Spearman's correlation also demonstrated a moderate positive correlation between STI and HEPS_Log10 (Pearson's: 0,453; Spearman's: 0,476) and SP_ Log10 (Pearson's: 0,514; Spearman's: 0,538). The result is consistent with Jouber and Fakhfakh (2012:493), who evidenced a positive correlation between executive pay and firm performance in four developed countries between 2004 and 2008. The results are all statistically significant at 1%. It seems like executives are progressing well towards prioritising the interests of firms above their own. Another possible explanation is that firms seem to have good pay policies, which they are trying to implement effectively. The attraction and retention of competent executives who can simultaneously drive production and negotiate an attractive pay (Jouber & Fakhfakh 2012:493) is also a possible explanation for the selected JSE-listed firms.

Both Pearson's and Spearman's results are similar in magnitude and direction, the correlations are also similar for both accounting-based and market-based measures of firm performance, meaning that there is no difference in how these two performance measures explain executive pay. The result contradicts Smirnova and Zavertiaeva (2017:671), who observed that accounting-based FPMs are more effective than market-based FPMs in improving the connection between executive pay and firm performance. The results also show that the extent

of growth between executive pay, and firm performance is not the same, indicating that firms have not yet achieved a perfect pay-performance link. Different results were revealed by Bussin and Modau (2015:16) who witnessed a weak correlation between HEPS and STI on 21 JSE-listed firms between 2006 and 2012. Theku (2014:57) observed no correlation between HEPS and fixed pay on 30 JSE-listed mining firms between 2009 and 2013. Mnyaka-Rulwa (2019:62) evidenced no correlation between HEPS and STI and a weak correlation between STI and SP on 37 JSE-listed mining firms between 2010 and 2016. Lastly, Modau (2014:100) evidenced a negative correlation between fixed pay and HEPS on the top 40 JSE-listed firms between 2008 and 2012. Variation in results may be attributed to the issue of sampling which differs in size and approach and the focus of the studies as others focused only on CEO pay. The results lean towards the agency theory as both executive pay and firm performance grow simultaneously towards the same direction. The following sub-section presents and discusses regression analyses results.

5.5.3. Regression analysis

This sub-section focuses on regression analyses to assess the association between executive pay and firm performance. Executive pay measures have served as dependent variables, while firm performance measures have been used as independent variables. This is based on the reasoning that executives are paid for the work that they have already been done, and this is consistent with previous research. More explanation has been provided in sub-section 4.12.1.4 of chapter four. There are five control variables in the study namely, %IND, SH%, Tobin's Q, ROA and firm size which have been measured by total assets. A moderator variable namely, RGCI-JSE has also been incorporated in the latter part of this sub-section as explained in sub-section 4.8.5 and 4.8.6 of chapter four. Similar to the previous sub-section, regression analysis has been conducted on log transformed data to address issues of linearity discovered in the data. Therefore, executive pay measures have been labelled as fixed pay_Log10 and STI_Log10 and firm performance measures have been labelled as HEPS_Log10 and SP_Log10 to indicate this. Detailed data screening to test the assumptions of a regression analysis was conducted and is presented in sub-section 4.12.1.2 of chapter four. Regression analyses related to objective four have been presented in two parts, the first part focuses on the pay-performance link without the moderating effects, and the second part presents results with RGCI-JSE as the moderator. The following sub-section presents the link before the moderation was considered.

5.5.3.1. Executive pay and firm performance (pre-moderation)

The relationship has been initially conducted before considering RGCI-JSE as a moderator. OLS with year effects using the general linear model and a univariate option on IBM SPSS version 28.0.1 was conducted on the following two models towards achieving objective four of this study.

1. $\text{Fix-pay\_Log10} = \beta_{32} + \beta_{33}\text{HEPS\_Log10} + \beta_{34}\text{SP\_Log10} + \beta_{35}\%\text{SH} + \beta_{36}\text{ROA} + \beta_{37}\%\text{IND} + \beta_{38}\text{Size} + \beta_{39}\,\text{Tobin's Q} + \beta_{43}T_5 + \varepsilon_5$

2. $\text{STI\_Log10} = \beta_{44} + \beta_{45}\text{HEPS\_Log10} + \beta_{46}\text{SP\_Log10} + \beta_{47}\%\text{SH} + \beta_{48}\text{ROA} + \beta_{49}\%\text{IND} + \beta_{50}\text{Size} + \beta_{51}\,\text{Tobin's Q} + \beta_{55}T_6 + \varepsilon_6$

Where Fix-pay_Log10 and S_Log10 are dependent variables that have been log transformed to manage the issues of linearity; β_{32} and β_{44} are intercepts, which would be the value of Fix-pay_Log10 and STI_Log10 respectively if all other values in the respective models would be zero; HEPS_Log10 and SP_Log10 are independent variables which were log transformed to address the issues of non-linearity; %SH is the percentage of executive directors' share ownership and the first of the five control variables; ROA is return on assets and the second of the five control variables; %IND is the percentage of independent board members and the third of the five control variables; Size refers to firm size which has been measured by total assets and is the fourth of the five control variables and Tobin's Q is the last control variable; *T* stands for time effects and ε stands for the standard error.

Since there were two independent variables in each of the models, the approach is therefore, multivariate. Table 5.13 below shows the results before the interaction effects were incorporated. Detailed regression results are attached as Annexure 5.3.

Table 5.13: Executive pay *as a dependent variable*

Parameter Estimates with Robust Standard Errors				
	Fixed pay_Log10		**STI_Log10**	
Parameter	B	Sig.	B	Sig.
Intercept	6.893	.000	6.458	<,001
Shareholding %	.005	<,001	-.001	.871
ROA	-.001	.496	.003	.334
IND	.000	.658	-.003	.098
TobinsQ	-.008	.464	-.061	.009
SizeTotalassetsR	1.587E-12	<,001	1.123E-12	.235
HEPS_log10	.005	.869	.057	.504
SP_log10	.165	<,001	.263	.005
[Year=2011]	-.152	<,001	-.017	.855
[Year=2012]	-.131	.004	.016	.883
[Year=2013]	-.136	.001	-.007	.946
[Year=2014]	-.125	.004	.059	.547
[Year=2015]	-.112	.015	.059	.536
[Year=2016]	-.075	.082	.080	.465
[Year=2017]	-.053	.228	-.060	.631
[Year=2018]	-.030	.461	.055	.622
[Year=2019]	-.024	.552	-.066	.626
[Year=2020]	0[b]	.	0[b]	.
	R Squared = .408 (Adjusted R Squared = .389)		R Squared = .242 (Adjusted R Squared = .213)	

Source: Author's conceptualisation (2022)

As evident from the results, HEPS_Log10 and SP_Log10 have a positive slope/beta towards explaining both fixed pay and STI, this means that executive pay increases with an increase in firm performance (Rahayu, Harymawan, Nasih & Nowland 2022:2; Bin et al 2020:21; Jouber & Fakhfakh 2012:495). The results confirm those obtained from this study's correlation analysis, which revealed a moderate association between executive pay and firm performance. Kirsten and Du Toit (2018:8) reported Contra results, as they witnessed a negative association between SP and executive pay in 42 JSE-listed Consumer Sector firms between 2006 and 2015. Furthermore, p-values and the magnitudes of betas of the performance measures behaved differently. P-values of HEPS_Log10 were statistically non-significant for both fixed pay and STI, which suggests that although HEPS_Log10 positively predicts executive pay, it fails to do this significantly as the relationship might have occurred by chance. The p-values of SP_Log10 are statistically significant, indicating that SP is a better predictor of both Fixed pay and STI and that there is no possibility of a chance in this prediction. The results are consistent with the descriptive statistics and Jouber and Fakhfakh (2012:495), who observed a significant p-value between executive pay and firm performance after using total shareholder return as a proxy of performance. The results by Matemane and

Nkwadi (2022:1) who investigated pay-performance link before and after the SA Mining Sector Marikana Massacre using SP as one of the FPMs are mixed. This is since the link was statistically significant only before the Massacre, with contradictory results post the event. The results show that HEPS, an accounting-based FPM is not a reliable predictor of executive pay, but SP is.

The magnitudes of the slopes of HEPS_Log10 were 0,005 for Fixed pay_Log10 and 0,057 for STI_Log10 and those of SP_Log10 were 0,165 for Fixed pay_Log10 and 0,263 for STI_Log10. University of Virginia Library (2018:3) advises that for an analysis on data where both dependent and independent variables were transformed as in this objective, the slopes can be used without conversion except by treating them as percentages to explain movements in the dependent variables. Therefore, the interpretation of the results is that for every 1% increase in the accounting-based measure of performance (i.e., HEPS), fixed pay and STI would increase by 0,005% and 0,057% respectively, which can be viewed as a negligible prediction. This is consistent with the fact that p-values associated with HEPS were non-significant towards predicting executive pay, indicating that the observed positive relationship might have occurred by chance. Yan (2015:133) witnessed that an accounting-based measure of performance (ROA) strongly predicts executive pay in China since 1 unit change in ROA resulted in 1 587,78% increase in executive pay. The study was conducted between 2006 and 2011. Mnyaka-Rulwa (2019:62), on the other hand, witnessed a negative prediction of STI by HEPS in JSE-listed mining firms between 2011 and 2016. At the same time, Scholtz and Engelbrecht (2015:44) witnessed a statistically significant prediction of executive pay by HEPS in South Africa (SA) between 2009 and 2012.

Regarding SP, the results suggest that for every 1% increase in SP, fixed pay and STI increased by 0,165% and 0,265% respectively, which can also be viewed as a negligible prediction. The magnitudes of the slopes for HEPS are very small compared to those of the SP, highlighting that SP is a better predictor of executive pay. The results also indicate that the market-based measure of firm performance (SP) can explain executive pay better than the accounting-based measure. The results partly support the agency theory as only the SP_Log10 is a significant predictor of executive pay. The result is consistent with Tshipa et al (2018:380); Ashwin (2015:72-74), who observed a positive relationship only with market-based FPMs in SA.

Moreover, r^2 was 40,8% (adjusted r^2, 38,9%) for Fixed pay_Log10 and 24,2% (adjusted r^2, 21,3%) for STI_Log10, suggesting that the combination of variables included in the regression

model could reliably explain only about 38,9% and 21,3% of the variation associated with fixed pay and STI respectively. The difference, which amounts to about 61% and 79% of fixed pay and STI, respectively, could be explained by factors outside the model. Skanes (2015:91), who used ROA and earnings per share (EPS) as FPMs, discovered an adjusted r^2 of 22% and 31,4% for CEO salary and 21,4% and 32,7% for CEO bonus on 69 firms in the Energy, Metals and Mining Sectors in Australia between 2006 and 2012. Even in their study, the regression models failed to explain most of the variation in dependent variables.

To sum up this sub-section, the results indicate that there is a weak association between executive pay and firm performance in the selected JSE-listed firms. The results are contra to Malik and Makhdoom (2016:759), who evidenced a negative pay-performance link in different countries between 2005 and 2012. The following sub-section covers regression results after the moderation effect has been considered.

5.5.3.2. The moderating effect of RGC on the connection between executive pay and firm performance

This sub-section has been motivated by the fact that the agency theory favours M+I, of which RG is part on the belief that pay-performance link would be strengthened. At the same time, the stewardship theory disregards both M+I as well as the pay-performance link based on the argument that both shareholders and managers are happy with the level of executive pay and firm performance and need no intervention of whatever nature to improve their relationship. The presence of interactions which test the moderation effect of RGC should strengthen the pay-performance link if the agency theory holds true, otherwise, there should be no notable impact on the pay-performance link. This is based on the reasoning that firms are expected to be guided by RG in designing and implementing pay policies, which should positively influence firm performance while curbing executive pay which has been consistently reported as high.

Some statisticians like Aguinis et al (2016:8); Frazier, Tix and Barron (2004:120) recommend that the predictors and a moderator variable be mean-centred prior to running the regression model that contains interactions to avoid collinearity of the interaction terms with the predictor variables. However, Hayes (2018:304-305); Dawson (2014:2) emphasised that the mean-centring exercise is unnecessary as it does not affect how the model explains the dependent variable and neither does it impact the betas, t-statistic, p-values, and standard errors of the interactions terms. Therefore mean-centring of variables was ignored in this study. OLS regression with year effects using the general linear model and a univariate option on IBM

SPSS version 28.0.1 was conducted on the following two models towards achieving objective four of this study.

1. $\text{Fix-pay\_Log10} = \beta_{56} + \beta_{57}\text{HEPS\_Log10} + \beta_{58}\text{SP\_Log10} + \beta_{59}\%\text{SH} + \beta_{60}\text{ROA} + \beta_{61}\%\text{IND} + \beta_{62}\text{Size} + \beta_{63}\ \text{Tobin's Q} + \beta_{64}\text{RGCIJSE} + \beta_{65}\text{RGCIJSE x HEPS\_Log10} + \beta_{66}\text{RGCIJSE x SP\_Log10} + \beta_{67}T_5 + \varepsilon_5$

2. $\text{STI\_Log10} = \beta_{68} + \beta_{69}\text{HEPS\_Log10} + \beta_{70}\text{SP\_Log10} + \beta_{71}\%\text{SH} + \beta_{71}\text{ROA} + \beta_{72}\%\text{IND} + \beta_{73}\text{Size} + \beta_{74}\ \text{Tobin's Q} + \beta_{75}\text{RGCIJSE} + \beta_{76}\text{RGCIJSE x HEPS\_Log10} + \beta_{77}\text{RGCIJSE x SP\_Log10} + \beta_{78}T_6 + \varepsilon_6$

Where Fix-pay_Log10 and S_Log10 are dependent variables that have been log transformed to manage the issues of linearity; β_{56} and β_{68} are intercepts, which would be the value of Fix-pay_Log10 and STI_Log10 respectively if all other values in the respective models would be zero; HEPS_Log10 and SP_Log10 are independent variables which were log transformed to address the issues of non-linearity; %SH is the percentage of executive directors' share ownership and the first of the five control variables; ROA is return on assets and the second of the five control variables; %IND is the percentage of independent board members and the third of the five control variables; Size refers to firm size which has been measured by total assets and is the fourth of the five control variables and Tobin's Q is the last control variable; RGCIJSE, RGCIJSE x HEPS_Log10 and RGCIJSE x SP_Log10 are independent variables that have been added to test the moderating effect of RGC; *T* stands for time effects and ε stands for the standard error.

Table 5.14 shows the results of whether RGC moderates the pay-performance link. Detailed regression results with moderation effects are attached in Annexure 5.4.

Table 5.14: Executive pay *as a dependent variable (with moderator)*

Parameter Estimates with Robust Standard Errors				
With interactions				
	Fixed pay_Log10		**STI_Log10**	
Parameter	B	Sig.	B	Sig.
Intercept	6.520	<,001	6.443	<,001
Shareholding %	.006	<,001	.000	.908
ROA	.000	.775	.002	.438
IND	.000	.517	-.002	.121
TobinsQ	-.018	.122	-.065	.011
SizeTotalassets	1.579E-12	<,001	1.136E-12	.233
RGCIJSE	.008	<,001	.001	.878
HEPS_log10	-.183	.039	.160	.540
SP_log10	.329	<,001	.139	.658
HEPSLog10_RGCIJSE	.003	.019	-.002	.668
SPLog10_RGCIJSE	-.003	.034	.002	.708
[Year=2011]	-.189	<,001	-.040	.685
[Year=2012]	-.170	<,001	-.025	.821
[Year=2013]	-.175	<,001	-.041	.693
[Year=2014]	-.175	<,001	.014	.892
[Year=2015]	-.167	<,001	.021	.829
[Year=2016]	-.135	.002	.036	.749
[Year=2017]	-.020	.645	-.038	.771
[Year=2018]	-.012	.773	.062	.592
[Year=2019]	-.003	.933	-.060	.666
[Year=2020]	0[b]	.	0[b]	.
	R Squared = .448 (Adjusted R Squared = .426)		R Squared = .246 (Adjusted R Squared = .211)	

Source: Author's conceptualisation (2022)

To ease the comparison of results, a summary before and after the interaction effects is provided in Table 5.15 below.

Table 5.15: Summary of the regression results for objective four

	Predictions before interaction effects		*Predictions post interaction effects*	
	Fixed pay_Log10	***STI_Log10***	***Fixed pay_Log10***	***STI_Log10***
HEPS_Log10	Positive, p(0,869)	Positive, p(0,504)	Negative, p(0,039)	Positive, p(0,540)
SP_Log10	Positive, p(<0,001)	Positive, p(0,005)	Positive, p(<0,001)	Positive, p(0,658)
RGCIJSE			Positive, p(<0,001)	Positive, p(<0,878)
HEPSLog10_RGCIJSE	N/A	N/A	Positive, p(0,019)	Negative, p(0,668)
SPLog10_RGCIJSE	N/A	N/A	Negative, p(0.034)	Positive, p(0,708)

Source: Author's conceptualisation (2022)

In the presence of interactions, HEPS_Log10 negatively and significantly (at 5%) predicts fixed pay_Log10, which indicates that the relationship did not occur by chance and that HEPS is now vital than before in this relationship. While SP_Log10 positively and significantly predicts fixed pay_Log10, which rules out the possibility of a chance in this association. At the same time, with interactions, HEPS_Log10 positively and insignificantly predicts STI_Log10 while

SP also positively and insignificantly predicts STI_Log10, which suggests that the connections likely exist by chance. The magnitude of the slopes of HEPS_Log10 were -0,183 and 0,160 towards predicting fixed pay_Log10 and STI_Log10 respectively, indicating that for every 1% increase in HEPS, fixed pay would decline by 0,183% and STI increase by 0,16% compared 0,005% and 0,057% increase for both fixed pay and STI respectively before interactions were included. The magnitude of the slopes of SP_Log10 were 0,329 and 0,139 towards predicting fixed pay_Log10 and STI_Log10 respectively, this means that a 1% increase in SP would positively influence both fixed pay and STI by 0,329% and 0,139%, respectively compared to 0,165% and 0,263% for fixed pay and STI respectively before the interaction effects. Regarding the p-values, the power of HEPS_Log10 to predict fixed pay improved from non-significant to statistically significant post the moderating effect. At the same time, that of SP_Log10 deteriorated from being significant to statistically non-significant in predicting STI after incorporating the interaction effects.

Considering the regression model, r2 was 44,8% (Adjusted r^2, 42,6%) and 24,6% (Adjusted r^2, 21,1%) for fixed pay_Log10 and STI_Log10, respectively, which indicates that the inclusion of RGCI-JSE as a moderator led to the regression model being able to reliably explain about 42,6% and 21,1% of fixed pay and STI respectively. The difference which amounts to about 57% and 79% on fixed pay and STI respectively could be explained by factors outside the model. Before the moderation effect, the adjusted r^2 were 38,9% and 21,3% for Fixed pay_Log10 and STI_Log10, respectively, meaning that the moderation effect improved the influence of the different variables towards explaining executive pay by 9,51% and 0,94% for fixed pay and STI respectively. Table 5.16 below provides summarised results post the interaction effects.

Table 5.16: Summary of the moderation effect

	Fixed pay	**STI**
HEPS	The slope deteriorated by 366 100%, and the p-value moved to a significant level at 5%	The slope improved by 180,7%, and the p-value did not change its significance level
SP	The slope increased by 99,39%, and the p-value did not change its significance level	The slope declined by 47,15%, and the p-value moved to non-significant

Source: Author's conceptualisation (2022)

These results are mixed as both the measures of firm performance responded differently regarding the direction of the relationships, magnitudes and p-values after interaction variables were included. The moderation effect successfully pushed the predicting power of HEPS

towards becoming negative in explaining fixed pay. This opposes the agency theory which expects M+I to intensify the pay-performance link but rather favours the stewardship theory which disregards a need for M+I. However, the moderating effect failed to have a similar influence on the association between HEPS and STI, SP and fixed pay and SP and STI as only the p-value of SP on STI changed to being statistically non-significant. In this way, it can be said that RGC does moderate the pay-performance link by weakening it for the selected JSE-listed firms. The general remark is that the moderation effect is not strong but weak since only one of the four directions of the relationships changed while only two of the p-values changed. Krasnikova (2014:122) evidenced that certain individual governance factors moderate the pay-performance link in the UK and Spain between 2005 and 2011. The results are different from those of Elmagrhi et al (2018:23), who witnessed that CGC significantly moderates the pay-performance link in the UK and Ntim et al (2019:956), who witnessed that better-governed firms report an improved pay-performance link in SA. The shift from King III to IV Report in 2017 and the fact that the current study only focused on RG as opposed to CG at large may be the reason for the difference in results. No other studies found by the researcher have assessed governance as a moderator.

Overall, correlation results revealed a moderate connection between executive pay and firm performance. Regression analysis showed that only the SP_Log10 can reliably explain executive pay although HEPS_Log10 also positively influenced executive pay. This is because the influence of HEPS_Log10 was found to be statistically non-significant. The magnitudes of the slopes of the predictors towards executive pay were small, suggesting that the influence of firm performance on executive pay is only to a small extent. Therefore, a weak pay-performance link was observed for the selected JSE-listed firms between 2011 and 2020. On the other hand, the test of whether RGC moderates the pay-performance link evidenced mixed results. After the moderation process, the levels of two out of four p-values changed. One changed to being statistically significant while the other changed to being statistically non-significant; a change in one of the four directions was also observed when HEPS became a negative predictor of fixed pay when it was previously a positive predictor. At the same time, the slopes also changed by more than 40% for each of the relationships studied. Overall, firm performance weakly predicts executive pay while RGC negatively and weakly moderates pay-performance link. This is contra to Padia and Callaghan (2020:11) who witness no meaningful association between executive pay and firm performance post King III Report. This does not support the agency theory, which expects M+I to intensify pay-performance link.

Implications: The results imply that policy makers should find ways of strengthening RGC or of enticing firms to increase levels of compliance such that even if compliance to governance does not seem to enhance pay-performance link, firms would still find an incentive to strengthen their compliance levels. This may be achieved by finding ways of punishing poor compliance, which would increase accountability (Nazir & Afza 2018:152). Since the issue of executive pay is still prevalent even after numerous interventions, it is about time to acknowledge that it has been chiefly perceived in a one-sided theory manner and the approaches to manage it have also been designed with a similar approach. Perhaps a relook is necessary, especially since the current literature has neglected the way executive performance measurement unfolds in practice.

Contribution to knowledge: Objective four has advanced the literature and contributed to knowledge in three ways, firstly by having assessed the moderation effect of RGC on the pay-performance link, this is the first study to have investigated pay-performance link this way even though CG has been advancing locally and internationally. Pay-performance link has been investigated with caution as far as the selection of FPMs is concerned, accounting-based and market-based measures were selected considering executive KPIs that are more common for the selected JSE-listed firms. The intention was to minimise theory to a practical gap and thus manage endogeneity, this is the first study to have taken executive KPIs into account in examining pay-performance link. Thirdly, as has been highlighted previously, this study has focused on RGC rather than CGC generally which makes it unique from previous studies.

The following section presents and discusses results associated with objective five.

5.6. RELATIONSHIP BETWEEN EXECUTIVE-EMPLOYEE PAY-GAP AND FIRM PERFORMANCE WITH MODERATING EFFECT OF RGC

Objective five intends to investigate the association between firm performance (HEPS_Log10 and SP_Log10) and executive-employee pay-gap. Research on pay-gap is scarce globally, perhaps due to data availability issues (Cheng et al 2017:10). The situation is worse in SA perhaps since SA legislation compels firms to disclose only executive pay in their annual reports and not pay-gaps yet. However, this research is vital, especially since the media has constantly been highlighting that SA is among the most unequal societies in the world. Perhaps this is why King IV Report required firms to indicate how much they have considered ordinary employees' pay when they determined executive pay (Institute of Directors South Africa 2016:31). Data availability challenges were also experienced in this research, though they were minimised by manually determining this variable using inputs such as fixed

executive pay, executive STI, number of employees, number of executives, and salaries expense. These inputs were all incorporated into the Excel spreadsheet, and a formula, {average executive pay ÷ average employee's pay} was used to calculate the pay-gap for each firm for each of the ten years of the study. IAR was the primary data source for this variable and was supplemented by the IRESS Database. The reason was that the IRESS Database did not have the data for most of the inputs needed to complete this variable. IAR was also not complete as some firms did not have a complete ten year set of reports, while some of the IAR did not provide specific inputs to complete this variable. Hence, there was some missing data (about 14.29%) during the analysis process. Refer to sub-section 4.8.4 and 4.10.4 of chapter four for more information about pay-gap and its data collection.

The choice of measures related to firm performance together with a brief overview of their collection process has already been covered sections 5.3 above. This objective also features a moderator variable namely, RGC, which has been proxied using RGCI-JSE. The relevant information in explaining this variable is the same as in section 5.2 of this chapter and sub-sections 4.8.1 and 4.10.1 of chapter four. All data for objective five has been analysed quantitatively using descriptive statistics, correlation and regression analysis as detailed in sub-section 4.12.1 of chapter four. Similar to other objectives, the pre-data transformation version of HEPS and SP has been utilised for descriptive statistics only, and the post-data transformation version (i.e., HEPS_Log10 and SP_Log10) has been used for correlation and regression analyses.

The agency theory advocates for a pay-performance link and supports a negative relationship between firm performance and pay-gap. This is opposed to the tournament theory which favours high pay-gaps and predicting a positive relationship between firm performance and pay-gap. Descriptive statistics have been presented first, then correlation and regression analyses.

5.6.1. Descriptive statistics

This sub-section presents and discuss basic analyses of objective five, which focuses on investigating the connection between executive to employee pay-gap, and firm performance, with HEPS and SP as proxies of performance. This fundamental analysis comes in the form of descriptives and graphs. Descriptives have been presented using a table which includes a mean, standard deviation, variance, minimum and maximum figures about the three variables that have been featured in objective five. Graphs provide analysis for one variable at a time across the study period of ten years (i.e., 2011 to 2020). HEPS and SP have already been

graphically analysed over ten years, and the results are the same as those presented in section 5.3. Hence, they have been omitted here. Descriptives have been discussed first, followed by a pay-gap graph over the study period.

Table 5.17 below provides descriptives for the three variables associated with objective five

Table 5.17: Descriptive Statistics for objective five

Statistics				
		HEPS	SP	Pay-gap
N	Valid	765	730	660
	Missing	5	40	110
Mean		4.6251	62.6458	62.5815
Std. Deviation		9.46062	80.57414	356.84270
Variance		89.503	6492.192	127336.709
Minimum		-18.18	.07	1.72
Maximum		170.89	625.48	6427.72

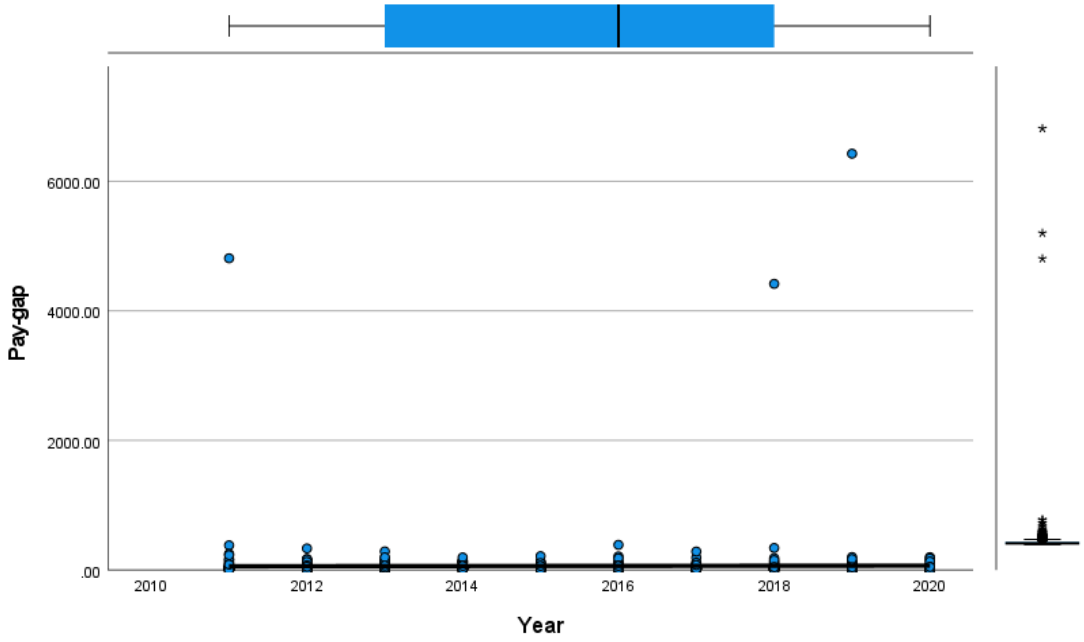
Source: Author's conceptualisation (2022)

The explanation of descriptive statistics that relates to HEPS and SP, which are the proxies of firm performance has also already been provided in section 5.3, hence omitted here.

Table 5.17 indicate that pay-gap had an average of 62,58 times between 2011 and 2020. This means that executives earned an average of about 63 times the annual pay of ordinary workers for the selected JSE firms between 2011 and 2020. The average pay-gap of other studies is diverse and not close to the one for this study, for instance, Alan, Bardos and Shelkova (2021:366) observed an average pay-gap of about 202 on S&P1 500 firms between 2017 and 2018. Luo et al (2020:10) witnessed a pay-gap of about 274 in China between 2008 and 2012. Cheng et al (2017:14) evidenced an average pay-gap of between 103 to 145 in 817 US firms in 2011 while Banker et al (2016:512) witnessed the lowest average pay-gap of about 06 on 5 835 firm-year observations in China between 2000 and 2009. The results reject the general perception that SA is among the unequal societies globally, with regards to executive-employee pay-gaps at least. This study shows 1,72 and 6 423 as the lowest and highest pay-gaps respectively for the selected JSE firms between 2011 and 2020. This is dissimilar to about 6 and 1 795 lowest and highest pay-gaps respectively observed by Alan et al (2021:366) in S&P1 500 firms. Urson (2016:32) reported the lowest pay-gap of 1,72 on 51 firms from the Consumer Sector in SA between 2006 and 2014. This indicates that executive pay, and ordinary employees' pay vary in monetary terms across jurisdictions, necessitating a deliberate and contextualised intervention to manage pay-gaps.

For pay-gap, the graphical visualisation appears in Figure 5.6 below:

Figure 5.6: Pay-gap



Source: Author's conceptualisation (2022)

Pay-gap shows a decrease from 2011 to 2014, after which an increase is observed until 2016, and then a steady decrease is noted until 2020. Overall, pay-gap has shown a notable decrease between 2011 and 2020, perhaps due to the furore against high pay-gaps, the advancement of RG has likely also played a role. Studies that have reported a graphical variation of pay-gap are rare in the literature.

5.6.2. Correlation analysis

This sub-section presents correlation analysis results which cover both Pearson's and Spearman's correlation to assess the association between executive-employee pay-gap and firm performance. A brief overview of the correlation analysis approach has already been provided in section 5.4 above. Details about correlation analyses and the motivation behind this analysis tool is provided in sub-section 4.12.1.3 of chapter four. Correlation analyses have been conducted on log-transformed data to address issues of linearity that were discovered in the data. Therefore, firm performance measures have been labelled as HEPS_Log10 and SP_Log10 to indicate this. Table 5.18 and Table 5.19 below depict Pearson's and Spearman's results, respectively. Detailed correlation results have been attached as Annexure 5.1 and 5.2 for Pearson's and Spearman's results, respectively. Tables 5.21 and 5.22 shows correlation results for objective five. This is followed by a presentation and discussion of these results.

Table 5.18: Objective five-Pearson's correlation

		Paygap	HEPS_Log10	SP_Log10
Paygap	Pearson Correlation	1	.181**	.222**
	Sig. (2-tailed)		<,001	<,001
	N	660	605	652

Source: Author's conceptualisation (2022)

Table 5.19: Objective five-Spearman's correlation

Spearman's Correlation		Paygap	HEPS_Log10	SP_Log10
Paygap	Correlation Coefficient	1.000	.286**	.363**
	Sig. (2-tailed)	.	<,001	<,001
	N	660	605	652

Source: Author's conceptualisation (2022)

Pearson's correlation indicates a weak and positive association (0,181) between pay-gap and HEPS_Log10 and a weak positive correlation (0,222) between pay-gap and SP_Log10. Similar results were observed with Spearman's correlation as they show a weak and positive association (0,286) between pay-gap and HEPS_Log10 and a weak positive association (0,363) between pay-gap and SP_Log10. Both market-based and accounting-based measures of firm performance behaved similarly in their relationship with the pay-gap. This means that firm performance increases with the increase in pay-gaps, which rejects the notion that high pay-gaps are detrimental to firm performance. Sanchez-Marin and Baixauli-Soler (2015:449) observed a correlation coefficient between 0,15 and 0,19 on 709 Spanish firm-year observations between 2004 and 2012. Banker et al (2016:514) witnessed a correlation between 0,03 and 0,29 on 5 835 firm-year observations in China between 2000 and 2009 while Luo et al (2020:13) evidenced a negative correlation of 0,096 on 2 237 firms in China between 2008 and 2012. The evidence of most of these studies was based on other proxies of firm performance other than HEPS and SP.

This study is consistent with Sanchez-Marin and Baixauli-Soler (2015:449) who observed a weak positive correlation while partly supporting Banker et al (2016514), who witnessed mixed results on the correlation between pay-gap and firm performance. The results contradict Luo et al (2020:13), who discovered a weak negative association between pay-gap and firm performance in China. Firm performance, therefore, responds positively although weakly to high pay-gaps for the selected JSE firms, suggesting that firms can deliberately pursue high pay-gaps in anticipation of high performance. This rejects the agency theory, which anticipates a negative association between pay-gap and firm performance but instead, supports the tournament theory, which anticipates higher firm performance for higher pay-gaps.

The following sub-section presents and discusses regression analysis results.

5.6.3. Regression analysis

This sub-section focuses on using regression analyses to assess the association between pay-gap and firm performance. Pay-gap has been used as an independent variable while HEPS and SP were used as dependent variables. This is based on the reasoning that firms are expected to first design a desirable pay-gap and incorporate it into the firms' strategies in the process of creating a firms' wealth. This approach is also consistent with previous research. More explanation about pay-gap being an independent variable while firm performance is a dependent variable has been provided in sub-section 4.12.1.4 of chapter four. Like in the previous objectives, there are five control variables in the study namely, %IND, SH%, Tobin's Q, ROA and firm size which has been measured by total assets. A moderator variable namely, RGCI-JSE has also been incorporated in the later part of this section as explained in sub-section 4.8.5 and 4.8.6 of chapter four. Similar to the previous sub-section, regression analyses have been conducted on log-transformed data; therefore, firm performance measures have been labelled as HEPS_Log10 and SP_Log10. Detailed data screening to test the assumptions of a linear regression analysis was conducted and is presented in sub-section 4.12.1.2 of chapter four. Regression analyses related to objective five have been presented in two parts, the first part focuses on the connection between pay-gap and firm performance without the moderating effect, and the second part presents the results with RGCI-JSE as the moderator. The following sub-section presents the results before the moderation was considered.

5.6.3.1. Firm performance and executive-employee pay-gap

Similar to the regression analysis approach in objective four, the relationship was initially conducted without the interaction effect. Later, the interaction effect was incorporated into the same relationship to investigate if RGC moderates the association between firm performance and pay-gap. OLS with year effects using the general linear model and a univariate option on IBM SPSS version 28.0.1 was conducted on the following two models towards achieving objective five of this study.

1. $\text{HEPS\_Log10} = \beta_{79} + \beta_{80}\text{Gap} + \beta_{81}\%\text{SH} + \beta_{82}\text{ROA} + \beta_{83}\%\text{IND} + \beta_{84}\text{Size} + \beta_{85}\,\text{Tobin's Q} + \beta_{86}T_7 + \varepsilon_7$

2. $\text{SP\_Log10} = \beta_{87} + \beta_{88}\text{Gap} + \beta_{89}\%\text{SH} + \beta_{90}\text{ROA} + \beta_{91}\%\text{IND} + \beta_{92}\text{Size} + \beta_{93}\text{Tobin's Q} + \beta_{94}T_8 + \varepsilon_8$

Where HEPS_Log10 and SP_Log10 are dependent variables that have been log transformed to manage the issues of linearity; β_{79} and β_{87} are intercepts, which would be the value of HEPS_Log10 and SP_Log10 respectively if all other values in the respective models would be zero; Gap is an independent variable and a measure of pay-gap; %SH is the percentage of executive directors' share ownership and the first of the five control variables; ROA is return on assets and the second of the five control variables; %IND is the percentage of independent board members and the third of the five control variables; Size refers to firm size which has been measured by total assets and is the fourth of the five control variables and Tobin's Q is the last control variable; *T* stands for time effects and ε stands for the standard error.

Table 5.20 below contains regression results before interaction effects were incorporated. Detailed regression results are attached in Annexure 5.3.

Table 5.20: Firm performance *as a dependent variable*

Parameter Estimates with Robust Standard Errors				
	HEPS_Log10		**SP_Log10**	
Parameter	B	Sig.	B	Sig.
Intercept	-.523	.005	.212	.190
Shareholding %	-.014	<,001	-.018	<,001
ROA	.010	.019	.011	.001
IND	.007	<,001	.009	<,001
TobinsQ	.112	<,001	.187	<,001
SizeTotalassetsR	5.268E-12	<,001	5.477E-12	<,001
Paygap	.001	.078	.001	.022
[Year=2011]	.058	.696	.191	.132
[Year=2012]	.076	.589	.157	.209
[Year=2013]	.090	.524	.226	.067
[Year=2014]	-.044	.775	.187	.141
[Year=2015]	.053	.715	.213	.086
[Year=2016]	-.053	.726	.147	.239
[Year=2017]	.070	.628	.182	.149
[Year=2018]	.055	.704	.134	.287
[Year=2019]	.018	.906	.066	.619
[Year=2020]	0[b]	.	0[b]	.
	R Squared = .314 (Adjusted R Squared = .292)		R Squared = .440 (Adjusted R Squared = .423)	

Source: Author's conceptualisation (2022)

The results reveal that the slopes of the pay-gap are positive towards predicting both HEPS_Log10 and SP_Log10. The results are similar to the correlation results and confirm that pay-gap positively predicts firm performance on both accounting-based and market-based measures of firm performance. It seems like the sampled JSE firms favour high pay-gaps as one strategy to enhance their firms' long-term wealth. The results are consistent with Alan et

al (2021:370); Cheng et al (2017:30); Banker et al (2016:514); He and Fang (2016:403), who evidenced a positive relationship between pay-gap and firm performance. Although this positive effect is absent on the association between pay-gap and employees' productivity, it remains non-detrimental to firms as high pay-gaps tend to reduce operating costs, which ultimately boosts firms' profitability (Osiichuk 2022:1). However, p-values are different as HEPS_Log10, which is an accounting-based measure of firm performance, is statistically non-significant, which suggests a possibility that this association exists by chance. This is consistent with Alan et al (2021:370), who observed a positive association only with the firm size, an accounting-based measure of performance on S&P1 500 firms between 2017 and 2018. At the same time, SP_Log10 which serves as a market-based measure of firm performance, is statistically significant at 5%, highlighting that increasing pay-gaps reliably influence SP upwards. The result is contra to Alan et al (2021:370), who observed a significant but negative connection between pay-gap and book-to-market value, a performance measure that is sometimes used as a market-based measure of performance.

Although the magnitude of the slopes of pay-gap were 0,001 for both HEPS_Log10 and SP_Log10, indicating that a one unit increase in pay-gap leads to the increase of HEPS and SP by 0,1%, the difference in p-values indicates that pay-gap better explains market-based measure of performance than the accounting-based measure though the explanatory power is weak as 0,1% is a small value. The magnitude of the slope is not different from a slope of 0,04 that was reported by Banker et al (2016:515) on the connection between pay-gap and ROA, an accounting-based measure of firm performance in China. This highlights that pay-gap does not strongly predict firm performance.

Further, r^2 was 31,4% (adjusted r^2, 29,2%) for HEPS_Log10 and 44% (adjusted r^2, 42,3%) for SP, suggesting that the combination of variables included in the regression model could reliably explain only about 29,2% and 42,3% of the variation in HEPS and SP respectively. The difference, which amounts to about 71% and 58%, can be explained by factors external to the model. Overall, the results align with the tournament theory, which favours high pay-gaps. The explanation for the results is likely that the sampled JSE firms believe in their executives' competency (Banker et al 2016:516) and are inspired to instil this attribute in ordinary workers through high pay-gaps. Similar observations include those of Pissaris et al (2010:307) who evidenced a significant result and Cheng et al (2017:29-31); Rouen (2017:4); Banker et al (2016:501); He and Fang (2016:371), who reported just a positive association between pay-gap and firm performance in Fortune 500 firms, US, US, US and China

respectively. Yang and Klaas (2011:2164) also support a higher pay-gap as they evidenced that firms have more incentives to increase than to reduce their pay-gap in Korea. Luo (2006:13) witnessed a U-shaped relationship between pay-gap and performance, with a proxy of performance being Tobin's Q in China, while Urson (2016:56-58) evidenced no effect of pay-gaps on firm performance in the consumer sector in SA. No study was found that has supported the agency theory by reporting a negative association between pay-gap and performance.

5.6.3.2. The moderating effect of RGC on the relationship between pay-gap and firm performance

This sub-section has been motivated by the fact that the agency theory favours the use of monitoring and incentives (M+I) on the basis that they strengthen pay-performance link. The stewardship theory on the other hand disregards both M+I and pay-performance link based on the argument that both shareholders and managers are happy with the level of executive pay and firm performance and need no intervention of whatever nature to improve their relationship. The intention is to investigate if RG, as one of the monitoring approaches, moderates the relationship between firm performance and pay-gap. If the agency theory prevails, the presence of a link should lead to a negative relationship between firm performance and pay-gap. OLS with year effects using the general linear model and a univariate option on IBM SPSS version 28.0.1 was conducted on the following two models towards achieving objective five of this study.

1. $HEPS\_Log10 = \beta_{95} + \beta_{96}Gap + \beta_{97}\%SH + \beta_{98}ROA + \beta_{99}\%IND + \beta_{100}Size + \beta_{101}$ Tobin's Q + $\beta_{102}RGCIJSE + \beta_{103}RGCIJSE \times Gap + \beta_{104}T_7 + \varepsilon_7$

2. $SP_Log10 = \beta_{105} + \beta_{106}Gap + \beta_{107}\%SH + \beta_{108}ROA + \beta_{109}\%IND + \beta_{110}Size + \beta_{111}$Tobin's Q + $\beta_{112}RGCIJSE + \beta_{113}RGCIJSE \times Gap + \beta_{114}T_8 + \varepsilon_8$

Where HEPS_Log10 and SP_Log10 are dependent variables that have been log transformed to manage the issues of linearity; β_{95} and β_{105} are intercepts, which would be the value of HEPS_Log10 and SP_Log10 respectively if all other values in the respective models would be zero; Gap is an independent variable and a measure of pay-gap; %SH is the percentage of executive directors' share ownership and the first of the five control variables; ROA is return on assets and the second of the five control variables; %IND is the percentage of independent board members and the third of the five control variables; Size refers to firm size which has been measured by total assets and is the fourth of the five control variables and Tobin's Q is

the last control variable; *T* stands for time effects and ε stands for the standard error. RGCIJSE and RGCIJSE x Gap are independent variables that have been added to test the moderating effect of RGC; *T* stands for time effects and ε stands for the standard error.

Table 5.21 below shows whether RGC moderates the connection between firm performance and pay-gap. Detailed regression results with moderation effects are attached in Annexure 5.4.

Table 5.21: Firm performance *as a dependent variable (with moderator)*

Parameter Estimates with Robust Standard Errors				
With an interaction				
	HEPS_Log10		**SP_Log10**	
Parameter	B	Sig.	B	Sig.
Intercept	-1.003	<,001	-.203	.258
Shareholding %	-.011	<,001	-.014	<,001
ROA	.011	.013	.011	<,001
IND	.007	.001	.009	<,001
TobinsQ	.089	.001	.165	<,001
SizeTotalassetsR	4.985E-12	<,001	5.187E-12	<,001
RGCIJSE	.010	<,001	.010	<,001
Paygap	.003	.284	.003	.351
Paygap_RGCIJSE	-3.519E-5	.404	-2.570E-5	.535
[Year=2011]	-.008	.955	.113	.378
[Year=2012]	-.012	.930	.063	.615
[Year=2013]	.001	.994	.125	.312
[Year=2014]	-.179	.236	.049	.703
[Year=2015]	-.066	.634	.089	.479
[Year=2016]	-.171	.251	.021	.869
[Year=2017]	.124	.396	.240	.059
[Year=2018]	.076	.591	.149	.233
[Year=2019]	.052	.730	.071	.594
[Year=2020]	0[b]	.	0[b]	.
	R Squared = .348 (Adjusted R Squared = .323)		R Squared = .466 (Adjusted R Squared = .447)	

Source: Author's conceptualisation (2022)

The following table outlines a summary of the results pertaining to objective five:

Table 5.22: Summary of the regression results for objective five

	Predictions before interaction effects		*Predictions post interaction effects*	
	HEPS_Log10	***SP_Log10***	***HEPS_Log10***	***SP***
Pay-gap	Positive, p(0,078)	Positive, p(0,022)	Positive, p(0,284)	Positive, p(0,351)
RGCIJSE			Positive, p(<0,001)	Positive, p(<0,001)
Pay-gap_RGCIJSE	N/A	N/A	Negative, p(0,404)	Negative, p(0,535)

Source: Author's conceptualisation (2022)

In the presence of an interaction term, pay-gap positively and insignificantly predicts both HEPS_ Log10 and SP_Log10. The prediction was positive for both HEPS_Log10 and SP_Log10, although it was different in significance before the interaction effect was incorporated into the model. The magnitude of the slopes of pay-gap were 0,003 for both HEPS_Log10 and SP_Log10 compared to 0,001 for both measures of firm performance before the interaction effects, indicating that a one unit increase in pay-gap positively influences HEPS and SP by 0,3%. This is a 200% increase for both variables, suggesting that the slope of pay-gap towards predicting both measures of firm performance became more positive, highlighting that the interaction effect of RGCIJSE*Gap positively influences the association between pay-gap and firm performance. The result is consistent with Sanchez-Marin and Baixauli-Soler (2015:450); Pissaris et al (2010:319), who evidenced that governance positively intensifies the relationship between pay-gap and firm performance in Spain and different countries, respectively. On the other hand, p-values deteriorated as they were both statistically non-significant posits the interaction effect. Further, r^2 was 34,8% (Adjusted r^2, 32,3%) and 46,6% (Adjusted r^2, 44,7%) for HEPS_Log10 and SP_Log10 respectively, which indicates that the moderation effects led to the regression model being able to reliably explain about 32,3% and 44,7% of the variation in HEPS and SP respectively. The difference, which amounts to about 68% and 55% on HEPS and SP, respectively could be explained by factors external to the model. The pre-moderation adjusted r^2 results were 29,2% and 42,3% for HEPS_Log10 and SP_Log10, respectively, indicating that the moderation effect improved the adjusted r^2 by about 10,62% and 5,37% in positively explaining HEPS and SP, respectively.

As can be noted, the interaction effect has impacted the magnitude of the slope of pay-gap towards both HEPS_Log10 and SP_Log10 as they increased by about 200% post the moderation effect. There was also an effect on the p-value towards predicting SP as it became non-significant post the moderation effect with no changes in the direction of the relationships. Therefore, RGC moderates the relationship between the pay-gap and firm performance by making it more positive although it was statistically non-significant and to a small extent. This is consistent with Sanchez-Marin and Baixauli-Soler (2015:454); Pissaris et al (2010:307), who observed that the relationship between pay-gap and performance tends to intensify in favour of high pay-gaps in firms with effective governance in Spain and US respectively. Sanchez-Marin and Baixauli-Soler (2015:454) used industry relative ratio of ROA, ROE and Tobin's while Pissaris et al (2010:307) utilised ROA as measures of performance. Both studies included some control variables in their models.

In summary, descriptive statistics showed that pay-gap largely remained constant when firm performance improved between 2011 and 2020, while correlation and regression analyses revealed a weak positive connection between pay-gap and firm performance. This indicates that tournament theory prevails over the agency theory since the connection is positive while the agency theory expects it to be negative. Evidence by Pissaris et al (2010:307) is not much further from these results as they witnessed a positive and significant correlation between pay-gap and firm performance in the US. The moderating effect of RGC was weak and non-significant in the relationship between pay-gap and firm performance. This is because the magnitudes of the slopes of pay-gaps in predicting firm performance remained relatively small after the interaction effect, although the slope of pay-gap towards SP deteriorated to be non-significant. Therefore, RGC positively moderates the relationship between pay-gap and firm performance although non-significantly and to a small extent.

Implications: The King Code needs to be specific about the issue of pay-gaps and be deliberate in how it mandates firms to manage it. This is because the results of this study and that of many other studies indicate that RGC favours high pay-gaps, which is less likely the motive of RG. Perhaps this is somehow linked to the fact that at the data collection stage of this study, most of the selected JSE firms had not yet complied with the mandate of disclosing how they considered ordinary employees' pay in their determination of executive pay. It is also essential for the King Code to mandate the disclosure of pay-gaps and prescribe how the pay-gaps should be calculated (Gómez-Bezares et al 2019:1; Hopkins & Ebrahimi 2017:31; Bebchuk & Fried 2004:8) to ensure uniformity in the IAR so that it can be easy for investors to compare this information and make informed decisions.

Contribution to knowledge: Objective five has addressed the literature gap and contributed to knowledge in three ways, firstly; this is the first study in the SA context to have considered the full range of JSE-listed firms as the population in the examination of the association between firm performance and pay-gaps, giving a broad idea of the situation with executive-employee pay-gaps in SA. An existing study by Urson (2016:56-58) focused only on the SA consumer goods and services sector. The literature on pay-gap remains limited globally and specifically in the SA context. Secondly, this is the first study to have focused specifically on RGC, which has been used to test the moderation effect on the association between pay-gap and firm performance. Pay-gap is a product of the executive pay therefore, RG is more relevant than other sections of CG to study it. The study also used proxies of firm performance

that are aligned to the executive KPIs that are preferred by the selected JSE firms to assess executives' performance. This assists in controlling for endogeneity issues.

The following section presents and discusses results associated with objective six.

5.7. COMPARISON OF KPI'S AND FPM'S

This section seeks to investigate the extent to which FPMs that are generally selected by researchers in their assessment of the connections involving RGC, executive pay, firm performance, pay-performance link, and pay-gap are similar to the KPIs that firms prefer to measure executives' performance. The fact that the used regression models have failed to explain most of the variation in the dependent variables while none of the investigated relationships was strong gave more reasons for the persuasion of the sixth objective. This is because the research results are usually the reflection of the type and nature of variables that were selected as proxies of firm performance (Elmagrhi 2016:220) in such relationships. Chenhall and Moers (2007:179) concur that in an ideal situation, independent variables should significantly predict dependent variables. This is likely if FPMs and KPIs are similar. However, since the world is complex, the researchers' focus is usually on studying multiple firms simultaneously, and therefore, uniqueness of firms and different contexts make it impractical to achieve perfect uniformity between FPMs and KPIs. Nevertheless, the principles of conducting research advocates for a flawless choice of variables (Chenhall & Moers 2007:173), which minimises endogeneity effects. This means that being realistic in choosing variables becomes crucial in every research.

The findings have the potential to unveil possible endogeneity issues in the governance and executive pay research. FPMs were collected from 80 sampled articles, while KPIs were collected from 59 firms that met the criterion as provided in sub-section 4.11.2 of chapter four. The data was entered into a spreadsheet where article name, author/s and year of publication were captured vertically in the first three columns while performance measures were captured one by one in the rows. Data that relates to the KPIs was captured in a similar manner with firms captured horizontally while each KPI was captured individually in columns. Copy of the documents that were used to extract data for FPMs and KPIs are included as Annexure 4.9. Only variables that were used as measures of firm performance in the sampled articles were considered, control variables were ignored since they are by default not the focus of the study. Moderator variables were also ignored since they do not usually focus on measuring performance but on assessing the impact of a specific variable on the relationship of interest.

KPIs were collected from only 59 of the sampled 77 firms since there were firms that did not disclose their executive KPIs. For more information on FPMs and KPIs, refer to sub-sections 4.8.7, 4.8.8 and 4.10.5 of chapter four. There was no deep analysis for objective six since the data was at the nominal scale of measurement. Only basic descriptive tables and figures were prepared to aid interpretation. Therefore, the approach has been regarded as qualitative. More detailed information about FPMs and KPIs are contained in sub-section 4.12.2 of chapter four, for more information about analysing objective six, refer to section 4.6 of chapter four.

Table 5.23 below presents a summary of the KPIs and FPMs that were found most popular between 2011 and 2020 in governance, firm performance, pay-performance link, executive pay and pay-gap research. The items appear in descending order with most popular FPMs and KPIs at the top of the list. Detailed KPIs are attached in this chapter as Annexure 5.5 and FPMs as Annexure 5.6 respectively. Interpretation follows in sub-sections 5.7.1 and 5.7.2 below.

Table 5.23: Summary of KPIs vs FPMs

Summary of KPIs vs FPMs					
Part 1: KPIs (59 firms)			**Part 2: FPMs (80 articles)**		
KPI	**Out of 59**	**%**	**FPM**	**Out of 80**	**%**
HEPS	48	81%	ROA	57	71%
Operating profit/EBIT/EBITDA	43	73%	Return on equity (ROE)	37	46%
Other (Non-financial)	43	73%	Tobin's Q	32	40%
Total shareholder return (TSR)	29	49%	Earnings per share (EPS)	14	18%
BBBEE rating	22	37%	Stock price return	11	14%
Safety	21	36%	Other (Financial)	11	14%
Cash	18	31%	Other (Non-financial)	9	11%
Return on invested capital (ROIC)	17	29%	TSR	8	10%
Return on capital employed (ROCE)	17	29%	Market capitalisation (MC)	7	9%
Revenue	17	29%	Economic/market-value added (EVA/MVA)	5	6%
Other (Financial)	16	27%	Net margin	5	6%
ROE	16	27%	PAT	4	5%
Cost control	16	27%	Revenue/change in revenue	4	5%
Free cash flow	15	25%	Board size	3	4%
Headline earnings	12	20%	Ownership concentration	3	4%
Transformation	12	20%	HEPS	3	4%
Working capital	9	15%	Board independence	3	4%
Production	8	14%	EBIT	2	3%
Return on net assets (RONA)	6	10%	Directors' shareholding	2	3%
Profit before tax/interest (PBT/PBIT)	6	10%	ROCE	2	3%
Market share	6	10%	Total assets	2	3%
Gross margin	5	8%	Book to market value	2	3%
Customer satisfaction	5	8%			
Profit after tax (PAT)	5	8%			
Share price	4	7%			

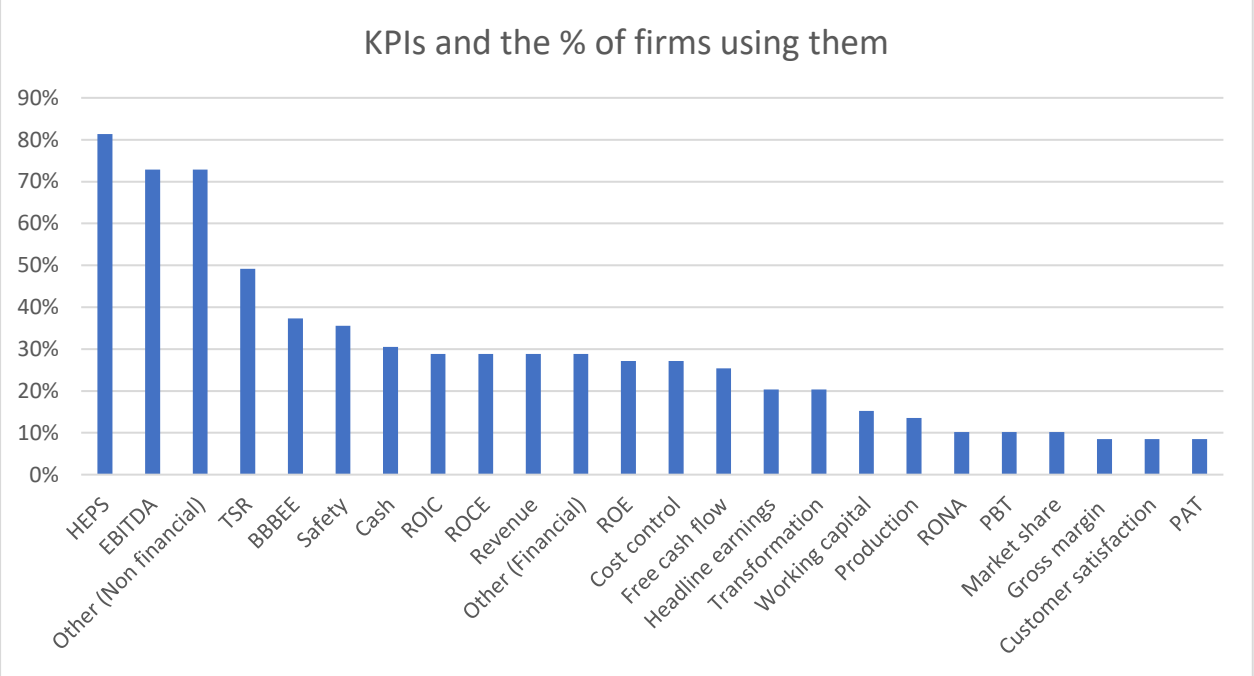
Source: Author's conceptualisation (2022)

5.7.1. KPIs of the selected JSE firms between 2011 and 2020

Out of 77 sampled firms, 18 did not disclose their executive KPIs; hence only 59 firms appear in Annexure 5.5. Even so, not all the 59 firms disclosed the KPIs for the entire ten years. This motivated the interpretation of the results to ignore the issue of the number of years, especially since the FPMs against which the comparison has been made were presented per article and did not feature the number of years. Firms have therefore, been considered if they managed to disclose KPIs for at least one of the ten years of the study.

The results show that HEPS is the most popular KPI among the selected JSE firms, as it appeared in about 81% of the selected listed firms. This is followed by EBIT/EBITDA, which appeared in about 73% of the selected listed firms. Since there were numerous KPIs as can be seen in Annexure 5.5, only those that were utilised by at least more than four firms were identified in Part 1 of Table 5.23. The rest were combined under the term '*Other non-financial'* or '*Other financial*' depending on whether they were classified as financial or non-financial KPIs. The results have been further shown graphically as follows:

Figure 5.7: Summarised KPIs of the selected JSE firms



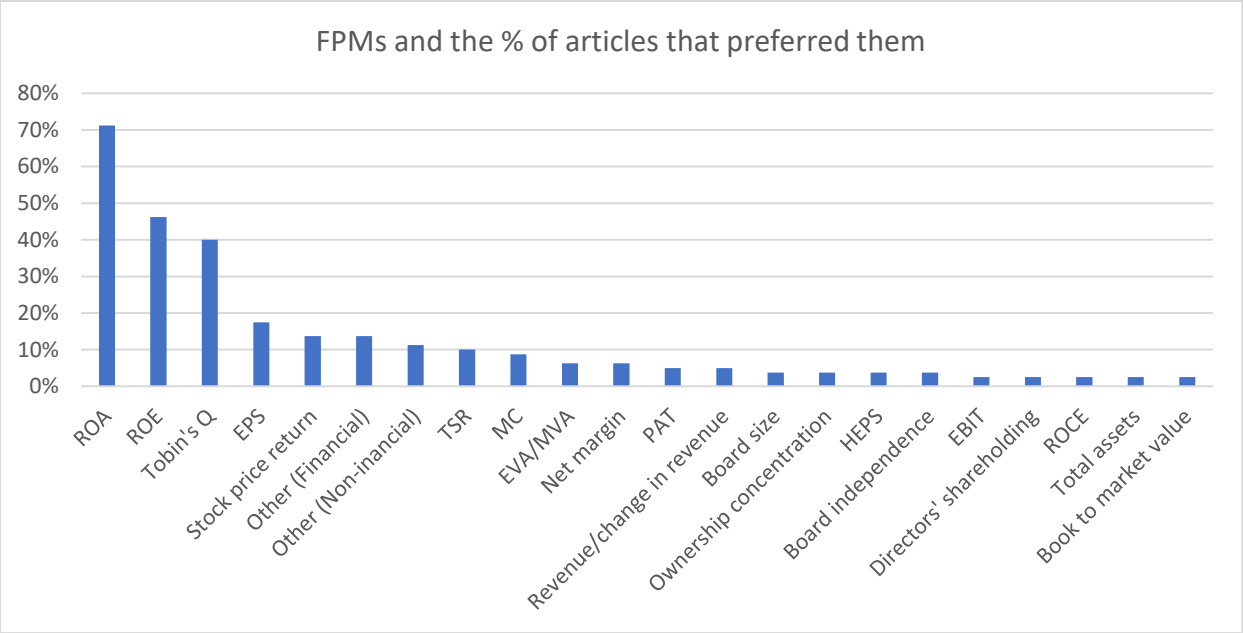
Source: Author's conceptualisation (2022)

The results show that the majority of the selected JSE firms have adopted both financial and non-financial KPIs, with financial measures still leading although with a small fraction from the non-financial measures. This partly confirms an argument by Matemane, Moloi and Adelowotan (2022:4) that firms predominantly rely on the financial measures to measure executive's performance. Only one firm relied purely on non-financial measures, while nine of the 59 firms relied purely on financial measures, other firms used a combination of both financial and non-financial KPIs.

5.7.2. FPMs between 2011 and 2020

Regarding the FPMs, ROA is the most popular measure preferred by researchers as it has been used in about 71% of the selected articles. This is followed by ROE which appeared in about 46% of the selected articles. Like KPIs, FPMs utilised in only one article were combined under the term '*Other non-financial* or '*Other financial*' depending on whether they were classified as financial or non-financial FPMs. Figure 5.8 below shows the FPMs according to their level of popularity.

Figure 5.8: Summarised FPMs from the selected articles



Source: Author's conceptualisation (2022)

The results indicate that about 99% of the articles used financial FPMs, and only about 8% had included non-financial FPMs in their studies. Overall, only one article relied purely on non-financial FPMs, while 74 relied purely on financial FPMs, the other five articles had a combination of both financial and non-financial FPMs. The non-financial FPMs in this instance were CEO age, CEO tenure, duality, ownership concentration, independent directors, ownership concentration and so forth. Interestingly, these are entirely distinct from the non-financial KPIs utilised by firms as non-financial KPIs were more detailed for direct measurement. Refer to Annexures 5.5 and 5.6 for a detailed list of KPIs and FPMs.

From the evidence above, there is no similarity in the KPIs that firms have used to measure executive pay to the FPMs that researchers have selected to study the relationships involving governance, executive pay, pay-gap, pay-performance, and firm performance. Firstly, the most popular FPMs of researchers, say the top five included: ROA, ROE, Tobin's Q, EPS, and stock price return are different from the top five preferred KPIs by firms which include HEPS, EBIT/EBITDA/operating profit, total shareholder return (TSR), BBBEE rating and safety. HEPS is a KPI in 81% of the firms but only appears in 4% of the articles while ROE is doing better as it has been used by 46% of the articles when 27% of the firms adopted it as a KPI. EBIT/EBITDA is another popular KPI as 73% of the firms have adopted it for determining executive pay, interestingly it only appeared in 3% of the selected articles.

Padia and Callaghan (2020:829) who used revenue, Tobin's Q and ROA to assess the pay-performance link post-King III Report, found revenue to have better-predicted executive pay than the other two FPMs. Their highlights indicate that the Tobin's Q ratio and ROA are value-added measures from which they expected a better prediction power than revenue, perhaps due to their popularity in the literature. However, Table 5.23 above indicates that revenue is being utilised by 29% of the selected JSE firms as an executive KPI, ROA by 3% of the firms, while none of the 59 scrutinised JSE firms indicated Tobin's Q as one of their executive KPIs. This suggests that revenue should be better able to predict executive pay than the other two FPMs. A common observation from the literature is that researchers rarely motivate their choice of FPMs except often citing previous research. Perhaps this has contributed to the less attention by researchers to investigate the relevance and/or practicality of the selected FPMs. The other issue is the rare use of non-financial FPMs by researchers despite firms having adopted them as KPIs and the King IV Report having encouraged the use of triple context KPIs in determining executive pay. This is evident because only 8% of the articles had non-financial measures, all of which were directly measurable and distinct from the non-financial KPIs that firms preferred for their executives' performance. This could lead to research that does not connect to what is happening in practice.

In summary, the results of objective six revealed no similarity between FPMs preferred by researchers and KPIs used by firms to determine executive pay. As many as 81% of the firms adopted non-financial KPIs, which is different from the non-financial KPMs selected by only 8% of the sampled journal articles. All the non-financial FPMs seem to be directly measurable compared to the majority of non-financial KPIs, which are mostly unique and detailed for direct measurement. The dominance of the agency theory in investigating relationships involving RGC, executive pay, pay-gap, pay-performance link and firm performance is likely to have influenced researchers' choices towards measurable FPMs. This is since this theory advocates for a pay-performance link, which has been chiefly investigated quantitatively. The results for objectives two to five have been based on two FPMs, the first being HEPS, an accounting-based FPM that is also the most popular accounting-based KPI among the selected JSE firms. The second is SP, a market-based FPM that is also the only market-based KPI that the selected JSE firms seem to prefer, although it has been used in a few firms.

Implications: What is evident from the results in this section is that if less attention continues to be paid to possible endogeneity factors associated with the type and nature of FPMs being used in research involving executive pay, governance, firm performance, pay-performance

link and pay-gap, possible theory imbalance and methodological flaws are likely to occur. It is crucial for researchers to consider the fact that KPIs of selected JSE firms have become broader and more detailed than purely financial, which is in line with changes in the economic space, complexity of business activities as well as King IV Report. Hence, there is a need to advance ways in which matters of interest are investigated as far as the variables of interests are concerned.

Contribution to knowledge: Objective six has extended the literature and uniquely advanced knowledge by unveiling the need to align research on executive pay, governance, firm performance, pay-performance link, and pay-gap with what is happening in practice as far as choosing variables of interest are concerned. This has a potential to influence theory choice and methodological preferences. To the knowledge of the researcher, this is the first study to have compared FPMs against KPIs to check similarities and/or divergences.

5.8. CONCLUSION

The results suggest that the general expectation that RGC should lead to a reduced executive pay and pay-gap while improving firm performance and pay-performance link may likely be flawed. The reasons are that firstly, the results of this study revealed no strong connection between dependent and independent variables; secondly, there was no sufficient explanation of dependent variables by the regression models; thirdly, no alignment was found between FPMs and KPIs. Further to this, there is a lack of theory balance in governance and executive pay research as the agency theory, which assumes that executives are opportunists has been a cornerstone for most studies in governance, executive pay, firm performance, pay-performance link and pay-gap research. On the other hand, the stewardship theory that assumes that executives have the same mindset as the shareholders as far as maximising firms' wealth is concerned has rarely been featured in investigating these relationships, despite being relevant.

Simultaneously, the literature highlights additional factors that are likely to minimise the chances of obtaining flawless results in investigating relationships involving governance, executive pay, pay-gap, pay-performance link and firm performance. These include the firm's agility, '*comply or explain*' principle, firms' focus on ticking boxes rather than effectiveness when it comes to RGC and endogeneity, among other things. These have been presented in detail in section 3.9 of chapter three. Detthamrong et al (2017:707); Akbar et al (2016:428) believe that if endogeneity could be adequately controlled in the study, there would be no relationship between governance and firm performance. Meaning that with effective

endogeneity control, RGC should not influence executive pay, pay-gap, pay-performance link and firm performance. This aligns with the stewardship theory, which posits that governance, as a monitoring tool, is unnecessary since executives already exert maximum effort in creating shareholders' wealth. Overall, the issues of high executive pay and misalignment of interests, if any, should not be solely blamed on poor RG, as has been predominantly the case, but also in the way theories are applied and endogeneity issues are handled.

This study has implications, firstly is that RGC does not look impressive among the selected JSE-listed firms, some of the RG provisions that came with King IV Report have not yet been complied with by most of the selected JSE-listed firms for instance, the requirement that firms ought to disclose how they considered average employees' pay has rarely been complied with by the firms in the sample. Thus necessitating either some form of enforcement (Elmagrhi 2016:300) or regular monitoring of firms' compliance levels by external bodies. Secondly, the results imply that policymakers should find ways of strengthening RG or regulators find ways of enticing firms to increase levels of compliance such that even if compliance to governance does not seem to enhance performance or reduce executive pay and pay-gap, firms would still find an incentive to strengthen their compliance. This may be achieved by finding ways of punishing poor compliance, which would increase accountability (Nazir & Afza 2018:152).

Thirdly, given the ongoing concerns over excessive executive pay even after numerous interventions in the form of governance have emerged, it is about time to acknowledge the limitations that come with one-sidedness in how the executive pay subject has been investigated. The reliance on the quantitative methods and the dominance of the agency theory with less consideration of what is happening in practice needs a review especially since there is evidence of a disconnection between FPMs and KPIs of the selected JSE-listed firms. This speaks to endogeneity issues which threaten the quality of research. Lastly, the King Code needs to be specific about the issue of pay-gaps and be deliberate in how they mandate firms to manage it. This is because the results of this study and that of other studies support high pay-gaps, which is less likely the motive of RG. Perhaps this is somehow linked to the fact that most of the selected JSE firms had not yet complied with the mandate of disclosing how they considered ordinary employees' pay in their determination of executive pay at the data collection stage of this study. It is also essential for the King Code to mandate the disclosure of pay-gaps and prescribe how the pay-gaps should be calculated to ensure uniformity in the IAR so that it can be easy for investors to compare this information and make informed decisions.

This study has advanced the literature and contributed to knowledge in several ways; firstly, by focusing on RGC for the selected JSE-listed firms given that most prior literature focused on CGC generally. Secondly, post the implementation of King IV Report this study is the first to have attempted to measure compliance to governance, investigated a relationship between RGC and firm performance and another relationship between RGC and executive pay in the SA context. Thirdly, by having assessed the moderation effect of RGC on the pay-performance link, this is the first study to have investigated pay-performance link this way especially post the implementation of King IV Report.

Pay-performance link has been investigated after cautiously selecting accounting-based measure and the market-based measure of performance, these were selected based on the extent to which they have been popular as executive KPIs of the selected JSE firms, something that has not been witnessed in previous studies. This assists in managing endogeneity issues, something that has been proven to threaten the quality of research. Fourthly, this study is the first in the SA context to have considered the full range of JSE-listed firms in its population, adding to (Urson 2016:56-58) who focused only on the SA consumer goods and services sector. The literature on pay-gap remains limited globally and specifically in the SA context. This study is also unique by having tested the moderation effect of RGC on the connection between pay-gap and firm performance. Lastly, this study has unveiled the need to align research on executive pay, firm performance, pay-performance link, pay-gap, and governance with what is happening in practice as far as choosing variables of interest is concerned. This has a potential to influence theory choice and methodological preferences. To the knowledge of the researcher, this is the first study to have compared FPMs against KPIs to check similarities and/or divergences.

The following chapter presents the conceptual model that the study aimed to develop.

CHAPTER SIX: CONCEPTUAL MODEL LINKING RGC, EXECUTIVE PAY, FIRM PERFORMANCE, PAY-PERFORMANCE LINK AND PAY-GAP

6.1. INTRODUCTION

The study aimed to develop a conceptual model that explains whether RGC ought to enhance firm performance, improve pay-performance link, reduce executive pay, and pay-gap in selected JSE-listed firms. The objectives of the study were as follows:

I. determine the extent of RGC of the selected JSE-listed firms between 2011 and 2020,
II. assess if there is a relationship between RGC and firm performance,
III. evaluate if there is a connection between RGC and executive pay,
IV. examine if there is a relationship between executive pay and firm performance and assess the moderating effect of RGC on this relationship,
V. investigate if there is a relationship between executive-employee pay-gap and firm performance and assess the moderating effect of RGC on this relationship; and
VI. investigate similarities and divergences between FPMs of researchers on associations involving governance, pay, performance, pay-performance link, and pay-gap against KPIs of the selected JSE-listed firms between 2011 and 2020.

Data analyses was conducted following the methodology as presented in chapter four. The results are summarised and conceptualised in the next section, this is followed by the conceptual model, after which the theories featured in the study are explained in relation to the results and lastly, the conclusion of this chapter is presented.

6.2. BRIEF SUMMARY AND CONCEPTUALISATION OF THE RESULTS

According to the results of this study, objective one revealed a decreasing level of RGC by the selected JSE listed firms between 2011 and 2020, which is likely due to the advancement of the King Code from King I in 1994 to King IV in 2016. Objective two unveiled a weak positive and statistically significant association between RGC and firm performance. This association is arguably supposed to be strong according to the agency theory. Simultaneously, the regression model accounted for only about 32,9% and 44,5% of the movements in HEPS and SP respectively, indicating that most of the variation came from factors outside the model. Objective three demonstrates a positive and statistically significant connection between RGC and executive pay, which contradicts a negative expectation of the agency theory. The regression model could explain only about 34,1% of movements associated with fixed pay and 11,8% of the variation associated with STI, suggesting that most of the variation came from factors outside the model.

In objective four, a moderate correlation was evidenced between executive pay and firm performance. From the regression analyses, it was evidenced that executive pay weakly responds to firm performance and the response level varies as only the SP was found to be statistically significant in predicting executive pay. It was also witnessed that the regression model can explain about 38,9% and 21,3% of the variation associated with fixed pay and STI respectively, highlighting that most of the variation is attributable to factors external to the model. Regarding the moderation effect of RGC on the pay-performance link, it was witnessed that RGC moderates the pay-performance link, and the moderation effect is more negative than positive, which means RGC weakens the pay-performance link more than it strengthens it. At the same time, it was unveiled that the regression model is capable of reliably explaining about 42,6% and 21,1% for fixed pay and STI, respectively after incorporating the moderator variable, meaning that it still failed to explain most of the variation in executive pay post the moderation effect.

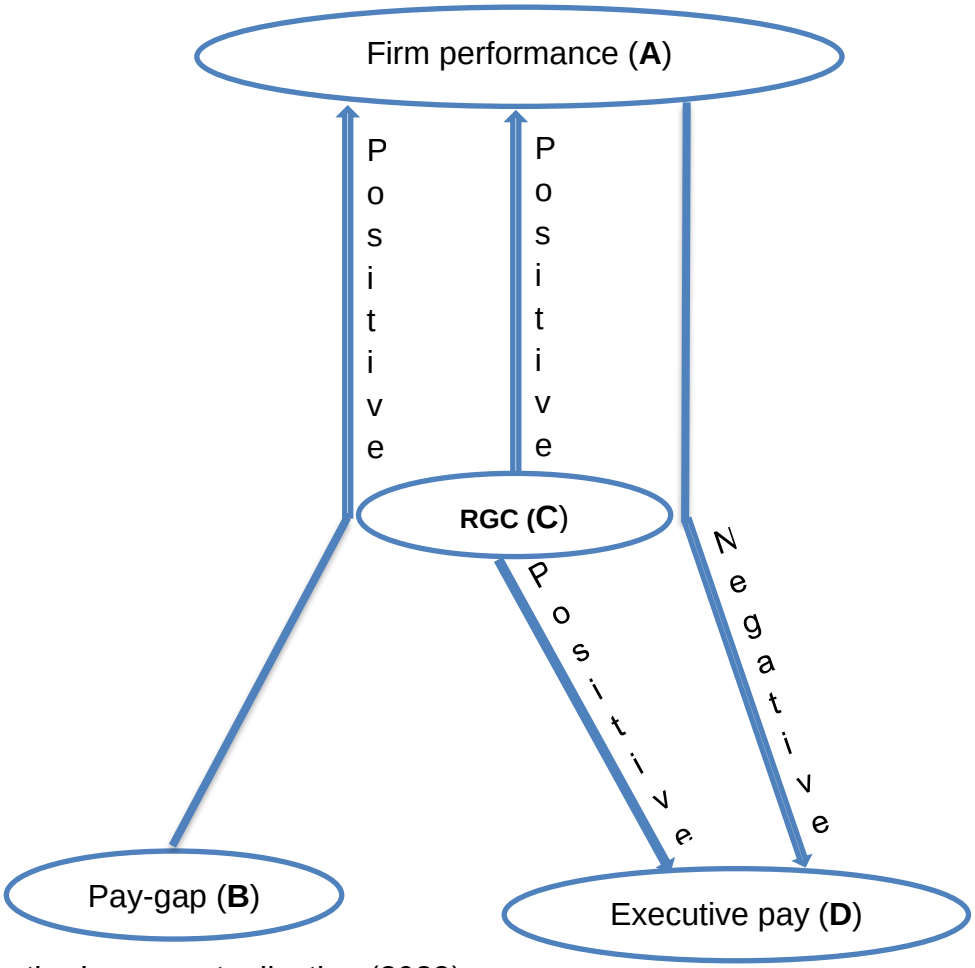
Objective five was also analysed in two parts. The results from the pre-moderation effect unveiled a weak positive relationship between pay-gap and performance, indicating that high pay-gaps may be beneficial to creating firms' wealth. The results are mixed as they are statistically significant only for the SP and not HEPS. Simultaneously, it was observed that the regression model could explain only about 29,2% and 42,3% of the variation in HEPS and SP, respectively. This suggests that much of the variation could not be accounted for in the used model for this connection. Secondly, it was discovered that RGC weakly and insignificantly moderates the pay-gap to performance link, and the moderation effect makes the relationship more positive, although only to a small extent. This aligns with the tournament theory rather than the agency theory. Also, the moderation effect enabled the regression model to only explain about 32,3% and 44,7% of the variation associated with HEPS and SP, meaning that post the moderation effect, most of the variation could still not be explained by the model.

Objective six was analysed through comparison of FPMs and KPIs, the focus was on investigating similarities and/or divergencies from which to get an insight of the extent to which research conclusions are likely relevant to what happens in practice. No similarity was found between FPMs and KPIs both in their type and nature, indicating that variables that researchers are mostly inclined to in their investigations of relationships involving governance, executive pay, firm performance, pay-performance link, and pay-gap are not representative of the executive KPIs that firms mostly use to conclude executive pay.

6.3. ADDRESSING THE AIM OF THE STUDY THROUGH A CONCEPTUAL MODEL

As can be noted from the summary above, three of the four relationships studied suggest that RGC is ineffective in curbing executive pay, reducing pay-gap and/or improving pay-performance link, this is against the expectations of the agency theory. This confirms conclusions by many studies including Chu et al (2021:30); Iliev and Vitanova (2017:27); Kim et al (2017:82); Sanchez-Marin et al (2017:230); Brunarski et al (2015:132); Burns and Minnick (2013:256); Pissaris et al (2010:307). The summary of the connections explained above which were investigated as objective two to five of the study can be conceptualised in Figure 6.1 below:

Figure 6.1: Conceptualised Model



Source: Author's conceptualisation (2022)

Figure 6.1 above depicts the following observations:

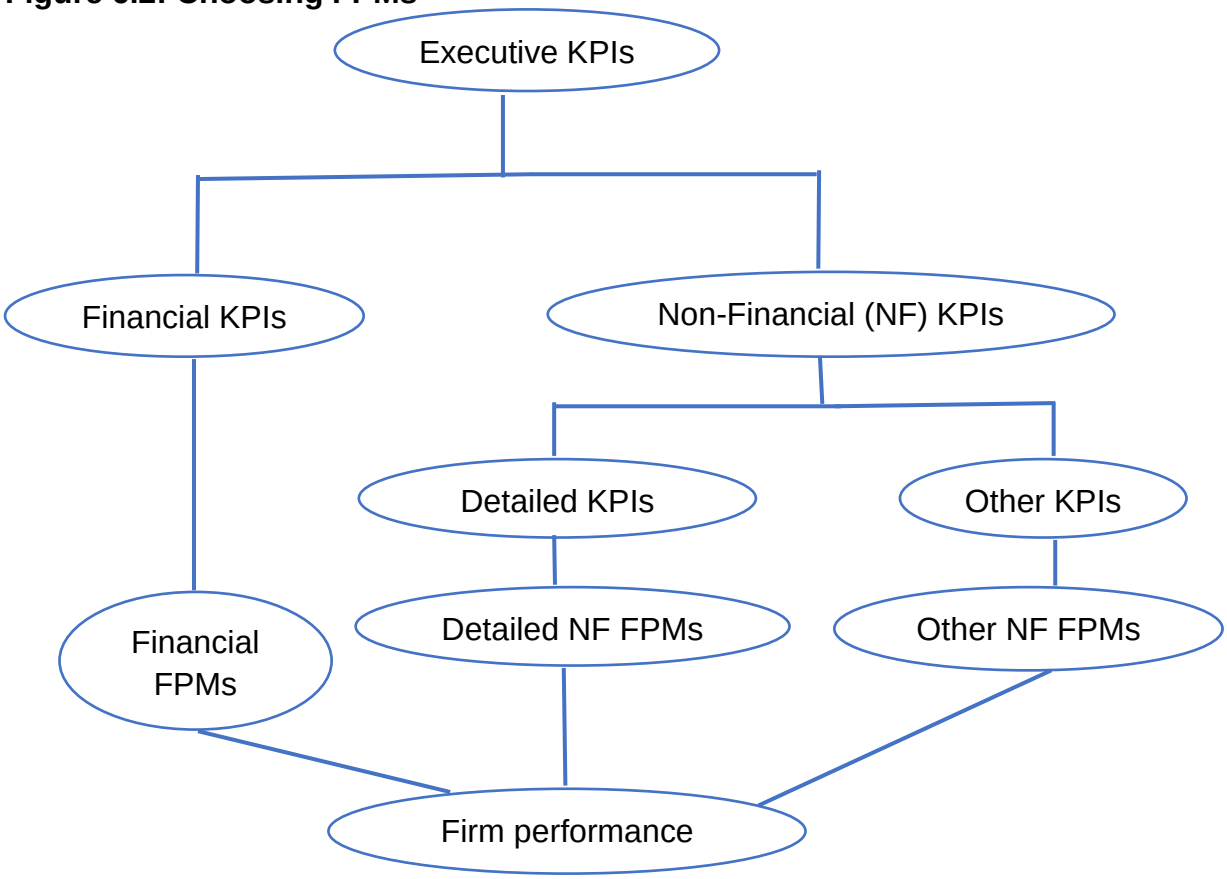
I. Line AC indicates a positive association between RGC and firm performance (objective two, *agency theory accepted*).

II. Line CD indicates a positive connection between RGC and executive pay (objective three, *agency theory rejected*).
III. Line AB indicates a positive moderating effect of RGC on the connection between pay-gap and firm performance (objective four, *agency theory rejected*).
IV. Line AD depicts a negative moderating effect of RGC on the relationship between firm performance and executive pay (objective five, *agency theory rejected*).

However, upon further investigation, which was conducted as objective six, this study unveiled the neglect of executive KPIs when FPMs are being selected to investigate the associations examined in this study. The findings indicate that more than 80% of the selected JSE-listed firms used a combination of financial and non-financial KPIs to measure executive performance. The results further highlight that only about 8% of the journal articles incorporated non-financial FPMs, although the nature and type of those non-financial FPMs was distinct from the non-financial KPIs of the selected JSE-listed firms. The type of financial FPMs were also distinct from the KPIs. This has a potential for researchers to report misaligned executive pay from firm performance, leading to research results that are disconnected from what is happening in practice.

To mitigate this and thus limit the chances of this error, this study proposes the consideration of FPMs that resemble the type and nature of KPIs when connections involving RGC, executive pay, firm performance, pay-performance link, and pay-gap are investigated. Figure 6.2 below illustrates how the choice of FPMs should flow from firms' KPIs:

Figure 6.2: Choosing FPMs



Source: Author's conceptualisation (2022)

6.4. RELATION TO THEORIES COVERED IN CHAPTER TWO

Three theories were featured in this study namely, the agency theory, the stewardship theory, and the tournament theory. These were largely discussed in chapter two of this study. This section discusses the relation of these theories to the relationships examined in the study, which covers objective two to five. Objectives one and six do not feature in this section as they did not examine any relationship or test any theory.

6.4.1. The agency theory

The agency theory advocates for a pay-performance link which is expected to intensify as M+I increase, this suggests that firms with high RGC should report more of this link if this theory holds true. This is because remuneration governance, which is regarded as a monitoring tool became stringent after corporate scandals that mostly manifested in the form of excessive executive pay. Hence a negative connection is expected between RGC and executive pay and/or pay-gap while a positive association is expected between RGC, and firm performance and/or pay-performance link. This study has examined all these relationships among its objectives and the results largely reject the agency theory. As summarised in the preceding section, the connection between RGC and firm performance is positive, indicating that an

increase in RGC coincides with an increase in firm performance. This supports the agency theory which encourages increasing firm performance for increasing executive pay or vice versa, this is the only association that supported the agency theory in this study. Simultaneously, the association between RGC and executive pay is positive, meaning that an increase in RGC coincides with an increase in executive pay. The agency theory argues that executive pay should be at the level of firm performance, and since it has been reportedly high for decades, the focus has been to reduce it to the level of firm performance through RG among other approaches. Hence, a positive relationship between RGC and executive pay rejects this theory.

At the same time, the connection between executive pay and firm performance before the moderating effect of RGC has been positive, indicating that an increase in executive pay coincides with an increase in firm performance. Incorporating RGC into this relationship is expected to strengthen it towards a positive direction as RG is part of M+I, which according to the agency theory intensifies this link. However, the results revealed otherwise as the moderating effect of RGC has weakened pay-performance link, indicating that RGC rather favours a disconnection between executive pay and firm performance for JSE-listed firms. Another relationship examined in this study is between firm performance and executive-employee pay-gap. This has been based on the agency versus the tournament theory hence not covered in this sub-section but in 6.4.3 below.

6.4.2. The stewardship theory

The stewardship theory posits no conflict of interest between owners and managers as executive pay is regarded as already aligned to firm performance. This is since the owners of firms fully trust their managers while they in turn work in good faith towards achieving firm's objectives. So, this theory neither features pay-performance link as the tool that aligns pay to performance nor remuneration governance as the tool that monitors this link. Therefore, there is no expectation of any relationship between executive pay, RG and/or firm performance. Objective two of this study revealed a positive association between firm performance and RGC, objective three unveiled a positive connection between executive pay and RGC, objective four indicated a weak positive pay-performance link which deteriorates with higher levels of RGC while objective five revealed a positive relationship between pay-gap and firm performance which escalates with the levels of RGC. These relationships do not favour or disfavour the stewardship theory as it does not predict any relationship between variables.

Rather they allow the stewards to make better productivity decisions while boards of directors make better pay decisions.

6.4.3. The tournament theory

Tournament theory only relates to objective five of this study which examined the relationship between firm performance and pay-gap. This theory supports large pay-gaps and therefore, predicts a positive relationship between firm performance and pay-gap. On the other hand, the agency theory supports reducing executive pay which has a direct impact on pay-gaps such that high level of executive pay coincides with high levels of pay-gap. Therefore, the agency theory expects a negative connection between pay-gap and firm performance. The results as presented in section 5.6 of chapter five indicate a positive association between pay-gap and firm performance, this relationship weakly intensifies with the increase in RGC. The agency theory which expects large pay-gap to be detrimental to firm performance is therefore, rejected and the tournament theory which posits that large pay-gaps predict better firm performance is supported. The tournament theory argues that large pay-gaps motivate employees to work harder for promotions to the positions that offer better compensation.

6.5. CONCLUSION

As can be noted, based on the results of the study, the agency theory has not been supported in three of the four examined relationships, detailed results can be found in section 6.2 of chapter six and/or sections 5.2 to 5.7 of chapter five. In many instances as witnessed in the literature, such results would be used as a basis to suggest that RG is ineffective. However, this study has taken a different stance to argue that the agency theory, which encourages the link of pay to performance and ultimately the utilisation of quantitative measures to assess the relationships like those investigated in this study, is limited and therefore, handicapped to realistically capture the complexities that are embedded in the control of firms. This is since this study also discovered a disconnection of FPMs usually preferred by researchers in investigating associations involving governance, executive pay, firm performance, pay-performance link and pay-gap from the KPIs that were used by the selected JSE-listed firms to measure executive performance between 2011 and 2020. The KPIs of the selected JSE-listed firms were more detailed for direct measurement and more non-financial than financial, which can less likely be fairly investigated using only quantitative measures or the agency theory as this has a potential to compromise the conclusions of the study. This fact has been largely ignored in the literature.

To mitigate this, this study suggests that FPMs should be influenced by the type and nature of KPIs as depicted in Figure 6.2 above. This is likely to necessitate broader theory foundations than the popular agency theory while shaping methodological choices to also include qualitative research since the business environment is complex for a rigid approach. This is consistent with the recommendations by Matemane et al (2022:4); Tjano (2021:172-173) who recommended environmental, social and governance (ESG) measures and examined governance and sustainability issues in SA and SA respectively.

Clearly, it is time that the obsession about the agency theory and quantitative measures be rectified to appropriately assess if RG is effective or not. The achievement of balanced FPMs as advised above is not straightforward and is likely to be challenging. However, the exercise is essential to address the noted disjuncture of FPMs from KPIs. The following chapter presents summary of the results per objective, this is followed by the implications and recommendations of the study, after which contribution to knowledge is presented, then delimitations of the study, followed by future research and the study's conclusion respectively.

CHAPTER SEVEN: SUMMARY, RECOMMENDATIONS AND CONCLUSION

7.1. INTRODUCTION

This chapter intends to summarise and conclude this study. This has been achieved by briefly outlining the results of the study per objective, followed by the conceptual model as presented in the preceding chapter. After which the implications and recommendations have been outlined, followed by contribution to knowledge. Then the study's limitations, followed by suggestions for future research and lastly, the conclusion of the study were presented.

7.2. SUMMARY OF RESULTS

The results of the study have been obtained from both the quantitative and qualitative analyses of data that was collected from 77 selected JSE-listed firms for objectives one to five and from 80 journal articles and 59 JSE-listed firms for objective six. The results for objectives one to five were obtained from descriptive statistics, Pearson's, and Spearman's correlations as well as from the OLS linear regression with year effects. The findings for objective six were obtained from the analyses of data that was at the nominal scale of measurement which came in the form of a comparison of FPMs and executives' KPI. This covered only objective six of the study. Details about the results and findings of the study are found in chapter five. The following briefly outlines the summary of results or findings per objective.

7.2.1. RGC of the selected JSE-listed firms

The results from objective one detailed in section 5.2 of chapter five, depicts that the majority of the selected JSE-listed firms complied at an average or middle level to RG between 2011 and 2020, highlighting that firms are not yet adequately inclined to comply with RG. This also indicates that firms are selective when it comes to RGC (Kirsten & Du Toit 2018:8), perhaps choosing sections they deem more aligned to maximising shareholders' wealth. Although the compliance level may not be an impressive picture to regulators, it is not far from that of other countries as evidenced by Tizazu (2017:124); Elmagrhi (2016:141); Outa and Waweru (2016:902); Munisi and Randøy (2013:100). This indicates that firms have a similar attitude towards governance regardless of jurisdiction.

7.2.2. Linkages of RGC and firm performance

The results from the descriptive statistics and regression analyses as presented in section 5.3 of chapter five indicate a small positive influence of RGC on firm performance, with both correlations and regression results being statistically significant at 1%. This indicates that although the influence of RGC on firm performance is small, it has a notable impact on the relationship. Significant association between RGC and firm performance means that the

relationship did not occur by chance and confirms results by Nazir and Afza (2018:151); Bhatt and Bhatt (2017:906); Malik and Makhdoom (2016:747); Outa and Waweru (2016:908). Simultaneously, correlation results suggests a positive but weak relationship between RGC and firm performance (Buallay et al 2017:94), this confirms the results from descriptive statistics and regression analyses. Although the influence of RGC on firm performance is small, the results partly confirm the agency theory, which justifies an expectation of a positive relationship between RGC and firm performance. This is since monitoring (of which RG is part) is presumed to have a positive impact on the pay-performance link.

The two regression models that have been run to answer objective two yielded r-squared values of about 33% and 45%, highlighting that only about 33% and 45% of the variation in HEPS and SP could be explained by the variables that were included in the model. This is not far from that of other studies like Tizazu (2017:150); Outa and Waweru (2016:903). Overall, the results from objective two seem to justify why JSE-listed firms may be reluctant to increase their commitment towards RGC. They are likely to interpret the poor connection between RGC and firm performance as a small economic benefit for their investment.

7.2.3. RGC and executive pay connection

This sub-section summarises the results of objective three which investigated the association between RGC and executive pay using descriptive statistics, Pearson's and Spearman's correlations and OLS regression. The results as detailed in section 5.4 of chapter five all concur that RGC pushes the executive pay upwards although by a small margin as correlation results revealed a weak relationship while regression results unveiled a very small slope of RGC. This, therefore, suggests that RGC cannot prevent excessive pay but rather it fuels it, if only by a small margin. The results from both correlation and regression analyses concur that the relationship is statistically significant at 1%, meaning that the relationship did not occur by chance and that RGC is a vital variable in this relationship. No study has been found which has evidenced similar results as Scholtz and Engelbrecht (2019:46); Elmagrhi (2016:289) witnessed a negative association between RGC and executive pay. Studies that have investigated the association between governance and executive pay remain limited locally and abroad. With regards to adjusted r-squared, the two models for this objective could explain only about 34% and 12% of the variation in fixed pay and STI respectively, highlighting that most of the variation could be explained by factors outside the model.

The results reject the agency theory which supports a negative association between RGC and executive pay on the basis that monitoring (of which RG is part) enhances pay-performance

link, which should prevent excessive executive pay. The results better fit the stewardship theory which posits no agency problem between managers and shareholders as managers are deemed non-conflicted when it comes to maximising shareholders' wealth. This then necessitates no form of intervention to mitigate the agency problem, hence RG cannot be expected to curb executive pay as it is unnecessary in the stewardship theory.

7.2.4. Association between executive pay and firm performance with the moderating effect of RGC

This sub-section focuses on the summary of results for objective four which investigated the connection between executive pay and firm performance of the selected JSE-listed firms from 2011 to 2020. These have been provided in detail in section 5.5 of chapter five. The connection was analysed with and without RGC as the moderation effect. Before the moderation effect was incorporated into the regression model, descriptive statistics and regression analyses results indicated a small positive influence of firm performance on executive pay. This influence is statistically significant (at 1%) only for the market-based measure of firm performance, which is SP in this case, while it is statistically non-significant for the accounting-based measure of firm performance, i.e., HEPS. This means that SP is an important variable in this relationship as its effect on executive pay does not exist by chance. However, the same cannot be said about HEPS as a possibility of chance exists about its effect on executive pay. Regarding the correlation results, both Pearson's and Spearman's correlation analyses indicate a moderate influence of firm performance on executive pay, and these are both statistically significant at 1%. These results partly confirm those of the regression analyses as only the SP is statistically significant in the regression analyses. Looking at the adjusted r-squared values, the regression models before the moderation effect showed adjusted r-squared values of about 39% and 21%, which means that the model could only explain 39% and 21% of variation in fixed pay and STI respectively, with most of the variation being attributable to factors outside the model.

In objective four, RGC was later included in the regression model to test its moderating effect on the relationship between executive pay and firm performance. The results after the moderation effect differ for each measure of firm performance as they indicate that HEPS negatively and significantly predicts fixed pay while positively and significantly predicted by SP. These results are partly similar to those before the moderation effect as the prediction power (both the direction and p-value) of the SP on fixed pay remains the same while that of HEPS has changed (both the direction and p-value) to being negative and significant.

Simultaneously, the results also indicate that both HEPS and SP positively and insignificantly predict STI, which suggests that the relationship might have occurred by chance for both measures of firm performance. Again, after the moderation effect the results are mixed as the prediction power of HEPS on STI remained the same (both the direction and p-value) while that of SP on STI changed (only p-value) to become non-significant. This means that with the moderation effect, the prediction power of HEPS on fixed pay deteriorated severely while that of SP on STI deteriorated slightly. There has been no real change in other variables. Therefore, RGC negatively moderates the relationship between executive pay and firm performance.

The results reject the agency theory which posits that monitoring (which refers to RG in this case) should intensify the relationship between executive pay and firm performance. The stewardship theory is better supported as it disregards any form of monitoring on the basis that executive pay is already aligned to firm performance.

7.2.5. Relationship between executive-employee pay-gap and firm performance with the moderating effect of RGC

This sub-section summarises the findings of objective six which also served as a last objective for this study, detailed findings are found in section 5.7 of chapter five. Objective six looked at identifying similarities and divergencies between FPMs preferred by researchers on their investigation of the relationships involving governance, pay, performance, pay-performance link and pay-gap and KPIs used by the selected firms to determine executive pay in practice. This is a qualitative exercise that has been performed on 59 JSE-listed firms and 80 journal articles and is necessary to better understand the results that were obtained quantitatively. It also gives an insight of the endogeneity problem that may be prevalent. Alignment between FPMs and KPIs would mean less endogeneity problem in the selected articles.

The results depict that the selected JSE-listed firms adopted a mix of non-financial KPIs (more than 80% of the firms) and financial KPIs between 2011 and 2020. This is opposed to about 8% of the non-financial FPMs preferred by researchers between 2011 and 2020. The nature of the non-financial KPIs is different from that of the non-financial FPMs as the variables of the latter seem more direct and easily measurable, namely, board independence, ownership concentration and so on. While the non-financial KPIs seem more detailed for direct measurement, for example, BBBEE status, safety, and transformation to name a few. KPIs of the selected JSE-listed firms and FPMs of the selected articles in the subject of governance, pay, performance and pay-gap are clearly not aligned. Also, the financial measures on both

sides of KPIs and FPMs do not coincide as the selected JSE-listed firms preferred HEPS, EBIT/EBITDA, total shareholder return (TSR) and cash as their top four financial KPIs between 2011 and 2022. While selected researchers of the relationships involving governance, pay, performance and pay-gap preferred return on assets (ROA), return on equity (ROE), Tobin's Q and earnings per share (EPS) as their top four performance measures between 2011 and 2020.

The preference of the agency theory by researchers is perhaps the basis for the neglect of the non-financial FPMs since it is grounded on the pay-performance link, which is predominantly investigated quantitatively. The neglect of the executive KPIs when selecting FPMs is likely to have been influenced by what prior literature has preferred to use as FPMs. This study has selected one accounting-based and one market-based measure of firm performance to achieve quantitative objectives of this study. This is since the selected JSE firms preferred these as executive KPIs between 2011 and 2020. This might be one of the reasons the results of this study appear to be different from the literature.

7.2.6. Comparison of FPMs preferred by researchers and KPIs preferred by JSE-listed firms

This sub-section summarises the findings of objective six which also served as a last objective for this study. Objective six looked at identifying similarities and divergences between FPMs preferred by researchers on their investigation of the relationships involving governance, pay, performance, pay-performance link, and pay-gap against the KPIs used by the selected JSE listed firms to determine executive pay in practice. This is a qualitative exercise that has been performed on 59 JSE-listed firms and 80 journal articles and is necessary to better understand the results that were obtained quantitatively. It also gives an insight of the endogeneity problem that may be prevalent. Alignment between FPMs and KPIs would mean less endogeneity problem in the selected articles.

The results depicted that the selected JSE-listed firms adopted a mix of non-financial KPIs (more than 80% of the firms) and financial KPIs between 2011 and 2020. This is opposed to about 8% of the non-financial FPMs preferred by researchers between 2011 and 2020. The nature of the non-financial KPIs is different from that of the non-financial FPMs as the variables of the latter seem more direct and easily measurable e.g., board independence, ownership concentration, CEO age and so on. While the non-financial KPIs seemed more detailed for direct measurement e.g., BBBEE status, safety, transformation to name a few. KPIs of the selected JSE-listed firms and FPMs of the selected articles in the subject of governance, pay,

performance, pay performance link and pay-gap are clearly not aligned. Also, the financial measures on both sides of KPIs and FPMs did not coincide as the selected JSE-listed firms preferred HEPS, EBIT/EBITDA, TSR and cash as their top four financial KPIs between 2011 and 2022. While selected researchers of the relationships involving governance, pay, performance, pay-performance link and pay-gap preferred ROA, ROE, Tobin's Q and EPS as their top four FPMs between 2011 and 2020.

The preference of the agency theory by researchers is perhaps the basis for the neglect of the non-financial FPMs since it is grounded on the pay-performance link, which is predominantly investigated quantitatively. This neglect is likely to have been influenced by what prior literature has preferred to use as FPMs. This study has selected one accounting-based and one market-based measure of firm performance to achieve quantitative objectives of this study. This is since the selected JSE firms preferred these as executive KPIs between 2011 and 2020. This might be one of the reasons the results of this study appear to be different from the literature.

7.3. IMPLICATIONS AND RECOMMENDATIONS

The implications of this study are as follows:

7.3.1. Policy implications

RGC was low among the selected JSE-listed firms, one of the recommendations of King IV that requires firms to explain how they considered employees' pay when they determined executive pay has been rarely honoured by the selected JSE-listed firms over the period of the study, which suggests that the attitude of firms towards RG might not be as desired by the regulators. It seems like some form of enforcement is necessary (Elmagrhi 2016:300) accompanied by regular monitoring of firms' compliance levels by external bodies. Equally important is the issue of regulating pay-gaps in SA with regards to their disclosure and levels as RGC has been found to positively correlate with firm performance, meaning that high pay-gaps are more economically beneficial than low ones. If the King Code continues to be voluntary, a way should be found to intensify compliance among JSE-listed firms, which can come in the form of punishing poor compliance (Nazir & Afza 2018:152) or by rewarding good compliance. This would encourage firms to invest in RGC regardless of whether it does not seem to directly bring financial benefits.

7.3.2. Industry implications

It would be beneficial for firms to work with regulators in achieving effective RG even if there is less probability of immediate economic benefit as this would assist in accommodating different stakeholders, which would ultimately lead to firm's long-term sustainability. Also, in the meanwhile, the disclosure of executive-employee pay-gap is not yet regulated in SA, and firms ought to make sufficient attempts to disclose all the information that is needed to determine pay-gap. This would enable potential investors and other stakeholders to make accurate decisions about a particular firm.

7.4. CONTRIBUTION TO KNOWLEDGE

This study has extended the literature and contributed to knowledge as follows:

7.4.1. Empirical contributions

- The first empirical contribution to knowledge has come from the focus of this study which has been on RG compared to the previous studies that have focused on corporate governance generally. Studies on RG are useful as executive pay remains among the top issues locally and internationally.
- Secondly, this study is the first to have constructed a governance index post King IV Report despite the issue of executive pay and its governance being at the centre of most economic activities globally.
- Thirdly, this study has added to a very limited literature on the association between RGC and executive pay as it is the first study in the SA context and one of the very few studies globally that have assessed this connection.
- Fourthly, this study is the first to have tested the moderating effect of RGC (or of governance at all) on the pay-performance link and on the pay-gap to performance link. This despite CG (of which RG is a component) being the pillar of firms as far as management and leadership is concerned.
- Lastly, the study has advanced the limited literature on pay-gap as to the knowledge of the researcher, it is the second study in the SA context and the first to have assessed the relationship between pay-gap and firm performance from the full sample of selected JSE-listed firms.

7.4.2. Policy contributions

The study highlighted that there is a need for regulators to find ways of pushing JSE-listed firms to comply with RG as this is necessary for firms' and economic sustainability. This is since the compliance levels of the selected JSE-listed firms were not impressive while the

connection between RGC and firm performance did not ensure obvious economic benefits. This can be achieved by first monitoring firms' compliance levels and then finding ways to punish firms for poor compliance or rewarding them for good compliance. Also, there is a need to regulate the levels of pay-gaps and specify how they should be disclosed in order to achieve consistency so that investors can easily compare this information for quicker and better-informed decisions.

7.4.3. Methodological and theoretical contributions

This study has unveiled methodological flaws as far as choosing FPMs is concerned in the investigations involving governance, executive pay, firm performance, or pay-performance link. Numerous times executive pay has been flagged as excessive based on the poor link it has mostly shown with firm performance. This link has been predominantly investigated with no consideration of the type and nature of KPIs that firms often choose to measure executives' performance. This is since the researchers mostly rely on the financial and easily measurable non-financial FPMs while KPIs are more unique in type and nature than these preferences. According to the knowledge of the researcher, this exercise is the first of its kind and is necessary for minimising endogeneity issues and aligning research to what is happening in practice.

Measurable KPIs are more inclined to the agency theory since it promotes pay-performance link. This theory has been the foundation of numerous studies involving governance, executive pay, firm performance, and pay-performance link in the past. This study calls for a broader theory perspective to accommodate the type and nature of the prevalent KPIs as one theory is less likely to explain the complex nature of firms and the extent to which they are effective in fairly remunerating their executives.

7.5. STUDY'S DELIMITATIONS

- The study was conducted only in the SA context due to data and time constraints. The study also focused only on the selected JSE-listed firms since their annual reports are available for public access.
- The study has only considered a small fraction of the firms that operate in SA as only 77 of the JSE-listed firms were sampled, firms in the private sector, alternative JSE listing, non-profit firms and state-owned entities were not considered although they are affected by the King Code, this was due to time constraints.
- The study considered one aspect of endogeneity prevalent in governance and executive pay research although there may be other aspects that may be relevant.

- Only compliance that relates to RG rather than the full CG has been investigated as was the focus of this study.
- Also, this study did not attempt to use the detailed non-financial KPIs in its assessment of the relationships stated in the objectives.

7.6. SUGGESTIONS FOR FUTURE RESEARCH

- In the SA context, there is no study that has constructed CG index at large especially post King III and King IV, such study is necessary to give a broader picture of compliance by JSE-listed firms and its influence on firm value.
- More research on pay-gap is necessary in the SA context especially since CG is being advanced and other regulations continue to emerge to reduce it. While on the other hand SA is continuously being rated among the most unequal societies in the world by the World Bank.
- Studies that will consider the types, nature, and depth of the executive KPIs when assessing relationships involving governance, pay, performance, pay-performance link and pay-gap are necessary to check if the results will confirm those of the previous studies.

7.7. CONCLUSION

This chapter presented the summary of results, implications, recommendations, and contribution to knowledge. The study aimed to develop a conceptual model linking RGC, executive pay, firm performance, pay-performance link, and pay-gap on the selected JSE-listed firms between 2011 and 2020. This was to be achieved from the investigation of association between RGC and firm performance, RGC and executive pay, pay-gap, and firm performance with the moderating effect of RGC and from the pay-performance link with the moderating effect of RGC. The results indicate a negative association between RGC and executive pay, a positive connection between RGC and firm performance, a positive moderating effect of RGC on the connection between pay-gap and firm performance and a negative moderating effect of RGC on the pay-performance link. The diagrammatical presentation of the results has been provided in section 6.3 of this chapter.

The thesis statement of this study posits that *High RGC should not be expected to enhance firm performance, improve pay-performance link, and/or reduce executive pay and pay-gap as the focus of RG is to enhance governance of pay, while there are many factors outside RG that can shape these variables.* Indeed, the findings of this study confirm a major part of the thesis statement as RGC has been found to weaken pay-performance link and intensify the

positive relationship between pay-gap and firm performance while also intensifying the amount of executive pay for the selected JSE-listed firms. The only aspect of the thesis statement that has not been confirmed is with regards to the relationship between RGC and firm performance, here the results confirm a positive relationship, which indicates that high RGC tends to improve firm performance.

The agency theory, which puts monitoring (of which RG is part) at the centre when it comes to managing the levels of executive pay and firm performance has been largely rejected. Which probed an interest to investigate the existing literature that has attempted to investigate one or more of the relationships assessed in this study between 2011 and 2020. Upon scrutiny of the literature with regards to FPMs that were mostly preferred by researchers to study the relationships in question against the executives' KPIs of the selected JSE-listed firms. It was found that there are no similarities between FPMs and KPIs as FPMs are predominantly financial, directly measurable, and different from the KPIs which are mostly non-financial, more detailed for direct measurement and unique in type. This suggests that the variables that have been used in research between 2011 and 2020 have been largely incompatible with those that firms use in practice to measure executive performance. This speaks to the endogeneity issue which is known to compromise research principles and weakens research results and/or findings.

This can be linked to the choice of variables being based more on the previous research (Atinc et al 2012:60). Also, it can be linked to over-reliance on the agency theory, which promotes pay-performance link and encourages measurement of variables. This has been dominant even though the executive KPIs for JSE firms have become largely non-financial and more detailed for easy measurement. This calls for a theoretical and methodological review in the investigation of associations involving governance, pay, performance and pay-gap. For instance, one of the alternative theories, namely, the stewardship theory which posits that the interests between managers and shareholders is already aligned, and that firm performance is already at its maximum, has been rarely applied or tested in practice. This encourages one-sidedness as there may be firms whose practices are based on this theory.

REFERENCES

(OECD), O for EC and D. 2021. OECD corporate governance factbook. *OECD*. 252. Available from: https://www.oecd.org/corporate/Corporate-Governance-Factbook.pdf%0Ahttps://www.oecd.org/corporate/corporate-governance-factbook.htm.

Abdallah, W, Goergen, M & O'Sullivan, N. 2015. Endogeneity: How failure to correct for it can cause wrong inferences and some remedies. *British Journal of Management*. 26(4):791–804. doi.org/10.1111/1467-8551.12113.

Abdelmotaal, H & Abdel-Kader, M. 2016. The use of sustainability incentives in executive remuneration contracts: Firm characteristics and impact on the shareholders' returns. *Journal of Applied Accounting Research*. 17(3):311–330. doi.org/10.1108/JAAR-12-2013-0123.

Abudy, M (Meni), Amiram, D, Rozenbaum, O & Shust, E. 2020. Do executive compensation contracts maximize firm value? Indications from a quasi-natural experiment. *Journal of Banking and Finance*. 114:105787.

Adhiambo, DO. 2011. REMUNERATION IN SOUTH AFRICAN STATE OWNED ENTERPRISES : AN Keywords. (October).

Agrawal, A & Cooper, T. 2017. Corporate Governance Consequences of Accounting Scandals: Evidence from Top Management, CFO and Auditor Turnover. *Quarterly Journal of Finance*. 7(1).

Aguinis, H, Edwards, JR & Bradley, KJ. 2016. Improving Our Understanding of Moderation and Mediation in Strategic Management Research. *Organizational Research Methods*. 20(4):665–685. doi.org/10.1177/1094428115627498.

Agyei-Boapeah, H, Ntim, CG & Fosu, S. 2019. Governance structures and the compensation of powerful corporate leaders in financial firms during M&As. *Journal of International Accounting, Auditing and Taxation*. 37:100285. doi.org/10.1016/j.intaccaudtax.2019.100285.

Agyei-Mensah, BK. 2016. Internal control information disclosure and corporate governance: evidence from an emerging market. *Corporate Governance (Bingley)*. 16(1):79–95.

Ahn, JY. 2016. Top executives' pay for long-run performance and corporate governance. *Journal of Applied Business Research*. 32(2):661–670. doi.org/10.19030/jabr.v32i2.9602.

Akbar, S, Poletti-Hughes, J, El-Faitouri, R & Shah, SZA. 2016. More on the relationship between corporate governance and firm performance in the UK: Evidence from the application of generalized method of moments estimation. *Research in International Business and Finance*. 38:417–429.

Akinkoye, EY & Olasanmi, OO. 2014. Corporate governance practice and level of compliance among firms in Nigeria : Industry analysis. *Journal of Business and Retail Management Research*. 9(1):13–25.

Al-Najjar, B. 2017. Corporate governance and CEO pay: Evidence from UK Travel and Leisure listed firms. *Tourism Management*. 60:9–14.

Al-Saadi, H. 2014. Demystifying Ontology and Epistemology in Research Methods. PhD Research Student. University of Sheffield. *ResearchGate*. (February):1–11. Available from: file:///C:/Users/Romeo Ankisiwai/Downloads/DemystifyingOntologyandEpistemologyinresearchmethods.pdf.

Alan, NS, Bardos, KS & Shelkova, NY. 2021. CEO-to-employee pay ratio and CEO diversity. *Managerial Finance*. 47(3):356–382. doi.org/10.1108/MF-03-2020-0107.

Albarracin, D, Johnson, BT, Zanna, MP & Kumkale, TG. 2005. Attitudes: Introduction and scope. In: *Attitudes: Introduction and Scope*. 1–19.

Alissa, W. 2015. Boards' response to shareholders' dissatisfaction: The Case of Shareholders' say on Pay in the UK. *European Accounting Review*. 24(4):727–752.

Allison, P. 2012. When can you safely ignore multicollinearity? In: *Statistical Horisons*. 1–150. Available from: https://statisticalhorizons.com/multicollinearity/#:~:text=Multicollinearity is a common problem,unstable estimates of regression coefficients.

Almalki, S. 2016. Integrating Quantitative and Qualitative Data in Mixed Methods Research—Challenges and Benefits. *Journal of Education and Learning*. 5(3):288.

Almhmoud, A. 2015. The laws and regulations related to remuneration practices: A comparative and analytical investigation into legal aspects. University of Liverpool. Available from: http://repository.liv.ac.uk/2013939/.

Alves, P, Couto, EB & Francisco, PM. 2016. Executive pay and performance in Portuguese listed companies. *Research in International Business and Finance*. 37:184–195.

Ammari, A, Ayed, NBEN & Ellouze, A. 2016. The interaction between Board Independence and CEO entrenchment on Tobin ' s Q. *International Journal of Business & Economic Strategy*. 4(February):1–13.

Anabtawi, I. 2005. Explaining pay without performance: The tournament alternative. *Emory Law Journal*. 54:1157–1602.

Anderson, S. 2018. No CEO should earn 1,000 times than a regular employee. *The Guardian*. 2–4.

Andersson, U, Cuervo-Cazurra, A & Nielsen, BB. 2014. From the editors: Explaining interaction effects within and across levels of analysis. *Journal of International Business Studies*. 45(9):1063–1071. doi.org/10.1057/jibs.2014.50.

Andjelkovic, A, Boyle, G & McNoe, W. 2002. Public disclosure of executive compensation: Do shareholders need to know? *Pacific Basin Finance Journal*. 10(1):97–117. doi.org/10.1016/S0927-538X(01)00034-8.

ArcGIS Pro. No date. Scatter plot matrix. In: *Pro ArcGIS*. 1–3. Available from: https://pro.arcgis.com/en/pro-app/latest/help/analysis/geoprocessing/charts/scatter-plot-matrix.htm.

Arthurs, JD & Busenitz, LW. 2013. The boundaries and limitations of agency theory and stewardship theory in the venture capitalist/entrepreneur relationship. *Research Gate*. (October).

Ashwin, VA. 2015. The relationship between corporate governance and financial performance of companies listed on the JSE Ltd. University of Johannesburg.

Aslam, E, Haron, R & Tahir, MN. 2019. How director remuneration impacts firm performance: An empirical analysis of executive director remuneration in Pakistan. *Borsa Istanbul Review*. 19(2):186–196. doi.org/10.1016/j.bir.2019.01.003.

Assarroudi, A, Heshmati Nabavi, F, Armat, MR, Ebadi, A & Vaismoradi, M. 2018. Directed qualitative content analysis: the description and elaboration of its underpinning methods and data analysis process. *Journal of Research in Nursing*. 23(1):42–55. doi.org/10.1177/1744987117741667.

Ataay, A. 2018. Performance sensitivity of executive pay: the role of ownership structure,

board leadership structure and board characteristics. *Economic Research-Ekonomska Istrazivanja*. 31(1):1152–1168.

Atif, M, Huang, A & Liu, B. 2019. The effect of say on pay on CEO compensation and spill-over effect on corporate cash holdings: Evidence from Australia. *Pacific Basin Finance Journal*. (July 2017):101105. doi.org/10.1016/j.pacfin.2019.01.001.

Atinc, G, Simmering, MJ & Kroll, MJ. 2012. Control variable use and reporting in macro and micro management research. *Organizational Research Methods*. 15(1):57–74. doi.org/10.1177/1094428110397773.

Azarian, R. 2011. Potentials and Limitations of Comparative Method in Social Science. *International Journal of Humanities and Social Science*. 1(4):113–125.

Badgett, ME, Brunarski, KR, Campbell, TC & Harman, YS. 2017. Do directors suffer external consequences for failing to align executive pay practices with shareholder preferences? Evidence from say-on-yay votes. *SSRN Electronic Journal*. doi.org/10.2139/ssrn.3069124.

Bahli, B & Rivard, S. 2003. The information technology outsourcing risk: A transaction cost and agency theory-based perspective. *Journal of Information Technology*. 18(3):211–221.

Bailey, C, Fessler, N & Laird, B. 2019. Performance-based pay, performance monitoring, and dishonest behavior: The plot thickens. *Advances in Management Accounting*. 31:91–112. doi.org/10.1108/S1474-787120190000031005.

Baixauli-Soler, JS & Sanchez-Marin, G. 2014. Executive compensation and corporate governance in Spanish listed firms: a principal–principal perspective. *Review of Managerial Science*. 9(1):115–140. doi.org/10.1007/s11846-014-0122-z.

Baixauli-Soler, JS, Lozano-Reina, G & Sánchez-Marín, G. 2020. Managerial discretion, say on pay, and CEO compensation. *Management Decision*. 59(6):1333–1362. doi.org/10.1108/MD-03-2020-0242.

Balsam, S, Boone, J, Liu, H & Yin, J. 2016. The impact of say-on-pay on executive compensation. *Journal of Accounting and Public Policy*. 35(2):162–191.

Bank, SA & Georgiev, GS. 2019. Securities Disclosure As Soundbite: The Case of CEO Pay Ratios. *SSRN Electronic Journal*. doi.org/10.2139/ssrn.3324882.

Banker, RD, Bu, D & Mehta, MN. 2016. Pay Gap and Performance in China. *Abacus*.

52(3):501–531. doi.org/10.1111/abac.12082.

Barbosa, K, Bucione, A & Souza, AP. 2014. Performance-based compensation vs. Guaranteed compensation: Contractual incentives and performance in the Brazilian banking industry. *Economia Aplicada*. 18(1):5–33.

Barreca, E. 2020. Accountable compensation: The progressive case for stakeholder-focused, board-empowering executive compensation laws. *Yale Journal on Regulation*. 37(1):338–379.

Barros, LABC, Bergmann, DR, Henrique Castro, F & da Silveira, ADM. 2020. Endogeneity in panel data regressions: Methodological guidance for corporate finance researchers. *Revista Brasileira de Gestao de Negocios*. 22(Special Issue):437–461. doi.org/10.7819/rbgn.v22i0.4059.

Bauwhede, H Vander. 2009. On the relation between corporate governance compliance and operating performance. *Accounting and Business Research*. 39(5):497–513. doi.org/10.1080/00014788.2009.9663380.

BBC News. 2016. BP shareholders reject chief Bob Dudley's £14m pay deal. In: *https://www.bbc.com/news/business-36040210*.

Bebchuk, L & Fried, J. 2004. *Pay without performance: The unfulfilled promise of executive compensation*. England: Havard University Press.

Bebchuk, LA & Weisbach, MS. 2010. The state of corporate governance research. *Review of Financial Studies*. 23(3):939–961. doi.org/10.1093/rfs/hhp121.

Beck, AC, Campbell, D & Shrives, PJ. 2010. Content analysis in environmental reporting research: Enrichment and rehearsal of the method in a British-German context. *British Accounting Review*. 42(3):207–222. doi.org/10.1016/j.bar.2010.05.002.

Becker, TE. 2005. Potential problems in the statistical control of variables in organizational research: A qualitative analysis with recommendations. *Organizational Research Methods*. 8(3):274–289. doi.org/10.1177/1094428105278021.

Beckman, R & Cook, R. 1983. Outliers. *Technometrics*. 25(2):119–149.

Belcredi, M, Bozzi, S, Ciavarella, A & Novembre, V. 2014. Say-on-Pay in a Context of Concentrated Ownership. Evidence from Italy. *SSRN Electronic Journal*.

doi.org/10.2139/ssrn.2403886.

Benedetti, AH & Chen, S. 2018. High CEO-to-worker pay ratios negatively impact consumer and employee perceptions of companies. *Journal of Experimental Social Psychology*. 79(September):378–393. doi.org/10.1016/j.jesp.2018.09.003.

Berger, AN & Bonaccorsi di Patti, E. 2006. Capital structure and firm performance: A new approach to testing agency theory and an application to the banking industry. *Journal of Banking and Finance*. 30(4):1065–1102.

Bhatt, PR & Bhatt, RR. 2017. Corporate governance and firm performance in Malaysia. *Corporate Governance (Bingley)*. 17(5):896–912. doi.org/10.1108/CG-03-2016-0054.

Bhuiyan, BU, Roudaki, J & Clark, M. 2013. Corporate governance compliance and discretionary accruals: New Zealand evidence. *Australian Accounting, Business and Finance Journal*. 7(2):101–124.

Bian, H. 2011. Mixed Methods Research (Presentation). In: *http://core.ecu.edu/StatisticsResearch*. 1–85. Available from: http://core.ecu.edu/ofe/StatisticsResearch/mixed methods 10 16 2013.pdf%5Cnhttp://sage-ereference.com/research/n269.xml.

Biggam, J. 2011. *Succeeding With Your Master's Dissertation : A Step-By-Step Handbook, (3rd Edition). Maidenhead, GBR: Open University Press, 2015. ProQuest ebrary. Web. 9 February 2016. Copyright © 2015. Open University Press. All rights reserved.*

Bin, Y & Abbas, Z. 2013. Compliance and multidimensional firm performance: Evaluating the efficacy of rule-based code of corporate governance. *Economic Modelling*. 35(February):565–575.

Bin, L, Chen, J & Ngo, XA. 2020. Revisiting executive pay, firm performance, and corporate governance in China. *Economics, Management, and Financial Markets*. 15(1):9–32. doi.org/10.22381/EMFM15120201.

Binnekade, C, Koppeschaar, Z, Stegmann, N, Rossouw, J & Wright, C. 2015. *Group statements Volume 1: Comprehensive guide to consolidated financial statements*. 17th ed. Lexis Nexis.

Blanes, F, de Fuentes, C & Porcuna, R. 2019. Executive remuneration determinants: New

evidence from meta-analysis. *Economic Research-Ekonomska Istrazivanja*. 0(0):1–23.

Bloom, R. 2017. The Median Employee to CEO Pay Ratio Disclosure Requirement. *2017 Faculty Bibliography. 98*. 34–37. doi.org/10.1177/0886368718756694.

Bognanno, ML. 2001. Corporate Tournaments. *Journal of Labour Economics*. 19(2):290–315.

Boon, J. 2018. Moving the governance of shared service centres (SSCs) forward : juxtaposing agency theory and stewardship theory. *Public Money and Management*. 0962:97–104. doi.org/10.1080/09540962.2018.1407135.

Borthwick, J, Jun, A & Ma, S. 2020. Changing board behaviour: The role of the 'Two Strikes' rule in improving the efficacy of Australian Say-on-Pay. *Accounting and Finance*. 60(S1):827–876. doi.org/10.1111/acfi.12381.

Boslaugh, S. 2007. An introduction to secondary data analysis. *Secondary Data Sources for Public Health*. 1–11. doi.org/10.1017/cbo9780511618802.002.

Bosse, DA & Phillips, RA. 2016. Agency theory and bounded self-interest. *Academy of Management Review*. 41(2):276–297.

Botosan, CA. 1997. Disclosure level and the cost of equity capital. *Accounting Review*. 72(3):323–349.

Bowen, GA. 2009. Document analysis as a qualitative research method. *Qualitative Research Journal*. 9(2):27–40. doi.org/10.3316/QRJ0902027.

Bowlin, KO, Christ, MH & Griffin, JB. 2020. Say-on-pay and the differential effects of voluntary versus mandatory regimes on investor perceptions and behavior. *Journal of Management Accounting Research*. 32(1):11–29. doi.org/10.2308/jmar-52485.

BPP Learning Media. 2017. *CIMA study text: Strategic paper P3 Risk Management*.

Breusch, TS. 1978. Testing for autocorrelation in dynamic linear models. *Australian Economic Papers*. 334–355. doi.org/10.1111/j.1467-8454.1978.tb00635.x.

Brierley, JA. 2017. The role of a pragmatist paradigm when adopting mixed methods in behavioural accounting research. *International Journal of Behavioural Accounting and Finance*. 6(2):140.

Brueckner, JK & Neumark, D. 2014. *Beaches, sunshine, and public sector pay: Theory and evidence on amenities and rent extraction by government workers*. V. 6. doi.org/10.1257/pol.6.2.198.

Brunarski, KR, Campbell, TC & Harman, YS. 2015. Evidence on the outcome of Say-On-Pay votes: How managers, directors, and shareholders respond. *Journal of Corporate Finance*. 30:132–149. doi.org/10.1016/j.jcorpfin.2014.12.007.

Buallay, A, Hamdan, A & Zureigat, Q. 2017. Corporate governance and firm performance: evidence from Saudi Arabia. *Australasian Accounting, Business and Finance Journal*. 11(1):78–98. doi.org/10.14453/aabfj.v11i1.6.

Buck, T, Bruce, A, Main, BGM & Udueni, H. 2003. Long term incentive plans, executive pay and UK company performance. *Journal of Management Studies*. 40(7):1709–1727.

Buck, T, Liu, X & Skovoroda, R. 2008. Top executive pay and firm performance in China. *Journal of International Business Studies*. 39(5):833–850. doi.org/10.1057/palgrave.jibs.8400386.

Bui, T. 2020. Executive compensation and independent directors in Japan. *Annals of Business Administrative Science*. 19(1):13–28.

Burns, N & Minnick, K. 2013. Does say-on-pay matter? Evidence from say-on-pay proposals in the United States. *Financial Review*. 48(2):233–258. doi.org/10.1111/fire.12002.

Bussin, M. 2015. Ceo pay-performance sensitivity in the South African context. *South African Journal of Economic and Management Sciences*. 18(2):232–244. doi.org/10.17159/2222-3436/2015/v18n2a7.

Bussin, M & Blair, C. 2015. Financial indicators of company performance in different industries that affect CEOremuneration in South Africa. *SAJEMS NS*. 18(4):534–550.

Bussin, M & Christos, D. 2018. Implement effective remuneration governance. *HR Future*. (February):36–37.

Bussin, M & Modau, MF. 2015. The relationship between Chief Executive Officer remuneration and financial performance in South Africa between 2006 and 2012. *SA Journal of Human Resource Management*. 13(1):1–18. doi.org/10.4102/sajhrm.v13i1.668.

Cai, J & Walkling, RA. 2011. Shareholders' say on pay: Does it create value? *Journal of*

Financial and Quantitative Analysis. 46(2):299–339. doi.org/10.1017/S0022109010000803.

Çakmakçı, S c, Kemmerich, T, Ahmed, T & Baykal, N. 2020. Online DDoS attack detection using Mahalanobis distance and Kernel-based learning algorithm. *Journal of Network and Computer Applications*. 168(July):102756. doi.org/10.1016/j.jnca.2020.102756.

Carlson, KD & Wu, J. 2012. The Illusion of Statistical Control: Control Variable Practice in Management Research. *Organizational Research Methods*. 15(3):413–435. doi.org/10.1177/1094428111428817.

Carnell, D. 2018. CEO remuneration: tangled top pay? *Institute of Economic Affairs*. 38(1):125–130. doi.org/10.1111/ecaf.12283.

Carter, ME, Li, L, Marcus, AJ & Tehranian, H. 2016. Excess pay and deficient performance. *Review of Financial Economics*. 30:1–10.

Cegarra-Navarro, JG, Soto-Acosta, P & Wensley, AKP. 2016. Structured knowledge processes and firm performance: The role of organizational agility. *Journal of Business Research*. 69(5):1544–1549. doi.org/10.1016/j.jbusres.2015.10.014.

Chalaczkiewicz-Ladna, K. 2019. Failed reform of say on pay in the UK? The future of shareholder engagement with executive pay. *Company Lawyer*. 40(2):47–53.

Chan, HL, Kawada, B, Shin, T & Wang, J. 2020. CEO-employee pay gap and firm R&D efficiency. *Review of Accounting and Finance*. 19(2):271–287. doi.org/10.1108/RAF-10-2018-0207.

Chang, W, Dambra, M, Schonberger, B & Suk, I. 2019. doi.org/10.2139/ssrn.3470215.

Chen, J, Ezzamel, M & Cai, Z. 2011. Managerial power theory , tournament theory , and executive pay in China. *Journal of Corporate Finance*. 17(4):1176–1199.

Cheng, Q, Ranasinghe, T & Zhao, S. 2017. Do high CEO pay ratios destroy firm value? Singapore Management University.

Chenhall, RH & Moers, F. 2007. The issue of endogeneity within theory-based, quantitative management accounting research. *European Accounting Review*. 16(1):173–196. doi.org/10.1080/09638180701265937.

Chin, TY. 2006. Mediator and Moderator Variables in Social Science Research. In: *Research*

Methodology Series. Nebraska Center for Research. 1–29.

Cho, MJ, Ibrahim, S & Yan, Y. 2019. The use of nonfinancial performance measures in CEO bonus compensation. *Corporate Governance: An International Review*. 27(4):301–316.

Choi, AH, Lund, ACW & Schonlau, R. 2020. Golden Parachutes and the Limits of Shareholder Voting. *Vanderbilt Law Review*. 73(1):223–266.

Chu, J, Gupta, A & Livne, G. 2021. Pay regulation–is more better? *Accounting and Business Research*. 51(1):1–35. doi.org/10.1080/00014788.2020.1815515.

Church, RM. 2002. The effective use of secondary data. *Learning and Motivation*. 33(1):32–45. doi.org/10.1006/lmot.2001.1098.

Clark, TS & Linzer, DA. 2015. Should I Use Fixed or Random Effects? *Political Science Research and Methods*. 3(2):399–408. doi.org/10.1017/psrm.2014.32.

Clarke, T. 2004. *Theories of corporate governance: The philosophical foundations of corporate governance*.

Clarkson, PM, Walker, J & Nicholls, S. 2011. Disclosure, shareholder oversight and the pay-performance link. *Journal of Contemporary Accounting and Economics*. 7(2):47–64. doi.org/10.1016/j.jcae.2011.07.001.

Collins, D, Marquardt, BB & Niu, X. 2019. Equity-based incentives and shareholder say-on-pay. *Journal of Business Finance and Accounting*. 46(5–6):739–761. doi.org/10.1111/jbfa.12373.

Collischon, M & Eberl, A. 2020. Let's talk about fixed effects: Let's talk about all the good things and the bad things. *Kolner Zeitschrift fur Soziologie und Sozialpsychologie*. 72(2):289–299. doi.org/10.1007/s11577-020-00699-8.

Compensia Inc. 2010. The Dodd-Frank Act Executive Compensation Provisions – What You Should be Doing Now. *Compensia.com*. 1–6. Available from: https://compensia.com/the-dodd-frank-act-executive-compensation-provisions-what-you-should-be-doing-now/.

Connelly, LM. 2008. Pilot studies. *Research Roundtable*. 17(6):411–412. doi.org/10.1145/3081016.3081020.

Conyon, MJ. 2001. The disclosure of UK boardroom pay: The March 2001 DTI proposals.

Corporate Governance: An International Review. 9(4):276–285. doi.org/10.1111/1467-8683.00255.

Conyon, MJ & He, L. 2016. Executive Compensation and Corporate Fraud in China. *Journal of Business Ethics*. 134(4):669–691. doi.org/10.1007/s10551-014-2390-6.

Conyon, MJ & Read, LE. 2000. The CEO-To-Employee Pay Gap: Evidence from UK Firms. *SSRN Electronic Journal*. (July):1–22.

Conyon, MJ, Peck, SI & Sadler, G V. 2001. Corporate tournaments and executive compensation: Evidence from the UK. *Strategic Management Journal*. 22(8):805–815. doi.org/10.1002/smj.169.

Cook, WD, Ramón, N, Ruiz, JL, Sirvent, I & Zhu, J. 2019. DEA-based benchmarking for performance evaluation in pay-for-performance incentive plans. *Omega (United Kingdom)*. 84:45–54.

Correa, R & Lel, U. 2016. Say on pay laws , executive compensation , pay slice , and firm valuation around the world R. *Journal of Financial Economics*. 122(3):500–520.

Cory, M. 2021. Unweighted index. In: *https://www.investopedia.com/terms/u/unweightedindex.asp*. Investopedia. Available from: https://www.investopedia.com/terms/u/unweightedindex.asp.

Crafford, WL. 2015. Thesis presented in fulfilment of the requirements for the degree of Master of Commerce at the Faculty of Economic and Management Sciences at Stellenbosch University. (December).

Craighead, J, Magnan, M & Thorne, L. 2004. The impact of mandated disclosure on performance-based CEO compensation. 1–34.

Crawford, S, Nelson, KK & Rountree, B. 2016. Mind the Gap: CEO-Employee Pay Ratios and Shareholder Say-on-Pay Votes. *SSRN Electronic Journal*. 1–42.

Creswell, JW. 2014. *Research design: Qualitative, quantitative and mixed method approaches*. forth ed. V. Knight, J. Young, K. Koscielak, B. Bauhaus, M. Markanich, & A. Hutchinson, Eds. California: Sage Publications Inc.

Cullen, M, Kirwan, C & Brennan, N. 2007. Comparative analysis of corporate governance theory: The agency-stewardship Continuum. In: *Annual Conference of the Irish Accounting &*

Finance Association. 1–51.

Cuñat, V, Giné, M & Guadalupe, M. 2016. Say Pays! Shareholder Voice and Firm Performance. *Review of Finance*. 20(5):1799–1834.

Davis, J, Frankforter, S, Vollrath, D & Hill, V. 2012. An empirical test of stewardship theory. *Journal of Business & Leadership*. 3(1):40–50.

Davis, JH, Schoorman, DF & Donaldson, L. 1997. Toward a stewardship theory of management. *Academy of Management Review*. 22(1):20–47.

Dawson, JF. 2014. Moderation in management research: What, why, when and how. *Journal of Business and Psychology*. 29(1):1–19. doi.org/10.1007/s.

Delman, JR. 2010. Structuring say-on-Pay: comparative look at global variations in shareholder voting on executive compensation. *Columbia Business Law Review*. 1:583–631.

Deschenes, S, Boubacar, H, Rojas, M & Morris, T. 2015. Is top-management remuneration influenced by board characteristics? *International Journal of Accounting and Information Management*. 23(1):60–79.

Desfontaines, PG. 2018. Chief Executive Officer remuneration and financial performance of Australian and South African publicly listed companies.

Detthamrong, U, Chancharat, N & Vithessonthi, C. 2017. Corporate governance, capital structure and firm performance: Evidence from Thailand. *Research in International Business and Finance*. 42(June):689–709.

Deutscher Corporate Governance Kodex. 2019. German corporate governance code. *Cross-Border Investments with Germany - Tax, Legal and Accounting*. 1–18. doi.org/10.9785/9783504384555-045.

Dhliwayo, D V. & Bussin, MHR. 2019. Accounting for uncontrollable factors in executive incentive scheme designs. *SA Journal of Human Resource Management*. 17:1–14. doi.org/10.4102/sajhrm.v17i0.1084.

Diaconis, P & Efron, B. 1985. Testing for independence in a two-way table: New interpretations of the Chi-square statistic. *Annals of Statistics*. 13(3):845–874.

Dicke, LA & Ott, JS. 2002. A test: Can stewardship theory serve as a second conceptual

foundation for accountability methods in contracted human services. *International Journal of Public Administration*. 25(4):463–487. doi.org/10.1081/PAD-120013252.

Dieronitou, I. 2014. the Ontological and Epistemological Foundations of Qualitative and Quantitative Approaches To Research. *International Journal of Economics, Commerce and Management United*. II(10):1–17. Available from: http://ijecm.co.uk/.

DiMaggio, PJ & Powell, WW. 1983. The iron cage revisited: Institutional isomorphism and collective tationality in organizational fields. *American Sociological Review*. 48(2):147–160.

Dogan, M, Elitas, BL, Agca, V & Ogel, S. 2013. The Impact of CEO Duality on Firm Performance: Evidence from Turkey. *International Journal of Business and Social Science*. 4(2):149–155. Available from: http://www.ijbssnet.com/journals/Vol_4_No_2_February_2013/16.pdf.

Donaldson, L & Davis, JH. 1991. Stewardship Theory or Agency Theory: CEO governance and shareholder returns. *Australian journal of Management*. 16(June 1991):49–66.

Dormann, CF, Elith, J, Bacher, S, Buchmann, C, Carl, G, Carré, G, Marquéz, JRG, Gruber, B, et al. 2013. Collinearity: A review of methods to deal with it and a simulation study evaluating their performance. *Ecography*. 36(1):27–46. doi.org/10.1111/j.1600-0587.2012.07348.x.

Dube, S & Maroun, W. 2017. Corporate social responsibility reporting by South African mining companies: Evidence of legitimacy theory. *South African Journal of Business Management*. 48(1):23–34. doi.org/10.4102/sajbm.v48i1.17.

Dumay, J, Torre, M La & Farneti, F. 2019. Developing trust through stewardship. *Journal of Intellectual Capital*. 20(1):11–39.

Dzingai, I & Fakoya, MB. 2017. Effect of corporate governance structure on the financial performance of johannesburg stock exchange (JSE)-listed mining firms. *Sustainability (Switzerland)*. 9(6):1–16. doi.org/10.3390/su9060867.

Eberly College of Science. 2022. Log-transforming both the predictor and response. In: *STAT 501 Regression Methods*. 1–10.

Edmans, A, Gabaix, X & Jenter, D. 2017. *Executive compensation: A survey of theory and evidence*. Available from: http://www.nber.org/papers/w23596.

Eisenhardt, KM. 1989. Agency theory: An assessment and review. *Academy of Management*. 14(1):57–74.

Eklund, MMA. 2015. CEO Compensation of listed companies in Switzerland: Empirical studies on firm financial performances, risk, and peer group comparisons. University of St. Gallen.

El-Sayed, NM. 2013. An Examination of Executive Directors ' Remuneration in FTSE 350 Companies. University of Exeter.

Elmagrhi, MHA. 2016. Corporate Governance, Voluntary Compliance, Corporate Performance and Executive Pay: Evidence from the UK. University of Huddersfield.

Elmagrhi, MH, Ntim, CG, Wang, Y, Abdou, HA & Zalata, AM. 2018. Corporate Governance Disclosure Index–Executive Pay Nexus: The Moderating Effect of Governance Mechanisms. *European Management Review*. 17(1):121–152.

Elo, S & Kyngäs, H. 2008. The qualitative content analysis process. *Journal of Advanced Nursing*. 62(1):107–115. doi.org/10.1111/j.1365-2648.2007.04569.x.

Elst, C Van Der & Lafarre, A. 2017. Shareholder Voice on Executive Pay : A Decade of Dutch Say on Pay. *European Business Organization Law Review*. 18(1):51–83.

Van der Elst, C. 2017. Answering the say for no pay. In: *Innovations in Corporate Governance: Global Perspectives*. 151–190. doi.org/10.4337/9781786432858.00016.

Elvin, P & Hamid, NINBA. 2015. Ownership Structure, Corporate Governance, and Firm Performance: Evidence From Turkey. *International Journal of Economics and Financial Issues*. 6:120.

Ely, KM. 1991. Interindustry Differences in the Relation between Compensation and Firm Performance Variables. *Journal of Accounting Research*. 29(1):37.

Fabbri, F & Marin, D. 2016. What Explains the Rise in Executive Pay in Germany? A Panel Data Analysis for 1977-2009. *Scandinavian Journal of Economics*. 118(2):235–263.

De Falco, ES & Renzi, A. 2007. Agency theory, stewardship theory and residual right: Logics and interpretative models. *Tourism and Management*. 27–41.

Fall. 2008. Heteroskedasticity and autocorrelation. In: *Macroeconometrics and Time Series*

Analysis. 1–17. doi.org/10.1057/9780230280830_15.

Fan, H, Song, X & Zhou, L. 2019. Executive-employee pay gap and academic directors – A Chinese Study. In: *2019 Canadian Academic Accounting Association (CAAA) Annual Conference*. Social Science Research Network. 1–33.

Al Farooque, O, Buachoom, 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(4):1111–1164. doi.org/10.1007/s10490-018-09640-2.

Feng, Y, Kristensen, SR, Lorgelly, P, Meacock, R, Sanchez, MR, Siciliani, L & Sutton, M. 2019. Pay for performance for specialised care in England: Strengths and weaknesses. *Health Policy*. 123(11):1036–1041. doi.org/10.1016/j.healthpol.2019.07.007.

Ferri, F & Göx, RF. 2018. Executive compensation, corporate governance, and say on pay. *Foundations and Trends in Accounting*. 12(1):1–103.

Field, A. 2018. *Discovering statistics using IBM SPSS Statistics*. 5th ed. London: Sage Edge.

Filatotchev, I & Wright, M. 2017. Methodological issues in governance research: An editor's perspective. *Corporate Governance: An International Review*. 25(6):454–460.

Filzmoser, P. 2004. A multivariate outlier detection method. In: *Seventh International Conference on Computer Data Analysis and Modeling*. V. 1. 1–5. Available from: http://computerwranglers.com/com531/handouts/mahalanobis.pdf.

Financial Reporting Council. 2018. The UK corporate governance code. *UK Government*. 1–17. doi.org/10.1093/jn/44.3.433.

Fisch, J, Palia, D & Davidoff Solomon, S. 2018. Is Say on Pay All About Pay? The Impact of Firm Performance. *Harvard Business Law Review*. 8(17–39):101.

Flora, DB, LaBrish, C & Chalmers, RP. 2012. Old and new ideas for data screening and assumption testing for exploratory and confirmatory factor analysis. *Frontiers in Psychology*. 3(MAR):1–21. doi.org/10.3389/fpsyg.2012.00055.

De Franco, G, Hope, OK & Larocque, S. 2013. The effect of disclosure on the pay-performance relation. *Journal of Accounting and Public Policy*. 32(5):319–341. doi.org/10.1016/j.jaccpubpol.2013.06.007.

Frazier, PA, Tix, AP & Barron, KE. 2004. Testing moderator and mediator effects in counseling psychology research. *Journal of Counseling Psychology*. 51(1):115–134. doi.org/10.1037/0022-0167.51.1.115.

Frost, J. 2021. Guidelines for removing and handling outliers in data. In: *Statistics by Jim*. Online. Available from: https://statisticsbyjim.com/basics/remove-outliers/.

Gaitán, S, Herrera-Echeverri, H & Pablo, E. 2018. How corporate governance affects productivity in civil-law business environments: Evidence from Latin America. *Global Finance Journal*. 37(July 2017):173–185.

Gerged, AM, Beddewela, E & Cowton, CJ. 2020. Is corporate environmental disclosure associated with firm value? A multicountry study of Gulf Cooperation Council firms. *Business Strategy and the Environment*. 30(1):185–203. doi.org/10.1002/bse.2616.

Gerhart, B. 2017. *Incentives and pay for performance in the workplace*. V. 4. Elsevier Ltd. doi.org/10.1016/bs.adms.2017.02.001.

Gill, A & Mathur, N. 2011. Board Size, CEO Duality, and the Value of Canadian Manufacturing Firms. *Journal of Applied Finance & Banking*. 1(3):1–13.

Gilsdorf, KF & Sukhatme, VA. 2011. Tournament incentives and match outcomes in women ' s professional tennis Tournament incentives and match outcomes in women ' s professional tennis. *Applied Economics*. 40(2405–2412). doi.org/10.1080/00036840600949512.

Glinkowska, B & Kaczmarek, B. 2015. Classical and modern concepts of corporate governance (Stewardship theory and agency theory). *Management*. 19(2):84–92.

Goertz, G & Mahoney, J. 2012. Concepts and measurement: Ontology and epistemology. *Social Science Information*. 51(2):205–216. doi.org/10.1177/0539018412437108.

Gómez-Bezares, F, Przychodzen, W & Przychodzen, J. 2019. Corporate sustainability and CEO-employee pay gap-buster or booster? *Sustainability (Switzerland)*. 11(21):1–15.

González, P & Orbe, S. 2014. Heteroskedasticity and Autocorrelation Corrections. In: *Campus of International Excellence*. 1–39. doi.org/10.1057/9781137336583.0783.

Gordon, LA, Loeb, MP & Tseng, CY. 2009. Enterprise risk management and firm performance: A contingency perspective. *Journal of Accounting and Public Policy*. 28(4):301–327. doi.org/10.1016/j.jaccpubpol.2009.06.006.

Graefe-Anderson, R, Pyo, U & Zhu, B. 2018. Does CEO compensation suppress employee wages? *Review of Accounting and Finance*. 17(4):426–452.

Grant, C & Osanloo, A. 2014. Understanding, Selecting, and Integrating a Theoretical Framework in Dissertation Research: Creating the Blueprint for Your “House”. *Administrative Issues Journal Education Practice and Research*. 12–26.

Green, CA, Duan, N, Gibbons, RD, Hoagwood, KE, Palinkas, LA & Wisdom, JP. 2016. Approaches to Mixed Methods Dissemination and Implementation Research: Methods, Strengths, Caveats, and Opportunities. *HHS Public Access*. 42(5):508–523.

Greener, R. 2020. Stop testing for normality. In: *Towards Data Science*. Online. Available from: https://towardsdatascience.com/stop-testing-for-normality-dba96bb73f90.

Grosman, A, Aguilera, R V. & Wright, M. 2019. Lost in translation? Corporate governance, independent boards and blockholder appropriation. *Journal of World Business*. 54(4):258–272. doi.org/10.1016/j.jwb.2018.09.001.

Grundei, J. 2008. Are managers agents or stewards of their principals? Logic, critique, and reconciliation of two conflicting theories of corporate governance. *Journal fur Betriebswirtschaft*. 58(3):141–166. doi.org/10.1007/s11301-008-0038-2.

Guillet, BD, Seo, K, Kucukusta, D & Lee, S. 2013. CEO duality and firm performance in the U.S. restaurant industry: Moderating role of restaurant type. *International Journal of Hospitality Management*. 33(1):339–346. doi.org/10.1016/j.ijhm.2012.10.004.

Guo, T. 2019. Does the regional sense of social fairness really narrow the executive-employee pay gap? *Modern Economy*. 10(06):1558–1580.

Gupta, P & Sharma, AM. 2014. A Study of the Impact of Corporate Governance Practices on Firm Performance in Indian and South Korean Companies. *Procedia - Social and Behavioral Sciences*. 133:4–11. doi.org/10.1016/j.sbspro.2014.04.163.

Hail, L, Tahoun, A & Wang, C. 2018. Corporate Scandals and Regulation. *Journal of Accounting Research*. 56(2):617–671.

Halcomb, EJ & Hickman, L. 2015. Mixed methods research Mixed methods research Recommended Citation Recommended Citation. *Nursing Standard: promoting excellence in nursing care*. 29(32):41–47. Available from:

https://ro.uow.edu.au/smhpapershttps://ro.uow.edu.au/smhpapers/2656.

Harkin, SM, Mare, DS & Crook, JN. 2020. Independence in bank governance structure: Empirical evidence of effects on bank risk and performance. *Research in International Business and Finance*. 52(November 2019):1–21.

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.

Hassan, MK & Halbouni, SS. 2013. Corporate governance, economic turbulence and financial performance of UAE listed firms. *Studies in Economics and Finance*. 30(2):118–138. doi.org/10.1108/10867371311325435.

Hassen, R Ben, El Ouakdi, J & Omri, A. 2015. Executive compensation and ownership structure. *Journal of Applied Business Research*. 31(2):593–609.

Hayes, AF. 2018. *Introduction to mediation, moderation, and conditional process analysis*. Guilford Publications.

He, L & Fang, J. 2016. Subnational institutional contingencies and executive pay dispersion. *Asia Pacific Journal of Management*. 33(2):371–410. doi.org/10.1007/s10490-015-9429-9.

Heath, J. 2009. The Uses and Abuses of Agency Theory. *Business Ethics Quarterly*. 19(4):497–528.

Hecht, K. 2021. 'It's the value that we bring': performance pay and top income earners' perceptions of inequality. *Socio-Economic Review*. 00(0):1–26. doi.org/10.1093/ser/mwab044.

Hemphill, TA. 2019. Say-On-Pay Voting: A Five-Year Retrospective. *Business and Society Review*. 124(1):63–71. doi.org/10.1111/basr.12163.

Hengartner, L. 2006. Explaining Executive Pay: The roles of managerial power and complexity. *Explaining Executive Pay: The roles of managerial power and complexity*. (3217):1–204. doi.org/10.1007/978-3-8350-9391-1.

Hernandez, M. 2012. Toward an understanding of the psychology of stewardship. *Academy of Management Review*. 37(2):172–193.

Hill, JG. 2002. Regulatory responses to global corporate scandals. *Wisconsin International*

Law Journal. 152(20):367–416.

Hill, MS, Lopez, TJ & Reitenga, AL. 2016. CEO excess compensation: The impact of firm size and managerial power. *Advances in Accounting*. 33:35–46. doi.org/10.1016/j.adiac.2016.04.007.

Hofstee, E. 2015. *Constructing a good dissertation: A practial guide to finishing a masters, MBA or PhD on schedule*.

Holmstrom, B. 2017. Pay for performance and beyond. *American Economic Review*. 107(7):1753–1777. doi.org/10.1257/aer.107.7.1753.

Hooghiemstra, R, Kuang, YF & Qin, B. 2017. Does obfuscating excessive CEO pay work? The influence of remuneration report readability on say-on-pay votes. *Accounting and Business Research*. 47(6):695–729.

Hopkins, M & Ebrahimi, L. 2017. doi.org/10.1108/s0190-1281(2011)0000031003.

Hou, W, Priem, RL & Goranova, M. 2015. Does one size fit all? Investigating pay–future performance relationships over the “Seasons” of CEO tenure. *Journal of Management*. 43(3):864–891. doi.org/10.1177/0149206314544744.

Hox, JJ & Boeije, HR. 2005. Data Collection, Primary vs. Secondary. *Encyclopedia of Social Measurement*. 1:593–599. doi.org/10.1016/B0-12-369398-5/00041-4.

Hsieh, HF & Shannon, SE. 2005. Three approaches to qualitative content analysis. *Qualitative Health Research*. 15(9):1277–1288. doi.org/10.1177/1049732305276687.

Hughen, L, Malik, M & Shim, ED. 2019. The impact of Sarbanes–Oxley and Dodd–Frank on executive compensation. *Journal of Applied Accounting Research*. 20(3):243–266. doi.org/10.1108/JAAR-01-2018-0015.

Hurlin, C. 2018. Advanced Econometrics II. University of Orléans.

Ilaboya, OJ & Ohiokha, IF. 2016. Firm Age, Size and Profitability Dynamics: A Test of Learning by Doing and Structural Inertia Hypotheses. *Business and Management Research*. 5(1).

Iliev, P & Vitanova, S. 2017. The Effect of Say-on-Pay vote in the U.S. Pennsylvania State University.

Institute of Directors South Africa. 2009. King report on governance for South Africa 2009. *King III Report on Corporate Governance for South Africa*. 1–140.

Institute of Directors South Africa. 2016. Report on corporate governance for South Africa 2016. *King IV Report on Corporate Governance for South Africa*. 1–121.

Iyengar, RJ & Zampelli, EM. 2009. Self-selection, endogeneity, and the relationship between ceo duality and firm performance. *Strategic Management Journal*. 30(10):1092–1112. doi.org/10.1002/smj.776.

Jacoby, L & Siminoff, LA. 2008. *Empirical methods for bioethics: A primer*. V. 11. doi.org/10.1016/S1479-3709(07)11010-4.

Jarque, CM & Bera, AK. 1980. Efficient tests for normality, homoscedasticity and serial independence of regression residuals. *Economics*. 255–259.

Jensen, MC. 1994. Self-Interest, Altruism, Incentives, and Agency Theory. *Journal of Applied Corporate Finance*. 7(2):1–15. doi.org/10.1111/j.1745-6622.1994.tb00404.x.

Jensen, MC & Meckling, WH. 1976. Theory of the firm: Managerial behavior, agency costs and ownership structure. *Journal of Financial Economics*. 3:305–360.

Jensen, MC, Murphy, KJ & Wruck, EG. 2005. Remuneration: Where We've Been, How We Got to Here, What are the Problems, and How to Fix Them. *SSRN Electronic Journal*. (July). doi.org/10.2139/ssrn.561305.

Jentsch, V. 2015. Management compensation in Switzerland: Say-on-pay votes, bonus bans, and salary caps. *European Business Law Review*. 26(5):733–742.

Ji, YY & Oh, WY. 2014. An integrative model of diffusion and adaptation of executive pay dispersion. *Journal of Managerial Issues*. 26(1):70–85.

Jiang, H & Zhang, H. 2018. Regulatory restriction on executive compensation, corporate governance and firm performance Evidence from China. *Asian Review of Accounting*. 26(1):131–152. doi.org/10.1108/ARA-07-2016-0080.

Jiang, W, Lin, B, Liu, Y & Xu, Y. 2019. Chairperson collectivism and the compensation gap between managers and employees: Evidence from China. *Corporate Governance: An International Review*. 27(4):261–282.

Jiraporn, P, Miller, GA, Yoon, SS & Kim, YS. 2008. Is earnings management opportunistic or beneficial? An agency theory perspective. *International Review of Financial Analysis*. 17(3):622–634. doi.org/10.1016/j.irfa.2006.10.005.

Johnston, MP. 2014. Secondary data analysis: A method of which the time has come. *Qualitative and Quantitative Methods in Libraries (QQML)*. (3):619–626. doi.org/10.1159/000479695.

Jones, V & Government, UK. 2017. Ruminating on remuneration governance or simply. (278):10–12.

Jouber, H & Fakhfakh, H. 2012. Pay for luck: New evidences from the institutional determinants of CEOs' compensation. *International Journal of Law and Management*. 54(6):485–507. doi.org/10.1108/17542431211281963.

Junyong, I. 2017. Introduction of a pilot study. *Korean Journal of Anesthesiology*. 70(6):601–605.

Kale, E, Aknar, A & Başar, Ö. 2019. Absorptive capacity and firm performance: The mediating role of strategic agility. *International Journal of Hospitality Management*. 78(September 2018):276–283. doi.org/10.1016/j.ijhm.2018.09.010.

Kanapathippillai, S, Johl, SK & Wines, G. 2016. Remuneration committee effectiveness and narrative remuneration disclosure. *Pacific Basin Finance Journal*. 40:384–402. doi.org/10.1016/j.pacfin.2016.02.006.

Kanapathippillai, S, Gul, F, Mihret, D & Muttakin, MB. 2019. Compensation committees, CEO pay and firm performance. *Pacific Basin Finance Journal*. 57(July):101187.

Kanapathippillai, S, Mihret, D & Johl, S. 2019. Remuneration Committees and Attribution Disclosures on Remuneration Decisions: Australian Evidence. *Journal of Business Ethics*. 158(4):1063–1082.

Kang, LS & Nanda, P. 2018. What determines the disclosure of managerial remuneration in India? *Journal of Financial Reporting and Accounting*. 16(1):2–23. doi.org/10.1108/JFRA-04-2015-0050.

Kanzow, WP. 2014. Remuneration governance in Germany and the United Kingdom. Durham University. Available from: Durham E-thesis.

Kaplan Financial Limited. 2019. *CIMA official study text: Financial strategy, strategic level F3*. Kaplan Publishers.

Kashif, A & Lone, RR. 2018. Do corporate governance mechanism influence CEO's compensation? An evidence from Pakistan's banking sector. *Journal of Organisational Studies and Innovation*. 5(2):26–48. doi.org/10.1002/ecy.2047.

Kaspereit, T, Lopatta, K & Onnen, D. 2017. Shareholder value implications of compliance with the German Corporate Governance Code. *Managerial and Decision Economics*. 38(2):166–177.

Kazan, E. 2016. The impact of CEO compensation on firm performance in Scandinavia. In: *The impact of CEO compensation on firm performance in Scandinavia*. University of Twente.

Keay, A. 2017. Stewardship theory: Is board accountability necessary ? *International Journal of Law and Management*. 59(6):1292–1314.

Kecskes, A & Halasz, V. 2014. Performance based compensation–A practical guidance on remuneration of corporate executives. *Studia Prawno-ekonomiczne*. 69–91.

Kelly, K & Seow, JL. 2016. Investor reactions to company disclosure of high CEO pay and high CEO-to-employee pay ratio: An experimental investigation. *Journal of Management Accounting Research*. 28(1):107–125.

Kent, P, Kercher, K & Routledge, J. 2018. Remuneration committees, shareholder dissent on CEO pay and the CEO pay–performance link. *Accounting and Finance*. 58(2):445–475.

Kercher, K. 2013. A Study of Board Remuneration Committees : Structure and Effectiveness. (April).

Kew, J & Alex, W. 2017. *Financial Accounting: An introduction*. Oxford University Press.

Kim, K, Al-shammari, HA, Kim, B & Lee, S. 2009. CEO duality leadership and corporate diversi fi cation behavior. 62:1173–1180.

Kim, SY, Lee, KR & Shin, HH. 2017. The enhanced disclosure of executive compensation in Korea. *Pacific Basin Finance Journal*. 43:72–83.

Kimbro, MB & Xu, D. 2016. Public policy shareholders have a say in executive compensation : Evidence from say-on-pay in the United States. *Journal of Accounting and*

Public Policy. 35(1):19–42.

Kioya, E. 2020. Autocorrelation, heteroscedasticity, and multicollinearity. In: *https://ehikioya.com/forums/topic/autocorrelation-heteroscedasticity-and-multicollinearity/*.

Kirsten, E & Du Toit, E. 2018. The relationship between remuneration and financial performance for companies listed on the Johannesburg stock exchange. *South African Journal of Economic and Management Sciences*. 21(1):1–10.

Kivunja, C & Kuyini, AB. 2017. Understanding and applying research paradigms in educational contexts. *International Journal of Higher Education*. 6(5):26. doi.org/10.5430/ijhe.v6n5p26.

Krasnikova, N. 2014. Executive remuneration, financial performance and corporate governance in UK and Spanish listed firms. Aston University.

Kubo, K. 2000. The Determinants of executive compensation and its effect on company performance in Japan and in the UK. Bible London University.

Kuppelwieser. 2011. Stewardship behavior and creativity. *Management Review*. 22(3):274–295.

Laksmana, I. 2008. Corporate board governance and voluntary disclosure of executive compensation practices. *Contemporary Accounting Research*. 25(4):1147–1182. doi.org/10.1506/car.25.4.8.

Lan, LL & Heracleous, L. 2010. Rethinking agency theory: The view from law. *Academy of Management Review*. 35(2):294–314.

Langeni, P. 2018. The value of corporate governance: a comparison between the perceived value of King III and King II. (January):1–258. Available from: https://repository.up.ac.za/bitstream/handle/2263/65491/Langeni_Value_2018.pdf?sequence=1&isAllowed=y.

Larmou, S & Vafeas, N. 2010. The relation between board size and firm performance in firms with a history of poor operating performance. *Journal of Management and Governance*. 14(1):61–85. doi.org/10.1007/s10997-009-9091-z.

Lee, GJ. 2017. Transcending paradox in the realm of South African executive pay. In: *Acta Commercii*. V. 16. doi.org/10.4102/ac.v16i2.418.

Lee, KW, Lev, B & Yeo, GHH. 2005. Executive pay dispersion, corporate governance and firm performance.

Lehn, K. 2018. Corporate governance, agility, and survival. *International Journal of the Economics of Business*. 25(1):65–72. doi.org/10.1080/13571516.2017.1396661.

Lemma, TT, Mlilo, M & Gwatidzo, T. 2020. Board remuneration, directors' ownership and corporate performance: the South African evidence. *International Review of Applied Economics*. 34(4):491–511. doi.org/10.1080/02692171.2020.1773654.

Leslie, O & Robin, H. 2002. Data Screening : Essential Techniques for Data Review and Preparation. *the Southwest Educational Research Association*. (February):1–39.

Li, Z. 2010. Pay gap, corporate Governance and firm peformance. 1–54.

Li, Z. 2016. Executive Remuneration and Its Regulation. (October). Available from: http://etheses.whiterose.ac.uk/id/eprint/16609.

Li, H, Henry, D & Wu, X. 2019. The effects of accounting conservatism on executive compensation. *International Journal of Managerial Finance*. 16(3):393–411. doi.org/10.1108/IJMF-07-2019-0262.

Li, Z, Crook, J, Andreeva, G & Tang, Y. 2020. Predicting the risk of financial distress using corporate governance measures. *Pacific Basin Finance Journal*. (September 2019):101334. doi.org/10.1016/j.pacfin.2020.101334.

Liang, Y, Moroney, R & Rankin, M. 2020. Say-on-pay judgements: The two-strikes rule and the pay-performance link. *Accounting and Finance*. 60(S1):943–970.

Lin, YF, Yeh, YMC & Shih, YT. 2013. Tournament theory's perspective of executive pay gaps. *Journal of Business Research*. 66(5):585–592.

Lindqvist, C & Mijovski, D. 2012. Does agency theory or stewardship theory apply to the venture capitalist-entrepreneur relationship? Goteborgs University.

List Corp. 2021. JSE listed firms: Main exchange. In: *https://www.listcorp.com/jse/*.

Liu, P, Hosain, MS & Li, L. 2020. *Does the compensation gap between executives and staffs influence future firm performance? The moderating roles of managerial power and overconfidence*. V. 55. doi.org/10.2478/ijme-2019-0025.

Lock, I & Seele, P. 2015. Quantitative content analysis as a method for business ethics research. *Business Ethics*. 24(S1):S24–S40. doi.org/10.1111/beer.12095.

Loh, J. 2017. Could the pay ratio disclosure backfire? Examining the effects of the SEC's pay ratio disclosure rule. *Texas A&M Law Review*. 4(3):417–450.

Long, TD. 2016. Executive compensation, firm performance, and net community benefits within nonprofit urban hospitals. Walden University.

Lozano-Reina, G & Sánchez-Marín, G. 2020. Say on pay and executive compensation: A systematic review and suggestions for developing the field. *Human Resource Management Review*. 30(2):100683. doi.org/10.1016/j.hrmr.2019.01.004.

Luo, L. 2006. Corporate governance and firm performance: Evidence from the UK using corporate governance scorecard.

Luo, J, Xiang, Y & Zhu, R. 2020. When Are Pay Gaps Good or Bad for Firm Performance? Evidence from China. *Management and Organization Review*. 1–27. doi.org/10.1017/mor.2019.42.

Maas, K & Rosendaal, S. 2016. Sustainability Targets in Executive Remuneration: Targets, Time Frame, Country and Sector Specification. *Business Strategy and the Environment*. 25(6):390–401. doi.org/10.1002/bse.1880.

Madanoglu, M, Kizildag, M & Ozdemir, O. 2018. Which bundles of corporate governance provisions lead to high firm performance among restaurant firms? *International Journal of Hospitality Management*. 72(April 2017):98–108. doi.org/10.1016/j.ijhm.2018.01.006.

Madhani, P. 2009. Strategic compensation plan: Rebalancing fixed and variable pay. In: *Seventh AIMS International Conference on Manament*. 1–4. Available from: https://www.researchgate.net/publication/45144246_Strategic_Compensation_Plan_Rebalancing_Fixed_and_Variable_Pay.

Madison, KJ. 2014. Agency theory and stewardship theory integrated , expanded, and bounded by context: An empirical investigation of structure, behavior and performance within family firms. University of Tennessee. Available from: http://trace.tennessee.edu/utk_graddiss/2711.

Magang, TIT. 2012. Culture and corporate governance in South Africa. University of

Bradford. doi.org/10.1007/s40093-015-0101-7.

Magnan, M & Martin, D. 2019. Executive Compensation and Employee Remuneration: The Flexible Principles of Justice in Pay. *Journal of Business Ethics*. 160(1):89–105.

Malik, MS & Makhdoom, DD. 2016. Does corporate governance beget firm performance in Fortune Global 500 companies? *Corporate Governance (Bingley)*. 16(4):747–764. doi.org/10.1108/CG-12-2015-0156.

Manders, T. 2012. Executive compensation structure and company performance. Available from: http://arno.uvt.nl/show.cgi?fid=129620.

Mangen, C & Magnan, M. 2012. “Say on pay”: A wolf in sheep’s clothing. *Academy of Management Perspectives*. May:86–104. doi.org/10.1136/bmj.330.7494.744.

Mans-Kemp, N & Viviers, S. 2018. Executive performance evaluation and remuneration: Disclosure and practices of selected listed South African companies (2002−2015). *South African Journal of Accounting Research*. 32(2–3):154–173. doi.org/10.1080/10291954.2018.1465149.

Mans-Kemp, N, Erasmus, PD & Viviers, S. 2017. Does investing in sound corporate governance pay? A South African study. *South African Journal of Business Management*. 48(2):33–43. doi.org/10.4102/sajbm.v48i2.26.

Marais, A. 2018. Remuneration committee independence and CEO pay in the South African consumer and technology-related sectors. *Southern African Journal of Accountability and Auditing Research*. 20(1):43–55.

Marais, A & Strydom, B. 2018. Remuneration committee independence and CEO pay in the South African consumer and technology-related sectors. *Southern African Journal of Accountability and Auditing Research*. 20(1):43–55.

Mardnly, Z, Mouselli, S & Abdulraouf, R. 2018. Corporate governance and firm performance: an empirical evidence from Syria. *International Journal of Islamic and Middle Eastern Finance and Management*. 11(4):591–607. doi.org/10.1108/IMEFM-05-2017-0107.

Marino, B. 2016. Show me the money: The CEO Pay Ratio Disclosure Rule and the quest for effective executive compensation reform. *Fordham Law Review*. 85(3):1355–1388.

Martin, JA & Butler, FC. 2017. Agent and stewardship behavior: How do they differ? *Journal*

of Management and Organization. 23(5):633–646. doi.org/10.1017/jmo.2016.72.

Martynov, A. 2009. Agents or stewards? Linking managerial behavior and moral development. *Journal of Business Ethics*. 24(3):239–249. doi.org/10.1108/dlo.2010.08124cad.005.

Mas, A. 2016. Does disclosure affect CEO pay setting? Evidence from the passage of the 1934 Securities and Exchange Act. Princeton University and NBER.

Mashayekhi, B & Bazaz, MS. 2008. Corporate Governance and Firm Performance in Iran. *Journal of Contemporary Accounting & Economics*. 4(2):156–172. doi.org/10.1016/s1815-5669(10)70033-3.

Mason, CH & Perreault, WD. 1991. Collinearity, power, and interpretation of multiple regression analysis. *Journal of Marketing Research*. 28(3):268–280. doi.org/10.2307/3172863.

Mason, SA, Medinets, AF & Palmon, D. 2016. Say-on-Pay : Is Anybody Listening ? *Multinational Finance Journal*. 20(04):273–322.

Matemane, R & Nkwadi, R. 2022. Executive compensation and company performance: Pre and Post Marikana uprising analysis. *South African Business Review*. 26:1–22.

Matemane, R, Moloi, T & Adelowotan, M. 2022. ESG performance measures for executive pay: Delphi inquiry strategy and experts' opinion. *Acta Commercii*. 22(1):1–14. doi.org/10.4102/ac.v22i1.1072.

Mayer, KJ & Sparrowe, RT. 2013. From the editors: Integrating theories in AMJ articles. *Academy of Management Journal*. 56(4):917–922.

McClelland, GH, Irwin, JR, Disatnik, D & Sivan, L. 2017. Multicollinearity is a red herring in the search for moderator variables: A guide to interpreting moderated multiple regression models and a critique of Iacobucci, Schneider, Popovich, and Bakamitsos (2016). *Behavior Research Methods*. 49(1):394–402. doi.org/10.3758/s13428-016-0785-2.

McConvill, J. 2005. Positive corporate governance and its implications for executive compensation. *German Law Journal*. 6(12):1777–1804. doi.org/10.1017/s2071832200004314.

McConvill, J. 2006. Executive compensation and corporate governance: rising above the

"Pay-for-performance" principle. *American Business Law Journal*. 43(2):413–438. Available from: http://ezproxy.library.wisc.edu/login?url=http://proquest.umi.com/pqdweb?did=1069007611&Fmt=7&clientId=3751&RQT=309&VName=PQD.

McConvill, JA. 2011. Executive Compensation in Contemporary Corporate Governance: Why Pay for Performance is a Flawed Methodology. *SSRN Electronic Journal*. doi.org/10.2139/ssrn.723521.

McDaniel, S. 2022. R Bloggers. In: *R Bloggers*. 1–4. Available from: https://www.r-bloggers.com/2013/01/scatterplot-matrices/.

McKinsey & Company. 2000. Investor opinion survey on corporate governance. In: *https://www.oecd.org/daf/ca/corporategovernanceprinciples/1922101.pdf*. 1–18.

McLeod, S. 2019. What a p-value tells you about statistical significance. In: *Simply Psychology*. 1–7. Available from: https://www.simplypsychology.org/p-value.html.

Mdingi, ND. 2017. A comparative study of the provisions regarding the remuneration of directors in terms of the Companies Act of 2008. University of Johannesburg.

Mills, DE & Keast, RL. 2009. Achieving better stewardship of major infrastructure assets through configuration of governance arrangements utilising Stewardship Theory. In: *3th International Research Society for Public Management Conference (IRSPM XIII)*. 1–29.

Mills, M, van de Bunt, G & Bruijn, J. 2006. Comparative research: Persistent Problems and Promising Solutions. *International Sociological Association*. 21(September 2006):619–631. doi.org/10.1177/0268580906067833.

Miri, SM & Shahrokh, ZD. 2019. A Short Introduction to Comparative Research. Allameh Tabataba'i University.

Mitchell, A. 2018. A review of mixed methods, pragmatism and abduction techniques. *Electronic Journal of Business Research Methods*. 16(3):103–116.

Mnyaka-Rulwa, NP. 2019. CEO performance based remuneration and the agency problem in JSE listed mining companies. University of South Africa.

Modau, MF. 2014. The relationship between Chief Executive Officer (CEO) remuneration and financial performance of an organisation. University of Pretoria.

Mohajan, HK. 2017. Two Criteria for Good Measurements in Research: Validity and Reliability. *Annals of Spiru Haret University. Economic Series*. 17(4):59–82.

Motepe, KA. 2018. The relationship between corporate governance and compensation policies and economic performance in South African companies. University of Witwatersrand.

Moyo, NJ. 2010. South African principles of corporate governance: Legal and regulatory restraints on powers and remuneration of executive directors. University of South Africa.

Mukaka, MM. 2012. Statistics corner: A guide to appropriate use of correlation coefficient in medical research. *Malawi Medical Journal*. 24(3):69–71.

Munisi, G & Randøy, T. 2013. Corporate governance and company performance across Sub-Saharan African countries. *Journal of Economics and Business*. 70:92–110.

Muzata, T. 2018. Examining consequences of principal-agent and corporate governance interactions in South Africa: A study of FTSE/JSE Top40 companies. University of South Africa.

Naik, M, Padia, N & Callaghan, CW. 2020. Variable executive remuneration and company performance: Insights from the Johannesburg Stock Exchange, South Africa. *Acta Commercii*. 20(1):1–10. doi.org/10.4102/ac.v20i1.790.

Naimah, Z & Hamidah. 2017. The role of corporate governance in firm performance. In: *SHS Web of Conferences*. V. 34. 1–6. doi.org/10.4324/9781315583075-38.

Nannicini, A, Ferraz, DP & Lopes, IT. 2018. Relationship between top executive compensation and corporate governance: evidence from large Italian listed companies. *International Journal of Disclosure and Governance*. 15(4):197–209.

National Minimum Wage Panel. 2016. *A national minimum wage for South Africa: Recommendations on Policy and Implementation*. Available from: http://www.treasury.gov.za/publications/other/NMW Report Draft CoP FINAL.PDF.

Naudé, P, Hamilton, B, Ungerer, M, Malan, D & De Klerk, M. 2018. Steinhoff Saga. (June):1–36. Available from: www.usb.ac.za/managementreview.

Nazir, MS & Afza, T. 2018. Does managerial behavior of managing earnings mitigate the relationship between corporate governance and firm value? Evidence from an emerging

market. *Future Business Journal*. 4(1):139–156. doi.org/10.1016/j.fbj.2018.03.001.

NCSS WPengine. No date. Scatter Plot Matrix. In: *NCSS WPengine*. 1–3. Available from: https://ncss-wpengine.netdna-ssl.com/wp-content/themes/ncss/pdf/Procedures/NCSS/Scatter_Plot_Matrix.pdf.

Ndofirepi, TP. 2015. The relationship between CEO compensation and various performance indicators in South Africa. University of Witwatersrand. doi.org/10.1145/3132847.3132886.

Ndzi, E. 2016. Directors' pay regulation: "one goal two approaches". *International Journal of Law and Management*. 58(3):337–352. doi.org/10.1108/IJLMA-07-2015-0034.

Ndzi, EG. 2019. Executive remuneration: the power and dominance of human greed. *Journal of Financial Crime*. 26(4):978–992.

Needle, D. 2014. Agency Theory. *Wiley Encyclopedia of Management*. 1–2. doi.org/10.5040/9781509920266.ch-008.

Nemkova, E. 2017. The impact of agility on the market performance of born-global firms: An exploratory study of the 'Tech City' innovation cluster. *Journal of Business Research*. 80(April):257–265. doi.org/10.1016/j.jbusres.2017.04.017.

Ngulube, P. 2020. *Handbook of research on connecting research methods for information science research*. V. 1.

Nguyen, BD. 2015. Is more news good news? Media coverage of ceos, Firm value, and rent extraction. *Quarterly Journal of Finance*. 5(4):1–35. doi.org/10.1142/S2010139215500202.

Nielsen, BB & Raswant, A. 2018. The selection, use, and reporting of control variables in international business research: A review and recommendations. *Journal of World Business*. 53(6):958–968. doi.org/10.1016/j.jwb.2018.05.003.

Nienaber, R. 2016. Remuneration governance. In: *Remuneration handbook for Africa*. 381–388.

Nienaber, R & Bussin, M. 2016. Organisation strategy and reward policy. In: *Remuneration handbook for Africa*. 1–22.

Nigam, N, Benetti, C & Mbarek, S. 2018. Can linking executive compensation to sustainability performance lead to a sustainable business model? Evidence of

implementation from enterprises around the world. *Strategic Change*. 27(6):571–585. doi.org/10.1002/jsc.2240.

Nolan, B & Valenzuela, L. 2019. Inequality and its discontents. *Oxford Review of Economic Policy*. 35(3):396–430. doi.org/10.1093/oxrep/grz016.

Noreen, E. 1988. The economics of ethics: A new perspective on agency theory. *Accounting, Organizations and Society*. 13(4):359–369.

Norman, CS, Rose, AM, Rose, JM & Suh, I. 2020. An investigation of corporate directors' responses to CEO pay ratio disclosures and say-on-pay votes. *Human Resource Management*. 1–20. doi.org/10.1002/hrm.22034.

Ntim, CG, Opong, KK, Danbolt, J & Thomas, DA. 2012. Voluntary corporate governance disclosures by post-Apartheid South African corporations. *Journal of Applied Accounting Research*. 13(2):122–144. doi.org/10.1108/09675421211254830.

Ntim, CG, Lindop, S, Thomas, DA, Abdou, H & Opong, KK. 2019. Executive pay and performance: the moderating effect of CEO power and governance structure. *International Journal of Human Resource Management*. 30(6):921–963.

Nyberg, A, Fulmer, I, Gerhart, B & Carpenter, M. 2010. Agency theory revisited: CEO return and shareholder interest alignment. *Academy of Management Journal*. 53(5):1029–1049.

O'Dwyer, A. 2014. Corporate Governance After the Financial Crisis: The Role of Shareholders in Monitoring the Activities of the Board. *Aberdeen Student Law Review*. 5(June 2010):112–133.

Obermann, J. 2018. Can management-sponsored non-binding remuneration votes shape the executive compensation structure? Evidence from Say-on-Pay votes in Germany. *European Journal of Finance*. 24(17):1609–1630.

Obermann, J. 2020. Let's talk about money! Assessing the link between firm performance and voluntary Say-on-Pay votes. *Journal of Business Economics*. 90(1):109–135. doi.org/10.1007/s11573-019-00931-8.

Oberpaul, T, Tichy, N & Weller, I. 2022. CEO compensation complexity and firm performance. *Academy of Management*. (1).

Odzak, A & Skog, A. 2017. CEO remuneration: A study on the impact of the capital

requirement iirective IV’s bonus cap on the variable remuneration. Jönköping International Business School.

Ogunsanwo, O. 2019. Effect of Corporate Governance on Firm Performance in Nigeria. *Acta Universitatis Danubius. Œconomica*. 15(6):82–98.

Olaniyi, CO & Obembe, OB. 2017. Determinants of CEO pay: Empirical evidence from Nigerian quoted banks. *International Journal of Business Performance Management*. 18(3):327–349.

Osborne, JW & Waters, E. 2003. Four assumptions of multiple regression that researchers should always test. *Practical Assessment, Research and Evaluation*. 8(2).

Osei-Bonsu, N & Lutta, JGM. 2016. CEO Cash Compensation and Firm Performance: An Empirical Study from Emerging Markets. *Business and Economic Research*. 6(2):79. doi.org/10.5296/ber.v6i2.9805.

Osiichuk, D. 2022. The Driver of Workplace Alienation or the Cost of Effective Stewardship ? The Consequences of Wage Gap for Corporate Performance.

Osterloh, M & Frey, BS. 2005. *Corporate governance for crooks? The case of corporate virtue*. Available from: http://hdl.handle.net/10419/214324.

Outa, ER & Waweru, NM. 2016. Corporate governance guidelines compliance and firm financial performance Kenya listed companies. *Managerial Auditing Journal*. 31(8):891–914. doi.org/10.1108/MAJ-12-2015-1291.

Padia, N & Callaghan, CW. 2020. Executive director remuneration and company performance: panel evidence from South Africa for the years following King III. *Personnel Review*. 1–16.

Paletta, A & Alimehmeti, G. 2018. SOX disclosure and the effect of internal controls on executive compensation. *Journal of Accounting, Auditing and Finance*. 33(2):277–295. doi.org/10.1177/0148558X16630445.

Panda, B & Leepsa, NM. 2017. Agency theory: Review of theory and evidence on problems and perspectives. *Indian Journal of Corporate Governance*. 10(1):74–95. doi.org/10.1177/0974686217701467.

Pandey, P & Pandey, MM. 2015. *Research methodology: Tools and techniques*. First ed.

Romania. doi.org/10.1007/978-3-030-37727-4_2.

Paniagua, J, Rivelles, R & Sapena, J. 2018. Corporate governance and financial performance: The role of ownership and board structure. *Journal of Business Research*. 89(June 2017):229–234. doi.org/10.1016/j.jbusres.2018.01.060.

Park, T, Kim, S & Sung, L. 2017. Fair pay dispersion: A regulatory focus theory view. *Organizational Behavior and Human Decision Processes*. 142:1–11. doi.org/10.1016/j.obhdp.2017.07.003.

Parthasarathy, A, Bhattacherjee, D & Menon, K. 2006. Executive Compensation, Firm Performance and Corporate Governance: An Empirical Analysis. *SSRN Electronic Journal*. 41(39):4139–4147. doi.org/10.2139/ssrn.881730.

Passador, ML & Riganti, F. 2018. Shareholders' rights in agency conflicts: Selected issues in the transatlantic debate. *Delaware Journal of Corporate Law*. 42:569–618.

Pastoriza, D & Montreal, H. 2008. When agents become stewards : Introducing learning in the stewardship theory. In: *Humanizing the firm and the management profession*. 1–17.

Pautasso, M. 2013. Ten simple rules for writing a literature review. *PLoS Computational Biology*. 9(7):1–4. doi.org/10.1371/journal.pcbi.1003149.

Pecher, C. 2012. Linking pay to performance: A closer look at performance-based compensation and shareholder voting rights.

Pepper, A & Gore, J. 2015. Behavioral agency theory: New foundations for theorizing about executive compensation. *Journal of Management*. 41(4):1045–1068. doi.org/10.1177/0149206312461054.

Pepper, A, Gosling, T & Gore, J. 2015. Fairness, envy, guilt and greed: Building equity considerations into agency theory. *Human Relations*. 68(8):1291–1314. doi.org/10.1177/0018726714554663.

Petra, ST & Dorata, NT. 2008. Corporate governance and chief executive officer compensation. *Corporate Governance*. 8(2):141–152.

Pickvance, C. 2001. Four Varieties of Comparative Analysis. *Journal of Housing and the Built Environment*. 16(March 2001):7–28. doi.org/10.1023/A.

Pissaris, S, Jeffus, W & Gleason, KC. 2010. The Joint Impact of Executive Pay Disparity and Corporate Governance on Corporate Performance. *Journal of Managerial issues*. 22(3):306–329.

Pouryousefi, S & Frooman, J. 2017. The problem of unilateralism in agency theory: Towards a bilateral formulation. *Business Ethics Quarterly*. 27(2):163–182.

Pucheta-Martínez, MC & Chiva-Ortells, C. 2019. Institutional Shareholding As a Corporate Governance Mechanism That Drives Ceo Pay. *BRQ Business Research Quarterly*. 1–15. doi.org/10.1016/j.brq.2019.03.001.

Qadorah, AAM & Fadzil, FHB. 2018. The Relationship Between Board Size and CEO Duality and Firm Performance: Evidence from Jordan. *International Journal of Accounting, Finance and Risk Management*. 3(3):16.

Ra, J & Kim, W. 2018. Perils of limiting the coverage of mandatory pay disclosure: The Korean experience. *SSRN Electronic Journal*. (September 2018). doi.org/10.2139/ssrn.3234163.

Rabianski, JS. 2003. Primary and secondary data: Concepts, concerns, errors, and issues. *The Appraisal Journal*. 71(1):43–55.

Raghavan. 2018. Scatter matrix , Covariance and Correlation Explained. In: *Raghavan*. 1–6. Available from: https://medium.com/@raghavan99o/scatter-matrix-covariance-and-correlation-explained-14921741ca56.

Rahayu, NK, Harymawan, I, Nasih, M & Nowland, J. 2022. Director pay slice, the remuneration committee, and firm financial performance. *Cogent Economics & Finance*. 10(1). doi.org/10.1080/23322039.2022.2087291.

Rambajan, A. 2011. The relationship between corporate governance and company performance. Available from: https://repository.up.ac.za/bitstream/handle/2263/27020/dissertation.pdf?sequence=1&isAllowed=y.

Rampling, PN. 2015. CEO and executive director remuneration practice and corporate financial performance: a comparison of practices in the USA, UK and Australia. 1–415.

Rehman, AA & Alharthi, K. 2016. An introduction to research paradigms in distance

education. *International Journal of Educational Investigations*. 3(October):51–59.

Renner, P. 2001. Moderation: Tests for interaction in multiple regression. In: *VDI Berichte*. V. 2. 611–644.

Republic of South Africa. 2009. Companies Act 71 of 2008. *Government Gazette*. 1–359.

Riaz, Z. 2016. A hybrid of state regulation and self-regulation for remuneration governance in Australia. *Corporate Governance (Bingley)*. 16(3):539–563. doi.org/10.1108/CG-10-2015-0133.

Riaz, Z & Kirkbride, J. 2017. Governance of director and executive remuneration in leading firms of Australia. *Economics and Business Review*. 3 (17)(4):66–86. doi.org/10.18559/ebr.2017.4.5.

Riaz, Z, Ray, S, Ray, PK & Kirkbride, J. 2013. Collibration as an alternative regulatory approach for remuneration governance: A contextual analysis of Australia. *International Journal of Disclosure and Governance*. 10(3):246–260. doi.org/10.1057/jdg.2013.1.

Roode, G. 2016. THE CORRELATION BETWEEN DIRECTORS ' PERFORMANCE-BASED REMUNERATION AND OVERALL PERFORMANCE OF SOUTH AFRICAN COMPANIES Mini-dissertation by Magister Commercii in Financial Management. (August).

Rose, C. 2016. Firm performance and comply or explain disclosure in corporate governance. *European Management Journal*. 34(3):202–222.

Rossouw, J & Styan, J. 2019. Steinhoff collapse: a failure of corporate governance. *International Review of Applied Economics*. 33(1):163–170.

Rouen, E. 2017. Rethinking measurement of pay disparity and its relation to firm performance. Columbia University. doi.org/10.2308/accr-52440.

Rourke, L & Anderson, T. 2004. Validity in quantitative content analysis. *Educational Technology Research and Development*. 52(1):5–18. doi.org/10.1007/BF02504769.

Rutledge, R, Karim, K & Lu, S. 2016. The effects of board independence and CEO duality on firm performance: evidence from the NASDAQ-100 index with controls for endogeneity. *Journal of Applied Business and Economics*. 18(2):49.

Sanchez-Marin, G & Baixauli-Soler, S. 2015. TMT pay dispersion and firm performance: The

moderating role of organizational governance effectiveness. *Journal of Management and Organization*. 21(4):436–459.

Sanchez-Marin, G, Lozano-Reina, G, Baixauli-Soler, JS & Lucas-Perez, ME. 2017. Say on pay effectiveness, corporate governance mechanisms, and CEO compensation alignment. *BRQ Business Research Quarterly*. 20(4):226–239.

Sánchez, AV. 2001. Development of corporate governance systems: Agency theory versus stewardship theory in Welsh Agrarian Cooperative societies. University of Huelva & Centra.

Sapp, SG. 2008. The impact of corporate governance on executive compensation. *European Financial Management*. 14(4):710–746.

Saravanan, P, Srikanth, M & Avabruth, SM. 2017. Compensation of top brass, corporate governance and performance of the Indian family firms - An empirical study. *Social Responsibility Journal*. 13(3):529–551. doi.org/10.1108/SRJ-03-2016-0048.

Sarpong-Danquah, B, Gyimah, P, Afriyie, RO & Asiama, A. 2018. Corporate Governance and Firm Performance: An Empirical Analysis of Manufacturing Listed Firms in Ghana. *Accounting and Finance Research*. 7(3):111. doi.org/10.5430/afr.v7n3p111.

Sarstedt, M & Mooi, E. 2014. A Concise Guide to Market Research - Chapter 7 Regression Analysis. In: *Regression Analysis*. 193–233.

Schillemans, T. 2013. Moving beyond the clash of interests: On stewardship theory and the relationships between central government departments and public agencies. *Public Management Review*. 15(4):541–562.

Schober, P, Boer, C & Schwarte, LA. 2018. Correlation coefficients: Appropriate use and interpretation. *Anesthesia and Analgesia*. 126(5):1763–1768. doi.org/10.1213/ANE.0000000000002864.

Schofield-Georgeson, E. 2018. Regulating executive salaries and reducing pay disparities: Is pay disclosure the answer? *Journal of Australian Political Economy*. 2018(81):95–120.

Scholtz, HE & Engelbrecht, WA. 2015. The effect of remuneration committees, directors' shareholding and institutional ownership on the remuneration of directors in the top 100 companies in South Africa. *Southern African Business Review*. 19:22–51.

Schoonenboom, J & Johnson, RB. 2017. How to Construct a Mixed Methods Research

Design. *Kolner Zeitschrift fur Soziologie und Sozialpsychologie*. 69:107–131.

Scotland, J. 2012. Exploring the philosophical underpinnings of research: Relating ontology and epistemology to the methodology and methods of the scientific, interpretive, and critical research paradigms. *English Language Teaching*. 5(9):9–16. doi.org/10.5539/elt.v5n9p9.

Scribbr. No date. What is the difference between a conceptual framework and a theoretical framework? In: *Scribbr*. Available from: https://www.scribbr.com/frequently-asked-questions/conceptual-vs-theoretical-framework/#:~:text=While a theoretical framework describes,and the interplay between them.

Senthilnathan, S. 2019. Usefulness of correlation analysis. *SSRN Electronic Journal*. (July). doi.org/10.2139/ssrn.3416918.

Serban, R. 2018. Is Corporate Governance the Proper Tool for Enhancing Long-Term Company Performance? *Sustainability from an economic and social perspective*. (November):705–713.

Shan, Y & Walter, T. 2016. Towards a Set of Design Principles for Executive Compensation Contracts. *Abacus*. 52(4):619–684. doi.org/10.1111/abac.12090.

Shapiro, SP. 2005. Agency Theory. *Annual Review of Sociology*. 31(1):263–284.

Sharma, S. 2019. Descriptive statistics. Horizons University, Paris.

Shaw, JD. 2015. Pay dispersion, sorting and organisational performance. Hong Kong Polytechnic University.

Shaw, P. 2012. CEO pay-performance sensitivity in South African financial services companies. *Gordon Institute of Business Science, University of Pretoria*. (November 2011):50–51.

Sheehan, K. 2012a. The regulated remuneration cycle. In: *The Regulation of Executive Compensation*. 17–49.

Sheehan, K. 2012b. Remuneration committees. In: *The Regulation of Executive Compensation*. 64–77. doi.org/10.4337/9780857938336.00012.

Sheehan, K. 2012c. Greed, accountability and say on pay. In: *The Regulation of Executive Compensation*. 1–16. doi.org/10.4337/9780857938336.00009.

Sheehan, K. 2012d. Disclosure. In: *The Regulation of Executive Compensation*. 116–128.

Sheehan, K. 2012e. UK remuneration practice – best practice? In: *The Regulation of Executive Compensation*. 78–94. doi.org/10.4337/9780857938336.00013.

Shrives, PJ & Brennan, NM. 2017. Explanations for corporate governance non-compliance: A rhetorical analysis. *Critical Perspectives on Accounting*. 49:31–56. doi.org/10.1016/j.cpa.2017.08.003.

Simon Fraser University. No date. Ordinary least squares. In: *Simon Fraser University*. 1–11. Available from: https://statweb.stanford.edu/~jtaylo/courses/stats203/notes/fixed+random.pdf.

Sitlani, C. 2016. Introduction to Longitudinal Data Analysis. In: *Washington.edu*. Available from: https://www.biostat.washington.edu/sites/default/files/modules//2016_SISCR_16_1_notes.pdf.

Skanes, M. 2015. The Influence of Corporate Strategy on the Relationship between CEO Compensation and Financial Performance: An Australian Study. The University of Newcastle.

Skantz, TR. 2012. CEO pay, managerial power, and SFAS 123(R). *Accounting Review*. 87(6):2151–2179. doi.org/10.2308/accr-50224.

Slomka-Golębiowska, A. 2016. The Effect of Remuneration Committee Independence on the Pay-Performance Relationship: Evidence from the Banking Industry in Poland. *Eastern European Economics*. 54(1):71–89.

Smirnova, AS & Zavertiaeva, MA. 2017. Which came first, CEO compensation or firm performance? The causality dilemma in European companies. *Research in International Business and Finance*. 42(September 2016):658–673. doi.org/10.1016/j.ribaf.2017.07.009.

Snippert, T, Witteveen, W, Boes, H, Voordijk, H, Snippert, TIM, Witteveen, W, Boes, H & Voordijk, H. 2015. Barriers to realizing a stewardship relation between client and vendor : the Best Value approach Barriers to realizing a stewardship relation between client and vendor : the Best Value approach. *Construction Management and Economics*. 33(7):569–586. doi.org/10.1080/01446193.2015.1078902.

Sorensen, J. 2012. Endogeneity. In: *http://people.bu.edu/tsimcoe/code/Endog-PDW.pdf*. 1–32.

Sorensen, HT, Sabroe, S & Jorn, O. 1996. A framework for evaluation of secondary data sources for epidemiological research. *International Journal of Epidemiology*. 25(2):435–442.

Srivastava, G & Kathuria, V. 2020. Impact of corporate governance norms on the performance of Indian utilities. *Energy Policy*. 140(March):111414.

Stabile, SJ. 2002. One for A, two for B, and four hundred for C: The widening gap in pay between executives and rank and file employees. *Univesity of Michigan Journal of Law Reform*. (75):147–173.

Stathopoulos, K & Voulgaris, G. 2016. The Importance of Shareholder Activism: The Case of Say-on-Pay. *Corporate Governance: An International Review*. 24(3):359–370.

Statistics Solutions. 2021. Autocorrelation. In: *https://www.statisticssolutions.com/dissertation-resources/autocorrelation/*.

Statistics Solutions. No date. Correlation (Pearson, Kendall, Spearman). In: *(https://www.statisticssolutions.com*. 1–6. Available from: http://www.statisticssolutions.com.

Steckler, A, Mcleroy, KR, Goodman, RM, Bird, ST & Mccormick, L. 1992. Toward Integrating Qualitative and Quantitative Methods: An Introduction. *Health Education & Behavior*. 19(1):1–8. doi.org/10.1177/109019819201900101.

Steenkamp, G & Wesson, N. 2018. Share-based incentives for South African CEOs: Trends 2002−2015. *South African Journal of Accounting Research*. 32(1):46–70. doi.org/10.1080/10291954.2017.1409869.

Tahir, M, Ibrahim, S & Nurullah, M. 2019. Getting compensation right - The choice of performance measures in CEO bonus contracts and earnings management. *British Accounting Review*. 51(2):148–169. doi.org/10.1016/j.bar.2018.09.004.

Talab, HR, Manaf, KBBA & Malak, SSDA. 2017. Corporate governance mechanisms and firm performance in Iraq: A Conceptual framework. *Account and Financial Management Journal*. 2(11):1132–1146.

Tan, DT, Chapple, L & Walsh, KD. 2017. Corporate fraud culture: Re-examining the corporate governance and performance relation. *Accounting and Finance*. 57(2):597–620.

doi.org/10.1111/acfi.12156.

Tanjung, M. 2020. A cross-firm analysis of corporate governance compliance and performance in Indonesia. *Managerial Auditing Journal*. 35(5):621–643. doi.org/10.1108/MAJ-06-2019-2328.

Teh, CT. 2009. Compliance and impact of corporate governance Best practice code on the financial performance of New Zealand listed Companies. Massey University.

The World Bank. 2018. *Overcoming Poverty and Inequality in South Africa*. Available from: https://www.statssa.gov.za/wp-content/themes/umkhanyakude/documents/South_Africa_Poverty_and_Inequality_Assessment_Report_2018.pdf.

The World Bank. 2022. *Inequality in Southen Africa: An assessment of the Southern African Customs Union*. Available from: http://documents.worldbank.org/curated/en/099125303072236903/P1649270c02a1f06b0a3ae02e57eadd7a82.

Theku, M. 2014. CEO compensation sensitivity to performance in the South African mining industry. University of Pretoria. Available from: https://repository.up.ac.za/bitstream/handle/2263/43997/Theku_CEO compensation sensitivity to performance.pdf?sequence=1.

Thompson, CG, Kim, RS, Aloe, AM & Becker, BJ. 2017. Extracting the Variance Inflation Factor and Other Multicollinearity Diagnostics from Typical Regression Results. *Basic and Applied Social Psychology*. 39(2):81–90. doi.org/10.1080/01973533.2016.1277529.

Thomson, C, Carpenter, R, Harber, M & Graham, M. 2018. An examination of the quality of the variable portion of executive directors' remuneration for large South African listed companies. *African Journal of Business and Economic Research*. 13(2):25–59. doi.org/10.31920/1750-4562/2018/v13n2a2.

Tingle, BC. 2017. How good are our " Best practices" when it comes to executive compensation? A review of forty years of skyrocketing pay, regulation, and the forces of good governance. 1.

Tizazu, AE. 2017. Corporate governance, antecedents and performance implications in the Ethiopian non-financial share companies-A contingency perspective. University of South

Africa.

Tjano, RN. 2021. An empirical study of corporate governance and sustainability reporting practices in South African State-Owned entities. University of South Africa.

Torres-Reyna, O. 2007. Panel Data Analysis, Fixed and Random Effects using Stata (v. 4.2). In: *http://d December 2007 ss.princeton.edu/training/*. 1–40. Available from: http://dss.princeton.edu/training/.

Tosi, HL & Gomez-mejia, LR. 1989. The decoupling of CEO pay and performance: An agency theory perspective. *Administrative Science Quarterly*. 34(2):169–189.

Tosi, HL, Werner, S, Katz, JP & Gomez-Mejia, LR. 2000. How much does performance matter? A meta-analysis of CEO pay studies. *Journal of Management*. 26(2):301–339. doi.org/10.1177/014920630002600207.

Tröger, TH & Walz, U. 2019. Does Say on Pay Matter? Evidence from Germany. *European Company and Financial Law Review*. 16(3):381–413. doi.org/10.1515/ecfr-2019-0014.

Tsang, KK. 2013. Methodological ontology. *Scientific Journal of Review*. 2(5):128–130.

Tshipa, J & Mokoaleli-Mokoteli, T. 2015. The south African code of corporate governance. The relationship between compliance and financial performance: Evidence from south African publicly listed firms. *Corporate Ownership and Control*. 12(2):149–169.

Tshipa, J, Brummer, L, Wolmarans, H & Du Toit, E. 2018. The impact of flexible corporate governance disclosures on value relevance. Empirical evidence from South Africa. *Corporate Governance (Bingley)*. 18(3):369–385.

Turnbull, S. 1997. Corporate Governance: Its scope, concerns and theories. *Corporate Governance: An International Review*. 5(4):180–205. doi.org/10.1111/1467-8683.00061.

Ulrich, N. 2010. Disclosure of executive remuneration as a corporate governance control measure in South African listed companies. University of South Africa.

Unerman, J. 2000. Methodological issues - Reflections on quantification in corporate social reporting content analysis. *Accounting, Auditing & Accountability Journal*. 13(5):667–681. doi.org/10.1108/09513570010353756.

UNISA. 2003. Master's and doctoral degrees-Research proposal module. UNISA College of

Accounting Sciences.

University of Virginia Library. 2018. Interpreting log transformations in a linear model. In: *Research Data Services and Sciences*. 1–12. Available from: https://data.library.virginia.edu/interpreting-log-transformations-in-a-linear-model/.

Urson, M. 2016. CEO Pay Ratios and Company Performance: a Study of JSElisted Consumer Goods and Services Companies. University of Cape Town.

Vafeas, N & Afxentiou, Z. 1998. The association between the SEC's 1992 compensation disclosure rule and executive compensation policy changes. *Journal of Accounting and Public Policy*. 17(1):27–54. doi.org/10.1016/S0278-4254(97)10006-0.

Varma, S. 2016. What is the difference between panel data, time-serial data, and cross-sectional data? In: *https://www.quora.com/What-is-the-difference-between-panel-data-time-serial-data-and-cross-sectional-data*.

Vartiainen, M, Antoni, CH, Baeten, X, Hakonen, N, Lucas, R & Thierry, H. 2008. *Reward management-Facts and trends in Europe*.

Velte, P. 2019. Does CEO power moderate the link between ESG performance and financial performance?: A focus on the German two-tier system. *Management Research Review*. 43(5):497–520. doi.org/10.1108/MRR-04-2019-0182.

Vigario, F, Benade, F, Combrink, A, de Graaf, A, Esterhuyse, L, Jonker, W, Klopper, S, Ndlovu, S, et al. 2014. *Managerial Finance*. 7th ed. F. Skae, Ed. South Africa: Lexis Nexis.

Viviers, S, 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):1–11. doi.org/10.4102/sajems.v22i1.3251.

Vourvachis, P & Woodward, T. 2015. Content analysis in social and environmental reporting research: Trends and challenges. *Journal of Applied Accounting Research*. 16(2):166–195. doi.org/10.1108/JAAR-04-2013-0027.

Wanniarachchige, MK & De Silva, LD. 2022. Effect of corporate governance on stock returns in firms listed in Colombo Stock Exchange. *International Journal of Accounting & Business Finance*. 8(1):33–51.

Watson, R. 2015. Quantitative research. *Journal of Advanced Nursing and Professor of*

nursing. 151:29–31.

Weber, R. 2014. Comparative Philosophy and the Tertium : Comparing What with What , and in What Respect ? *Springer Science+Business Media*. 13:151–171. doi.org/10.1007/s11712-014-9368-z.

White, MD & Marsh, EE. 2006. Content analysis: A flexible methodology. *Library Trends*. 55(1):22–45. doi.org/10.1353/lib.2006.0053.

Williams, R. 2018. Fixed effects vs random effects models. In: *Https://Www3.Nd.Edu/~Rwilliam/*. 1–8. Available from: http://www3.nd.edu/~rwilliam/stats3/Panel04-FixedVsRandom.pdf.

Wiseman, RM, Cuevas-Rodríguez, G & Gomez-Mejia, LR. 2012. Towards a social theory of agency. *Journal of Management Studies*. 49(1):202–222.

Wixley, T, Everingham, G & Louw, K. 2019. Why corporate governance. In: *Corporate Governance*. 1–18.

Wright, P, Mukherji, A & Kroll, MJ. 2001. A reexamination of agency theory assumptions: Extensions and extrapolations. *Journal of Socio-Economics*. 30(5):413–429.

Wu, H. 2011. The UK bank corporate governance framework: A holistic and critical analysis with a focus upon bank risk and executive remuneration governance. University of Manchester. Available from: http://ucelinks.cdlib.org:8888/sfx_local?url_ver=Z39.88-2004&rft_val_fmt=info:ofi/fmt:kev:mtx:dissertation&genre=dissertations+%26+theses&sid=ProQ:ProQuest+Dissertations+%26+Theses+Global&atitle=&title=The+UK+Bank+Corporate+Governance+Framework%3A%0AA+Hol.

Yahya, F. 2017. The Role of Corporate Governance and Dividend Policy As An Alignment Mechanisms to CEO Compensation and Firm's Performance. Universiti Utara Malaysia.

Yahya, F & Ghazali, Z. 2018. The moderating role of country-specific characteristics on pay-performance relationship in Asian markets: A meta-analysis approach. *Iranian Journal of Management Studies*. 11(1):37–69. doi.org/10.22059/ijms.2018.233899.672683.

Yamina, A & Mohamed, B. 2017. The Impact of Firm Performance on Executive Compensation in France. *Mediterranean Journal of Social Sciences*. 8(2):63–69. doi.org/10.5901/mjss.2017.v8n2p63.

Yan, Y. 2015. Determinants and Consequences of Executive Compensation: Empirical Evidence from Chinese Listed Companies. University of Bath.

Yanadori, Y & Cui, V. 2013. Creating incentives for innovation? the relationship between pay dispersion in R&D groups and firm innovation performance. *Strategic Management Journal*. 34(12):1502–1511.

Yang, H & Klaas, BS. 2011. Pay dispersion and the financial performance of the firm : evidence from Korea. *The International Journal of Human Resource Management*. 22(10):2147–2166. doi.org/10.1080/09585192.2011.580182.

Yang, L, Yang, Y & Su, W. 2015. Salary gap and operating performance: perspective of tournament theory. 9(1):15–26.

Yu, P & Van Luu, B. 2016. Bank performance and executive pay: tournament or teamwork. *Review of Quantitative Finance and Accounting*. 47(3):607–643. doi.org/10.1007/s11156-015-0514-4.

Yuan, X, Lin, W & Oriaku, EA. 2017. Executive compensation, financial performance and say on pay votes. *International Journal of Business & Economic Development*. 5(1):85–94.

Yusoff, WF & Alhaji, IA. 2012. Insight of corporate governance theories. *Journal of Business & Management*. 1(1):52–63.

Zaid, MA. 2015. *Correlation and regression analysis*. doi.org/10.4135/9781446286104.

Zalewska, A. 2014. Gentlemen do not talk about money: Remuneration dispersion and firm performance relationship on British boards. *Journal of Empirical Finance*. 27:40–57.

Zalewska, A. 2016. A New Look at Regulating Bankers' Remuneration. *Corporate Governance: An International Review*. 24(3):322–333. doi.org/10.1111/corg.12149.

Zhang, C & Guo, Q. 2017. A comparative study of the manipulation effects of CEO ownership on executive-employee pay gap between the fresh CEO and the senior CEO: Evidence from the knowledge-based enterprises. 33(Febm):339–344. doi.org/10.2991/febm-17.2017.44.

Zhang, CZ & Gao, XMZ. 2015. Manipulation effects of managerial discretion on executive-employee pay gap: A comparative study between the senior CEOs and the fresh CEOs. *Corporate Board: Role, Duties and Composition*. 11(3):43–65.

Zhang, C, Guo, Q & Hu, L. 2017. Role of CEO age in determining executive-employee pay gap in Chinese listed manufacturing companies: A perspective of risk aversion. *MATEC Web of Conferences*. 100.

Zhao, J & Li, Z. 2019. The Regulatory Framework of Executive Remuneration: Contributions from Shareholder Activism and Board Accountability. *Hastings Business Law Journal*. 15(2):203.

Zhou, F, Fan, Y, An, Y & Zhong, L. 2017. Independent directors, non-controlling directors, and executive pay-for-performance sensitivity: Evidence from Chinese non-state owned enterprises. *Pacific Basin Finance Journal*. 43(15):55–71.

Zona, F, Minoja, M & Coda, V. 2013. Antecedents of corporate scandals: CEOs' personal traits, stakeholders' cohesion, managerial fraud, and imbalanced corporate strategy. *Journal of Businesss Ethics*. 113(2):265–283.

Zorn, ML, Shropshire, C, Martin, JA, Combs, JG & Ketchen, DJ. 2017. Home Alone: The Effects of Lone-Insider Boards on CEO Pay, Financial Misconduct, and Firm Performance. *Strategic Management Journal*. 38:2623–2646.

Zsidisin, GA & Ellram, LM. 2003. An Agency Theory Investigation of Supply Risk M anagement. *Journal of Supply Chain Management*. 39(2):15–27. doi.org/10.1111/j.1745-493X.2003.tb00156.x.

ANNEXURE 4.1: RGCI-JSE-LIST OF RG PROVISIONS (KING IV)

No	RG element	Provision	Yes	No
1	Pay policy	A pay policy exists in a firm	1	0
2		A pay policy mentions the importance of either fair, responsible and/or transparent pay	1	0
3		The pay policy has stated objectives in a financial year	1	0
4		The pay policy includes the need to determine fair executive pay considering ordinary employees' pay	1	0
5		The pay policy indicates the importance of incorporating economic, social and environmental performance measures in determining pay	1	0
6		The pay policy indicates the importance of incorporating all the capitals the firm uses when determining pay	1	0
7		The pay policy highlights the types of cash benefits	1	0
8		The pay policy highlights the types of non-cash benefits	1	0

9		The pay policy differentiates between long-term and short-term benefits	1	0
10		The pay policy specifies the benefits due on termination of employment	1	0
11		The pay policy specifies the benefits to non-executive board members	1	0
12	**Pay disclosure**	The background of the pay report includes internal and external factors that influenced pay	1	0
13		The background of the pay report indicates whether there were major changes to the pay policy	1	0
14		The background of the pay report highlights the key focus areas and/or key decisions taken by the remuneration committee	1	0
15		The background of the pay report indicates whether pay consultants were used and if yes, whether the remuneration committee believes that they were independent and objective	1	0
16		The background of the pay report indicates whether the remuneration committee believes that the pay policy has achieved its objectives	1	0
17		The background of the pay report indicates the future pay focus	1	0
18		The Overview of remuneration policy (ORP) highlights pay elements and/or design principles of executive pay in details and summary for other employees	1	0
19		The ORP includes the time over which performance measures apply	1	0
20		The ORP indicates how transparency and fairness of executive pay has been addressed in the context of the overall employee pay	1	0
21		The ORP indicates whether pay benchmarks were used or not and if yes, their justification	1	0
22		The ORP indicates the basis for non-executive members' fees	1	0
23		The ORP includes a link to the pay policy for public access	1	0
24		The implementation report (IR) reflects a total pay per executive member	1	0
25		The pay elements in the IR add up to the total pay per executive member	1	0
26		The IR includes the number of awards made to executive members in the current and prior year that have not yet vested	1	0
27		The IR includes the grant dates of the variable awards	1	0
28		The IR includes the vesting dates of the variable awards	1	0
29		The IR includes the expiry dates of the variable awards	1	0
30		The IR includes the fair value of the variable awards	1	0
31		The IR includes the cash value of the variable awards	1	0
32		The IR includes performance measures used in setting variable pay	1	0
33		The IR includes the weight of performance measures used in setting variable pay	1	0
34		The IR includes the targets for the performance measures of variable pay	1	0
35		The IR includes the estimated value in case the performance targets were met	1	0

36		The IR includes the actual performance of each executive member against the set variable targets	1	0
37		The IR indicates the extent to which a firm has complied with the pay policy	1	0
38	Say on pay	There is an indication that non-executive directors' fees were tabled for a special vote within the preceding two years	1	0
39		There is an indication that the pay policy underwent the voting process within the preceding twelve months	1	0
40		There is an indication that the pay implementation report underwent the voting process within the preceding twelve months	1	0
41		The firm has indicated the measures to take if rejection on the pay policy and/or IR is at 25% or more	1	0
42		The indicated measures in 41 above includes investigating the reasons of the rejection	1	0
43		The indicated measures in 41 above highlights the firm's willingness to genuinely address the areas of concern	1	0
		If the pay policy was accepted, the firm indicates that attempts were made to identify areas of concern	1	0
		The firm indicates with whom the attempts were made to identify areas of concern	1	0
		The firm indicates the way the attempts and/or engagements were made to identify the areas of concern	1	0

Source: Author's conceptualisation (2022)

ANNEXURE 4.2: RGCI-JSE-LIST OF RG PROVISIONS (KING III)

No	RG element	Provision	Yes	No
1	Pay policy	A pay policy exists in a firm	1	0
2		The pay policy indicates its alignment to the firm's strategy	1	0
3		The pay policy highlights its link to executives' contributions in the firm	1	0
4		The pay policy highlights the extent to which firm performance outside executives' control influences executive pay	1	0
5		The pay policy has short and long-term performance rewards	1	0
6		The pay policy includes performance measures, both financial and/or non-financial	1	0
7		The pay policy indicates how share-based incentives align interests of executives to that of shareholders and/or are linked to performance	1	0
8		The pay policy indicates that share-based rewards are granted annually	1	0
9		The pay policy highlights how the shares issued under a scheme are priced	1	0
10		The pay policy highlights that share options cannot be backdated	1	0
11		The pay policy highlights that share options are not exercisable within three years of the grant date	1	0
12		The pay policy highlights that share options are not exercisable more than ten years after the grant date	1	0
13		The pay policy provides no payment commitment if the termination of employment arises from the failure of the executive	1	0
14		The pay policy highlights no balloon payment on termination of executives' contract	1	0

15		The pay policy highlights the lapse of unvested options in the case of an early termination or a dismissal of the executive member	1	0
16	Pay disclosure	Each executive director's total pay has been disclosed	1	0
17		Each non-executive director's total pay has been disclosed	1	0
18		Fees paid to non-executive directors do not include share options	1	0
19		Each executive director's pay reflects all the elements (base-pay, bonuses, share-based pay, etc.) of executive pay	1	0
20		The pay report reflects a potential dilution of executive pay from incentives granted during the year	1	0
21		A policy outlining executive employment contract has been included	1	0
22		A policy on executive employment contract includes a period of employment	1	0
23		Annual bonuses in the pay report are linked to yearly objectives	1	0
24		A policy on executive employment contract includes a period of notice of termination of employment	1	0
25		The pay report indicates whether pay benchmarks were used or not and if yes, their justification	1	0
26	Say on pay	There is an indication that non-executive directors' fees underwent the voting process within the last two years	1	0
27		There is an indication that the pay policy underwent the voting process within the preceding twelve months	1	0

Source: Author's conceptualisation (2022)

ANNEXURE 4.3: RGCI-JSE -DATA EXTRACTION TOOL

RGCI-JSE-King IV

		Pay policy					Pay disclosure				Say on pay							
Co Name	Year	1	2	9	10	11	12	13	36	37	38	39	40	41	42	43	Total	%
Adcock Ingram Holdings	2020																	
Adcock Ingram Holdings	2019																	
Adcock Ingram Holdings	2018																	
Adcock Ingram Holdings	2017																	
AECI	2020																	
AECI	2019																	
AECI	2018																	
AECI	2017																	
Distell Group	2020																	
Distell Group	2019																	
Distell Group	2018																	
Distell Group	2017																	
enX Group	2020																	
enX Group	2019																	
enX Group	2018																	
enX Group	2017																	
Harmony Gold Mining Co	2020																	
Harmony Gold Mining Co	2019																	
Harmony Gold Mining Co	2018																	
Harmony Gold Mining Co	2017																	

Source: Author's conceptualisation (2022)

ANNEXURE 4.4: SUMMARY OF VARIABLES COLLECTED

	Co Name	Year	Fixed pay AR	PBP (Exclude LTI) AR	Total executive pay IRESS	Salary bill less Exec pay AR	No. of employees less No. of exec's AR	Av. Emp. Pay (G/H)	Pay-gap (Total executive pay/av. Emp pay	Performance 1: ROA IRESS	Performance 2: SP IRESS	CRG (CGI) AR	%SH AR	Dual AR	%IND AR	Size (Total assets) IRESS
1	Firm A	2020														
2	Firm A	2019														
3	Firm A	2018														
4	Firm A	2017														
5	Firm A	2016														
6	Firm A	2015														
7	Firm A	2014														
8	Firm A	2013														
9	Firm A	2012														
10	Firm A	2011														
11	Firm B	2020														
12	Firm B	2019														
13	Firm B	2018														
14	Firm B	2017														
15	Firm B	2016														
16	Firm B	2015														
17	Firm B	2014														
18	Firm B	2013														
19	Firm B	2012														
20	Firm B	2011														

Source: Author's conceptualisation (2022)

ANNEXURE 4.5: FIRMS IN THE FINANCIAL SERVICES SECTOR

	Firm name		Firm name		Firm name		Firm name		Firm name
1	4Sight Holdings	26	Clientele	51	Investec Bank PREF	76	Ninety One Plc	101	Sanlam
2	ABSA Bank	27	Conduit Capital	52	Investec Limited	77	NVest Financial Holdings	102	Santam
3	Accelerate Property Fund	28	Coronation Fund Managers	53	Investec Limited PREF	78	Oasis Crescent Property Fund	103	Sasfin Holdings
4	Acsion	29	Delta Property Fund	54	Investec Plc	79	Octodec Investments	104	Sasfin Holdings PREF
5	African Dawn Capital	30	Deneb Investments	55	Investec Plc PREF	80	Old Mutual	105	Schroder European Real Estate Investment Trust plc
6	African Equity Empowerment	31	Deutsche Konsum REIT-AG	56	Investec Plc PREF (RAND)	81	Pembury Lifestyle Group	106	Sebataa Holdings
7	African Rainbow Capital Investments	32	Dipula Income Fund	57	Investec Property Fund	82	PSG Group	107	Sirius Real Estate
8	Afristrat Investment Holdings	33	Discovery	58	Irongate Group	83	PSG Group PREF	108	Spear REIT
9	Afrocentric Investment Corp	34	Discovery B Pref	59	JSE	84	PSG Konsult	109	Standard Bank Group
10	Alexander Forbes Group Holdings	35	Echo Polska Properties	60	Liberty Holdings	85	Purple Group	110	Standard Bank Group 6.5% PREF
11	Alviva Holdings	36	Emira Property Fund	61	Liberty Holdings PREF	86	Putprop	111	Standard Bank Group PREF
12	Arrowhead Properties	37	EPE Capital Partners (Ethos Capital)	62	Liberty Two Degrees	87	Quilter Plc	112	Stenprop

13	Arrowhead Properties - B	38	Equites Property Fund	63	Lighthouse Capital	88	Rand Merchant Investment Holdings	113	Stor-Age Property REIT
14	Astoria Investments	39	Exemplar REITail	64	London Finance & Investment Group	89	Raven Property Group	114	Sygnia
15	Attacq	40	Fairvest Property Holdings	65	Long4Life	90	Rebosis Property Fund-A	115	Texton Property Fund
16	Balwin Properties Pty	41	Finbond Group	66	MAS Real Estate Inc	91	Rebosis Property Fund-B	116	Tower Property Fund
17	Barclays Africa Group	42	Firstrand	67	Momentum Metropolitan Holdings	92	RECM And Calibre	117	Tradehold
18	Brait SE	43	Firstrand B PREF	68	MTN Zakhele Futhi (RF)	93	Redefine Properties	118	Transaction Capital
19	Brimstone Investment Corporation Ld	44	Fortress REIT-A	69	Nedbank Group	94	Reinet Investments SCA	119	Trematon Capital Investments
20	Calgro M3 Holdings	45	Fortress REIT-B	70	Nedbank PREF	95	Remgro	120	Trustco Group Holdings
21	Capital & Counties Properties Plc	46	Freedom Property Fund	71	NEPI Rockcastle	96	Renergen	121	Universal Partners
22	Capital & Regional Plc	47	Globe Trade Centre SA	72	New Frontier Properties	97	Resilient REIT	122	Visual International Holdings
23	Capital Appreciation	48	Heriot REIT	73	Newpark REIT	98	RMB Holdings	123	Vukile Property Fund
24	Capitec Bank Holdings	49	Hyprop Investments	74	Nictus Beperk	99	SA Corporate Real Estate	124	Vunani
25	Castleview Property Fund	50	Indluplace Properties	75	Ninety One	100	Safari Investments RSA	125	Zeder Investments

Source: Author's conceptualisation (2022)

ANNEXURE 4.6: FIRMS WITH INSUFFICIENT DATA

	Firm name		Firm name		Firm name		Firm name		Firm name
1	Adapt It Holdings	24	Bytes Technology Group	47	Imbalie Beauty	69	Motus Holdings	91	Sibanye-Stillwater
2	Adcorp Holdings	25	Central Rand Gold	48	Insimbi Refractory and Alloy Supplies	70	Mpact	92	South Ocean Holdings
3	Advanced Health	26	Choppies Enterprises	49	ISA Holdings	71	MultiChoice Group	93	South32
4	African And Overseas Enterprises	27	City Lodge Hotels	50	Italtile	72	Mustek	94	Spanjaard
5	African Media Entertainment	28	Combined Motor Holdings	51	Jasco Electronics Holdings	73	Nepi Rock Castle	95	Stadio Holdings
6	Afrimat	29	Consolidated Infrastructure Group	52	Jubilee Platinum Plc	74	Net 1 UEPS Technologies Inc	96	Steinhoff Investment Holdings Pref
7	AH Vest	30	CSG Holdings	53	Kaap Agri	75	Novus Holdings	97	Stellar Capital Partners

8	Allied Electronics Corporation	31	Dis-Chem Pharmacies	54	Karooooo	76	Nutritional Holdings	98	Telkom SA SOC
9	Alphamin Resources Corp	32	DRA Global	55	Kore Potash Plc	77	Oando Plc	99	Tharisa Plc
10	Arcelormittal South Africa	33	Eastern Platinum	56	Labat Africa	78	Orion Minerals NL	100	Thungela Resources
11	Argent Industrial	34	eMedia Holdings	57	Lewis Group	79	PBT Group	101	Total Client Services
12	Ascendis Health	35	EOH Holdings	58	Libstar Holdings	80	Pepkor Holdings	102	Transcend Residential Property Fund
13	Astral Foods	36	Erin Energy Corporation	59	Life Healthcare Group Holdings	81	Premier Fishing and Brands	103	Transpaco
14	Assore	37	Etion	60	Mahube Infrastructure	82	Prosus	104	Trellidor Holdings
15	Aveng	38	Famous Brands	61	Marshall Monteagle Plc	83	PSV Holdings	105	Union Atlantic Minerals
16	AYO Technology Solutions	39	Firestone Energy	62	Massmart Holdings	84	Quantum Food Holdings	106	Value Group
17	Basil Read Holdings	40	Go Life International PCC	63	Master Drilling Group	85	RCL Foods	107	Vivo Energy Plc
18	BHP Group Plc	41	Grand Parade Investments	64	Mediclinic International	86	Resource Generation	108	W G Wearne
19	Bid Corp	42	Grindrod	65	Middle East Diamond Resources	87	Rex Trueform Group	109	Wilson Bayly Holmes-Ovcon
20	Bid Vest	43	Growth point	66	Mine Restoration Investments	88	RH Bophelo	110	Workforce Holdings
21	Brikor	44	Huge Group	67	Mix Telematics	89	Rhodes Food Group	111	York Timber Holdings
22	British Standard Institute	45	Hulisani	68	Montauk Renewables	90	Sea Harvest Group	112	Zarclear Holdings
23	Buffalo Coal Corp	46	Hwange Colliery Company						

Source: Author's conceptualisation (2022)

ANNEXURE 4.7: FINAL SAMPLE-QUANTITATIVE STUDY

Sample, 77 firms					
	Name	**Sector**		**Name**	**Sector**
1	Adcock Ingram Holdings	Health Care	40	Mr Price Group	Consumer Services
2	Advtech	Consumer Services	41	MTN Group	Telecom
3	AECI	Basic Materials	42	Murray & Roberts Holdings	Industrials
4	African Rainbow Minerals	Basic Materials	43	Nampak	Industrials
5	Alaris Holdings	Industrials	44	Netcare	Health Care
6	ARB Holdings	Industrials	45	Northam Platinum	Basic Materials
7	Aspen Pharmacare Holdings	Health Care	46	Nu-World Holdings	Consumer Goods
8	AVI	Consumer Goods	47	Oceana Group	Consumer Goods
9	Barloworld	Industrials	48	Omnia Holdings	Basic Materials
10	Bauba Platinum	Basic Materials	49	Onelogix Group	Industrials
11	Bell Equipment	Industrials	50	Pick N Pay Stores	Consumer Services
12	Blue Label Telecoms	Industrials	51	PPC	Industrials

13	Bowler Metcalf	Basic Materials	52	Primeserv Group	Industrials
14	Cashbuild	Consumer Services	53	Randgold & Exploration	Basic Materials
15	Caxton CTP Publishers & Printers	Consumer Services	54	Raubex Group	Industrials
16	Chrometco	Basic Materials	55	Reunert	Industrials
17	Clicks Group	Consumer Services	56	Royal Bafokeng Platinum	Basic Materials
18	Cognition Holdings	Telecom	57	Sabvest Capital	Industrials
19	Crookes Brothers	Consumer Goods	58	Santova	Industrials
20	Distell Group	Consumer Goods	59	Sasol	Oil & Gas
21	DRDGOLD	Basic Materials	60	Sephaku Holdings	Industrials
22	Efora Energy	Oil & Gas	61	Shoprite Holdings	Consumer Services
23	Ellies Holdings	Technology	62	Silverbridge Holdings	Technology
24	enX Group	Industrials	63	Spur Corporation	Consumer Services
25	Exxaro Resources	Oil & Gas	64	Stefanutti Stocks Holdings	Industrials
26	Fortress REIT-A	Property	65	Sun International	Consumer Services
27	Harmony Gold Mining Company	Basic Materials	66	Telemasters Holdings	Telecom
28	Homechoice International Plc	Consumer Services	67	The Foschini Group	Consumer Services
29	Hosken Consolidated Investments	Industrials	68	The SPAR Group	Consumer Services
30	Hudaco Industries	Industrials	69	Tiger Brands	Consumer Goods
31	Hulamin	Basic Materials	70	Tongaat Hulett	Consumer Goods
32	Impala Platinum Holdings	Basic Materials	71	Trencor	Industrials
33	Imperial Holdings	Consumer Services	72	Truworths International	Consumer Services
34	Invicta Holdings	Industrials	73	Tsogo Sun	Consumer Services
35	KAP Industrial Holdings	Industrials	74	Vodacom Group	Telecom
36	Luxe Holdings	Food and luxury	75	Wescoal Holdings	Industrials
37	Merafe Resources	Basic Materials	76	Wesizwe Platinum	Basic Materials
38	Metair Investments	Consumer Goods	77	Woolworths Holdings	Consumer Services
39	Metrofile Holdings	Technology			

Source: Author's conceptualisation (2022)

ANNEXURE 4.8: SAMPLE-JOURNAL ARTICLES

Journal articles for objective 6		
	Author/s	**Topic**
1	Afrifa, GA & Tauringana, V. 2015	Corporate governance and performance of UK listed small and medium enterprises
2	Aggarwal, R & Ghosh, A. 2015	Director's remuneration and correlation on firm's performance: A study from the Indian corporate
3	Akbar, S, Poletti-Hughes, J, El-Faitouri, R & Shah, SZA. 2016	More on the relationship between corporate governance and firm performance in the UK: Evidence from the application of generalized method of moments estimation
4	Ahmed, AS, Ntim, CG & Al-Najjar B. 2018	Board diversity, corporate governance, corporate performance, and executive pay
5	Akram, F, Muhammad, AUH, Umrani, WA. 2019	Assessing the effect of managerial power on firm performance through the perceptual lens of executive remuneration
6	Al Farooque, O, Buachoom, W & Hoang, N. 2019	Interactive effects of executive compensation, firm performance and corporate governance: Evidence from an Asian market
7	Alves, P, Couto, EB & Francisco, PM. 2016	Executive pay and performance in Portuguese listed companies
8	Arora, A & Sharma, C. 2016	Corporate governance and firm performance in developing countries: evidence from India
9	Ashwin, VA. 2015	The relationship between corporate governance and financial performance of companies listed on the JSE Ltd
10	Aslam, E, Haron, R & Tahir, MN. 2019	firm performance: An empirical analysis of executive director remuneration in Pakistan

11	Ataay, A. 2018	Performance sensitivity of executive pay: the role of ownership structure, board leadership structure and board characteristics
12	Banker, RD, Bu, D & Mehta, MN. 2016	Pay Gap and Performance in China
13	Bhatt, PR & Bhatt, RR. 2017	Corporate governance and firm performance in Malaysia
14	Bhagat, S & Bolton, B. 2019	Corporate governance and firm performance: The sequel
15	Bin, L, Chen, J & Ngo, XA. 2020	Revisiting executive pay, firm performance, and corporate governance in China
16	Bin, Y & Abbas, Z. 2013	Compliance and multidimensional firm performance: Evaluating the ef fi cacy of rule-based code of corporate governance
17	Bradley, S. 2013	The relationship between CEO compensation and company performance in a South African context
18	Buallay, A, Hamdan, A & Zureigat, Q. 2017	Corporate governance and firm performance: evidence from Saudi Arabia
19	Bussin, M & Blair, C. 2015	Financial indicators of company performance in different industries that affect CEO remuneration in South Africa
20	Bussin, M & Modau, M. 2015	The relationship between Chief Executive Officer remuneration and financial performance in South Africa between 2006 and 2012
21	Cai, J & Walkling, RA. 2011	Shareholders' say on pay: Does it create value?
22	Carter, ME, Li, L, Marcus, AJ & Tehranian, H. 2016	Excess pay and deficient performance
23	Cieślak. 2018	Agency conflicts, executive compensation regulations and CEO pay-performance sensitivity: evidence from Sweden
24	Cheng, Q, Ranasinghe, T & Zhao, S. 2017	Do high CEO pay ratios destroy firm value?
25	Clarkson, PM, Walker, J & Nicholls, S. 2011	Disclosure, shareholder oversight and the pay-performance link
26	Desfontaines. 2018	Chief Executive Officer remuneration and financial performance of Australian and South African publicly listed companies
27	Eklund, MMA. 2015	CEO Compensation of listed companies in Switzerland: Empirical studies on firm financial performances, risk, and peer group comparisons
28	Elsayed, N ~~& Elbardan, H~~. 2018	Investigating the associations between executive compensation and firm performance: Agency theory or tournament theory
29	Emile, R. 2015	The Effect of Corporate Governance on Firm Performance, Evidence from Egypt
30	Esra, A & Hamdan, A. 2016	The impact of corporate governance on firm performance: Evidence from Bahrain Bourse
31	Fallatah, Y. 2012	Corporate governance and firm performance and value in Saudi Arabia
32	Assankutty, A, Fatima, F & Kuntluru, S. 2019	Does Corporate Governance Disclosure Practice Impact Firm Performance in India?
33	Gao, Z & Zhang, C. 2015	Empirical study on the relationship between executive compensation dispersion and firm performance: The moderating role of technology intensity
34	Hassan, MK & Halbouni, SS. 2013	Corporate governance, economic turbulence and financial performance of UAE listed firms
35	Hou, W, Priem, RL & Goranova, M. 2015	Does one size fit all? Investigating pay–future performance relationships over the "Seasons" of CEO tenure
36	Kanapathippillai, S, Gul, F, Mihret, D & Muttakin, MB. 2019	Compensation committees, CEO pay and firm performance
37	Kazan, E. 2016	The impact of CEO compensation on firm performance in Scandinavia
38	Kirsten, E & Du Toit, E. 2018	The relationship between remuneration and financial performance for companies listed on the Johannesburg stock exchange
39	Li, L. 2017	An empirical study on the relationship between executive compensation and corporate performance of listed energy companies
40	Luo, J, Xiang, Y & Zhu, R. 2020	When Are Pay Gaps Good or Bad for Firm Performance? Evidence from China
41	Malik, MS & Makhdoom, DD. 2016	Does corporate governance beget firm performance in Fortune Global 500 companies?
42	Mans-Kemp, N, Erasmus, PD & Viviers, S. 2017	Does investing in sound corporate governance pay? A South African study
43	Mardnly, Z, Mouselli, S & Abdulraouf, R. 2018	Corporate governance and firm performance: an empirical evidence from Syria
44	Modau, M. 2014	The relationship between Chief Executive Officer (CEO) remuneration and financial performance of an organisation
45	Mnyaka, N. 2019	CEO performance based remuneration and the agency problem in JSE listed mining companies
46	Munisi, G & Randøy, T. 2013	Corporate governance and company performance across Sub-Saharan African countries

47	Naik, M. 2015	Executive director remuneration, company performance and executive director profiles for South African companies listed on the Johannesburg Stock Exchange (JSE)
48	Naimah, Z & Hamidah. 2017	The role of corporate governance in firm performance
49	Nazir, MS & Afza, T. 2018	Does managerial behavior of managing earnings mitigate the relationship between corporate governance and firm value? Evidence from an emerging market
50	Ndofirepi, TP. 2015	The relationship between CEO compensation and various performance indicators in South Africa
51	Ngwenya, S. 2016	CEO compensation, corporate governance, and performance of listed platinum mines in South Africa
52	Ntim, CG, Lindop, S, Thomas, DA, Abdou, H & Opong KK. 2019	Executive pay and performance: the moderating effect of CEO power and governance structure
53	Obermann, J. 2020	Let's talk about money! Assessing the link between firm performance and voluntary Say-on-Pay votes
54	Osei-Bonsu, N & Lutta, JGM. 2016	CEO Cash Compensation and Firm Performance: An Empirical Study from Emerging Markets
55	Outa, ER & Waweru, NM. 2016	Corporate governance guidelines compliance and firm financial performance Kenya listed companies
56	Padia, N & Callaghan, CW. 2020	Executive director remuneration and company performance: panel evidence from South Africa for the years following King III
57	Paniagua, J, Rivelles, R & Sapena, J. 2018	Corporate governance and financial performance: The role of ownership and board structure
58	Pecher, C. 2012	Linking pay to performance: A closer look at performance-based compensation and shareholder voting rights
59	Raithatha, M & Komera, S. 2016	Executive compensation and firm performance: Evidence from Indian firms
60	Ramachandran, N. 2018	Relevance of Executive Compensation and Corporate Performance: Indian Automobile Industry
61	Rambajan, A. 2011	The relationship between corporate governance and company performance
62	Rampling, PN. 2015	CEO and executive director remuneration practice and corporate financial performance: a comparison of practices in the USA, UK and Australia
63	Rose, C. 2016	Firm performance and comply or explain disclosure in corporate governance
64	Sanchez-Marin, G & Baixauli-Soler, S. 2015	TMT pay dispersion and firm performance: The moderating role of organizational governance effectiveness
65	Saravanan, P, Srikanth, M & Avabruth, SM. 2017	Compensation of top brass, corporate governance and performance of the Indian family firms – an empirical study
66	Sarpong-Danquah et al 2018	Corporate Governance and Firm Performance: An Empirical Analysis of Manufacturing Listed Firms in Ghana
67	Scholtz, H & Kieviet. 2018	The Influence Of Board Diversity On Company Performance Of South African Companies
68	Shaw, J. 2015	Pay dispersion, sorting and organisational performance
69	Tan, DT, Chapple, L & Walsh, KD. 2017	Corporate fraud culture: Re-examining the corporate governance and performance relation
70	Tizazu, AE. 2017	Corporate governance, antecedents and performance implications in the Ethiopian non-financial share companies-A contingency perspective
71	Tshipa, J & Mokoaleli-Mokoteli, T. 2015	The south African code of corporate governance. The relationship between compliance and financial performance: Evidence from south African publicly listed firms
72	Urson, M. 2016	CEO Pay Ratios and Company Performance: a Study of JSElisted Consumer Goods
73	Wang, J & Wang J. 2019	Does Corporate Governance Enhance Firm Performance and Reduce Firm Risk? Evidence from Taiwanese Listed Companies
74	Weenders, V. 2019	What is the effect of corporate governance on the pay-performance relationship in the Netherlands?
75	Yamina, A & Mohamed, **B**. 2017	The Impact of Firm Performance on Executive Compensation in France
76	Yameen, M, Farhan, NH & Tabash, MI. 2019	The impact of corporate governance practices on firm's performance: An empirical evidence from Indian tourism sector
77	Yahya, F & Ghazali, Z. 2018	The moderating role of country-specific characteristics on pay-performance relationship in Asian markets: A meta-analysis approach
78	Yuan, X, Lin, W & Oriaku, EA. 2017	Executive compensation, financial performance and say on pay votes
79	Zandi, G, Mohamad, S, Keong, OC & Ehsanullah S. 2019	CEO Compensation and Performance
80	Zhang, Z & Cui, Y. 2018	How the executive compensation effects the performance of listed companies

Source: Author's conceptualisation (2022)

ANNEXURE 4.9: KPI'S AND FPMS

Executive KPIs from 2011 to 2020							
Firm name	**Year**	**KPI1**	**KPI2**	**KPI3**	**KPI4**	**KPI5**	**etc**
Firm A	2020						
Firm A	2019						
Firm A	2018						
Firm A	2017						
Firm A	2016						
Firm A	2015						
Firm A	2014						
Firm A	2013						
Firm A	2012						
Firm A	2011						
Firm B	2020						
Firm B	2019						
Firm B	2018						
Firm B	2017						
Firm B	2016						
Firm B	2015						
Firm B	2014						
Firm B	2013						
Firm B	2012						
Firm B	2011						
Executive performance measures							
Article title	**Author/s**	**PM1**	**PM2**	**PM3**	**PM4**	**CV1**	**CV2**
Article 1							
Article 2							
Article 3							
Article 4							
Article 5							

Source: Author's conceptualisation (2022)

ANNEXURE 4.10: COLLINEARITY RESULTS

Objective 4.1

Regression

Variables Entered/Removed[a]			
Model	Variables Entered	Variables Removed	Method
1	SP_Log10, ROA, RGCIJSE, IND, SH, SizeTotalassetsIRESS, TobinsQ, HEPS_Log10[b]	.	Enter
a. Dependent Variable: Fixedpay_Log10			
b. All requested variables entered.			

Source: Author's conceptualisation (2022)

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.614[a]	.376	.366	.22807

a. Predictors: (Constant), SP_Log10, ROA, RGCIJSE, IND, SH, SizeTotalassetsIRESS, TobinsQ, HEPS_Log10

Source: Author's conceptualisation (2022)

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	15.671	8	1.959	37.659	<,001[b]
	Residual	25.956	499	.052		
	Total	41.627	507			

a. Dependent Variable: Fixedpay_Log10

b. Predictors: (Constant), SP_Log10, ROA, RGCIJSE, IND, SH, SizeTotalassetsIRESS, TobinsQ, HEPS_Log10

Source: Author's conceptualisation (2022)

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	6.761	.063		106.878	.000		
	RGCIJSE	.188	.068	.107	2.787	.006	.848	1.179
	SH	.005	.001	.153	3.917	<,001	.815	1.227
	ROA	-.377	.123	-.155	-3.080	.002	.492	2.033
	IND	4.727E-5	.001	.002	.062	.950	.806	1.241
	TobinsQ	.006	.012	.026	.478	.633	.428	2.337
	SizeTotalassetsIRESS	1.341E-12	.000	.274	6.876	<,001	.788	1.270
	HEPS_Log10	.052	.034	.142	1.554	.121	.150	6.671
	SP_Log10	.111	.036	.302	3.048	.002	.127	7.852

a. Dependent Variable: Fixedpay_Log10

Source: Author's conceptualisation (2022)

Collinearity Diagnostics[a]

Model	Dimension	Eigenvalue	Condition Index	Variance Proportions								
				(Constant)	RGCIJSE	SH	ROA	IND	TobinsQ	SizeTotalassetsIRESS	HEPS_Log10	SP_Log10
1	1	5.735	1.000	.00	.00	.00	.00	.00	.00	.01	.00	.00
	2	1.301	2.099	.00	.00	.19	.01	.00	.00	.10	.03	.00
	3	.742	2.780	.00	.00	.29	.03	.00	.02	.43	.00	.00
	4	.593	3.109	.00	.01	.26	.04	.01	.01	.00	.07	.00
	5	.376	3.906	.00	.00	.12	.16	.00	.06	.44	.05	.00
	6	.146	6.259	.00	.00	.01	.61	.01	.64	.00	.01	.00
	7	.062	9.580	.00	.65	.00	.00	.33	.03	.01	.00	.00
	8	.028	14.323	.14	.22	.02	.02	.53	.10	.00	.28	.44
	9	.016	18.780	.85	.11	.10	.13	.12	.14	.01	.56	.55

a. Dependent Variable: Fixedpay_Log10

Source: Author's conceptualisation (2022)

Objective 4.2

Regression

Variables Entered/Removed[a]

Model	Variables Entered	Variables Removed	Method

1	SP_Log10, ROA, RGCIJSE, IND, SizeTotalassetsIRESS, SH, TobinsQ, HEPS_Log10[b]	.	Enter
a. Dependent Variable: STI_Log10			
b. All requested variables entered.			

Source: Author's conceptualisation (2022)

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.486[a]	.236	.221	.45941
a. Predictors: (Constant), SP_Log10, ROA, RGCIJSE, IND, SizeTotalassetsIRESS, SH, TobinsQ, HEPS_Log10				

Source: Author's conceptualisation (2022)

ANOVA[a]						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	26.726	8	3.341	15.829	<,001[b]
	Residual	86.532	410	.211		
	Total	113.258	418			
a. Dependent Variable: STI_Log10						
b. Predictors: (Constant), SP_Log10, ROA, RGCIJSE, IND, SizeTotalassetsIRESS, SH, TobinsQ, HEPS_Log10						

Source: Author's conceptualisation (2022)

Coefficients[a]								
		Unstandardized Coefficients		Standardized Coefficients			Collinearity Statistics	
Model		B	Std. Error	Beta	t	Sig.	Tolerance	VIF
1	(Constant)	6.375	.144		44.197	<,001		
	RGCIJSE	.343	.150	.107	2.288	.023	.853	1.173
	SH	.000	.003	.005	.096	.924	.795	1.259
	ROA	-.413	.291	-.091	-1.420	.156	.454	2.202
	IND	-.003	.002	-.082	-1.705	.089	.810	1.235
	TobinsQ	-.024	.027	-.060	-.865	.387	.384	2.604
	SizeTotalassetsIRESS	1.106E-12	.000	.116	2.367	.018	.780	1.282
	HEPS_Log10	.081	.075	.117	1.082	.280	.160	6.231
	SP_Log10	.214	.081	.311	2.631	.009	.133	7.500
a. Dependent Variable: STI_Log10								

Source: Author's conceptualisation (2022)

Collinearity Diagnostics[a]												
				Variance Proportions								
Model	Dimension	Eigenvalue	Condition Index	(Constant)	RGCIJSE	SH	ROA	IND	TobinsQ	SizeTotalassetsIRESS	HEPS_Log10	SP_Log10
1	1	5.895	1.000	.00	.00	.00	.00	.00	.00	.01	.00	.00
	2	1.250	2.172	.00	.00	.24	.01	.00	.00	.09	.03	.00
	3	.714	2.873	.00	.00	.33	.02	.00	.02	.43	.00	.00
	4	.544	3.291	.00	.01	.14	.04	.02	.02	.01	.08	.00
	5	.368	4.000	.00	.00	.15	.13	.00	.05	.43	.07	.00
	6	.125	6.870	.00	.00	.00	.64	.00	.65	.01	.02	.00
	7	.062	9.769	.00	.62	.00	.01	.35	.01	.02	.00	.00
	8	.027	14.780	.16	.24	.03	.02	.52	.09	.00	.25	.40
	9	.015	19.718	.83	.12	.10	.14	.10	.16	.01	.55	.59
a. Dependent Variable: STI_Log10												

Source: Author's conceptualisation (2022)

ANNEXURE 4.11: HOMOSCEDASTICITY TEST RESULTS

Objective 2.1: RGCI-JSE vs HEPS_Log10

Regression

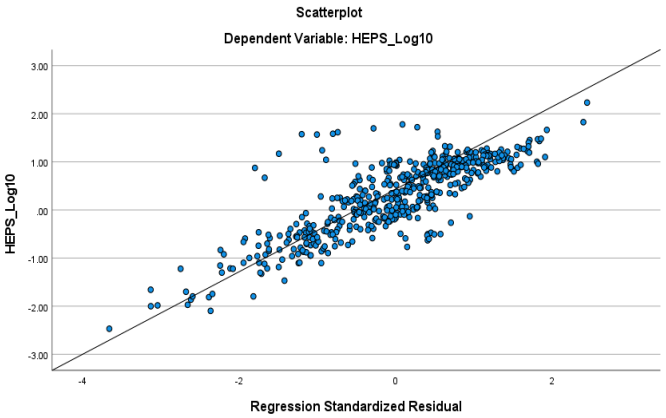
Variables Entered/Removed[a]			
Model	Variables Entered	Variables Removed	Method
1	SizeTotalassetsIRESS, TobinsQ, SH, RGCIJSE, IND, ROA[b]	.	Enter
a. Dependent Variable: HEPS_Log10			
b. All requested variables entered.			

Source: Author's conceptualisation (2022)

Coefficients[a]						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-.843	.158		-5.342	<,001
	RGCIJSE	.778	.188	.162	4.135	<,001
	SH	-.016	.004	-.172	-4.343	<,001
	ROA	1.187	.329	.179	3.604	<,001
	IND	.007	.002	.131	3.287	.001
	TobinsQ	.075	.031	.120	2.396	.017
	SizeTotalassetsIRESS	4.597E-12	.000	.344	8.970	<,001
a. Dependent Variable: HEPS_Log10						

Source: Author's conceptualisation (2022)

Chart



Source: Author's conceptualisation (2022)

Objective 2.2: RGCI-JSE vs SP_Log10

Regression

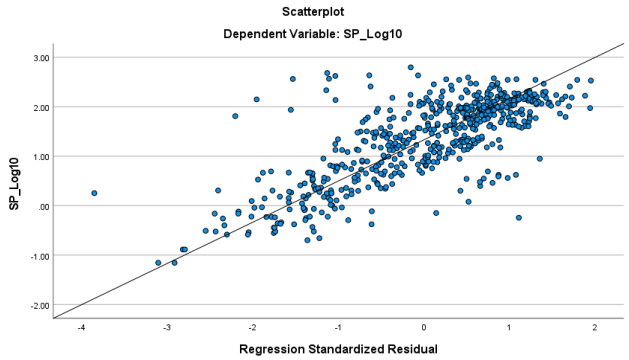
Variables Entered/Removed[a]			
Model	Variables Entered	Variables Removed	Method
1	SizeTotalassetsIRESS, ROA, RGCIJSE, SH, IND, TobinsQ[b]	.	Enter
a. Dependent Variable: SP_Log10			
b. All requested variables entered.			

Source: Author's conceptualisation (2022)

Coefficients[a]						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-.125	.145		-.867	.386
	RGCIJSE	.972	.170	.194	5.730	<,001
	SH	-.019	.003	-.185	-5.367	<,001
	ROA	.933	.091	.428	10.208	<,001
	IND	.011	.002	.187	5.344	<,001
	TobinsQ	.138	.016	.373	8.728	<,001
	SizeTotalassetsIRESS	4.663E-12	.000	.315	9.431	<,001
a. Dependent Variable: SP_Log10						

Source: Author's conceptualisation (2022)

Chart



Source: Author's conceptualisation (2022)

Objective 3.1: RGCI-JSE vs Fixed pay_Log10

Regression

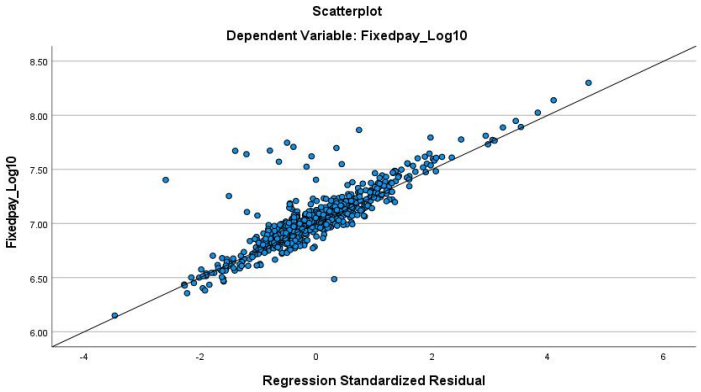
Variables Entered/Removed[a]			
Model	Variables Entered	Variables Removed	Method
1	SizeTotalassetsIRESS, ROA, RGCIJSE, SH, IND, TobinsQ[b]	.	Enter
a. Dependent Variable: Fixedpay_Log10			
b. All requested variables entered.			

Source: Author's conceptualisation (2022)

Coefficients[a]						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	6.690	.057		118.077	.000
	RGCIJSE	.352	.066	.205	5.298	<,001
	SH	.002	.001	.059	1.497	.135
	ROA	.054	.036	.072	1.515	.130
	IND	.002	.001	.098	2.461	.014
	TobinsQ	-.004	.006	-.029	-.603	.547
	SizeTotalassetsIRESS	2.105E-12	.000	.413	10.866	<,001
a. Dependent Variable: Fixedpay_Log10						

Source: Author's conceptualisation (2022)

Chart



Source: Author's conceptualisation (2022)

Objective 3.2: RGCI-JSE vs STI_Log10

Regression

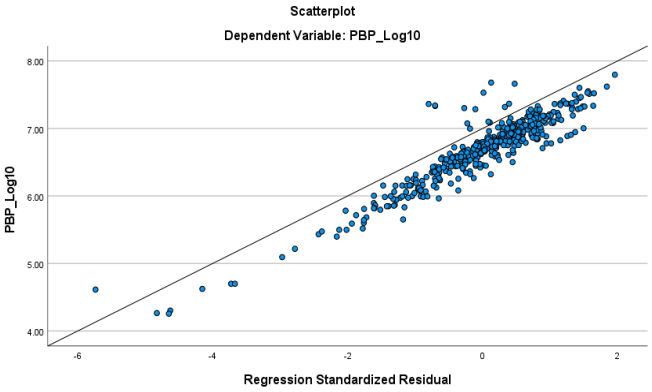
Variables Entered/Removed[a]			
Model	Variables Entered	Variables Removed	Method
1	SizeTotalassetsIRESS, ROA, RGCIJSE, IND, SH, TobinsQ[b]	.	Enter
a. Dependent Variable: STI_Log10			
b. All requested variables entered.			

Source: Author's conceptualisation (2022)

Coefficients[a]						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	6.290	.131		47.857	<,001
	RGCIJSE	.541	.154	.167	3.513	<,001
	SH	-.005	.003	-.083	-1.724	.085
	ROA	.209	.157	.063	1.330	.184
	IND	.000	.002	.006	.118	.906
	TobinsQ	-.002	.019	-.004	-.088	.930
	SizeTotalassetsIRESS	2.691E-12	.000	.272	5.894	<,001
a. Dependent Variable: STI_Log10						

Source: Author's conceptualisation (2022)

Chart



Source: Author's conceptualisation (2022)

Objective 4.1: Firm performance vs Fixed pay_Log10

Regression

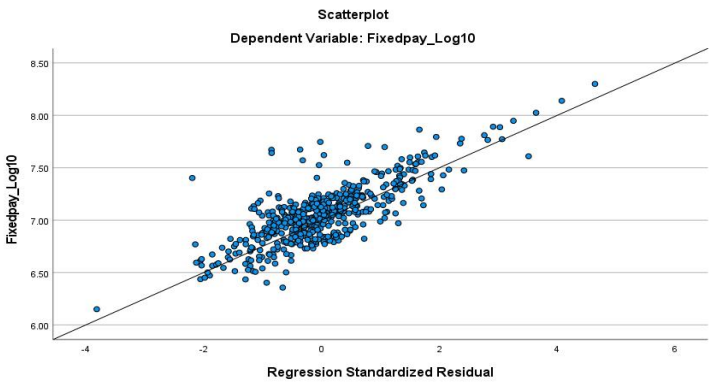
Variables Entered/Removed[a]			
Model	Variables Entered	Variables Removed	Method
1	SP_Log10, ROA, SH, IND, SizeTotalassetsIRESS, TobinsQ, HEPS_Log10[b]	.	Enter
a. Dependent Variable: Fixedpay_Log10			
b. All requested variables entered.			

Source: Author's conceptualisation (2022)

Coefficients[a]						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	6.851	.055		125.202	.000
	SH	.005	.001	.140	3.605	<,001
	ROA	-.397	.123	-.163	-3.235	.001
	IND	2.983E-5	.001	.002	.039	.969
	TobinsQ	.010	.012	.043	.794	.427
	SizeTotalassetsIRESS	1.317E-12	.000	.268	6.734	<,001
	HEPS_Log10	.054	.034	.146	1.599	.110
	SP_Log10	.121	.036	.329	3.343	<,001
a. Dependent Variable: Fixedpay_Log10						

Source: Author's conceptualisation (2022)

Charts



Source: Author's conceptualisation (2022)

Objective 4.2: Firm performance vs STI_Log10

Regression

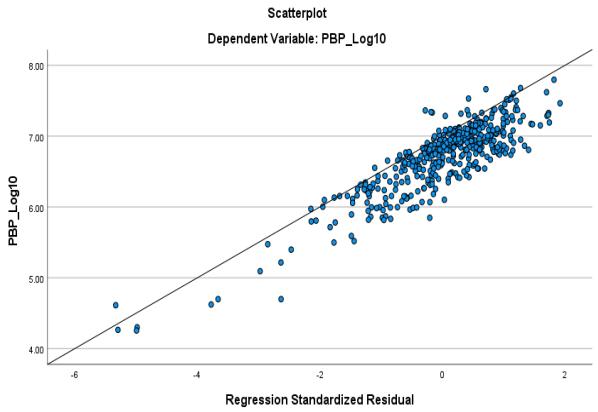
Variables Entered/Removed[a]			
Model	Variables Entered	Variables Removed	Method
1	SP_Log10, ROA, IND, SH, SizeTotalassetsIRESS, TobinsQ, HEPS_Log10[b]	.	Enter
a. Dependent Variable: STI_Log10			
b. All requested variables entered.			

Source: Author's conceptualisation (2022)

Coefficients[a]						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	6.549	.123		53.092	<,001
	SH	-.001	.003	-.016	-.330	.742
	ROA	-.415	.291	-.091	-1.424	.155
	IND	-.003	.002	-.087	-1.817	.070
	TobinsQ	-.017	.027	-.044	-.627	.531
	SizeTotalassetsIRESS	1.057E-12	.000	.110	2.262	.024
	HEPS_Log10	.083	.075	.120	1.107	.269
	SP_Log10	.231	.081	.335	2.838	.005
a. Dependent Variable: STI_Log10						

Source: Author's conceptualisation (2022)

Chart



Source: Author's conceptualisation (2022)

Objective 5.1: RGCI-JSE vs HEPS_Log10

Regression

Variables Entered/Removed[a]			
Model	Variables Entered	Variables Removed	Method
1	Paygap, ROA, SizeTotalassetsIRESS, SH, IND, TobinsQ[b]	.	Enter
a. Dependent Variable: HEPS_Log10			

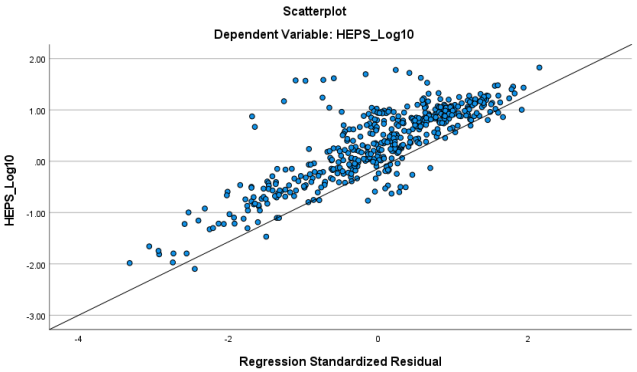
b. All requested variables entered.

Source: Author's conceptualisation (2022)

Coefficients[a]						
		Unstandardized Coefficients		Standardized Coefficients		
Model		B	Std. Error	Beta	t	Sig.
1	(Constant)	-.385	.131		-2.943	.003
	SH	-.018	.004	-.202	-4.927	<,001
	ROA	1.355	.380	.204	3.571	<,001
	IND	.007	.002	.133	3.131	.002
	TobinsQ	.083	.033	.143	2.537	.011
	SizeTotalassetsIRESS	4.328E-12	.000	.354	8.758	<,001
	Paygap	-4.035E-5	.000	-.023	-.587	.557
a. Dependent Variable: HEPS_Log10						

Source: Author's conceptualisation (2022)

Chart



Source: Author's conceptualisation (2022)

Objective 5.2: RGCI-JSE vs SP_Log10

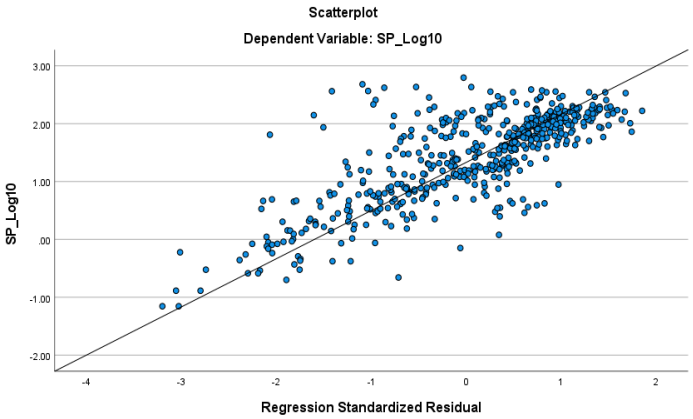
Variables Entered/Removed[a]			
Model	Variables Entered	Variables Removed	Method
1	Paygap, ROA, SizeTotalassetsIRESS, SH, IND, TobinsQ[b]	.	Enter
a. Dependent Variable: SP_Log10			
b. All requested variables entered.			

Source: Author's conceptualisation (2022)

Coefficients[a]						
		Unstandardized Coefficients		Standardized Coefficients		
Model		B	Std. Error	Beta	t	Sig.
1	(Constant)	.499	.123		4.063	<,001
	SH	-.022	.003	-.232	-6.440	<,001
	ROA	1.280	.265	.219	4.824	<,001
	IND	.009	.002	.159	4.269	<,001
	TobinsQ	.171	.028	.272	6.027	<,001
	SizeTotalassetsIRESS	4.466E-12	.000	.331	9.363	<,001
	Paygap	-6.347E-5	.000	-.033	-.950	.343
a. Dependent Variable: SP_Log10						

Source: Author's conceptualisation (2022)

Chart



Source: Author's conceptualisation (2022)

ANNEXURE 4.12: OUTLIER DETECTION RESULTS

	CoName	Year	Paygap	RGC-IJSE	SH	ROA	IND	Tob-insQ	SizeTotal assetsIRESS	Fixpay Log10	STI Log10	HEPS Log10	SP Log10	MAH_1	Outlier
1	Raubex	2011	4812,88	0,44	4,17%	0,20	37,5%	1,22	4011000000	6,59	6,75	0,38	1,31	105,38	0,00000
2	Wescoal	2019	6427,72	0,39	0,52%	0,07	36,4%	0,42	3352072000	7,21	6,81	-0,76	0,19	186,55	0,00000
3	Wescoal	2018	4418,21	0,41	0,33%	0,12	30,0%	0,44	3000199000	7,08	6,84	-0,33	0,23	88,78	0,00000
4	Hudaco Industries	2014	23,75	0,85	2,88%	0,22	57,1%	1,64	3068364000	6,95	6,66	-1,22	1,98	63,70	0,00000
5	Northam Platinum	2014	116,25	0,74	0,00%	0,01	66,7%	1,32	14740996000	6,98	7,46	-1,66	1,66	61,08	0,00000
6	MTN	2019	69,50	0,57	0,00%	0,12	78,9%	1,00	302311000000	7,86	4,61	0,67	1,94	59,92	0,00000
7	Adcock Ingram	2014	23,54	0,56	0,00%	-0,28	54,5%	2,35	5405842000	6,77	6,93	1,00	1,74	58,61	0,00000
8	Sasol	2018	25,41	0,49	0,01%	0,04	80,0%	0,88	439235000000	7,64	7,36	1,57	2,68	55,70	0,00000
9	Sasol	2017	34,84	0,53	0,01%	0,08	80,0%	0,75	398939000000	7,75	7,33	1,59	2,57	45,08	0,00000
10	Sasol	2016	27,80	0,59	0,00%	0,06	78,6%	0,88	390714000000	7,67	7,34	1,62	2,62	42,79	0,00000
11	Hulamin	2013	10,07	0,78	0,10%	-0,32	53,8%	0,41	5729872000	6,99	6,35	-0,24	0,69	40,94	0,00001
12	MTN	2020	80,96	0,63	0,01%	0,15	80,0%	0,77	348942000000	7,71	7,68	0,87	1,81	40,42	0,00001
13	Spur Corporation	2014	8,94	0,70	37,12%	0,52	40,0%	8,34	609174000	7,12	6,26	0,20	1,50	40,33	0,00001
14	Onelogix	2014	19,16	0,37	53,87%	0,16	44,4%	1,40	926223000	6,93	6,91	-0,51	0,59	37,58	0,00002
15	Mr Price	2015	132,49	0,78	0,71%	0,41	53,8%	8,71	7867000000	7,04	7,20	0,96	2,41	36,97	0,00003
16	Blue Label Telecoms	2017	12,59	0,59	24,25%	0,18	55,6%	1,40	8697383000	7,31	4,26	0,06	1,21	36,80	0,00003
17	Netcare	2012	28,18	0,63	0,59%	-0,26	70,0%	1,56	44222000000	7,01	6,85	0,09	1,27	35,18	0,00006
18	AVI	2019	40,25	0,51	0,27%	0,27	66,7%	3,43	9795300000	7,77	4,27	0,71	1,96	34,54	0,00007
19	Blue Label Telecoms	2018	12,68	0,61	19,48%	0,06	55,6%	0,90	17930951000	7,34	4,30	0,06	1,07	33,49	0,00011
20	Spur Corporation	2012	7,32	0,67	37,12%	0,60	22,2%	6,20	604014000	7,05	5,99	0,11	1,22	32,38	0,00017
21	Spur Corporation	2013	7,06	0,67	37,12%	0,52	40,0%	7,28	696213000	7,09	6,22	0,20	1,44	31,96	0,00020
22	Ellies	2013	28,11	0,30	47,83%	0,23	30,0%	2,07	1692129000	7,05	7,00	-0,13	0,95	29,80	0,00047
23	Ellies	2012	24,67	0,30	47,04%	0,23	40,0%	1,30	1345601000	7,01	6,71	-0,26	0,55	28,97	0,00065
24	Sasol	2015	30,15	0,59	0,00%	0,14	76,9%	1,02	323599000000	7,57	7,53	1,70	2,63	28,97	0,00066
25	Onelogix	2013	16,80	0,37	48,65%	0,13	30,0%	1,35	774680000	6,88	6,78	-0,60	0,46	28,95	0,00066
26	Impala Platinum	2016	61,05	0,52	0,00%	-0,01	75,0%	0,55	85016000000	7,11	6,54	-0,92	1,66	28,49	0,00079
27	Ellies	2014	22,92	0,30	44,08%	0,08	36,4%	0,97	2088703000	7,09	6,82	-0,63	0,62	25,64	0,00234
28	Spur Corporation	2011	3,45	0,67	37,12%	0,41	18,2%	4,99	555963000	6,97	6,04	-0,01	1,14	23,86	0,00454
29	Mr Price	2018	130,39	0,61	0,29%	0,39	46,2%	7,42	10119000000	7,16	7,24	1,04	2,45	23,74	0,00473
30	Cognition	2020	5,98	0,22	0,01%	-0,07	54,5%	1,46	294147000	6,90	5,83	-1,81	-0,08	22,17	0,00834
31	Santova	2020	4,16	0,51	14,82%	0,06	50,0%	0,73	1170181000	6,92	4,70	-0,39	0,30	21,52	0,01053
32	Sasol	2014	31,92	0,63	0,01%	0,15	71,4%	1,52	280264000000	7,62	7,66	1,78	2,80	20,95	0,01288
33	enX	2011	10,53	0,04	6,14%	-0,01	37,5%	0,59	580787000	6,77	5,96	-1,80	-0,29	20,47	0,01521
34	Onelogix	2018	20,74	0,24	38,27%	0,13	40,0%	0,88	1752249000	7,10	6,95	-0,47	0,62	20,34	0,01594

35	Onelogix	2019	18,14	0,27	38,75%	0,09	33,3%	0,66	2289568000	7,13	6,89	-0,50	0,56	20,33	0,01596
36	MTN	2014	48,13	0,74	0,00%	0,25	71,4%	2,13	253685000000	7,25	7,30	1,24	2,33	20,11	0,01723
37	PPC	2020	19,36	0,63	0,28%	-0,10	80,0%	0,39	17093000000	7,28	6,00	-0,57	0,09	20,08	0,01742
38	Onelogix	2020	13,53	0,27	38,91%	0,06	40,0%	0,66	2145181000	7,16	6,08	-0,77	0,40	19,91	0,01845
39	Mr Price	2013	126,12	0,81	0,11%	0,43	13,3%	6,10	4897000000	6,94	7,04	0,80	2,07	19,91	0,01845
40	Impala Platinum	2015	41,71	0,33	0,00%	-0,06	73,3%	0,58	77215000000	7,10	6,52	-0,44	1,79	19,47	0,02151
41	Santova	2011	8,80	0,59	17,62%	0,11	33,3%	0,79	347876000	6,82	5,85	-1,97	-1,15	18,95	0,02561
42	Onelogix	2017	14,24	0,24	37,68%	0,09	44,4%	0,71	1850952000	7,05	6,32	-0,53	0,48	18,14	0,03362
43	enX	2013	24,75	0,19	1,38%	0,01	60,0%	0,85	462662000	6,99	5,52	-1,74	-0,09	17,84	0,03704
44	Fortress REIT-A	2018	69,38	0,39	1,20%	-0,13	63,6%	0,65	56484993000	7,24	7,28	-0,71	1,20	17,18	0,04604
45	Onelogix	2016	14,32	0,37	37,58%	0,09	44,4%	0,99	1731133000	7,01	6,26	-0,59	0,54	17,05	0,04793
46	Mr Price	2017	60,41	0,49	0,31%	0,36	46,2%	4,75	8915000000	7,12	5,47	0,96	2,23	16,76	0,05254
47	Harmony Gold Mining	2014	34,25	0,85	0,04%	-0,03	66,7%	0,41	40870000000	7,23	6,63	-0,59	1,48	16,64	0,05463
48	Aspen Pharmacare	2013	23,78	0,56	0,02%	0,25	55,6%	5,86	45421700000	7,05	7,05	0,92	2,29	16,39	0,05909
49	Sasol	2013	25,55	0,63	0,02%	0,16	69,2%	1,18	246165000000	7,53	7,29	1,72	2,63	16,39	0,05918
50	Hulamin	2018	9,44	0,61	0,31%	-0,15	50,0%	0,31	6511459000	7,14	6,51	-0,04	0,63	16,37	0,05956
51	Barloworld	2017	69,28	0,14	0,05%	0,09	83,3%	0,84	46324000000	7,73	7,34	0,95	2,10	15,34	0,08210
52	Invicta	2013	22,83	0,67	0,45%	0,08	10,0%	1,35	12204811000	7,02	6,90	0,95	2,01	15,01	0,09061
53	Impala Platinum	2014	122,18	0,78	0,00%	0,00	69,2%	0,97	79867000000	7,15	7,08	-0,07	2,05	14,91	0,09354
54	Spur Corporation	2015	2,14	0,70	3,34%	0,25	36,4%	5,55	1106284000	6,15	6,36	0,18	1,57	14,89	0,09392
55	Exxaro Resources	2018	31,59	0,29	1,30%	0,09	64,3%	0,82	65050000000	7,08	6,74	1,83	2,12	14,70	0,09947
56	Sun International	2018	53,67	0,14	0,20%	0,11	35,7%	1,09	24299000000	7,20	6,86	0,33	1,79	14,70	0,09963
57	PPC	2017	15,89	0,53	0,09%	0,05	75,0%	0,91	18035000000	7,14	5,86	-1,15	0,83	14,53	0,10477
58	Efora Energy	2016	7,57	0,48	0,03%	0,05	45,5%	1,01	1056723000	6,97	6,10	-1,98	-0,52	14,29	0,11223
59	Mr Price	2014	133,77	0,81	0,16%	0,40	46,7%	6,20	6563000000	7,01	7,18	0,88	2,18	13,74	0,13198
60	Cognition	2011	10,00	0,30	0,02%	0,20	33,3%	0,98	127504143	6,61	6,45	-0,84	-0,05	13,61	0,13705
61	Cognition	2013	11,72	0,30	0,01%	0,21	22,2%	1,82	159557000	6,67	6,47	-0,74	0,31	13,59	0,13768
62	Aspen Pharmacare	2015	19,68	0,59	16,26%	0,20	45,5%	4,73	88400000000	7,11	7,10	1,06	2,56	13,49	0,14170
63	Bowler Metcalf	2014	12,07	0,26	0,01%	0,14	42,9%	1,20	553515000	6,72	5,40	-0,13	0,88	13,09	0,15847
64	Harmony Gold Mining	2013	31,63	0,85	0,02%	-0,05	66,7%	0,45	42133000000	7,18	6,57	-0,28	1,57	12,78	0,17283
65	Cognition	2018	10,09	0,20	0,01%	0,13	36,4%	0,78	221800000	6,87	6,26	-0,83	0,00	12,69	0,17734
66	Mr Price	2016	110,88	0,78	0,30%	0,47	41,7%	5,82	8063000000	7,02	7,09	1,02	2,24	12,65	0,17886
67	Stefanutti Stocks	2018	26,96	0,41	6,32%	-0,08	46,7%	0,18	6345000000	6,96	6,75	-0,17	0,34	12,47	0,18795
68	Blue Label Telecoms	2016	30,17	0,67	24,83%	0,19	60,0%	1,74	7312947000	7,37	7,33	0,02	1,21	12,29	0,19746
69	enX	2020	13,20	0,41	0,36%	-0,02	44,4%	0,62	10612007000	7,08	6,61	-1,21	0,67	12,27	0,19868
70	Merafe Resources	2015	110,67	0,67	0,11%	0,10	50,0%	0,43	5357605000	7,14	6,74	-0,85	-0,26	12,15	0,20523
71	Sun International	2019	63,41	0,14	0,19%	0,13	71,4%	0,94	23634000000	7,12	6,91	0,78	1,60	12,08	0,20876
72	Aspen Pharmacare	2016	16,93	0,56	16,26%	0,18	54,5%	4,23	104300000000	7,13	7,12	0,95	2,54	12,07	0,20924
73	Barloworld	2018	28,55	0,14	0,07%	0,09	69,2%	0,81	49259000000	7,21	7,19	1,08	2,09	12,05	0,21034
74	Blue Label Telecoms	2015	39,05	0,67	24,74%	0,17	50,0%	0,95	7026820000	7,39	7,29	-0,06	0,91	11,90	0,21880
75	Advtech	2020	20,46	0,19	0,49%	0,15	81,8%	1,33	7640700000	6,92	6,36	-0,04	0,98	11,84	0,22253
76	Barloworld	2019	21,66	0,14	0,10%	0,08	75,0%	0,76	47388000000	7,26	6,93	1,04	2,06	11,83	0,22301
77	Cognition	2014	18,38	0,30	0,01%	0,21	28,6%	1,97	167385000	6,73	6,61	-0,69	0,36	11,78	0,22579
78	Sasol	2012	34,34	0,56	0,04%	0,18	69,2%	1,14	197583000000	7,55	7,37	1,63	2,55	11,72	0,22966
79	Vodacom	2020	14,42	0,65	0,07%	0,13	41,7%	1,45	190223000000	7,11	7,08	0,98	2,05	11,59	0,23741
80	ARB	2012	14,25	0,52	3,17%	0,14	42,9%	1,18	984559449	6,72	5,22	-0,47	0,56	11,58	0,23791
81	Stefanutti Stocks	2016	35,45	0,70	5,50%	0,07	72,7%	0,25	6512000000	6,91	7,15	-0,05	0,54	11,47	0,24490
82	Cognition	2019	8,83	0,22	0,01%	0,09	54,5%	1,17	360334000	6,73	6,42	-1,03	-0,08	11,42	0,24825
83	Advtech	2019	19,48	0,21	0,45%	0,15	81,8%	1,51	7644000000	6,90	6,34	-0,07	1,01	11,17	0,26432
84	African Rainbow Minerals	2017	190,68	0,53	0,00%	-0,07	64,7%	0,65	32246000000	7,52	7,32	1,23	1,88	11,08	0,27008
85	Murray & Roberts	2020	6,61	0,57	1,12%	0,00	20,0%	0,31	18899000000	7,10	6,63	-0,10	0,71	11,05	0,27210
86	Crookes Brothers	2011	120,92	0,52	0,13%	0,20	36,4%	0,78	599285000	6,56	6,06	0,31	1,57	10,98	0,27738
87	Metrofile	2011	20,29	0,70	2,56%	0,29	30,0%	2,34	606406000	6,54	6,35	-0,74	0,31	10,86	0,28513
88	Blue Label Telecoms	2013	40,16	0,67	24,07%	0,13	40,0%	1,00	5720547000	7,32	7,32	-0,19	0,88	10,70	0,29693
89	Blue Label Telecoms	2012	45,86	0,67	23,60%	0,15	40,0%	0,92	4935532000	7,30	7,30	-0,19	0,80	10,68	0,29864
90	Mr Price	2012	118,55	0,74	0,11%	0,42	50,0%	5,59	4295068000	6,91	7,01	0,70	1,96	10,58	0,30529

91	Invicta	2015	14,17	0,67	11,97%	0,08	25,0%	1,16	14291177000	7,16	6,31	0,86	1,86	10,48	0,31291
92	Tiger Brands	2016	180,70	0,74	0,00%	0,19	83,3%	3,67	24487000000	7,78	6,32	1,33	2,59	10,38	0,32029
93	Cognition	2015	35,92	0,30	0,01%	0,19	33,3%	1,72	183084000	6,77	6,58	-0,73	0,32	10,25	0,33040
94	Clicks	2018	48,06	0,47	0,16%	0,19	66,7%	4,48	13350000000	7,30	7,01	0,78	2,29	10,15	0,33849
95	Fortress REIT-A	2016	2,02	0,67	1,52%	-0,11	57,1%	0,55	59125717000	6,95	6,63	0,26	1,19	10,09	0,34301
96	Northam Platinum	2011	18,26	0,63	0,00%	0,04	46,7%	1,36	11874456000	6,70	5,81	-0,05	1,64	10,06	0,34601
97	Merafe Resources	2013	112,05	0,67	0,10%	0,06	54,5%	0,55	5016582000	7,02	6,87	-0,96	-0,12	9,90	0,35867
98	Murray & Roberts	2017	14,37	0,49	0,63%	0,04	83,3%	0,46	14203000000	7,04	6,87	-0,57	1,12	9,78	0,36822
99	Caxton CTP Pub & Printers	2011	26,28	0,19	3,26%	0,08	33,3%	1,17	6142000000	6,99	6,32	0,03	1,18	9,77	0,36937
100	Crookes Brothers	2019	47,32	0,45	1,55%	0,04	44,4%	0,63	1681932000	6,81	5,80	0,16	1,65	9,76	0,37049
101	Cashbuild	2017	25,98	0,43	0,22%	0,19	55,6%	2,53	3740000000	7,07	5,97	1,31	2,54	9,71	0,37423
102	African Rainbow Minerals	2016	132,58	0,85	0,02%	-0,05	42,9%	0,75	32046000000	7,50	7,06	0,69	1,93	9,68	0,37718
103	PPC	2014	35,43	0,78	0,03%	0,15	80,0%	2,16	11575000000	7,38	5,78	0,25	1,50	9,61	0,38318
104	Advtech	2018	16,70	0,30	0,45%	0,16	80,0%	2,25	6283200000	6,88	6,00	-0,15	1,17	9,53	0,38977
105	Exxaro Resources	2019	39,26	0,29	1,39%	0,06	66,7%	0,87	68840000000	7,12	6,66	1,48	2,12	9,36	0,40471
106	Merafe Resources	2012	83,42	0,67	0,01%	0,02	54,5%	0,52	4292112000	6,84	6,54	-1,30	-0,16	9,35	0,40541
107	Murray & Roberts	2019	8,41	0,57	0,92%	0,05	20,0%	0,51	16390000000	7,06	6,95	-0,10	1,14	9,34	0,40619
108	Tiger Brands	2013	24,61	0,74	0,00%	0,16	75,0%	3,16	25103000000	7,11	6,00	1,21	2,47	9,25	0,41448
109	Stefanutti Stocks	2017	38,02	0,39	5,50%	-0,02	72,7%	0,27	6567000000	7,14	6,87	-0,96	0,65	9,20	0,41878
110	Aspen Pharmacare	2017	18,07	0,55	16,27%	0,16	60,0%	3,47	115593000000	7,16	7,02	1,11	2,45	9,07	0,43062
111	Invicta	2014	23,19	0,67	0,44%	0,08	23,1%	1,35	13448672000	7,02	7,04	0,88	2,07	8,96	0,44120
112	Metrofile	2018	56,49	0,53	0,01%	0,24	36,4%	2,15	1439605000	6,91	7,19	-0,54	0,57	8,96	0,44133
113	African Rainbow Minerals	2019	199,65	0,57	0,15%	-0,02	58,8%	1,14	37216000000	7,58	7,52	1,43	2,25	8,91	0,44553
114	Exxaro Resources	2020	41,92	0,29	1,43%	0,06	63,6%	0,87	78606000000	7,12	6,76	1,47	2,14	8,90	0,44645
115	Metrofile	2013	132,97	0,67	2,19%	0,31	50,0%	4,05	695250000	6,65	6,42	-0,59	0,67	8,88	0,44855
116	Exxaro Resources	2012	17,83	0,59	2,80%	0,04	30,8%	1,49	42417000000	7,04	6,55	1,15	2,21	8,87	0,44949
117	AVI	2017	21,74	0,39	0,25%	0,27	70,0%	3,78	9266200000	7,21	7,14	0,71	1,98	8,86	0,45038
118	Spur Corporation	2019	9,77	0,61	0,02%	0,34	66,7%	3,53	1038838000	7,20	5,98	0,24	1,34	8,81	0,45508
119	Vodacom	2012	15,17	0,70	0,05%	0,38	38,5%	3,70	48230000000	7,27	7,28	0,85	2,02	8,72	0,46305
120	Cashbuild	2018	23,41	0,43	0,15%	0,14	54,5%	2,06	4300000000	7,16	6,10	1,27	2,53	8,71	0,46490
121	Impala Platinum	2020	42,48	0,55	0,02%	0,24	69,2%	1,08	95855000000	7,38	7,24	1,32	2,08	8,68	0,46758
122	AECI	2015	14,57	0,85	0,05%	0,10	83,3%	0,89	17794000000	6,99	6,80	0,95	1,94	8,64	0,47151
123	Sasol	2011	27,73	0,63	0,04%	0,17	60,0%	1,30	177972000000	7,40	7,32	1,53	2,54	8,62	0,47291
124	Aspen Pharmacare	2018	17,39	0,55	16,27%	0,17	55,6%	3,15	132107000000	7,19	7,02	1,17	2,41	8,62	0,47323
125	Aspen Pharmacare	2014	21,42	0,59	0,02%	0,18	50,0%	4,33	82500000000	7,08	7,07	1,01	2,47	8,54	0,48074
126	Exxaro Resources	2014	22,44	0,59	2,72%	-0,07	66,7%	0,84	47429000000	7,13	6,71	1,14	2,02	8,42	0,49218
127	Vodacom	2013	34,94	0,70	0,02%	0,38	41,7%	3,35	55591000000	7,47	7,10	0,94	2,06	8,34	0,50057
128	Aspen Pharmacare	2020	16,17	0,41	16,68%	0,13	50,0%	1,91	133169000000	7,23	6,96	1,10	2,17	8,27	0,50759
129	Merafe Resources	2014	126,23	0,67	0,25%	0,07	50,0%	0,59	5401147000	7,06	6,80	-1,10	-0,04	8,24	0,50986
130	Murray & Roberts	2016	26,23	0,74	0,55%	0,07	81,8%	0,37	17965000000	7,02	7,01	0,20	1,08	8,20	0,51408
131	Santova	2014	6,79	0,56	16,31%	0,09	57,1%	0,84	696541000	6,80	5,85	-0,61	0,18	8,20	0,51443
132	Metrofile	2012	147,88	0,67	2,40%	0,30	50,0%	3,35	657831000	7,61	6,54	-0,66	0,53	8,16	0,51852
133	Caxton CTP Pub & Printers	2020	19,92	0,24	1,05%	-0,03	62,5%	0,23	6509000000	6,95	6,85	-0,68	0,62	8,13	0,52128
134	Exxaro Resources	2017	45,68	0,29	1,30%	0,02	50,0%	0,98	62414000000	7,04	6,77	1,19	2,18	8,12	0,52168
135	Merafe Resources	2011	247,71	0,67	0,00%	0,06	45,5%	0,67	3922138000	6,80	6,54	-1,22	-0,03	8,09	0,52501
136	Oceana	2011	14,17	0,81	0,23%	0,26	36,4%	2,20	2022996000	6,90	6,15	0,52	1,56	8,08	0,52652
137	Advtech	2016	22,73	0,56	0,37%	0,19	80,0%	3,29	4635100000	6,81	6,75	-0,15	1,25	8,05	0,52927
138	Vodacom	2011	24,44	0,70	0,06%	0,37	41,7%	3,29	41435000000	7,25	7,28	0,82	1,88	8,03	0,53096
139	Advtech	2013	12,30	0,41	3,26%	0,15	81,8%	2,08	1632700000	6,44	6,40	-0,42	0,81	8,01	0,53269
140	Northam Platinum	2020	58,30	0,24	0,01%	0,17	61,5%	2,38	30667505000	7,14	7,13	0,79	2,05	8,00	0,53373
141	Santova	2013	10,59	0,52	16,82%	0,09	42,9%	0,74	558085000	6,86	5,87	-0,75	0,02	7,96	0,53840
142	Metrofile	2017	34,35	0,45	0,01%	0,28	50,0%	2,72	981070000	6,87	6,83	-0,50	0,65	7,87	0,54693
143	Santova	2012	13,12	0,59	16,03%	0,11	37,5%	0,70	418003000	6,82	6,41	-0,80	-0,07	7,86	0,54821
144	Tiger Brands	2012	23,49	0,74	0,00%	0,25	75,0%	3,82	17809000000	7,08	6,25	1,23	2,43	7,83	0,55131
145	Caxton CTP Pub & Printers	2013	24,46	0,19	3,12%	0,08	44,4%	1,20	6691000000	7,01	6,88	0,09	1,24	7,81	0,55366

146	AVI	2015	21,46	0,74	0,27%	0,28	72,7%	4,30	8034000000	7,13	7,07	0,62	1,89	7,77	0,55706
147	Cashbuild	2011	24,48	0,26	9,65%	0,11	50,0%	1,15	2136000000	6,97	6,61	0,96	1,97	7,77	0,55769
148	Vodacom	2019	13,77	0,65	0,06%	0,13	41,7%	1,59	153643000000	7,07	7,00	0,94	2,06	7,72	0,56229
149	Merafe Resources	2018	56,80	0,47	0,11%	0,14	55,6%	0,54	6579785000	6,91	6,67	-0,57	0,15	7,67	0,56776
150	Aspen Pharmacare	2019	13,57	0,57	16,42%	0,09	60,0%	1,78	122316000000	7,21	6,73	1,08	2,01	7,63	0,57134
151	Hudaco Industries	2018	24,17	0,73	2,65%	0,18	28,6%	1,77	5041127000	6,98	6,66	1,11	2,18	7,63	0,57141
152	Cashbuild	2019	26,36	0,45	0,05%	0,16	58,3%	1,77	3995000000	7,25	6,13	1,28	2,41	7,53	0,58177
153	Metrofile	2016	30,28	0,67	0,01%	0,27	44,4%	3,03	950364000	6,84	6,95	-0,52	0,67	7,51	0,58393
154	Imperial	2014	42,93	0,78	1,06%	0,11	36,8%	1,11	59021000000	7,65	7,60	1,21	2,30	7,50	0,58501
155	Bowler Metcalf	2017	16,18	0,24	0,02%	0,07	57,1%	0,70	758540000	6,80	5,99	-0,03	0,83	7,48	0,58684
156	PPC	2019	15,32	0,61	0,04%	0,05	80,0%	0,57	17651000000	7,08	6,16	-0,70	0,67	7,43	0,59213
157	Bowler Metcalf	2015	26,19	0,26	0,02%	0,12	42,9%	0,89	770593000	6,75	6,13	-0,09	0,89	7,38	0,59737
158	Clicks	2019	41,36	0,47	0,05%	0,19	66,7%	4,01	15070000000	7,27	6,92	0,83	2,30	7,29	0,60708
159	Metrofile	2020	24,09	0,55	0,01%	0,08	40,0%	1,53	1378237000	6,97	5,96	-0,61	0,36	7,28	0,60795
160	Exxaro Resources	2011	20,23	0,63	2,80%	0,08	33,3%	1,70	36439000000	6,96	6,73	1,32	2,24	7,25	0,61103
161	Hulamin	2015	9,29	0,78	0,17%	0,04	41,7%	0,39	6656540000	7,05	6,16	-0,43	0,73	7,22	0,61376
162	Omnia	2020	25,83	0,65	0,17%	0,05	84,6%	0,43	18088000000	6,84	7,21	0,28	1,38	7,22	0,61428
163	Caxton CTP Pub & Printers	2012	20,72	0,19	3,50%	0,08	44,4%	1,11	6070000000	6,99	6,64	0,04	1,18	7,21	0,61562
164	Murray & Roberts	2015	16,43	0,74	0,29%	0,06	80,0%	0,40	18803000000	7,00	6,74	0,33	1,14	7,20	0,61585
165	Hulamin	2016	11,75	0,78	0,20%	0,09	53,3%	0,33	6956438000	7,08	6,80	0,08	0,70	7,18	0,61819
166	Hulamin	2012	11,11	0,78	0,05%	0,03	50,0%	0,23	7485366000	6,97	6,38	-0,24	0,54	7,14	0,62261
167	Merafe Resources	2016	65,98	0,67	0,11%	0,13	44,4%	0,76	5962403000	6,85	6,76	-0,68	0,18	7,13	0,62360
168	Clicks	2017	49,65	0,43	0,18%	0,20	66,7%	3,82	9746000000	7,27	6,99	0,73	2,17	7,08	0,62931
169	AVI	2014	16,24	0,74	0,26%	0,31	75,0%	3,60	7102600000	7,09	6,59	0,58	1,78	7,04	0,63323
170	Vodacom	2017	16,82	0,47	0,06%	0,30	41,7%	3,52	81138000000	7,08	7,10	0,97	2,18	6,97	0,63979
171	Vodacom	2014	16,15	0,70	0,04%	0,37	41,7%	3,69	60741000000	7,06	6,96	0,95	2,10	6,86	0,65122
172	Mr Price	2011	94,13	0,67	0,12%	0,38	53,8%	3,98	3861137000	6,99	7,03	0,62	1,78	6,81	0,65670
173	Hudaco Industries	2016	23,10	0,85	3,40%	0,23	42,9%	1,69	4230163000	6,89	6,80	1,09	2,04	6,77	0,66079
174	AVI	2020	9,67	0,53	0,27%	0,31	66,7%	2,57	9768700000	7,34	6,90	0,67	1,87	6,75	0,66341
175	Hudaco Industries	2017	29,95	0,67	3,50%	0,22	28,6%	1,91	4620784000	6,92	6,89	1,10	2,10	6,74	0,66431
176	Tiger Brands	2015	31,87	0,70	0,00%	0,09	71,4%	3,06	24803000000	7,21	6,70	1,25	2,48	6,70	0,66827
177	Advtech	2015	19,65	0,56	0,37%	0,15	75,0%	3,06	4302700000	6,78	6,37	-0,29	1,13	6,60	0,67855
178	Clicks	2020	42,33	0,53	0,05%	0,19	66,7%	3,98	15274000000	7,29	7,03	0,88	2,37	6,59	0,68004
179	Metair Investments	2018	45,15	0,59	0,24%	0,13	78,6%	0,70	8422000000	7,09	6,92	0,51	1,28	6,55	0,68353
180	AVI	2012	28,29	0,74	0,30%	0,28	75,0%	3,43	5529900000	6,90	6,86	0,51	1,69	6,51	0,68788
181	Impala Platinum	2013	94,89	0,67	0,00%	0,03	60,0%	0,86	80302000000	7,21	6,15	0,52	1,98	6,51	0,68790
182	Caxton CTP Pub & Printers	2019	22,67	0,24	2,06%	0,04	62,5%	0,41	7248000000	6,97	6,85	0,01	0,89	6,47	0,69215
183	Pick N Pay Stores	2016	83,23	0,74	0,50%	0,10	38,5%	1,80	16584900000	7,38	7,37	0,22	1,76	6,36	0,70342
184	Oceana	2013	9,80	0,81	0,10%	0,26	36,4%	3,65	2833569000	6,99	6,43	0,69	1,92	6,34	0,70568
185	Murray & Roberts	2018	8,09	0,57	0,77%	0,06	40,0%	0,58	14286000000	7,05	6,99	-0,33	1,26	6,34	0,70576
186	Onelogix	2012	15,17	0,37	4,97%	0,16	50,0%	1,05	606596000	6,84	6,74	-0,66	0,25	6,34	0,70591
187	Imperial	2018	110,58	0,43	0,12%	0,04	72,7%	0,75	75841000000	7,24	7,37	0,85	2,30	6,30	0,70917
188	Imperial	2011	42,27	0,59	0,65%	0,14	35,3%	0,99	36533000000	7,54	7,45	1,14	2,07	6,30	0,70929
189	Bowler Metcalf	2019	30,28	0,24	0,02%	0,08	50,0%	0,71	754301000	6,83	6,45	-0,06	0,83	6,26	0,71325
190	Mr Price	2019	99,19	0,63	0,15%	0,37	46,2%	4,38	11145000000	7,20	6,88	1,07	2,29	6,26	0,71378
191	Shoprite	2016	388,20	0,70	2,10%	0,16	42,9%	2,22	48001000000	8,14	7,80	0,96	2,22	6,23	0,71671
192	AVI	2013	24,03	0,74	0,22%	0,28	72,7%	3,81	6568800000	6,93	6,83	0,53	1,74	6,23	0,71708
193	African Rainbow Minerals	2018	183,11	0,57	0,00%	0,05	61,1%	0,78	34305000000	7,55	7,40	1,40	2,05	6,21	0,71875
194	Vodacom	2018	18,30	0,69	0,06%	0,17	41,7%	2,29	131365000000	7,18	7,10	0,97	2,20	6,20	0,71928
195	Shoprite	2017	284,75	0,35	0,23%	0,14	46,2%	2,30	55723000000	7,89	7,11	1,01	2,30	6,20	0,71950
196	African Rainbow Minerals	2011	381,26	0,85	0,00%	0,17	47,1%	1,35	32309000000	7,49	7,24	1,20	2,28	6,17	0,72292
197	African Rainbow Minerals	2020	198,09	0,57	0,19%	0,04	62,5%	0,95	42548000000	7,60	7,51	1,45	2,24	6,17	0,72317
198	PPC	2018	35,50	0,51	0,03%	0,06	53,8%	0,90	16076000000	7,47	6,45	-0,82	0,88	6,08	0,73191
199	Metrofile	2015	24,92	0,67	1,46%	0,25	37,5%	2,86	941667000	6,76	6,59	-0,53	0,67	6,08	0,73206
200	Advtech	2014	18,40	0,56	0,41%	0,14	77,8%	2,36	1960200000	6,78	6,31	-0,39	0,95	6,03	0,73680

201	Invicta	2012	25,06	0,67	8,84%	0,08	30,0%	1,15	8359426000	6,98	6,82	0,80	1,77	6,00	0,73954
202	Caxton CTP Pub & Printers	2018	21,26	0,24	3,40%	0,06	62,5%	0,51	7227000000	6,96	6,85	0,04	0,97	5,95	0,74460
203	KAP Industrial	2011	23,18	0,67	0,00%	0,09	45,5%	0,55	10947000000	6,62	6,15	-0,49	0,40	5,94	0,74574
204	Imperial	2016	31,40	0,81	3,47%	0,08	46,7%	0,79	69835000000	7,36	7,33	1,20	2,18	5,92	0,74804
205	Hudaco Industries	2015	30,05	0,85	3,23%	0,22	57,1%	1,77	3774024000	6,86	7,04	1,07	2,03	5,88	0,75194
206	AVI	2018	15,94	0,49	0,25%	0,28	66,7%	4,04	9664600000	7,24	6,84	0,73	2,03	5,88	0,75214
207	Metair Investments	2011	39,29	0,56	0,00%	0,23	40,0%	1,25	2482126000	6,71	6,85	0,46	1,27	5,84	0,75610
208	Tiger Brands	2011	38,28	0,74	0,00%	0,27	75,0%	3,34	16196000000	7,15	6,75	1,20	2,31	5,74	0,76548
209	AVI	2016	18,69	0,74	0,26%	0,27	72,7%	3,82	9031100000	7,17	6,90	0,67	1,93	5,74	0,76607
210	AECI	2019	16,67	0,53	0,19%	0,12	81,8%	0,92	23133000000	7,08	6,87	1,06	2,03	5,72	0,76780
211	Shoprite	2018	339,95	0,61	0,24%	0,13	54,5%	2,32	141452000000	7,79	7,09	0,99	2,34	5,71	0,76830
212	Imperial	2017	33,95	0,41	0,00%	0,08	56,3%	0,83	68853000000	7,34	7,38	0,81	2,20	5,68	0,77155
213	Caxton CTP Pub & Printers	2017	22,53	0,24	3,34%	0,06	62,5%	0,62	7229000000	6,95	6,85	0,06	1,06	5,67	0,77222
214	Oceana	2014	14,22	0,81	0,24%	0,30	36,4%	3,13	2975297000	6,99	6,84	0,74	1,86	5,67	0,77231
215	Royal Bafokeng Platinum	2012	34,06	0,59	0,34%	0,02	60,0%	0,76	20101400000	6,94	6,81	0,02	1,76	5,62	0,77722
216	African Rainbow Minerals	2012	332,83	0,81	0,01%	0,15	64,3%	1,13	27440532000	7,55	7,25	1,21	2,24	5,60	0,77902
217	Vodacom	2016	20,47	0,70	0,06%	0,30	41,7%	3,79	78703000000	7,23	7,15	0,95	2,18	5,54	0,78464
218	Royal Bafokeng Platinum	2020	37,67	0,55	1,00%	0,17	63,6%	0,63	31944400000	7,03	6,93	1,13	1,82	5,54	0,78471
219	Pick N Pay Stores	2019	105,38	0,57	1,09%	0,12	41,7%	1,86	32107700000	7,44	7,62	0,45	1,83	5,44	0,79430
220	AECI	2018	19,87	0,67	0,14%	0,11	80,0%	0,82	22275000000	7,05	6,96	1,02	1,94	5,44	0,79458
221	Metrofile	2019	51,80	0,55	11,80%	0,17	50,0%	1,36	1375518000	7,16	6,76	-0,69	0,22	5,40	0,79785
222	Invicta	2011	32,54	0,67	6,28%	0,08	30,0%	1,12	6888867000	6,96	6,81	0,70	1,63	5,40	0,79840
223	PPC	2011	19,83	0,81	0,01%	0,27	42,9%	2,46	6419000000	7,43	6,54	0,22	1,37	5,36	0,80203
224	AECI	2016	17,47	0,48	0,08%	0,09	81,8%	1,01	15820000000	7,02	6,89	0,91	2,00	5,35	0,80270
225	Trencor	2015	1,72	0,67	0,09%	0,02	44,4%	0,89	70591000000	6,98	6,55	0,71	1,61	5,32	0,80559
226	Nampak	2011	26,48	0,78	0,03%	0,12	75,0%	1,22	12908000000	7,01	7,05	0,22	1,31	5,31	0,80612
227	Raubex	2019	28,52	0,47	2,73%	0,03	42,9%	0,62	7266000000	7,00	7,08	-0,24	1,26	5,28	0,80925
228	Imperial	2012	48,17	0,59	0,96%	0,13	41,2%	1,14	45698000000	7,62	7,53	1,19	2,23	5,27	0,80993
229	Murray & Roberts	2014	17,82	0,74	0,15%	0,08	77,8%	0,69	19811000000	6,99	7,05	0,34	1,40	5,27	0,81001
230	Cashbuild	2020	29,44	0,47	0,06%	0,09	54,5%	0,85	6346000000	7,27	6,35	1,06	2,15	5,27	0,81014
231	Hudaco Industries	2019	28,67	0,67	0,29%	0,21	42,9%	1,42	4944842000	7,12	7,02	1,13	2,03	5,25	0,81206
232	Vodacom	2015	13,73	0,70	0,05%	0,30	41,7%	3,44	71307000000	7,08	6,72	0,93	2,12	5,22	0,81465
233	Oceana	2015	24,73	0,81	0,07%	0,17	36,4%	2,90	10813362000	7,02	7,02	0,77	1,97	5,22	0,81471
234	AVI	2011	31,04	0,63	0,15%	0,24	75,0%	2,40	5400400000	7,00	6,93	0,40	1,47	5,21	0,81557
235	Santova	2015	6,98	0,63	15,36%	0,10	57,1%	1,29	733486000	6,84	6,12	-0,51	0,56	5,14	0,82210
236	AECI	2014	12,92	0,63	0,02%	0,12	81,8%	1,44	14787000000	6,92	6,50	0,93	2,12	5,14	0,82238
237	Hulamin	2014	11,56	0,78	0,06%	0,09	53,8%	0,50	6269378000	7,02	6,48	0,05	0,86	5,11	0,82473
238	Barloworld	2013	24,66	0,74	0,19%	0,09	42,9%	0,87	40607000000	7,53	7,50	0,93	1,98	5,05	0,83020
239	AECI	2011	20,89	0,63	0,05%	0,12	81,8%	1,10	12457000000	6,85	6,84	0,86	1,91	5,01	0,83346
240	Imperial	2013	54,53	0,59	0,84%	0,12	43,8%	1,20	51716000000	7,61	7,55	1,26	2,29	4,94	0,83975
241	Imperial	2015	26,50	0,81	1,26%	0,09	50,0%	0,94	65712000000	7,47	7,28	1,21	2,26	4,94	0,83987
242	Hulamin	2011	11,98	0,78	0,02%	0,02	53,8%	0,45	7519095000	6,94	6,43	-0,10	0,89	4,88	0,84503
243	Hudaco Industries	2013	19,36	0,85	0,08%	0,21	57,1%	1,78	2824475000	6,97	6,77	0,97	2,01	4,86	0,84598
244	Fortress REIT-A	2015	5,89	0,63	2,20%	0,12	62,5%	0,65	20026623000	6,68	6,06	0,40	1,19	4,83	0,84892
245	Nampak	2012	28,45	0,78	0,06%	0,12	75,0%	1,49	14524100000	7,04	7,07	0,28	1,45	4,81	0,85037
246	Hudaco Industries	2011	20,32	0,85	0,96%	0,11	57,1%	1,34	4537577000	6,99	6,99	1,01	1,92	4,78	0,85305
247	Metair Investments	2019	32,83	0,65	0,53%	0,12	75,0%	0,79	8967335000	7,09	6,91	0,53	1,37	4,78	0,85314
248	Santova	2017	8,57	0,39	13,25%	0,13	57,1%	1,19	896072000	6,84	6,79	-0,40	0,53	4,76	0,85508
249	AECI	2020	14,08	0,63	0,38%	0,05	80,0%	0,71	23641000000	7,12	6,71	0,94	1,94	4,65	0,86368
250	Clicks	2016	45,07	0,70	0,16%	0,20	66,7%	3,78	8377000000	7,23	6,94	0,67	2,10	4,65	0,86391
251	Hudaco Industries	2020	23,99	0,73	3,15%	0,07	42,9%	1,13	4955149000	7,11	6,98	1,02	1,94	4,64	0,86478
252	African Rainbow Minerals	2013	183,76	0,81	0,01%	0,08	60,0%	0,99	33660843000	7,44	7,18	1,24	2,21	4,63	0,86491
253	Northam Platinum	2012	64,86	0,74	0,00%	0,03	50,0%	0,73	12243852000	6,87	6,93	-0,09	1,41	4,60	0,86749
254	Adcock Ingram	2013	29,25	0,59	0,03%	0,17	80,0%	2,52	6754360000	6,88	6,41	0,54	1,83	4,58	0,86898
255	PPC	2013	27,29	0,78	0,19%	0,21	72,7%	2,45	8876000000	7,20	6,65	0,25	1,48	4,57	0,87010

256	Crookes Brothers	2013	118,98	0,52	0,18%	0,10	54,5%	0,89	803443000	6,59	6,16	0,88	1,75	4,56	0,87089
257	Crookes Brothers	2012	154,47	0,52	0,21%	0,14	50,0%	0,87	730856000	6,57	6,26	0,77	1,53	4,55	0,87151
258	Murray & Roberts	2013	26,36	0,74	0,07%	0,07	75,0%	0,62	24527000000	7,06	7,01	0,27	1,37	4,47	0,87821
259	Pick N Pay Stores	2014	56,22	0,74	0,11%	0,07	42,9%	1,81	14129500000	7,35	6,89	0,14	1,65	4,47	0,87823
260	Fortress REIT-A	2017	5,90	0,37	1,57%	0,05	61,5%	0,56	65577221000	7,21	7,23	0,22	1,23	4,46	0,87848
261	Crookes Brothers	2017	61,00	0,43	1,55%	0,09	54,5%	0,77	1454739000	6,75	6,23	0,63	1,81	4,46	0,87880
262	Royal Bafokeng Platinum	2013	32,42	0,70	0,39%	0,03	50,0%	0,75	20817500000	6,98	6,77	0,24	1,77	4,45	0,87902
263	Hudaco Industries	2012	20,51	0,85	0,64%	0,11	57,1%	1,54	4718579000	6,93	6,82	1,03	2,03	4,42	0,88144
264	KAP Industrial	2016	56,62	0,70	0,10%	0,12	50,0%	1,17	18939000000	7,18	7,17	-0,32	0,80	4,42	0,88163
265	Stefanutti Stocks	2015	33,51	0,63	4,40%	0,06	50,0%	0,27	6523000000	6,87	6,74	0,05	0,71	4,35	0,88713
266	Distell	2016	14,11	0,70	0,01%	0,12	62,5%	1,64	19941891000	7,08	6,25	0,87	2,21	4,31	0,88991
267	KAP Industrial	2015	41,69	0,67	0,05%	0,11	50,0%	1,27	15924000000	7,10	7,17	-0,39	0,76	4,28	0,89168
268	The SPAR	2011	11,34	0,59	0,00%	0,18	72,7%	2,09	8302000000	6,86	6,19	0,75	1,98	4,28	0,89183
269	KAP Industrial	2013	35,42	0,67	0,01%	0,10	50,0%	0,88	15120000000	6,81	6,49	-0,55	0,45	4,26	0,89340
270	DRDGOLD	2013	67,27	0,56	0,05%	0,05	36,4%	0,91	2671100000	6,90	6,71	-0,18	0,78	4,21	0,89724
271	Harmony Gold Mining	2011	31,42	0,67	0,00%	0,01	62,5%	1,07	39844000000	7,03	6,77	0,35	1,95	4,20	0,89807
272	Imperial	2020	32,24	0,51	0,16%	0,03	62,5%	0,72	42526000000	7,21	7,03	0,02	1,63	4,19	0,89862
273	Pick N Pay Stores	2015	65,54	0,70	0,45%	0,09	42,9%	1,97	14824100000	7,37	7,15	0,25	1,75	4,16	0,90083
274	Distell	2014	15,26	0,59	0,06%	0,10	64,3%	1,64	15859733000	6,96	6,16	0,86	2,15	4,12	0,90365
275	PPC	2012	14,37	0,78	0,01%	0,26	40,0%	2,77	6907000000	7,29	6,72	0,27	1,45	4,10	0,90499
276	The Foschini	2018	87,59	0,63	0,52%	0,12	63,6%	2,95	27791600000	7,19	7,19	1,06	2,35	4,08	0,90597
277	Mr Price	2020	63,53	0,67	0,12%	0,24	46,2%	1,98	17354000000	7,09	6,57	1,02	2,10	4,08	0,90611
278	Santova	2018	7,69	0,51	12,47%	0,13	57,1%	0,97	964376000	6,87	6,63	-0,35	0,49	4,07	0,90682
279	Crookes Brothers	2016	45,81	0,52	1,72%	0,07	54,5%	0,69	1289696000	6,61	6,11	0,56	1,72	4,07	0,90690
280	KAP Industrial	2012	42,26	0,67	0,00%	0,09	50,0%	0,94	14440000000	6,67	6,40	-0,62	0,51	4,01	0,91044
281	AECI	2013	16,30	0,63	0,01%	0,11	80,0%	1,43	14393000000	6,94	6,83	0,90	2,08	4,00	0,91114
282	The Foschini	2017	63,96	0,41	0,88%	0,12	63,6%	2,39	22036000000	7,15	6,75	1,04	2,22	3,99	0,91175
283	AECI	2012	12,30	0,78	0,01%	0,10	72,7%	1,10	13066000000	6,88	6,76	0,70	1,89	3,98	0,91280
284	AECI	2017	20,20	0,61	0,10%	0,11	75,0%	0,92	15971000000	7,01	6,99	0,98	1,97	3,90	0,91782
285	Santova	2019	6,59	0,51	14,93%	0,11	42,9%	0,89	1036977000	6,89	6,47	-0,42	0,43	3,89	0,91820
286	Santova	2016	7,98	0,63	13,41%	0,09	57,1%	1,28	1023165000	6,88	6,47	-0,46	0,61	3,83	0,92237
287	PPC	2015	15,11	0,78	0,03%	0,11	71,4%	1,27	15257000000	6,91	6,57	0,16	1,30	3,83	0,92246
288	Pick N Pay Stores	2018	44,38	0,55	0,93%	0,10	46,2%	1,98	30880100000	7,42	6,28	0,39	1,85	3,80	0,92396
289	KAP Industrial	2014	44,39	0,67	0,01%	0,10	56,3%	0,93	15557000000	6,84	6,81	-0,47	0,59	3,79	0,92443
290	Cashbuild	2014	25,73	0,56	0,01%	0,14	60,0%	1,22	2616000000	6,97	6,44	1,06	2,12	3,79	0,92444
291	Shoprite	2013	286,86	0,63	2,23%	0,16	50,0%	3,38	33480000000	8,02	7,05	0,83	2,24	3,77	0,92616
292	Raubex	2017	28,37	0,47	0,27%	0,11	37,5%	0,89	6994000000	6,78	7,02	0,30	1,37	3,75	0,92696
293	Oceana	2016	16,45	0,81	0,15%	0,26	45,5%	3,10	11106801000	7,02	7,00	0,85	2,05	3,72	0,92858
294	The Foschini	2012	68,80	0,63	1,14%	0,08	60,0%	2,62	12817900000	7,08	7,07	0,82	2,08	3,70	0,92987
295	Nampak	2013	12,72	0,78	0,12%	0,10	73,3%	1,41	19623900000	7,06	6,58	0,31	1,49	3,70	0,92998
296	Omnia	2014	29,11	0,63	1,35%	0,14	66,7%	1,47	10572000000	6,82	7,19	1,15	2,32	3,70	0,93022
297	Crookes Brothers	2014	91,18	0,52	0,21%	0,10	63,6%	0,91	1025870000	6,63	6,27	0,83	1,85	3,68	0,93111
298	The Foschini	2019	122,42	0,65	0,82%	0,12	72,7%	2,11	37641100000	7,47	7,35	1,07	2,23	3,67	0,93164
299	Cashbuild	2012	33,64	0,59	0,00%	0,21	60,0%	1,82	1926000000	6,99	6,65	1,10	2,13	3,57	0,93714
300	Barloworld	2016	22,74	0,78	0,37%	0,09	53,8%	0,69	46022000000	7,56	7,20	0,92	1,93	3,57	0,93748
301	Metair Investments	2017	31,92	0,59	0,16%	0,12	72,7%	0,79	8105218000	7,14	6,62	0,45	1,32	3,56	0,93778
302	Aspen Pharmacare	2011	34,36	0,56	0,02%	0,24	42,9%	3,49	12492500000	6,99	6,98	0,72	1,93	3,55	0,93859
303	Barloworld	2012	22,94	0,74	0,10%	0,09	60,0%	0,81	35810000000	7,48	7,41	0,83	1,88	3,54	0,93925
304	Omnia	2016	26,31	0,67	1,58%	0,10	66,7%	0,81	12378000000	7,03	6,90	0,91	2,12	3,52	0,94019
305	Stefanutti Stocks	2014	42,28	0,63	5,25%	0,04	70,0%	0,50	6298000000	7,00	6,81	-0,19	0,99	3,50	0,94110
306	Metair Investments	2020	57,33	0,67	0,37%	0,05	73,3%	0,66	9298270000	7,44	6,93	0,17	1,26	3,49	0,94143
307	Cashbuild	2016	35,95	0,63	0,22%	0,17	63,6%	2,83	3539000000	7,02	6,87	1,28	2,54	3,48	0,94220
308	Shoprite	2011	165,42	0,56	2,28%	0,19	36,4%	2,83	20704000000	7,77	7,03	0,71	1,99	3,45	0,94358
309	Barloworld	2011	23,30	0,74	0,10%	0,08	60,0%	0,75	30932000000	7,43	7,37	0,67	1,78	3,37	0,94765
310	Harmony Gold Mining	2012	30,67	0,67	0,00%	0,05	50,0%	0,85	43091000000	7,15	6,44	0,78	1,93	3,33	0,94989
311	Barloworld	2014	23,34	0,74	0,37%	0,09	56,3%	0,81	44006000000	7,62	7,36	0,95	1,98	3,28	0,95215

312	Trencor	2014	1,91	0,67	6,33%	0,06	44,4%	1,01	53929000000	6,93	6,63	0,74	1,83	3,26	0,95319
313	Omnia	2015	31,01	0,63	1,53%	0,13	61,5%	1,13	11904000000	7,03	7,03	1,17	2,25	3,24	0,95410
314	The SPAR	2020	177,93	0,55	0,04%	0,07	75,0%	1,29	52739000000	8,30	7,11	1,06	2,25	3,19	0,95619
315	Adcock Ingram	2015	15,14	0,52	0,00%	0,07	50,0%	2,07	5457952000	6,89	6,57	0,20	1,70	3,19	0,95623
316	Northam Platinum	2013	45,40	0,74	0,00%	0,05	60,0%	0,96	14357664000	6,97	6,51	0,14	1,54	3,18	0,95659
317	Trencor	2011	2,74	0,67	0,04%	0,10	44,4%	0,93	20318000000	6,88	6,58	0,75	1,57	3,15	0,95804
318	Omnia	2013	43,47	0,67	1,49%	0,14	58,3%	1,34	9020000000	7,02	7,18	1,12	2,19	3,09	0,96060
319	Trencor	2013	2,44	0,67	0,04%	0,07	44,4%	1,05	44628000000	6,90	6,69	0,90	1,83	3,08	0,96087
320	Raubex	2016	46,92	0,56	2,50%	0,12	42,9%	0,71	6727000000	6,72	7,01	0,37	1,17	3,04	0,96251
321	Cashbuild	2015	32,43	0,59	0,11%	0,15	60,0%	2,50	3068000000	6,99	6,79	1,18	2,46	3,04	0,96253
322	Raubex	2018	31,73	0,47	2,73%	0,11	42,9%	0,73	7140000000	7,01	7,08	0,36	1,33	3,04	0,96263
323	Barloworld	2015	25,84	0,74	0,33%	0,08	60,0%	0,69	48155000000	7,60	7,26	0,91	1,91	3,03	0,96326
324	Fortress REIT-A	2019	3,62	0,51	1,23%	0,04	69,2%	0,80	54048624000	7,22	6,24	0,02	1,32	3,02	0,96351
325	Royal Bafokeng Platinum	2014	58,22	0,74	0,27%	0,04	63,6%	0,68	23503900000	7,01	6,92	0,38	1,71	3,01	0,96393
326	Distell	2013	18,81	0,56	0,57%	0,10	62,5%	1,64	14219565000	7,00	6,33	0,73	2,09	2,99	0,96459
327	Royal Bafokeng Platinum	2011	34,71	0,59	0,39%	0,03	60,0%	0,75	19492600000	6,91	6,69	0,22	1,74	2,96	0,96571
328	Clicks	2015	32,23	0,70	0,18%	0,20	66,7%	3,18	7556000000	7,23	6,91	0,60	1,97	2,94	0,96651
329	Raubex	2012	39,99	0,44	4,17%	0,14	42,9%	0,87	4387000000	6,62	6,80	0,25	1,14	2,92	0,96723
330	Shoprite	2012	170,05	0,67	2,17%	0,15	50,0%	2,99	31084000000	7,81	7,13	0,78	2,17	2,90	0,96802
331	Hulamin	2017	10,41	0,55	0,28%	0,08	56,3%	0,29	7225199000	7,11	6,62	-0,02	0,78	2,89	0,96860
332	The Foschini	2011	70,19	0,59	2,28%	0,08	58,3%	2,15	10673400000	7,00	7,06	0,80	1,91	2,79	0,97205
333	Distell	2018	13,26	0,63	0,00%	0,12	66,7%	1,64	22196954000	7,10	6,37	0,82	2,12	2,79	0,97209
334	KAP Industrial	2017	59,04	0,59	0,11%	0,11	50,0%	1,19	26978000000	7,08	7,08	-0,25	0,91	2,74	0,97369
335	Adcock Ingram	2020	7,97	0,59	0,01%	0,14	50,0%	1,37	7181750000	7,09	6,22	0,62	1,68	2,74	0,97373
336	KAP Industrial	2019	36,68	0,61	0,13%	0,10	62,5%	0,81	28104000000	7,08	6,69	-0,34	0,79	2,69	0,97539
337	Raubex	2014	58,10	0,48	2,26%	0,12	42,9%	1,04	5354000000	6,74	7,10	0,27	1,35	2,62	0,97758
338	Imperial	2019	44,94	0,51	0,15%	0,04	60,0%	0,65	36060000000	7,16	7,17	0,82	1,74	2,53	0,97996
339	Trencor	2012	2,22	0,67	0,04%	0,08	44,4%	1,03	30910000000	6,86	6,64	0,75	1,74	2,53	0,97998
340	Tongaat Hulett	2013	121,03	0,56	0,34%	0,10	66,7%	1,06	21301000000	7,21	6,95	0,99	2,15	2,47	0,98158
341	Metair Investments	2016	29,57	0,59	0,00%	0,10	70,0%	0,92	8031150000	7,13	6,44	0,36	1,34	2,46	0,98185
342	Exxaro Resources	2013	22,87	0,59	2,72%	0,05	61,5%	1,18	49506000000	7,09	6,84	1,17	2,15	2,43	0,98259
343	Distell	2017	16,37	0,49	0,00%	0,12	66,7%	1,64	20486207000	7,06	6,66	0,85	2,14	2,43	0,98270
344	Raubex	2020	24,16	0,47	2,73%	0,07	42,9%	0,70	7982000000	7,00	6,93	0,21	1,36	2,42	0,98284
345	Metair Investments	2012	29,07	0,59	0,01%	0,20	44,4%	1,60	3293869000	6,73	6,70	0,49	1,50	2,40	0,98346
346	Oceana	2020	21,75	0,61	0,17%	0,21	50,0%	1,63	12071381000	7,02	6,95	0,80	1,78	2,40	0,98355
347	Clicks	2011	38,73	0,70	0,15%	0,24	60,0%	3,00	4255000000	7,33	6,81	0,40	1,60	2,38	0,98394
348	Omnia	2012	22,88	0,63	1,61%	0,13	58,3%	1,02	7519000000	6,74	6,91	0,98	1,98	2,37	0,98419
349	Distell	2019	17,41	0,49	0,02%	0,08	66,7%	1,45	23607488000	7,13	6,88	0,81	2,12	2,35	0,98467
350	Shoprite	2015	213,71	0,63	2,09%	0,14	46,7%	2,45	43652000000	7,95	7,15	0,89	2,21	2,33	0,98514
351	Shoprite	2014	194,19	0,63	2,32%	0,14	46,7%	2,36	40533000000	7,89	7,16	0,84	2,20	2,31	0,98563
352	KAP Industrial	2018	50,62	0,57	0,13%	0,12	50,0%	1,05	28504000000	6,99	6,93	-0,21	0,89	2,30	0,98571
353	The SPAR	2018	13,36	0,53	0,06%	0,09	63,6%	1,53	31256000000	7,32	7,06	0,98	2,28	2,30	0,98573
354	Raubex	2015	45,12	0,48	2,39%	0,11	42,9%	0,92	6273000000	6,69	6,96	0,32	1,29	2,30	0,98577
355	Omnia	2011	24,15	0,52	1,86%	0,12	54,5%	0,96	6304000000	6,77	6,81	0,88	1,87	2,24	0,98703
356	The SPAR	2015	9,69	0,67	0,00%	0,13	50,0%	2,22	19330000000	7,18	7,05	0,92	2,27	2,24	0,98712
357	Caxton CTP Pub & Printers	2014	31,19	0,41	1,25%	0,07	55,6%	0,93	6319000000	7,03	6,90	-0,01	1,18	2,21	0,98765
358	Stefanutti Stocks	2012	40,72	0,56	3,95%	0,08	45,5%	0,51	5815000000	7,24	6,81	0,18	1,02	2,21	0,98772
359	Hosken Investments	2013	50,52	0,56	1,10%	0,07	50,0%	1,02	20204096000	7,17	6,94	0,93	2,05	2,21	0,98776
360	enX	2018	47,93	0,49	2,84%	0,08	50,0%	0,71	2928340000	7,48	6,98	0,20	1,08	2,17	0,98852
361	Tongaat Hulett	2012	161,79	0,59	0,29%	0,11	64,3%	0,97	17782000000	7,17	6,95	0,92	2,02	2,11	0,98966
362	Netcare	2011	38,78	0,63	0,01%	0,10	54,5%	1,54	50652000000	7,07	6,97	0,07	1,12	2,06	0,99043
363	Metair Investments	2015	38,21	0,59	0,00%	0,10	70,0%	0,99	9040460000	7,04	6,59	0,39	1,38	2,05	0,99073
364	Clicks	2014	25,16	0,70	0,16%	0,22	60,0%	2,96	6192000000	7,21	6,94	0,53	1,82	2,01	0,99131
365	The SPAR	2019	16,40	0,61	0,04%	0,10	63,6%	1,56	34053000000	7,37	7,19	1,05	2,27	1,98	0,99180
366	Metair Investments	2014	26,87	0,59	0,00%	0,12	70,0%	1,24	7934651000	6,94	6,62	0,48	1,52	1,90	0,99291
367	Tongaat Hulett	2011	20,57	0,56	0,25%	0,11	61,5%	1,09	14491000000	7,12	6,68	0,88	1,99	1,88	0,99319

368	The Foschini	2014	64,24	0,67	1,38%	0,08	63,6%	1,61	17103200000	7,13	6,93	0,91	1,99	1,84	0,99372
369	Raubex	2013	28,92	0,48	4,17%	0,12	42,9%	1,00	4858000000	6,65	6,53	0,20	1,28	1,78	0,99445
370	Impala Platinum	2012	99,55	0,56	0,01%	0,09	57,1%	1,27	72246000000	7,04	6,87	0,83	2,14	1,76	0,99473
371	The SPAR	2014	12,10	0,67	0,00%	0,13	50,0%	1,75	17123000000	7,16	7,01	0,89	2,10	1,63	0,99603
372	The SPAR	2013	11,87	0,67	0,00%	0,18	63,6%	2,23	9787000000	6,97	6,73	0,84	2,08	1,59	0,99643
373	Adcock Ingram	2016	14,20	0,59	0,00%	0,10	70,0%	1,56	5596607000	6,87	6,63	0,35	1,62	1,58	0,99650
374	Oceana	2019	18,71	0,63	0,18%	0,20	50,0%	2,04	10800199000	7,02	6,57	0,74	1,85	1,58	0,99651
375	Oceana	2018	12,63	0,55	0,05%	0,19	50,0%	2,30	10699481000	6,95	6,73	0,86	1,92	1,58	0,99651
376	The SPAR	2012	11,50	0,59	0,00%	0,16	63,6%	2,31	9899000000	6,91	6,70	0,80	2,10	1,58	0,99653
377	Impala Platinum	2019	29,15	0,53	0,00%	0,05	69,2%	0,91	66954000000	7,33	6,83	0,63	1,82	1,52	0,99703
378	Adcock Ingram	2019	12,38	0,51	0,01%	0,16	50,0%	1,81	6250793000	7,04	6,92	0,63	1,78	1,50	0,99715
379	Caxton CTP Pub & Printers	2016	23,09	0,56	3,33%	0,06	62,5%	0,76	7050000000	6,93	6,85	0,06	1,12	1,39	0,99787
380	Impala Platinum	2011	54,36	0,59	0,01%	0,14	61,5%	1,78	67604000000	7,08	6,87	1,04	2,26	1,31	0,99835
381	Metair Investments	2013	33,60	0,59	0,04%	0,07	50,0%	1,45	7449326000	6,77	6,73	0,46	1,58	1,13	0,99908
382	Adcock Ingram	2018	13,58	0,65	0,01%	0,15	50,0%	1,86	6270725000	7,06	6,89	0,58	1,79	0,96	0,99953
383	Caxton CTP Pub & Printers	2015	22,70	0,56	3,35%	0,07	55,6%	1,06	6690000000	6,92	6,81	0,04	1,27	0,79	0,99978
384	Adcock Ingram	2017	11,69	0,59	0,00%	0,13	57,1%	1,97	5562973000	7,02	6,80	0,49	1,77	0,71	0,99986
385	Adcock Ingram	2012	13,65	0,52	0,03%	0,19	81,8%	2,40	5147505000	6,85		0,63	1,78		
386	Adcock Ingram	2011	16,53	0,44	0,02%	0,24	77,8%	2,60	5235460000	6,83		0,67	1,79		
387	Advtech	2017	13,74	0,32	0,40%	0,16	80,0%	2,70	5553600000	6,85		-0,16	1,20		
388	Advtech	2012	13,29	0,41	3,26%	0,17	66,7%	2,35	1335700000	6,72		-0,47	0,76		
389	Advtech	2011	15,31		3,28%	0,22	55,6%	2,57	1150000000	6,68	6,13	-0,41	0,79		
390	African Rainbow Minerals	2015	112,16	0,81	0,01%	-0,02	57,1%	0,66	31086000000	7,48		0,90	1,96		
391	African Rainbow Minerals	2014	149,04		0,01%	0,03	55,6%	1,25	36458000000	7,46	7,06	1,28	2,27		
392	Alaris	2020	4,29	0,33	7,27%	0,14	50,0%		283388000	6,83		-0,59			
393	Alaris	2019	5,32	0,24	7,22%	0,25	37,5%		218395000	6,67	6,35	-0,46			
394	Alaris	2018	7,41	0,24	6,78%	0,27	50,0%		155626000	6,64	6,63	-0,55			
395	Alaris	2017	4,90	0,20	6,78%	0,23	33,3%		155752000	6,68	5,51	-0,80			
396	Alaris	2016	13,21	0,44	5,09%	0,24	14,3%		277837000	6,71	6,57	-0,87			
397	Alaris	2015	7,71	0,37	5,00%	0,09	14,3%		205018000	6,84	5,44	-0,82			
398	Alaris	2014	9,01	0,37	4,61%	-0,03	25,0%		239513000	6,70					
399	Alaris	2013	7,82	0,37	13,60%	0,11	42,9%		64504000	6,63		-1,13			
400	Alaris	2012		0,37	13,60%	0,18	42,9%		50043000	6,75		-1,09			
401	Alaris	2011		0,37	13,60%	0,03	25,0%		44924000	6,78	5,18	-1,48			
402	ARB	2020	13,14	0,37	0,00%	0,06	40,0%	0,62	1633931000	6,80		-0,22	0,46		
403	ARB	2019	13,22	0,37	0,00%	0,11	40,0%	0,79	1697428000	6,79		-0,24	0,65		
404	ARB	2018	12,90	0,45	0,00%	0,15	50,0%	0,98	1596680000	6,77		-0,14	0,74		
405	ARB	2017	13,99	0,24	0,00%	0,15	50,0%	1,14	1522569000	6,77		-0,21	0,80		
406	ARB	2016	10,27	0,59	0,00%	0,16	50,0%	1,07	1433560000	6,65		-0,22	0,74		
407	ARB	2015	32,89	0,52	0,00%	0,16	60,0%	1,36	1280106000	6,79		-0,29	0,77		
408	ARB	2014	11,41	0,52	3,19%	0,18	42,9%	1,54	1233662000	6,65		-0,33	0,81		
409	ARB	2013	8,73	0,52	3,19%	0,15	42,9%	1,19	1146395952	6,58		-0,40	0,65		
410	ARB	2011	14,52	0,52	3,17%	0,14	37,5%	1,16	783335817	6,67		-0,51	0,52		
411	Aspen Pharmacare	2012	26,62		0,02%	0,27	18,2%	4,80	31718500000	7,03	7,03	0,80	2,08		
412	Barloworld	2020	10,98	0,14	0,08%	-0,01	81,8%	0,53	47878000000	7,14			1,78		
413	Bauba Platinum	2020	40,94	0,22	9,57%	-0,18	42,9%	0,68	460504000	6,46			-0,52		
414	Bauba Platinum	2019	33,95	0,22	9,55%	0,16	50,0%	0,94	415898000	6,43		-1,33	-0,36		
415	Bauba Platinum	2018	29,47	0,22	10,42%	0,56	37,5%	1,69	322770000	6,40		-1,00	-0,22		
416	Bauba Platinum	2017		0,22	11,86%	0,90	37,5%	1,99	302582000	6,36	4,70	-0,83	-0,16		
417	Bauba Platinum	2016		0,63	11,86%	-0,21	37,5%	4,62	185295000	6,54			-0,51		
418	Bauba Platinum	2015		0,63	11,92%	-0,04	33,3%	3,60	219093000	6,51		-2,47	-0,40		
419	Bauba Platinum	2014		0,67	8,22%	-8,05	33,3%	42,32	29621000	6,49			-0,24		
420	Bauba Platinum	2013		0,67	6,65%	-1,80	44,4%	10,34	36367000	6,49	5,65		-0,25		
421	Bauba Platinum	2012		0,67	6,65%	-0,29	44,4%	5,25	46465000	6,43			0,15		
422	Bauba Platinum	2011		0,63	9,48%	-1,39	44,4%	5,51		6,66			0,24		
423	Bell Equipment	2020	8,68	0,53	0,00%	0,01	55,6%	0,34	6639939000	6,88			0,81		

424	Bell Equipment	2019	9,33	0,16	0,00%	0,03	50,0%	0,45	7027879000	7,07		-0,15	0,95		
425	Bell Equipment	2018	9,49		0,00%	0,07	50,0%	0,44	6528233000	7,07		0,44	1,08		
426	Bell Equipment	2017	8,38		0,00%	0,08	50,0%	0,40	5357614000	7,06		0,43	1,13		
427	Bell Equipment	2016	4,56	0,63	9,37%	0,03	55,6%	0,41	4506948000	6,93		-0,41	1,08		
428	Bell Equipment	2015	3,87	0,56	0,27%	0,06	60,0%	0,28	4888503000	6,89		0,14	0,94		
429	Bell Equipment	2014	7,21	0,56	9,38%	0,04	55,6%	0,28	4494504000	6,87		-0,31	0,95		
430	Bell Equipment	2013	9,38	0,56	9,28%	0,07	62,5%	0,57	4756333000	6,98		0,28	1,30		
431	Bell Equipment	2012	7,61	0,56	9,28%	0,11	55,6%	0,82	3489327000	6,96		0,37	1,33		
432	Bell Equipment	2011	8,28	0,59	9,26%	0,12	35,7%	0,49	3870209000	7,05		0,45	1,19		
433	Blue Label Telecoms	2020	14,78	0,61	18,59%	0,07	44,4%	0,57	10353706000	7,39		-0,24	0,37		
434	Blue Label Telecoms	2019	13,71	0,71	18,23%	-0,25	50,0%	0,74	12081372000	7,37			0,66		
435	Blue Label Telecoms	2014	21,16	0,67	24,22%	0,13	40,0%	1,14	6502887000	7,35		-0,17	0,96		
436	Blue Label Telecoms	2011	24,86	0,63	22,09%	0,10	36,4%	0,91	5089088000	7,30		-0,34	0,76		
437	Bowler Metcalf	2020	20,86	0,24	0,02%	0,12	66,7%	0,68	766924000	6,85		0,05	0,86		
438	Bowler Metcalf	2018	20,46	0,24	0,02%	0,11	66,7%	0,92	884338000	6,79		0,07	0,96		
439	Bowler Metcalf	2016	9,66	0,30	0,02%	0,09	57,1%	1,08	823499000	6,83		-0,13	1,01		
440	Bowler Metcalf	2013	9,39	0,26	0,02%	0,14	42,9%	1,37	513880000	6,63		-0,17	0,90		
441	Bowler Metcalf	2012	10,00	0,26	0,00%	0,15	42,9%	1,33	534757000	6,47		-0,15	0,89		
442	Bowler Metcalf	2011	15,55	0,26	0,00%	0,24	33,3%	1,77	489573000	6,62		-0,02	0,96		
443	Cashbuild	2013	20,21	0,56	0,01%	0,16	60,0%	1,66	2069000000	6,94		1,01	2,09		
444	Chrometco	2020		0,61			50,0%		1808276000	6,75					
445	Chrometco	2019		0,61			40,0%		1440371000	6,40					
446	Chrometco	2018		0,61			60,0%		1463337000	6,45					
447	Chrometco	2017		0,63			50,0%		277527000	5,78					
448	Chrometco	2016		0,41	0,20%		60,0%		287238128	6,03					
449	Chrometco	2015		0,30	0,27%		57,1%		195971753	6,08					
450	Chrometco	2014		0,22	0,41%		57,1%		211917893	6,28		-2,40			
451	Chrometco	2013		0,19	0,46%		57,1%		231574627	6,48					
452	Chrometco	2012		0,19	0,01%		50,0%		223138683	6,47					
453	Chrometco	2011		0,19	0,12%		25,0%		39257360	6,35					
454	Clicks	2013	19,82	0,70	0,13%	0,22	66,7%	3,01	5445000000	7,12		0,48	1,76		
455	Clicks	2012	29,12	0,70	0,11%	0,23	66,7%	3,66	4773000000	7,23		0,44	1,74		
456	Cognition	2017	6,73	0,20	0,01%	0,14	44,4%	1,35	202542000	6,80		-0,87	0,16		
457	Cognition	2016	9,10	0,30	0,01%	0,12	33,3%	1,29	188490000	6,79		-0,88	0,11		
458	Cognition	2012	6,84	0,30	0,02%	0,21	40,0%	1,18	140659000	6,79		-0,78	0,05		
459	Crookes Brothers	2020	38,90	0,47	1,43%	0,04	50,0%	0,59	1790613000	6,80			1,63		
460	Crookes Brothers	2018	45,31	0,45	1,55%	0,00	54,5%	0,73	1568430000	6,79			1,70		
461	Crookes Brothers	2015	59,20	0,52	0,89%	0,06	54,5%	0,93	1111985000	6,67		0,52	1,85		
462	Distell	2020	12,42	0,55	0,01%	0,04	66,7%	1,01	25271837000	7,13		0,37	1,91		
463	Distell	2015	11,70	0,63	0,04%	0,10	14,3%	1,64	17807768000	6,99		0,82	2,22		
464	Distell	2012	10,62	0,59	0,61%	0,08	71,4%	1,64	9854770000	6,81		0,68	1,95		
465	Distell	2011	13,19	0,59	0,59%	0,10	62,5%	1,64	8483580000	6,81		0,68	1,85		
466	DRDGOLD	2020	15,69	0,65	0,11%	0,17	70,0%		5675200000	7,03	7,01	-0,08	1,43		
467	DRDGOLD	2019	16,62	0,53	0,17%	0,03	75,0%		4060000000	7,01	6,86	-0,96	0,63		
468	DRDGOLD	2018	18,47	0,47	0,26%	0,02	71,4%		2360400000	6,98	6,87	-1,77	0,56		
469	DRDGOLD	2017	9,42	0,45	0,11%	-0,01	71,4%		2287400000	6,95		-2,70	0,61		
470	DRDGOLD	2016	18,80	0,63		0,05	66,7%		2419100000	6,93	6,90	-0,90	0,90		
471	DRDGOLD	2015	9,14	0,52		0,05	66,7%	0,42	2503100000	6,84		-1,00	0,35		
472	DRDGOLD	2014	18,42	0,52	0,08%	0,00	71,4%	0,64	2440700000	6,91	6,44		0,49		
473	DRDGOLD	2012	20,81	0,52		0,10	66,7%	0,89	2492300000	6,88	6,76	-0,07	0,75		
474	DRDGOLD	2011	60,63	0,48		-0,17	50,0%	0,59	2288700000	6,85	6,73	-0,55	0,50		
475	Efora Energy	2020	14,52	0,59	0,01%	-0,15	50,0%	0,41	766300000	6,81		-1,30	-0,89		
476	Efora Energy	2019	11,11	0,59	0,01%	-0,94	42,9%	0,64	823700000	6,86	6,45		-0,66		
477	Efora Energy	2018	10,53	0,49	0,03%	-0,17	66,7%	0,86	1310004000	6,85	5,68		0,15		
478	Efora Energy	2017	7,74	0,47	0,02%	-0,39	70,0%	1,16	838844000	6,94			-0,59		
479	Efora Energy	2015		0,44	0,01%	-0,36	45,5%	0,72	1202718938	6,99	6,58		-0,55		
480	Efora Energy	2014		0,44	0,03%	-0,05	36,4%	1,80	1305348156	6,51	6,07	-1,86	-0,23		

481	Efora Energy	2013		0,44	1,25%	-0,09	36,4%	0,61	717557731	6,57			-0,44		
482	Efora Energy	2012		0,41	1,34%	0,18	30,0%	1,44	589169030	6,61	6,80		-0,23		
483	Efora Energy	2011		0,41	3,04%	-0,34	50,0%	16,37	485211193	6,38			0,25		
484	Ellies	2020	11,50	0,43	0,08%	-0,30	71,4%	0,34	500956000	6,80	5,60		-1,15		
485	Ellies	2019	15,95	0,43	0,00%	-0,07	57,1%	0,35	660201000	6,85	5,97		-0,89		
486	Ellies	2018	19,35	0,27	19,06%	0,11	42,9%	0,45	776948000	6,96		-1,10	-0,43		
487	Ellies	2017	9,74	0,16	20,21%	-0,08	50,0%	0,39	788544000	6,88			-0,70		
488	Ellies	2016	4,58	0,30	22,86%	-0,31	22,2%	0,57	1291317000	6,76			-0,15		
489	Ellies	2015	10,55	0,30	34,11%	-0,17	30,0%	0,40	1733516000	7,06			0,08		
490	Ellies	2011		0,30	42,88%	0,20	33,3%	0,94	964793000	6,96	6,50	-0,50	0,30		
491	enX	2019	9,99	0,41	0,63%	0,02	44,4%	0,54	10362273000	6,96		0,06	1,08		
492	enX	2017	31,67	0,47	0,00%	-0,01	46,2%	0,81	3093649000	7,34		0,48	1,20		
493	enX	2016	15,08	0,56	0,00%	-0,05	38,5%	1,14	1424317000	6,88		-1,80	0,25		
494	enX	2015	9,43	0,56	2,91%	0,05	37,5%	1,40	883296000	6,56		-1,12	0,31		
495	enX	2014	10,78	0,67	0,00%	0,06	40,0%	1,79	513950000	6,79		-1,21	0,26		
496	enX	2012	13,50	0,04	7,17%	-0,38	50,0%	0,43	488599000	6,79			-0,38		
497	Exxaro Resources	2016		0,59	1,41%	0,08	57,1%	0,69	59931000000	7,12	6,87	1,66	1,94		
498	Exxaro Resources	2015		0,59	1,54%	0,06	50,0%	0,38	52626000000	7,29	7,00	1,21	1,64		
499	Fortress REIT-A	2020	5,45	0,49	0,12%	-0,17	66,7%	0,73	43251701000	7,23	6,80		1,09		
500	Fortress REIT-A	2014		0,63	2,10%	0,12	62,5%	1,01	13462784000	6,58	5,89	0,00	1,18		
501	Fortress REIT-A	2013		0,41	2,30%	0,20	71,4%	1,09	8798951000	6,50	5,94	-0,05	1,16		
502	Fortress REIT-A	2012		0,41	2,40%	0,18	71,4%	1,30	5916932000	6,54	5,09	-0,45	1,12		
503	Fortress REIT-A	2011		0,41	3,80%	0,16	62,5%	1,38	4117249000	6,45		-0,93	1,04		
504	Harmony Gold Mining	2020	25,52	0,63	0,08%	-0,01	60,0%		44692000000	7,35			1,86		
505	Harmony Gold Mining	2019	23,13	0,69	0,31%	-0,07	17,6%		36736000000	7,31		0,31	1,50		
506	Harmony Gold Mining	2018	22,52	0,53	0,17%	-0,12	66,7%		35342000000	7,29		0,23	1,33		
507	Harmony Gold Mining	2017	26,96	0,41	0,14%	0,00	26,7%		33948000000	7,26	6,78	0,47	1,36		
508	Harmony Gold Mining	2016	28,82	0,81	0,12%	0,04	20,0%		37030000000	7,25	6,74	0,34	1,71		
509	Harmony Gold Mining	2015	25,59	0,78	0,05%	-0,15	66,7%	0,29	36137000000	7,23	6,56		1,21		
510	Homechoice International Plc	2020		0,59		0,06	43,8%	0,84	4592000000	6,93		0,21	1,41		
511	Homechoice International Plc	2019	9,65	0,55		0,16	41,2%	1,18	4351000000	6,89		0,64	1,57		
512	Homechoice International Plc	2018	8,75	0,55		0,20	42,1%	1,34	3920000000	6,84		0,71	1,60		
513	Homechoice International Plc	2017	6,49	0,41		0,21	40,0%	1,44	3592000000	6,78		0,70	1,60		
514	Homechoice International Plc	2016	10,71	0,74		0,21	44,4%	1,41	3199000000	6,76	6,55	0,62	1,54		
515	Homechoice International Plc	2015	6,03	0,63		0,23	44,4%	1,56	2613569000	6,69		0,59	1,52		
516	Homechoice International Plc	2014	6,69	0,63		0,25	44,4%	1,66	2164682000	6,61	5,95	0,55	1,49		
517	Homechoice International Plc	2013		0,63		-0,14	42,9%	1,66	1767996000	6,47	6,24	0,49			
518	Homechoice International Plc	2012		0,59		0,09	42,9%	1,66	1374074000	6,97	6,75	0,45			
519	Homechoice International Plc	2011		0,59		0,08	42,9%	1,66	1073199000	6,85	6,76	0,37			
520	Hosken Investments	2020		0,35	1,10%	-0,14	36,4%	0,82	64892276000	7,25		1,10	1,61		
521	Hosken Investments	2019		0,35	0,80%	0,09	36,4%	1,03	72586906000	7,12	6,78	1,08	2,06		
522	Hosken Investments	2018		0,35	0,80%	0,08	60,0%	1,14	70322213000	7,15	6,83	1,12	2,16		
523	Hosken Investments	2017		0,31	0,60%	0,13	60,0%	1,18	70535763000	7,17	6,94	1,14	2,16		
524	Hosken Investments	2016		0,56	0,90%	0,11	11,1%	1,17	64608210000	7,14	6,65	1,00	2,02		
525	Hosken Investments	2015		0,56	0,90%	0,19	66,7%	1,32	61983404000	7,42	6,79	0,98	2,17		
526	Hosken Investments	2014		0,56	1,30%	0,06	66,7%	1,20	22793736000	7,23	6,99	0,98	2,15		
527	Hosken Investments	2012		0,56	1,10%	0,08	50,0%	0,87	17155692000	7,06	6,93	0,90	1,91		
528	Hosken Investments	2011		0,48	1,10%	0,07	50,0%	0,92	15863860000	7,06	6,88	0,76	1,89		
529	Hulamin	2020	15,36	0,61	0,29%	-0,02	40,0%	0,33	4545021000	7,27	5,43		0,25		
530	Hulamin	2019	10,78	0,55	0,32%	-0,33	50,0%	0,25	4260028000	7,29			0,35		
531	Impala Platinum	2018	32,32	0,49	0,00%	-0,19	69,2%	0,41		7,27	6,63		1,33		
532	Impala Platinum	2017	52,72	0,29	0,00%	-0,15	72,7%	0,53	73481000000	7,06	7,08		1,56		
533	Invicta	2020	25,95	0,45		-0,03	33,3%	0,50	10423267000	7,38	6,28	-0,24	0,90		
534	Invicta	2019	11,48	0,33		0,06	16,7%	0,69	11272202000	7,30		0,05	1,46		

535	Invicta	2018	22,66	0,39		0,09	25,0%	0,93	10179592000	7,23	7,03	-0,24	1,73		
536	Invicta	2017	35,58	0,22		0,07	25,0%	0,98	16151008000	7,16	7,09	0,70	1,79		
537	Invicta	2016	18,32	0,63	6,18%	0,07	27,3%	0,98	14895134000	7,21		0,57	1,70		
538	KAP Industrial	2020	33,15	0,63		-0,09	63,6%	0,60	24361000000	7,08	6,91	-0,82	0,44		
539	Luxe	2020		0,35	0,25%	-0,01	40,0%		468160000	6,85	5,29				
540	Luxe	2019		0,29	0,22%	-0,39	37,5%		784914000	6,89	4,59		-0,92		
541	Luxe	2018	15,66	0,29	0,55%	-0,29	11,1%		992452000	7,08	5,82		-0,18		
542	Luxe	2017	9,45	0,27	1,28%	-0,14	50,0%		1017970000	6,83	5,90		0,27		
543	Luxe	2016	24,40	0,59	2,75%	-0,09	60,0%		1128406000	6,94	5,72		0,39		
544	Luxe	2015	12,90	0,59	5,61%	0,06	54,5%		764267000	6,88		-1,17	0,50		
545	Luxe	2014	13,74	0,59	10,36%	0,18	54,5%		430694000	6,84		-0,80	0,57		
546	Luxe	2013	13,81	0,67	6,77%	0,20	45,5%		369667000	6,73	6,08	-0,88	0,60		
547	Luxe	2012	8,69	0,67	7,18%	0,19	45,5%		341365000	6,69	5,73	-0,91	0,35		
548	Luxe	2011	10,30	0,63		0,23	33,3%		216484000	6,72	5,79	-0,97	-0,27		
549	Merafe Resources	2020	75,22	0,49	0,14%	-0,44	55,6%	0,33	3113094000	6,97		-2,10	-0,38		
550	Merafe Resources	2019	40,79	0,47	0,12%	-0,43	55,6%	0,44	4559293000	6,94		-1,47	-0,06		
551	Merafe Resources	2017		0,45	0,11%	0,20	44,4%	0,60	6355447000	6,85	6,79	-0,44	0,19		
552	Metrofile	2014	14,01	0,67	1,29%	0,35	50,0%	3,39	810166000	6,68		-0,46	0,69		
553	MTN	2018	65,34	0,61		0,12	76,5%	1,07	256835000000	7,44	7,58	0,53	1,93		
554	MTN	2017	106,94	0,41		0,09	73,3%	1,46	252834000000	7,70	7,70	0,26	2,11		
555	MTN	2016	209,37	0,74		0,07	84,6%	1,41	268700000000	7,78	7,58	-0,11	2,08		
556	MTN	2015	61,50	0,74	0,11%	0,14	69,2%	1,25	249579000000	7,70		1,04	2,14		
557	MTN	2013	61,13	0,74		0,26	61,5%	2,40	229656000000	7,34	7,30	1,14	2,30		
558	MTN	2012	66,61	0,74		0,28	69,2%	2,49	176074000000	7,24	7,30	1,04	2,23		
559	MTN	2011	156,45	0,70		0,27	66,7%	2,03	174073000000	7,73	7,50	1,03	2,15		
560	Murray & Roberts	2012	17,99	0,74	0,00%	-0,01	76,9%	0,66	22436000000	7,05	6,77		1,42		
561	Murray & Roberts	2011	26,98	0,74	0,55%	-0,04	76,9%	0,71	19539000000	7,27			1,46		
562	Nampak	2020	20,14	0,57		-0,30	62,5%	0,48	16194300000	7,08	6,59		-0,14		
563	Nampak	2019	29,52	0,55		0,01	77,8%	0,64	22459600000	7,18	6,73		0,98		
564	Nampak	2018	26,74	0,55		0,07	72,7%	0,79	25914100000	7,20	7,22	0,18	1,19		
565	Nampak	2017	13,58	0,55		0,04	75,0%	0,86	25229900000	7,19	4,21	0,09	1,29		
566	Nampak	2016	15,98	0,59		0,11	76,9%	1,04	24103800000	7,13	6,67	0,03	1,28		
567	Nampak	2015	20,06	0,56		0,08	76,9%	1,26	24407500000	7,25	6,52	0,26	1,45		
568	Nampak	2014	29,56	0,78		0,09	78,6%	1,85	21891100000	7,19	7,06	0,37	1,63		
569	Netcare	2020	21,48	0,55		0,06	70,0%	1,26	25944000000	7,19	5,79		1,12		
570	Netcare	2019	30,57	0,55		0,19	77,8%	1,61	21415000000	7,17	6,83	0,22	1,23		
571	Netcare	2018	28,71	0,61		0,33	80,0%	2,19	20764000000	7,15	6,56	-0,31	1,44		
572	Netcare	2017	49,72	0,51		-0,06	80,0%	1,61	28112000000	7,13	6,86	0,04	1,37		
573	Netcare	2016	16,23	0,63		0,08	72,7%	2,24	30659000000	7,11	6,90	0,08	1,52		
574	Netcare	2015	17,07	0,63		0,13	72,7%	2,42	31664000000	7,09	6,93	0,24	1,58		
575	Netcare	2014	140,60	0,63		0,14	70,0%	2,53	26717000000	7,06	6,88	0,20	1,52		
576	Netcare	2013	26,07	0,63		0,31	70,0%	2,24	23808000000	7,03	6,84	0,13	1,38		
577	Northam Platinum	2019	88,34	0,57		0,08	76,9%	1,66	26944663000	7,39	7,09	-0,80	1,78		
578	Northam Platinum	2018	52,41	0,55	0,01%	0,03	72,7%	1,31	23824034000	7,13	7,07		1,54		
579	Northam Platinum	2017	50,23	0,33	0,01%	0,03	60,0%	1,50	19636112000	7,05	6,97		1,63		
580	Northam Platinum	2016	42,76	0,78	0,00%	0,02	60,0%	1,58	18977863000	7,02	6,83		1,62		
581	Northam Platinum	2015	36,37	0,74	0,00%	-0,04	55,6%	1,48	19151336000	6,98	6,59		1,63		
582	Nu-World	2020	19,05	0,31	8,71%	0,12	57,1%	0,35	1658028000	7,13		0,80	1,33		
583	Nu-World	2019	20,39	0,31	8,71%	0,13	57,1%	0,66	1714215000	7,16		0,88	1,61		
584	Nu-World	2018	21,13	0,31	9,51%	0,18	57,1%	0,63	1574614000	7,15		0,94	1,57		
585	Nu-World	2017	20,62	0,31	8,27%	0,18	57,1%	0,77	1356932000	7,13		0,89	1,60		
586	Nu-World	2016	21,58	0,63	7,60%	0,09	57,1%	0,59	1212790000	7,14		0,66	1,42		
587	Nu-World	2015	23,08	0,59	6,91%	0,11	50,0%	0,68	1224170000	7,14		0,63	1,33		
588	Nu-World	2014	21,34	0,59	5,40%	0,11	50,0%	0,53	1047169000	7,11		0,55	1,27		
589	Nu-World	2013	16,87	0,44	5,40%	0,08	50,0%	0,48	893183000	7,09		0,35	1,21		
590	Nu-World	2012	17,10	0,44	4,20%	0,10	50,0%	0,62	948889000	7,05		0,25	1,30		
591	Nu-World	2011	22,90	0,48	5,39%	0,06	50,0%	0,63	852945000	7,04		-0,03	1,31		

592	Oceana	2017	9,64	0,59	0,26%	0,18	40,0%	2,57	10043225000	7,01		0,59	1,91		
593	Oceana	2012	21,51	0,81		0,27	36,4%	2,58	2568728000			0,66	1,72		
594	Omnia	2019	23,90	0,65	0,00%	0,00	75,0%	0,55	16647000000	7,31			1,77		
595	Omnia	2018	30,81	0,31		0,08	72,7%	0,90	15402000000	7,11	6,99	0,94	2,18		
596	Omnia	2017	29,74	0,31	1,55%	0,09		1,00	12764000000	7,03	6,95	0,88	2,23		
597	Onelogix	2015	19,29	0,37	38,70%	0,04	44,4%	1,44	1448918000	6,97	6,78		0,69		
598	Onelogix	2011	12,49	0,37		0,17	22,2%	0,88	475945000	6,76	6,58	-0,72	0,08		
599	Pick N Pay Stores	2020	44,79	0,57	1,87%	0,09	46,7%	1,36	33505300000	7,48		0,46	1,79		
600	Pick N Pay Stores	2017	42,11	0,55	0,88%	0,10	46,2%	2,08	18102400000	7,41		0,37	1,83		
601	Pick N Pay Stores	2013	32,51	0,59	0,11%	0,07	45,5%	2,00	13175900000	7,22		0,05	1,67		
602	Pick N Pay Stores	2012	56,16	0,59		0,12	13,3%	1,97	11818700000	7,38	5,80	0,21	1,65		
603	Pick N Pay Stores	2011	46,12	0,56	0,51%	0,13	18,8%	2,12	111007000	7,09		0,28	1,64		
604	PPC	2016	10,88	0,78	0,02%	0,11	75,0%	0,98	16389000000	6,70		0,03	1,13		
605	Primeserv	2020		0,33	16,73%	0,13	20,0%	0,44	225542556	6,85	6,53	-0,49	-0,11		
606	Primeserv	2019		0,33	16,73%	0,13	40,0%	0,47	247315004	6,82	6,18	-0,58	-0,22		
607	Primeserv	2018		0,33	16,70%	0,15	50,0%	0,55	172247000	6,79	5,99	-0,65	-0,22		
608	Primeserv	2017		0,29	16,70%	0,14	50,0%	0,62	176073000	6,77	5,99	-0,73	-0,29		
609	Primeserv	2016		0,52	17,70%	0,12	42,9%	0,62	142017000	6,85	5,64	-0,86			
610	Primeserv	2015		0,52	17,70%	0,10	33,3%	0,62	140273000	6,84		-0,90	-0,52		
611	Primeserv	2014	15,84	0,52	17,68%	0,09	50,0%	0,67	153162000	6,84		-1,19	-0,54		
612	Primeserv	2013	18,02	0,52	17,61%	0,03	50,0%	0,79	166872000	6,87			-0,34		
613	Primeserv	2012	17,89	0,52	19,30%	0,04	50,0%	0,78	159506000	6,88		-1,10	-0,37		
614	Primeserv	2011		0,48	17,37%	0,07	44,4%	0,76	125826000	6,93	6,07	-1,09	-0,44		
615	Randgold & Exploration	2020		0,63	0,00%	-0,20	60,0%		124794000	6,74					
616	Randgold & Exploration	2019		0,63	0,00%	-0,25	50,0%		144709000	6,48					
617	Randgold & Exploration	2018		0,59	0,00%	-0,05	60,0%		169296000	6,61		-1,30			
618	Randgold & Exploration	2017		0,59	0,00%	-0,12	60,0%		166678000	6,58					
619	Randgold & Exploration	2016		0,56	0,00%	-0,13	60,0%		176866000	6,55			0,37		
620	Randgold & Exploration	2015		0,56	0,00%	-0,04	60,0%	0,94	181871000	6,53		-2,00	0,34		
621	Randgold & Exploration	2014		0,56	0,00%	0,69	60,0%	0,97	177434000	6,50	6,81	0,28	0,31		
622	Randgold & Exploration	2013		0,56	0,00%	-0,02	60,0%	0,75	204484000	6,51		-1,10	0,33		
623	Randgold & Exploration	2012		0,56	0,00%	-0,02	60,0%	0,77	217972000	6,61		-1,70	0,35		
624	Randgold & Exploration	2011		0,56	0,00%	0,17	60,0%	0,87	213992000	6,59	6,51		0,41		
625	Reunert	2020	26,60	0,49		0,02	69,2%	0,73	9726000000	7,14	7,08	0,19	1,50		
626	Reunert	2019	18,79	0,49		0,14	53,3%	1,45	10304000000	7,24	6,92	0,76	1,84		
627	Reunert	2018	21,71	0,53		0,17	53,8%	1,55	10453000000	7,22	6,83	0,85	1,88		
628	Reunert	2017	32,56	0,41		0,16	61,5%	1,40	10089000000	7,20	7,26	0,83	1,83		
629	Reunert	2016	26,33	0,70		0,13	61,5%	1,31	9909000000	7,17	7,19	0,76	1,79		
630	Reunert	2015	19,50	0,70		0,13	61,5%	1,35	9399000000	7,13	7,00	0,77	1,80		
631	Reunert	2014	22,78	0,70		0,08	63,6%	1,34	9582000000	7,20	6,62	0,70	1,82		
632	Reunert	2013	10,57	0,63		0,20	61,5%	2,28	7373000000	7,03	6,02	0,77	1,87		
633	Reunert	2012	30,78	0,63		0,26	63,6%	2,38	6588000000	7,29	6,55	0,82	1,86		
634	Reunert	2011	37,79	0,63		0,32	8,0%	2,19	6106000000	7,38	6,59	0,91	1,77		
635	Royal Bafokeng Platinum	2019	34,31	0,63	1,18%	0,02		0,67	26950700000	7,02	6,67	-0,30	1,68		
636	Royal Bafokeng Platinum	2018	62,90	0,49	1,08%	0,01		0,43	25510600000			-0,60	1,40		
637	Royal Bafokeng Platinum	2017	110,90	0,35	0,89%	-0,03		0,55	22145400000			-0,25	1,47		
638	Royal Bafokeng Platinum	2016	27,63	0,63	0,59%	0,01	63,6%	0,61	20317900000	6,93		-0,06	1,55		
639	Royal Bafokeng Platinum	2015	71,27	0,52	0,36%	-0,24	63,6%	0,48	19759300000				1,40		
640	Sabvest Capital	2020		0,27		0,08	57,1%	0,44	3645755000	7,08	6,37	0,85	1,46		
641	Sabvest Capital	2019		0,24		0,09	57,1%	0,44	3224230000	7,05	7,06	0,96	1,60		
642	Sabvest Capital	2018		0,24		0,10	42,9%	0,44	2819598000	6,85	6,94	0,73	1,68		
643	Sabvest Capital	2017		0,24		0,19	60,0%	0,44	2650813000	6,82	7,15	1,18	1,36		
644	Sabvest Capital	2016		0,63		0,03	42,9%	0,44	2167934000	6,79	6,19	-1,04	1,46		

645	Sabvest Capital	2015		0,63		0,26	42,9%	0,44	2098500000	6,77	6,87	1,00	1,54		
646	Sabvest Capital	2014		0,63		0,13	42,9%	0,44	1555746000	6,74	6,64	0,65	1,53		
647	Sabvest Capital	2013		0,63		0,23	44,4%	0,44	1400072000	6,68	6,72	0,78	1,30		
648	Sabvest Capital	2012		0,63		0,19	44,4%	0,44	1040084000	6,67	6,63	0,49	1,20		
649	Sabvest Capital	2011		0,56		0,14	44,4%	0,44	582140000	6,67	6,50	0,25	0,90		
650	Sasol	2020	8,55	0,59	0,00%	-0,23	80,0%	0,54	479162000000	7,40		1,17	2,15		
651	Sasol	2019	16,46	0,53	0,00%	0,02	80,0%	0,65	469968000000	7,67		1,58	2,56		
652	Sephaku	2020	55,26	0,39	1,17%	0,00	57,1%	0,23	1100765836	6,82	5,86		-0,24		
653	Sephaku	2019	33,28	0,41		0,01	57,1%	0,47	1085323677	6,87	6,18	-0,68	0,29		
654	Sephaku	2018	26,79	0,49		0,05	50,0%	0,63	1307075597	6,95	6,29	-0,68	0,44		
655	Sephaku	2017	34,70	0,47		0,08	50,0%	0,74	1311205665	6,98	6,73	-0,48	0,47		
656	Sephaku	2016	22,22	0,59		0,08	44,4%	1,12	1262961020	6,94	6,46	-0,53	0,65		
657	Sephaku	2015	32,90	0,56		0,06	44,4%	2,20	1219489216	6,98	6,38	-0,61	0,94		
658	Sephaku	2014	13,82	0,56		0,06	36,4%	1,79	1106812425	6,80	6,62		0,81		
659	Sephaku	2013	8,31	0,56		-0,03	25,0%	1,76	1099748503	6,20	6,31		0,73		
660	Sephaku	2012		0,56		-0,03	18,2%	0,48	673605075	6,77	5,68		0,31		
661	Sephaku	2011		0,37		0,54	8,3%	0,90	751708574				0,56		
662	Shoprite	2020	140,81	0,59		0,10	50,0%	1,23	141452000000	7,41	7,07	0,88	2,04		
663	Shoprite	2019	130,35	0,53		0,11	55,6%	1,69	141452000000	7,39	6,85	0,87	2,23		
664	Silverbridge	2020		0,31	22,56%	0,06	57,1%		72245000	6,87		-1,07			
665	Silverbridge	2019	5,69	0,31	22,75%	-0,14	28,6%		57274000	6,95			-0,05		
666	Silverbridge	2018	8,11	0,27	22,56%	0,13	25,0%		65453000	6,99		-0,69	0,08		
667	Silverbridge	2017	5,02	0,24	22,56%	0,24	28,6%		58723000	6,92	5,87	-0,38	0,48		
668	Silverbridge	2016	5,30	0,67	21,48%	0,21	12,5%		63039000	6,85	5,93	-0,54	0,45		
669	Silverbridge	2015	7,12	0,63	21,48%	0,22	12,5%		51957000	6,66	5,83	-0,62	0,30		
670	Silverbridge	2014	2,81	0,63	21,48%	0,20	14,3%		42515000	6,54	5,50	-0,77	0,10		
671	Silverbridge	2013	2,85	0,63	21,48%	0,10	14,3%		32718000	6,59		-1,12	-0,19		
672	Silverbridge	2012	2,38	0,63	21,78%	-0,21	12,5%		34392000	6,50		-0,77	-0,52		
673	Silverbridge	2011	3,35	0,52	21,78%	-0,36	11,1%		51434000	6,72		-1,07	0,15		
674	Spur Corporation	2020		0,63		0,27	58,3%	3,68	794903000	7,12	6,04	-0,08	1,24		
675	Spur Corporation	2018		0,53	0,43%	0,30	45,5%	4,16	1030486000	7,23	5,72	0,19	1,41		
676	Spur Corporation	2017		0,39	0,43%	0,28	36,4%	4,83	991169000	7,22	6,24	0,15	1,48		
677	Spur Corporation	2016		0,70	3,35%	0,31	36,4%	4,84	1066722000	7,19	6,36	2,23	1,49		
678	Stefanutti Stocks	2020	11,68	0,47	0,49%	-0,17	46,2%	0,23	6645000000	6,97			-0,59		
679	Stefanutti Stocks	2019	20,21	0,41	6,32%	-0,03	46,7%	0,17	6448000000	6,99			0,44		
680	Stefanutti Stocks	2013	35,72	0,63	5,25%	-0,02	45,5%	0,53	6085000000	7,21	6,53		0,98		
681	Stefanutti Stocks	2011	35,15	0,59		0,11	36,4%	0,56	5071000000	7,25	6,92	0,29	1,05		
682	Sun International	2020	22,39	0,14	0,48%	-0,06	66,7%	0,85	13369000000	6,98			1,12		
683	Sun International	2017	31,97	0,14	0,19%	0,07	61,5%	1,04	24436000000	7,22	6,68		1,76		
684	Sun International	2016	52,29	0,67		0,03	66,7%	1,22	24102000000	7,06			1,92		
685	Sun International	2015	35,70	0,67		0,14	14,3%	1,55	24228000000	7,03		0,80	2,06		
686	Sun International	2014	39,72	0,52		0,13		1,54				0,75	2,03		
687	Sun International	2013	76,63	0,67		0,16	61,5%	1,51	13065000000	7,48	7,11	0,87	1,99		
688	Sun International	2012	50,52	0,74		0,16		1,56	11721000000	7,33	6,75	0,83	1,94		
689	Sun International	2011	19,84	0,74		0,15	60,0%	1,62	10848000000	6,89	6,12	0,66	1,95		
690	Telemasters	2020		0,16	0,27%	0,03	57,1%		48476924			-1,60			
691	Telemasters	2019		0,20	0,10%	0,02	50,0%		40921122	6,19		-1,61			
692	Telemasters	2018		0,20	0,00%	0,10	50,0%		48527764	6,04		-1,13			
693	Telemasters	2017		0,20	86,51%	0,08	20,0%		54769801	6,25		-1,23			
694	Telemasters	2016		0,52	86,51%		20,0%					-1,32			
695	Telemasters	2015		0,52	86,51%	0,09	20,0%		44174157	6,17					
696	Telemasters	2014		0,52	86,51%	0,09			45833294	6,15					
697	Telemasters	2013		0,52	86,21%	0,02	40,0%		49087381	6,02					
698	Telemasters	2012		0,44		0,01			48425918	6,25					
699	Telemasters	2011		0,30											
700	The Foschini	2020	55,34	0,67	3,10%	0,09	76,9%	1,06	42158700000	7,37		1,07	1,97		
701	The Foschini	2016	78,45	0,70		0,12	72,7%	2,31	22095100000	7,10	6,97	1,02	2,13		

702	The Foschini	2015	105,87	0,67		0,08	63,6%	3,16	18533400000	7,16	7,31	0,95	2,24		
703	The Foschini	2013	41,03	0,63	1,31%	0,07	60,0%	2,03	15294400000	7,11		0,89	2,04		
704	The SPAR	2017	9,36	0,33		0,11	60,0%	1,58	28977000000	7,26	6,67	0,98	2,22		
705	The SPAR	2016	11,06	0,70		0,11	54,5%	1,86	28105000000	7,22	7,11	1,01	2,28		
706	Tiger Brands	2020	15,76	0,69	0,01%	0,10		1,74	22311000000	7,06		0,97	2,26		
707	Tiger Brands	2019	21,55	0,69	0,01%	0,23	84,6%	1,95	22166000000	7,21		1,12	2,34		
708	Tiger Brands	2018	41,13	0,69	0,00%	0,12	80,0%	2,36	23912000000	7,25		1,20	2,45		
709	Tiger Brands	2017	32,81	0,63	0,00%	0,19	76,9%	3,40	23935000000	7,30		1,10	2,58		
710	Tiger Brands	2014	34,46	0,70	0,00%	0,12		3,17	24545000000	7,15	6,78	1,26	2,50		
711	Tongaat Hulett	2020	131,23	0,63		0,11	66,7%	0,70	18148000000	7,30	7,58	-0,05	0,46		
712	Tongaat Hulett	2019	74,01	0,67		0,08	70,0%	0,89	15033000000	7,33			1,30		
713	Tongaat Hulett	2018	151,71	0,53		0,07	63,6%	0,79	29115000000	7,21		0,73	2,01		
714	Tongaat Hulett	2017		0,51		0,09	63,6%	0,96	27954000000	7,20	6,98	0,93	2,11		
715	Tongaat Hulett	2016		0,63	0,34%	0,06	63,6%	0,76	30692000000	7,19	6,60	0,83	2,00		
716	Tongaat Hulett	2015		0,59	0,33%	0,08	63,6%	0,96	26543000000	7,16	6,81	0,92	2,14		
717	Tongaat Hulett	2014		0,59	0,32%	0,10	58,3%	0,81	23976000000	7,25	6,97	1,00	2,04		
718	Trencor	2020		0,29	0,00%	-0,04	60,0%	0,61	1153000000	7,02			0,60		
719	Trencor	2019		0,29	0,00%	0,02	57,1%	0,68	2333000000	7,14			1,21		
720	Trencor	2018	4,35	0,29	0,00%	0,34	57,1%	0,74	8405000000	7,03			1,45		
721	Trencor	2017	2,25	0,29	0,00%	0,02	57,1%	0,74	52313000000	6,95		0,17	1,68		
722	Trencor	2016	2,06	0,67	0,00%	-0,04	50,0%	0,92	57122000000	7,09			1,46		
723	Truworths International	2020	42,18	0,65		-0,09	69,2%	1,55	18671000000	7,43		0,61	1,56		
724	Truworths International	2019	33,63	0,63		0,05	58,3%	3,02	16639000000	7,34		0,76	1,86		
725	Truworths International	2018	31,40	0,51		0,24	72,7%	3,25	15491000000	7,24		0,79	1,91		
726	Truworths International	2017	30,67	0,47		0,23	66,7%	2,96	16139000000	7,22		0,82	1,86		
727	Truworths International	2016	71,26	0,70		0,25	77,8%	3,59	17061000000	7,10	7,00	0,82	1,96		
728	Truworths International	2015	62,86	0,70		0,28	70,0%	4,27	9157000000	7,05	6,15	0,77	1,92		
729	Truworths International	2014	55,02	0,70		0,31	77,8%	4,01	8076000000	7,02		0,76	1,88		
730	Truworths International	2013	195,24	0,70		0,36	87,5%	5,66	7271000000	6,97	6,90	0,76	1,91		
731	Truworths International	2012	125,81	0,70		0,37	85,7%	6,09	6917000000	7,00	7,03	0,72	1,95		
732	Truworths International	2011	229,39	0,74		0,37	55,6%	5,51	6224000000	6,85	7,03	0,66	1,84		
733	Tsogo Sun	2020	41,73	0,57		-0,05	55,6%	0,61	15382000000	7,10	6,57	-0,69	0,20		
734	Tsogo Sun	2019	168,73	0,59		0,03	44,4%	0,61	14586000000	7,28	6,71	1,05	1,29		
735	Tsogo Sun	2018	39,23	0,49		0,11	50,0%	0,61	33780000000	7,09	6,59	0,32	1,37		
736	Tsogo Sun	2017	34,18	0,33		0,14	30,0%	0,61	32533000000	7,03	6,71	0,33	1,44		
737	Tsogo Sun	2016	30,14	0,52		0,13	33,3%	0,61	25667000000	7,00	6,53	0,27	1,37		
738	Tsogo Sun	2015	42,93	0,52		0,12	27,3%	0,61	24644000000	6,98	6,83	0,22	1,44		
739	Tsogo Sun	2014	43,61	0,52		0,15	25,0%	0,61	20414000000	6,95	6,87	0,24	1,41		
740	Tsogo Sun	2013	43,47	0,52		0,16	23,1%	0,61	17430000000	6,92	6,87	0,18	1,39		
741	Tsogo Sun	2012	73,13	0,56		0,20	25,0%	0,61	15369000000	7,06	7,07	0,15	1,26		
742	Tsogo Sun	2011	34,80	0,56		0,09	21,4%	0,61	16294552000	7,14	6,30	-0,01	1,20		
743	Wescoal	2020		0,43	0,13%	0,00	36,4%	0,47	3961450000	7,07	6,08		0,11		
744	Wescoal	2017		0,37	0,36%	0,08	23,1%	0,77	1591857000	7,07	6,15	-0,95	0,38		
745	Wescoal	2016		0,67	0,50%	0,11	33,3%	0,67	1019969000	6,76	4,62	-0,57	0,06		
746	Wescoal	2015		0,56	0,01%	0,06	42,9%	0,87	823242000	7,29	5,82	-0,81	0,28		
747	Wescoal	2014		0,56	5,77%	0,19	62,5%	0,94	724142608	6,86	5,82	-0,82	0,28		
748	Wescoal	2013		0,48	6,92%	0,13	37,5%	0,78	289124088	6,73	5,59	-0,91	-0,05		
749	Wescoal	2012		0,48	6,50%	0,14	16,7%	0,63	281576466	6,59	5,50	-0,94	-0,14		
750	Wescoal	2011		0,48	6,50%	-0,13	33,3%	0,85	268925328	6,61	5,50		-0,04		
751	Wesizwe Platinum	2020	5,16	0,39		-0,01	37,5%	0,74	13711280000	6,84	6,03	-1,50	-0,34		
752	Wesizwe Platinum	2019	4,54	0,37		0,01	37,5%	0,72	12473198000	6,85	6,01	-1,23	-0,29		
753	Wesizwe Platinum	2018	6,87	0,35		0,02	37,5%	0,68	9619897000	6,83	5,99		-0,43		
754	Wesizwe Platinum	2017		0,33		0,02	30,0%	0,63	7979577000	6,73	6,06	-0,67	-0,31		
755	Wesizwe Platinum	2016		0,48		0,08	37,5%	0,69	7579213000	6,69	6,22	-0,60	-0,15		

756	Wesizwe Platinum	2015		0,48		-0,09	40,0%	0,68	7626543000	6,76	6,51		-0,37		
757	Wesizwe Platinum	2014		0,48		-0,03	33,3%	0,59	6180034000	6,89	5,99		-0,10		
758	Wesizwe Platinum	2013		0,48		-0,01	30,0%	0,46	5042793000	6,67	5,85		-0,11		
759	Wesizwe Platinum	2012	4,02	0,48		-0,01	40,0%	0,38	4861273000	6,67		-2,15	-0,21		
760	Wesizwe Platinum	2011	2,13	0,48		-0,11	30,8%	0,60	3941163000	6,26	5,48		0,15		
761	Woolworths	2020	47,80	0,67		0,07	66,7%	1,37	65066000000	7,69		0,08	1,52		
762	Woolworths	2019	42,11	0,61		-0,04	73,3%	2,14	35929000000	7,62	6,32	0,54	1,68		
763	Woolworths	2018	43,60	0,67		-0,06	69,2%	2,52	40147000000	7,59		0,54	1,75		
764	Woolworths	2017	76,28	0,59		0,30	75,0%	2,87	44993000000	7,56		0,62	1,80		
765	Woolworths	2016	63,62	0,70		0,23	73,3%	3,39	49390000000	7,52	7,43	0,66	1,92		
766	Woolworths	2015	63,37	0,70		0,22	66,7%	4,46	41455000000	7,40	7,46	0,57	1,98		
767	Woolworths	2014	63,66	0,70		0,20	66,7%	3,88	22269000000	7,33	7,29	0,56	1,89		
768	Woolworths	2013	67,39	0,70		0,36	69,2%	5,65	12203000000	7,17	7,30	0,53	1,81		
769	Woolworths	2012	51,03	0,74		0,30	71,4%	4,79	10045000000	7,10	7,04	0,43	1,70		
770	Woolworths	2011	84,10	0,74		0,25	69,2%	3,06	9065000000	7,13	7,31	0,33	1,47		

Source: Author's conceptualisation (2022)

ANNEXURE 4.13: AUTOCORRELATION RESULTS

DURBIN WATSON

Objective 2.1 < RGCI-JSE vs Firm performance>

Variables Entered/Removed[a]			
Model	Variables Entered	Variables Removed	Method
1	SizeTotalassets, TobinsQ, SH, RGCIJSE, IND, ROA[b]	.	Enter
a. Dependent Variable: HEPS_Log10			
b. All requested variables entered.			

Source: Author's conceptualisation (2022)

Model Summary[b]					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.580[a]	.337	.329	.634	1.782
a. Predictors: (Constant), SizeTotalassets, TobinsQ, SH, RGCIJSE, IND, ROA					
b. Dependent Variable: HEPS_Log10					

Source: Author's conceptualisation (2022)

ANOVA[a]						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	102.412	6	17.069	42.490	<,001[b]
	Residual	201.659	502	.402		
	Total	304.070	508			
a. Dependent Variable: HEPS_Log10						
b. Predictors: (Constant), SizeTotalassets, TobinsQ, SH, RGCIJSE, IND, ROA						

Source: Author's conceptualisation (2022)

Objective 2.2 < RGCI-JSE vs Firm performance>

Variables Entered/Removed[a]			
Model	Variables Entered	Variables Removed	Method
1	SizeTotalassets, ROA, SH, RGCIJSE, IND, TobinsQ[b]	.	Enter
a. Dependent Variable: SP_Log10			
b. All requested variables entered.			

Source: Author's conceptualisation (2022)

Model Summary[b]					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.674[a]	.454	.448	.610	1.712
a. Predictors: (Constant), SizeTotalassets, ROA, SH, RGCIJSE, IND, TobinsQ					
b. Dependent Variable: SP_Log10					

Source: Author's conceptualisation (2022)

ANOVA[a]						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	171.610	6	28.602	76.763	<,001[b]
	Residual	206.046	553	.373		
	Total	377.656	559			
a. Dependent Variable: SP_Log10						
b. Predictors: (Constant), SizeTotalassets, ROA, SH, RGCIJSE, IND, TobinsQ						

Source: Author's conceptualisation (2022)

Objective 3.1 < RGCI-JSE vs Fixed pay>

Variables Entered/Removed[a]			
Model	Variables Entered	Variables Removed	Method
1	SizeTotalassets, ROA, SH, RGCIJSE, IND, TobinsQ[b]	.	Enter
a. Dependent Variable: Fixedpay_Log10			
b. All requested variables entered.			

Source: Author's conceptualisation (2022)

Model Summary[b]					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.537[a]	.288	.280	.236	1.630
a. Predictors: (Constant), SizeTotalassets, ROA, SH, RGCIJSE, IND, TobinsQ					
b. Dependent Variable: Fixedpay_Log10					

Source: Author's conceptualisation (2022)

ANOVA[a]						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	12.506	6	2.084	37.304	<,001[b]
	Residual	30.898	553	.056		
	Total	43.404	559			
a. Dependent Variable: Fixedpay_Log10						
b. Predictors: (Constant), SizeTotalassets, ROA, SH, RGCIJSE, IND, TobinsQ						

Source: Author's conceptualisation (2022)

Objective 3.2 < RGCI-JSE vs STI>

Variables Entered/Removed[a]			
Model	Variables Entered	Variables Removed	Method
1	SizeTotalassets, ROA, SH, RGCIJSE, IND, TobinsQ[b]	.	Enter
a. Dependent Variable: STI_Log10			
b. All requested variables entered.			

Source: Author's conceptualisation (2022)

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.376[a]	.142	.130	.481	1.722
a. Predictors: (Constant), SizeTotalassets, ROA, SH, RGCIJSE, IND, TobinsQ					
b. Dependent Variable: STI_Log10					

Source: Author's conceptualisation (2022)

ANOVA[a]						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	16.681	6	2.780	12.020	<,001[b]
	Residual	101.076	437	.231		
	Total	117.757	443			
a. Dependent Variable: STI_Log10						
b. Predictors: (Constant), SizeTotalassets, ROA, SH, RGCIJSE, IND, TobinsQ						

Source: Author's conceptualisation (2022)

Objective 4.1 < Firm performance vs Fixed pay>

Variables Entered/Removed[a]			
Model	Variables Entered	Variables Removed	Method
1	SP_Log10, ROA, SH, IND, SizeTotalassets, TobinsQ, HEPS_Log10[b]	.	Enter
a. Dependent Variable: Fixedpay_Log10			
b. All requested variables entered.			

Source: Author's conceptualisation (2022)

Model Summary[b]					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.614[a]	.377	.368	.221	1.617
a. Predictors: (Constant), SP_Log10, ROA, SH, IND, SizeTotalassets, TobinsQ, HEPS_Log10					
b. Dependent Variable: Fixedpay_Log10					

Source: Author's conceptualisation (2022)

ANOVA[a]						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	14.933	7	2.133	43.628	<,001[b]
	Residual	24.693	505	.049		
	Total	39.627	512			
a. Dependent Variable: Fixedpay_Log10						
b. Predictors: (Constant), SP_Log10, ROA, SH, IND, SizeTotalassets, TobinsQ, HEPS_Log10						

Source: Author's conceptualisation (2022)

Objective 4.2 < Firm performance vs STI>

Variables Entered/Removed[a]			
Model	Variables Entered	Variables Removed	Method
1	SP_Log10, ROA, SH, IND, SizeTotalassets, TobinsQ, HEPS_Log10[b]	.	Enter
a. Dependent Variable: STI_Log10			
b. All requested variables entered.			

Source: Author's conceptualisation (2022)

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.483[a]	.234	.221	.448	1.790
a. Predictors: (Constant), SP_Log10, ROA, SH, IND, SizeTotalassets, TobinsQ, HEPS_Log10					
b. Dependent Variable: STI_Log10					

Source: Author's conceptualisation (2022)

ANOVA[a]						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	25.381	7	3.626	18.035	<,001[b]
	Residual	83.232	414	.201		
	Total	108.614	421			
a. Dependent Variable: STI_Log10						
b. Predictors: (Constant), SP_Log10, ROA, SH, IND, SizeTotalassets, TobinsQ, HEPS_Log10						

Source: Author's conceptualisation (2022)

Objective 5.1 < Pay-gap vs HEPS>

Variables Entered/Removed[a]			
Model	Variables Entered	Variables Removed	Method
1	Paygap, IND, TobinsQ, SizeTotalassets, SH, ROA[b]	.	Enter
a. Dependent Variable: HEPS_Log10			
b. All requested variables entered.			

Source: Author's conceptualisation (2022)

Model Summary[b]					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.557[a]	.310	.301	.614	1.884
a. Predictors: (Constant), Paygap, IND, TobinsQ, SizeTotalassets, SH, ROA					
b. Dependent Variable: HEPS_Log10					

Source: Author's conceptualisation (2022)

ANOVA[a]						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	78.561	6	13.094	34.764	<,001[b]
	Residual	174.764	464	.377		
	Total	253.325	470			
a. Dependent Variable: HEPS_Log10						
b. Predictors: (Constant), Paygap, IND, TobinsQ, SizeTotalassets, SH, ROA						

Source: Author's conceptualisation (2022)

Objective 5.2 < Pay-gap vs SP>

Variables Entered/Removed[a]			
Model	Variables Entered	Variables Removed	Method
1	Paygap, IND, TobinsQ, SizeTotalassets, SH, ROA[b]	.	Enter
a. Dependent Variable: SP_Log10			
b. All requested variables entered.			

Source: Author's conceptualisation (2022)

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.658[a]	.433	.426	.587	1.856
a. Predictors: (Constant), Paygap, IND, TobinsQ, SizeTotalassets, SH, ROA					
b. Dependent Variable: SP_Log10					

Source: Author's conceptualisation (2022)

ANOVA[a]						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	132.485	6	22.081	64.035	<,001[b]
	Residual	173.448	503	.345		
	Total	305.933	509			
a. Dependent Variable: SP_Log10						
b. Predictors: (Constant), Paygap, IND, TobinsQ, SizeTotalassets, SH, ROA						

Source: Author's conceptualisation (2022)

ANNEXURE 4.16: PROOF OF THE LANGUAGE EDITING

Proof of language editing Mnyaka.pdf

ANNEXURE 5.1: PEARSON'S CORRELATIONS

Correlations												
		Paygap	RGCIJSE	%SH	ROA	IND	TobinsQ	SizeTotalassets	Fixedpay_Log10	STI_Log10	HEPS_Log10	SP_Log10
Paygap	Pearson Correlation	1	.154**	-.160**	.121**	.062	.147**	.139**	.386**	.303**	.181**	.222**
	Sig. (2-tailed)		<,001	<,001	.002	.114	<,001	<,001	<,001	<,001	<,001	<,001
	N	660	655	550	660	652	625	658	655	517	605	652
RGCIJSE	Pearson Correlation	.154**	1	-.189**	.195**	.156**	.296**	.128**	.271**	.234**	.311**	.346**
	Sig. (2-tailed)	<,001		<,001	<,001	<,001	<,001	<,001	<,001	<,001	<,001	<,001
	N	655	765	626	753	754	700	760	756	580	671	725
SH	Pearson Correlation	-.160**	-.189**	1	-.025	-.375**	.036	-.141**	-.170**	-.170**	-.298**	-.333**
	Sig. (2-tailed)	<,001	<,001		.526	<,001	.394	<,001	<,001	<,001	<,001	<,001
	N	550	626	631	624	624	574	628	626	473	557	600
ROA	Pearson Correlation	.121**	.195**	-.025	1	.009	.491**	.014	.105**	.158**	.263**	.386**
	Sig. (2-tailed)	.002	<,001	.526		.806	<,001	.696	.004	<,001	<,001	<,001
	N	660	753	624	758	748	705	755	751	583	674	730
IND	Pearson Correlation	.062	.156**	-.375**	.009	1	.016	.268**	.289**	.224**	.263**	.351**
	Sig. (2-tailed)	.114	<,001	<,001	.806		.678	<,001	<,001	<,001	<,001	<,001
	N	652	754	624	748	759	697	756	754	579	668	722
TobinsQ	Pearson Correlation	.147**	.296**	.036	.491**	.016	1	-.022	.044	.090*	.262**	.305**
	Sig. (2-tailed)	<,001	<,001	.394	<,001	.678		.568	.244	.032	<,001	<,001
	N	625	700	574	705	697	705	702	699	559	637	701
SizeTotalassets	Pearson Correlation	.139**	.128**	-.141**	.014	.268**	-.022	1	.489**	.332**	.378**	.409**
	Sig. (2-tailed)	<,001	<,001	<,001	.696	<,001	.568		<,001	<,001	<,001	<,001
	N	658	760	628	755	756	702	765	759	582	674	727
Fixedpay_Log10	Pearson Correlation	.386**	.271**	-.170**	.105**	.289**	.044	.489**	1	.452**	.511**	.545**
	Sig. (2-tailed)	<,001	<,001	<,001	.004	<,001	.244	<,001		<,001	<,001	<,001
	N	655	756	626	751	754	699	759	761	583	670	724
STI_Log10	Pearson Correlation	.303**	.234**	-.170**	.158**	.224**	.090*	.332**	.452**	1	.453**	.514**
	Sig. (2-tailed)	<,001	<,001	<,001	<,001	<,001	.032	<,001	<,001		<,001	<,001
	N	517	580	473	583	579	559	582	583	583	542	572
HEPS_Log10	Pearson Correlation	.181**	.311**	-.298**	.263**	.263**	.262**	.378**	.511**	.453**	1	.897**
	Sig. (2-tailed)	<,001	<,001	<,001	<,001	<,001	<,001	<,001	<,001	<,001		<,001
	N	605	671	557	674	668	637	674	670	542	676	655
SP_Log10	Pearson Correlation	.222**	.346**	-.333**	.386**	.351**	.305**	.409**	.545**	.514**	.897**	1
	Sig. (2-tailed)	<,001	<,001	<,001	<,001	<,001	<,001	<,001	<,001	<,001	<,001	
	N	652	725	600	730	722	701	727	724	572	655	730
**. Correlation is significant at the 0.01 level (2-tailed).												
*. Correlation is significant at the 0.05 level (2-tailed).												

Source: Author's conceptualisation (2022)

ANNEXURE 5.2: SPEARMAN'S CORRELATIONS

Correlations

Spearman's Correlation		Paygap	RGCIJSE	%SH	ROA	IND	Tobins Q	SizeTotalassets	Fixedpay_Log10	STI_Log10	HEPS_Log10	SP_Log10
Paygap	Correlation Coefficient	1.000	.187**	-.143**	.091*	.205**	.134**	.374**	.428**	.475**	.286**	.363**
	Sig. (2-tailed)	.	<,001	<,001	.019	<,001	<,001	<,001	<,001	<,001	<,001	<,001
	N	660	655	550	660	652	625	658	655	517	605	652
RGCIJSE	Correlation Coefficient	.187**	1.000	-.184**	.196**	.165**	.322**	.327**	.277**	.247**	.300**	.344**
	Sig. (2-tailed)	<,001	.	<,001	<,001	<,001	<,001	<,001	<,001	<,001	<,001	<,001
	N	655	765	626	753	754	700	760	756	580	671	725
SH	Correlation Coefficient	-.143**	-.184**	1.000	.009	-.364**	-.100*	-.304**	-.138**	-.125**	-.222**	-.270**
	Sig. (2-tailed)	<,001	<,001	.	.826	<,001	.016	<,001	<,001	.006	<,001	<,001
	N	550	626	631	624	624	574	628	626	473	557	600
ROA	Correlation Coefficient	.091*	.196**	.009	1.000	-.007	.605**	-.019	.052	.164**	.244**	.337**
	Sig. (2-tailed)	.019	<,001	.826	.	.842	<,001	.601	.151	<,001	<,001	<,001
	N	660	753	624	758	748	705	755	751	583	674	730
IND	Correlation Coefficient	.205**	.165**	-.364**	-.007	1.000	.071	.412**	.308**	.226**	.270**	.344**
	Sig. (2-tailed)	<,001	<,001	<,001	.842	.	.061	<,001	<,001	<,001	<,001	<,001
	N	652	754	624	748	759	697	756	754	579	668	722
TobinsQ	Correlation Coefficient	.134**	.322**	-.100*	.605**	.071	1.000	.089*	.134**	.175**	.331**	.469**
	Sig. (2-tailed)	<,001	<,001	.016	<,001	.061	.	.019	<,001	<,001	<,001	<,001
	N	625	700	574	705	697	705	702	699	559	637	701
SizeTotalassets	Correlation Coefficient	.374**	.327**	-.304**	-.019	.412**	.089*	1.000	.716**	.565**	.611**	.689**
	Sig. (2-tailed)	<,001	<,001	<,001	.601	<,001	.019	.	<,001	<,001	<,001	<,001
	N	658	760	628	755	756	702	765	759	582	674	727
Fixedpay_Log10	Correlation Coefficient	.428**	.277**	-.138**	.052	.308**	.134**	.716**	1.000	.520**	.519**	.565**
	Sig. (2-tailed)	<,001	<,001	<,001	.151	<,001	<,001	<,001	.	<,001	<,001	<,001
	N	655	756	626	751	754	699	759	761	583	670	724
STI_Log10	Correlation Coefficient	.475**	.247**	-.125**	.164**	.226**	.175**	.565**	.520**	1.000	.476**	.538**
	Sig. (2-tailed)	<,001	<,001	.006	<,001	<,001	<,001	<,001	<,001	.	<,001	<,001
	N	517	580	473	583	579	559	582	583	583	542	572
HEPS_Log10	Correlation Coefficient	.286**	.300**	-.222**	.244**	.270**	.331**	.611**	.519**	.476**	1.000	.910**
	Sig. (2-tailed)	<,001	<,001	<,001	<,001	<,001	<,001	<,001	<,001	<,001	.	<,001
	N	605	671	557	674	668	637	674	670	542	676	655
SP_Log10	Correlation Coefficient	.363**	.344**	-.270**	.337**	.344**	.469**	.689**	.565**	.538**	.910**	1.000
	Sig. (2-tailed)	<,001	<,001	<,001	<,001	<,001	<,001	<,001	<,001	<,001	<,001	.
	N	652	725	600	730	722	701	727	724	572	655	730

Source: Author's conceptualisation (2022)

ANNEXURE 5.3: REGRESSION RESULTS-ALL OBJECTIVES

Univariate Analysis of Variance

OBJECTIVE 2.1: RGCI-JSE VS HEPS_Log10

Tests of Between-Subjects Effects					
Dependent Variable: HEPS_Log10					
Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	105.930[a]	15	7.062	17.571	<,001
Intercept	14.869	1	14.869	36.996	<,001
RGCIJSE	8.856	1	8.856	22.036	<,001
SH	4.719	1	4.719	11.742	<,001
ROA	4.987	1	4.987	12.409	<,001
IND	3.845	1	3.845	9.567	.002
TobinsQ	2.784	1	2.784	6.927	.009
SizeTotalassets	35.065	1	35.065	87.246	<,001
Year	3.518	9	.391	.973	.462
Error	198.140	493	.402		
Total	348.115	509			
Corrected Total	304.070	508			

a. R Squared = .348 (Adjusted R Squared = .329)

Source: Author's conceptualisation (2022)

Parameter Estimates						
Dependent Variable: HEPS_Log10						
					95% Confidence Interval	
Parameter	B	Std. Error	t	Sig.	Lower Bound	Upper Bound
Intercept	-.924	.181	-5.095	<,001	-1.281	-.568
RGCIJSE	.010	.002	4.694	<,001	.006	.014
SH	-.013	.004	-3.427	<,001	-.020	-.005
ROA	.013	.004	3.523	<,001	.006	.021
IND	.006	.002	3.093	.002	.002	.011
TobinsQ	.081	.031	2.632	.009	.020	.141
SizeTotalassets	5.547E-12	5.939E-13	9.341	<,001	4.380E-12	6.714E-12
[Year=2011]	-.058	.136	-.424	.672	-.324	.209
[Year=2012]	-.084	.134	-.626	.532	-.347	.179
[Year=2013]	-.065	.132	-.489	.625	-.325	.195
[Year=2014]	-.220	.133	-1.658	.098	-.481	.041
[Year=2015]	-.167	.135	-1.241	.215	-.432	.098
[Year=2016]	-.151	.136	-1.111	.267	-.419	.116
[Year=2017]	.055	.137	.403	.687	-.214	.324
[Year=2018]	.060	.135	.445	.656	-.205	.325
[Year=2019]	.040	.136	.296	.768	-.226	.306
[Year=2020]	0[a]	.	.	.	.	.
a. This parameter is set to zero because it is redundant.						

Source: Author's conceptualisation (2022)

Parameter Estimates with Robust Standard Errors						
Dependent Variable: HEPS_Log10						
					95% Confidence Interval	
Parameter	B	Robust Std. Error[a]	t	Sig.	Lower Bound	Upper Bound
Intercept	-.924	.200	-4.632	<,001	-1.316	-.532
RGCIJSE	.010	.002	4.543	<,001	.006	.014
SH	-.013	.003	-4.750	<,001	-.018	-.007
ROA	.013	.005	2.759	.006	.004	.023
IND	.006	.002	3.221	.001	.003	.010
TobinsQ	.081	.031	2.635	.009	.021	.141
SizeTotalassets	5.547E-12	6.431E-13	8.625	<,001	4.283E-12	6.811E-12
[Year=2011]	-.058	.142	-.405	.686	-.337	.221
[Year=2012]	-.084	.139	-.603	.547	-.357	.189
[Year=2013]	-.065	.137	-.473	.636	-.333	.204
[Year=2014]	-.220	.149	-1.475	.141	-.513	.073
[Year=2015]	-.167	.146	-1.148	.251	-.454	.119
[Year=2016]	-.151	.147	-1.026	.305	-.441	.138
[Year=2017]	.055	.143	.386	.700	-.226	.336
[Year=2018]	.060	.138	.437	.662	-.210	.330
[Year=2019]	.040	.147	.272	.785	-.249	.329
[Year=2020]	0[b]	.	.	.	.	.
a. HC3 method						
b. This parameter is set to zero because it is redundant.						

Source: Author's conceptualisation (2022)

OBJECTIVE 2.2: RGCI-JSE VS SP_Log10

Tests of Between-Subjects Effects					
Dependent Variable: SP_Log10					
Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	173.517[a]	15	11.568	30.827	<,001
Intercept	.806	1	.806	2.149	.143
RGCIJSE	10.499	1	10.499	27.979	<,001
SH	7.793	1	7.793	20.768	<,001
ROA	19.831	1	19.831	52.847	<,001
IND	11.716	1	11.716	31.222	<,001
TobinsQ	5.920	1	5.920	15.776	<,001
SizeTotalassets	38.358	1	38.358	102.219	<,001
Year	1.908	9	.212	.565	.826
Error	204.139	544	.375		
Total	1376.604	560			
Corrected Total	377.656	559			
a. R Squared = .459 (Adjusted R Squared = .445)					

Source: Author's conceptualisation (2022)

Parameter Estimates						
Dependent Variable: SP_Log10						
					95% Confidence Interval	
Parameter	B	Std. Error	t	Sig.	Lower Bound	Upper Bound
Intercept	-.274	.160	-1.711	.088	-.589	.041
RGCIJSE	.010	.002	5.290	<,001	.006	.014
SH	-.016	.003	-4.557	<,001	-.022	-.009
ROA	.018	.003	7.270	<,001	.013	.023
IND	.011	.002	5.588	<,001	.007	.015
TobinsQ	.094	.024	3.972	<,001	.047	.140
SizeTotalassets	5.733E-12	5.671E-13	10.110	<,001	4.620E-12	6.847E-12
[Year=2011]	.060	.121	.500	.617	-.177	.298
[Year=2012]	.017	.120	.146	.884	-.217	.252
[Year=2013]	.058	.119	.493	.623	-.175	.292
[Year=2014]	-.010	.120	-.081	.935	-.246	.226
[Year=2015]	.032	.120	.269	.788	-.203	.267
[Year=2016]	.001	.123	.011	.991	-.240	.242
[Year=2017]	.195	.121	1.612	.108	-.043	.433
[Year=2018]	.153	.120	1.275	.203	-.083	.390
[Year=2019]	.078	.118	.661	.509	-.154	.311
[Year=2020]	0[a]	.	.	.	.	.
a. This parameter is set to zero because it is redundant.						

Source: Author's conceptualisation (2022)

Parameter Estimates with Robust Standard Errors						
Dependent Variable: SP_Log10						
					95% Confidence Interval	
Parameter	B	Robust Std. Error[a]	t	Sig.	Lower Bound	Upper Bound
Intercept	-.274	.158	-1.735	.083	-.584	.036
RGCIJSE	.010	.002	5.743	<,001	.007	.014

SH	-.016	.003	-5.146	<,001	-.021	-.010
ROA	.018	.003	5.912	<,001	.012	.024
IND	.011	.002	5.563	<,001	.007	.015
TobinsQ	.094	.031	3.056	.002	.034	.154
SizeTotalassets	5.733E-12	7.354E-13	7.796	<,001	4.289E-12	7.178E-12
[Year=2011]	.060	.121	.498	.619	-.178	.299
[Year=2012]	.017	.120	.146	.884	-.219	.254
[Year=2013]	.058	.122	.481	.631	-.181	.298
[Year=2014]	-.010	.128	-.076	.939	-.262	.242
[Year=2015]	.032	.124	.260	.795	-.211	.275
[Year=2016]	.001	.124	.011	.991	-.242	.244
[Year=2017]	.195	.122	1.597	.111	-.045	.435
[Year=2018]	.153	.119	1.289	.198	-.080	.387
[Year=2019]	.078	.127	.614	.539	-.172	.328
[Year=2020]	0[b]	.	.	.	.	.
a. HC3 method						
b. This parameter is set to zero because it is redundant.						

Source: Author's conceptualisation (2022)

OBJECTIVE 3.1: RGCI-JSE VS FIXED PAY_Log10

Tests of Between-Subjects Effects					
Dependent Variable: Fixedpay_Log10					
Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	15.561[a]	15	1.037	20.270	<,001
Intercept	754.164	1	754.164	14735.231	.000
RGCIJSE	3.357	1	3.357	65.594	<,001
SH	.391	1	.391	7.630	.006
ROA	.324	1	.324	6.331	.012
IND	.168	1	.168	3.274	.071
TobinsQ	.093	1	.093	1.814	.179
SizeTotalassets	6.800	1	6.800	132.854	<,001
Year	3.056	9	.340	6.633	<,001
Error	27.842	544	.051		
Total	27826.546	560			
Corrected Total	43.404	559			
a. R Squared = .359 (Adjusted R Squared = .341)					

Source: Author's conceptualisation (2022)

Parameter Estimates						
Dependent Variable: Fixedpay_Log10						
					95% Confidence Interval	
Parameter	B	Std. Error	t	Sig.	Lower Bound	Upper Bound
Intercept	6.680	.059	112.928	.000	6.563	6.796
RGCIJSE	.006	.001	8.099	<,001	.004	.007
SH	.003	.001	2.762	.006	.001	.006
ROA	.002	.001	2.516	.012	.001	.004
IND	.001	.001	1.809	.071	.000	.003
TobinsQ	-.012	.009	-1.347	.179	-.029	.005
SizeTotalassets	2.414E-12	2.094E-13	11.526	<,001	2.003E-12	2.825E-12
[Year=2011]	-.180	.045	-4.028	<,001	-.268	-.092

[Year=2012]	-.168	.044	-3.813	<,001	-.255	-.082
[Year=2013]	-.161	.044	-3.675	<,001	-.247	-.075
[Year=2014]	-.181	.044	-4.087	<,001	-.269	-.094
[Year=2015]	-.149	.044	-3.361	<,001	-.236	-.062
[Year=2016]	-.139	.045	-3.079	.002	-.228	-.050
[Year=2017]	.019	.045	.425	.671	-.069	.107
[Year=2018]	.002	.044	.034	.973	-.086	.089
[Year=2019]	.018	.044	.418	.676	-.068	.104
[Year=2020]	0[a]	.	.	.	.	.
a. This parameter is set to zero because it is redundant.						

Source: Author's conceptualisation (2022)

Parameter Estimates with Robust Standard Errors						
Dependent Variable: Fixedpay_Log10						
		Robust Std.			95% Confidence Interval	
Parameter	B	Error[a]	t	Sig.	Lower Bound	Upper Bound
Intercept	6.680	.051	130.343	.000	6.579	6.780
RGCIJSE	.006	.001	8.456	<,001	.004	.007
SH	.003	.001	3.853	<,001	.002	.005
ROA	.002	.001	2.319	.021	.000	.004
IND	.001	.001	1.816	.070	.000	.003
TobinsQ	-.012	.011	-1.093	.275	-.033	.009
SizeTotalassets	2.414E-12	2.110E-13	11.439	<,001	1.999E-12	2.828E-12
[Year=2011]	-.180	.044	-4.134	<,001	-.266	-.094
[Year=2012]	-.168	.044	-3.843	<,001	-.255	-.082
[Year=2013]	-.161	.043	-3.722	<,001	-.246	-.076
[Year=2014]	-.181	.043	-4.212	<,001	-.266	-.097
[Year=2015]	-.149	.044	-3.357	<,001	-.237	-.062
[Year=2016]	-.139	.042	-3.322	<,001	-.221	-.057
[Year=2017]	.019	.043	.446	.656	-.065	.103
[Year=2018]	.002	.040	.037	.970	-.077	.080
[Year=2019]	.018	.040	.460	.646	-.060	.096
[Year=2020]	0[b]	.	.	.	.	.
a. HC3 method						
b. This parameter is set to zero because it is redundant.						

Source: Author's conceptualisation (2022)

OBJECTIVE 3.2: RGCI-JSE VS STI_Log10

Tests of Between-Subjects Effects					
Dependent Variable: STI_Log10					
Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	17.464[a]	15	1.164	4.968	<,001
Intercept	489.350	1	489.350	2088.286	<,001
RGCIJSE	2.146	1	2.146	9.159	.003
SH	.453	1	.453	1.931	.165
ROA	1.179	1	1.179	5.032	.025
IND	.021	1	.021	.089	.765
TobinsQ	.213	1	.213	.911	.341
SizeTotalassets	8.328	1	8.328	35.541	<,001
Year	.783	9	.087	.371	.949

Error	100.294	428	.234		
Total	19969.914	444			
Corrected Total	117.757	443			

a. R Squared = .148 (Adjusted R Squared = .118)

Source: Author's conceptualisation (2022)

Parameter Estimates						
Dependent Variable: STI_Log10						
					95% Confidence Interval	
Parameter	B	Std. Error	t	Sig.	Lower Bound	Upper Bound
Intercept	6.194	.151	40.968	<,001	5.897	6.491
RGCIJSE	.005	.002	3.026	.003	.002	.009
SH	-.004	.003	-1.390	.165	-.010	.002
ROA	.006	.003	2.243	.025	.001	.012
IND	.001	.002	.299	.765	-.003	.004
TobinsQ	-.022	.023	-.954	.341	-.067	.023
SizeTotalassets	2.969E-12	4.981E-13	5.962	<,001	1.990E-12	3.948E-12
[Year=2011]	.015	.111	.137	.891	-.203	.234
[Year=2012]	.066	.111	.596	.552	-.152	.284
[Year=2013]	.023	.109	.211	.833	-.191	.237
[Year=2014]	.086	.108	.793	.428	-.127	.299
[Year=2015]	.096	.111	.866	.387	-.122	.314
[Year=2016]	.074	.113	.653	.514	-.149	.297
[Year=2017]	.084	.112	.753	.452	-.136	.305
[Year=2018]	.145	.109	1.328	.185	-.070	.360
[Year=2019]	.023	.111	.210	.834	-.195	.242
[Year=2020]	0[a]	.	.	.	.	.

a. This parameter is set to zero because it is redundant.

Source: Author's conceptualisation (2022)

Parameter Estimates with Robust Standard Errors						
Dependent Variable: STI_Log10						
					95% Confidence Interval	
Parameter	B	Robust Std. Error[a]	t	Sig.	Lower Bound	Upper Bound
Intercept	6.194	.167	37.148	<,001	5.866	6.522
RGCIJSE	.005	.002	2.833	.005	.002	.009
SH	-.004	.004	-1.071	.285	-.011	.003
ROA	.006	.003	2.207	.028	.001	.012
IND	.001	.002	.306	.760	-.003	.004
TobinsQ	-.022	.024	-.919	.358	-.069	.025
SizeTotalassets	2.969E-12	8.983E-13	3.305	.001	1.204E-12	4.735E-12
[Year=2011]	.015	.109	.139	.890	-.200	.230
[Year=2012]	.066	.118	.560	.576	-.166	.298
[Year=2013]	.023	.113	.202	.840	-.200	.246
[Year=2014]	.086	.113	.760	.448	-.136	.308
[Year=2015]	.096	.105	.910	.364	-.111	.303
[Year=2016]	.074	.120	.619	.536	-.161	.309
[Year=2017]	.084	.130	.651	.516	-.171	.340
[Year=2018]	.145	.118	1.228	.220	-.087	.378
[Year=2019]	.023	.144	.162	.872	-.260	.307
[Year=2020]	0[b]	.	.	.	.	.

a. HC3 method

b. This parameter is set to zero because it is redundant.

Source: Author's conceptualisation (2022)

OBJECTIVE 4.1: FIRM PERFORMANCE VS Fixed pay_Log10

Tests of Between-Subjects Effects					
Dependent Variable: Fixedpay_Log10					
Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	16.162[a]	16	1.010	21.353	<,001
Intercept	785.194	1	785.194	16597.822	.000
SH	.593	1	.593	12.541	<,001
ROA	.020	1	.020	.427	.514
IND	.009	1	.009	.182	.670
TobinsQ	.026	1	.026	.556	.456
SizeTotalassets	2.402	1	2.402	50.774	<,001
HEPS_Log10	.001	1	.001	.022	.882
SP_Log10	1.054	1	1.054	22.278	<,001
Year	1.229	9	.137	2.887	.002
Error	23.464	496	.047		
Total	25581.329	513			
Corrected Total	39.627	512			
a. R Squared = .408 (Adjusted R Squared = .389)					

Source: Author's conceptualisation (2022)

Parameter Estimates						
Dependent Variable: Fixedpay_Log10						
					95% Confidence Interval	
Parameter	B	Std. Error	t	Sig.	Lower Bound	Upper Bound
Intercept	6.893	.060	113.956	.000	6.774	7.012
SH	.005	.001	3.541	<,001	.002	.007
ROA	-.001	.001	-.654	.514	-.003	.002
IND	.000	.001	-.426	.670	-.002	.001
TobinsQ	-.008	.011	-.745	.456	-.031	.014
SizeTotalassets	1.587E-12	2.227E-13	7.126	<,001	1.149E-12	2.025E-12
HEPS_Log10	.005	.032	.149	.882	-.059	.068
SP_Log10	.165	.035	4.720	<,001	.096	.234
[Year=2011]	-.152	.046	-3.300	.001	-.243	-.062
[Year=2012]	-.131	.045	-2.889	.004	-.220	-.042
[Year=2013]	-.136	.045	-3.010	.003	-.224	-.047
[Year=2014]	-.125	.045	-2.793	.005	-.213	-.037
[Year=2015]	-.112	.046	-2.469	.014	-.202	-.023
[Year=2016]	-.075	.046	-1.629	.104	-.165	.015
[Year=2017]	-.053	.046	-1.145	.253	-.145	.038
[Year=2018]	-.030	.046	-.657	.511	-.121	.060
[Year=2019]	-.024	.046	-.527	.598	-.116	.067
[Year=2020]	0[a]	.	.	.	.	.
a. This parameter is set to zero because it is redundant.						

Source: Author's conceptualisation (2022)

Parameter Estimates with Robust Standard Errors
Dependent Variable: Fixedpay_Log10

Parameter	B	Robust Std. Error[a]	t	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Intercept	6.893	.054	127.789	.000	6.787	6.999
SH	.005	.001	4.768	<,001	.003	.006
ROA	-.001	.001	-.681	.496	-.003	.002
IND	.000	.001	-.443	.658	-.002	.001
TobinsQ	-.008	.012	-.734	.464	-.031	.014
SizeTotalassets	1.587E-12	1.951E-13	8.134	<,001	1.204E-12	1.970E-12
HEPS_Log10	.005	.029	.165	.869	-.053	.062
SP_Log10	.165	.032	5.091	<,001	.101	.229
[Year=2011]	-.152	.043	-3.524	<,001	-.237	-.067
[Year=2012]	-.131	.045	-2.910	.004	-.220	-.043
[Year=2013]	-.136	.042	-3.193	.001	-.219	-.052
[Year=2014]	-.125	.043	-2.908	.004	-.210	-.041
[Year=2015]	-.112	.046	-2.443	.015	-.203	-.022
[Year=2016]	-.075	.043	-1.740	.082	-.160	.010
[Year=2017]	-.053	.044	-1.207	.228	-.140	.033
[Year=2018]	-.030	.041	-.738	.461	-.111	.050
[Year=2019]	-.024	.041	-.595	.552	-.105	.056
[Year=2020]	0[b]	.	.	.	.	.
a. HC3 method						
b. This parameter is set to zero because it is redundant.						

Source: Author's conceptualisation (2022)

OBJECTIVE 4.2: FIRM PERFORMANCE VS STI_Log10

Tests of Between-Subjects Effects					
Dependent Variable: STI_Log10					
Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	26.335[a]	16	1.646	8.102	<,001
Intercept	568.553	1	568.553	2798.585	<,001
SH	.008	1	.008	.037	.847
ROA	.152	1	.152	.749	.387
IND	.494	1	.494	2.434	.120
TobinsQ	1.193	1	1.193	5.872	.016
SizeTotalassets	.970	1	.970	4.773	.029
HEPS_Log10	.116	1	.116	.572	.450
SP_Log10	2.194	1	2.194	10.800	.001
Year	.954	9	.106	.522	.859
Error	82.279	405	.203		
Total	19090.557	422			
Corrected Total	108.614	421			
a. R Squared = .242 (Adjusted R Squared = .213)					

Source: Author's conceptualisation (2022)

Parameter Estimates						
Dependent Variable: STI_Log10						
Parameter	B	Std. Error	t	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Intercept	6.458	.144	44.882	<,001	6.175	6.741
SH	-.001	.003	-.194	.847	-.006	.005

ROA	.003	.003	.865	.387	-.003	.009
IND	-.003	.002	-1.560	.120	-.006	.001
TobinsQ	-.061	.025	-2.423	.016	-.111	-.012
SizeTotalassets	1.123E-12	5.138E-13	2.185	.029	1.125E-13	2.133E-12
HEPS_Log10	.057	.075	.756	.450	-.090	.203
SP_Log10	.263	.080	3.286	.001	.106	.420
[Year=2011]	-.017	.107	-.162	.871	-.228	.193
[Year=2012]	.016	.106	.146	.884	-.194	.225
[Year=2013]	-.007	.105	-.064	.949	-.213	.200
[Year=2014]	.059	.104	.569	.570	-.145	.263
[Year=2015]	.059	.108	.546	.585	-.153	.270
[Year=2016]	.080	.108	.739	.460	-.132	.292
[Year=2017]	-.060	.110	-.547	.585	-.275	.155
[Year=2018]	.055	.107	.511	.610	-.156	.265
[Year=2019]	-.066	.109	-.610	.542	-.280	.147
[Year=2020]	0[a]	.	.	.	.	.
a. This parameter is set to zero because it is redundant.						

Source: Author's conceptualisation (2022)

Parameter Estimates with Robust Standard Errors						
Dependent Variable: STI_Log10						
					95% Confidence Interval	
Parameter	B	Robust Std. Error[a]	t	Sig.	Lower Bound	Upper Bound
Intercept	6.458	.169	38.225	<,001	6.126	6.790
SH	-.001	.003	-.163	.871	-.007	.006
ROA	.003	.003	.966	.334	-.003	.008
IND	-.003	.002	-1.656	.098	-.006	.000
TobinsQ	-.061	.023	-2.638	.009	-.107	-.016
SizeTotalassets	1.123E-12	9.433E-13	1.190	.235	-7.319E-13	2.977E-12
HEPS_Log10	.057	.085	.668	.504	-.110	.223
SP_Log10	.263	.092	2.850	.005	.082	.444
[Year=2011]	-.017	.095	-.182	.855	-.205	.170
[Year=2012]	.016	.105	.148	.883	-.192	.223
[Year=2013]	-.007	.098	-.068	.946	-.200	.187
[Year=2014]	.059	.098	.603	.547	-.134	.252
[Year=2015]	.059	.095	.619	.536	-.128	.245
[Year=2016]	.080	.109	.731	.465	-.135	.294
[Year=2017]	-.060	.125	-.480	.631	-.305	.185
[Year=2018]	.055	.111	.493	.622	-.163	.273
[Year=2019]	-.066	.136	-.488	.626	-.334	.201
[Year=2020]	0[b]	.	.	.	.	.
a. HC3 method						
b. This parameter is set to zero because it is redundant.						

Source: Author's conceptualisation (2022)

OBJECTIVE 5.1: PAY-GAP VS HEPS_Log10

Tests of Between-Subjects Effects					
Dependent Variable: HEPS_Log10					
Source	Type III Sum of Squares	df	Mean Square	F	Sig.

Corrected Model	79.638[a]	15	5.309	13.908	<,001
Intercept	5.051	1	5.051	13.231	<,001
SH	5.436	1	5.436	14.240	<,001
ROA	2.747	1	2.747	7.195	.008
IND	4.132	1	4.132	10.823	.001
TobinsQ	5.059	1	5.059	13.253	<,001
SizeTotalassets	31.238	1	31.238	81.833	<,001
Paygap	1.424	1	1.424	3.730	.054
Year	1.077	9	.120	.313	.971
Error	173.687	455	.382		
Total	306.013	471			
Corrected Total	253.325	470			

a. R Squared = .314 (Adjusted R Squared = .292)

Source: Author's conceptualisation (2022)

Parameter Estimates						
Dependent Variable: HEPS_Log10						
					95% Confidence Interval	
Parameter	B	Std. Error	t	Sig.	Lower Bound	Upper Bound
Intercept	-.523	.165	-3.169	.002	-.848	-.199
SH	-.014	.004	-3.774	<,001	-.021	-.007
ROA	.010	.004	2.682	.008	.003	.018
IND	.007	.002	3.290	.001	.003	.011
TobinsQ	.112	.031	3.640	<,001	.052	.173
SizeTotalassets	5.268E-12	5.823E-13	9.046	<,001	4.123E-12	6.412E-12
Paygap	.001	.001	1.931	.054	-1.804E-5	.002
[Year=2011]	.058	.135	.427	.670	-.208	.323
[Year=2012]	.076	.133	.571	.569	-.185	.337
[Year=2013]	.090	.131	.689	.491	-.167	.347
[Year=2014]	-.044	.131	-.332	.740	-.302	.214
[Year=2015]	.053	.135	.389	.698	-.213	.318
[Year=2016]	-.053	.135	-.394	.694	-.319	.213
[Year=2017]	.070	.137	.513	.608	-.200	.341
[Year=2018]	.055	.134	.406	.685	-.210	.319
[Year=2019]	.018	.135	.132	.895	-.247	.283
[Year=2020]	0[a]	.	.	.	.	.

a. This parameter is set to zero because it is redundant.

Source: Author's conceptualisation (2022)

Parameter Estimates with Robust Standard Errors						
Dependent Variable: HEPS_Log10						
					95% Confidence Interval	
Parameter	B	Robust Std. Error[a]	t	Sig.	Lower Bound	Upper Bound
Intercept	-.523	.186	-2.817	.005	-.888	-.158
SH	-.014	.002	-5.934	<,001	-.019	-.009
ROA	.010	.004	2.363	.019	.002	.019
IND	.007	.002	3.327	<,001	.003	.011
TobinsQ	.112	.026	4.374	<,001	.062	.163
SizeTotalassets	5.268E-12	5.723E-13	9.203	<,001	4.143E-12	6.392E-12
Paygap	.001	.001	1.763	.078	.000	.002
[Year=2011]	.058	.147	.391	.696	-.232	.347
[Year=2012]	.076	.140	.541	.589	-.199	.351

[Year=2013]	.090	.141	.638	.524	-.188	.368
[Year=2014]	-.044	.152	-.286	.775	-.343	.256
[Year=2015]	.053	.144	.365	.715	-.230	.336
[Year=2016]	-.053	.152	-.351	.726	-.352	.246
[Year=2017]	.070	.145	.485	.628	-.215	.356
[Year=2018]	.055	.144	.380	.704	-.228	.337
[Year=2019]	.018	.151	.118	.906	-.278	.314
[Year=2020]	0[b]	.	.	.	.	.
a. HC3 method						
b. This parameter is set to zero because it is redundant.						

Source: Author's conceptualisation (2022)

OBJECTIVE 5.2: PAY-GAP VS SP_Log10

Tests of Between-Subjects Effects					
Dependent Variable: SP_Log10					
Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	134.587[a]	15	8.972	25.868	<,001
Intercept	2.977	1	2.977	8.582	.004
SH	9.520	1	9.520	27.446	<,001
ROA	4.643	1	4.643	13.386	<,001
IND	7.816	1	7.816	22.533	<,001
TobinsQ	15.928	1	15.928	45.921	<,001
SizeTotalassets	34.462	1	34.462	99.355	<,001
Paygap	2.334	1	2.334	6.728	.010
Year	2.102	9	.234	.673	.733
Error	171.346	494	.347		
Total	1316.897	510			
Corrected Total	305.933	509			
a. R Squared = .440 (Adjusted R Squared = .423)					

Source: Author's conceptualisation (2022)

Parameter Estimates						
Dependent Variable: SP_Log10						
					95% Confidence Interval	
Parameter	B	Std. Error	t	Sig.	Lower Bound	Upper Bound
Intercept	.212	.147	1.441	.150	-.077	.500
SH	-.018	.003	-5.239	<,001	-.024	-.011
ROA	.011	.003	3.659	<,001	.005	.017
IND	.009	.002	4.747	<,001	.006	.013
TobinsQ	.187	.028	6.776	<,001	.133	.242
SizeTotalassets	5.477E-12	5.495E-13	9.968	<,001	4.397E-12	6.557E-12
Paygap	.001	.001	2.594	.010	.000	.002
[Year=2011]	.191	.121	1.574	.116	-.047	.429
[Year=2012]	.157	.118	1.330	.184	-.075	.390
[Year=2013]	.226	.117	1.933	.054	-.004	.456
[Year=2014]	.187	.118	1.585	.114	-.045	.418
[Year=2015]	.213	.119	1.796	.073	-.020	.446
[Year=2016]	.147	.120	1.223	.222	-.089	.383
[Year=2017]	.182	.121	1.510	.132	-.055	.419
[Year=2018]	.134	.119	1.124	.262	-.100	.368

[Year=2019]	.066	.118	.564	.573	-.165	.298
[Year=2020]	0[a]	.	.	.	.	.
a. This parameter is set to zero because it is redundant.						

Source: Author's conceptualisation (2022)

Parameter Estimates with Robust Standard Errors						
Dependent Variable: SP_Log10						
		Robust Std.			95% Confidence Interval	
Parameter	B	Error[a]	t	Sig.	Lower Bound	Upper Bound
Intercept	.212	.161	1.313	.190	-.105	.528
SH	-.018	.003	-6.837	<,001	-.023	-.013
ROA	.011	.003	3.250	.001	.004	.017
IND	.009	.002	4.656	<,001	.005	.013
TobinsQ	.187	.024	7.844	<,001	.140	.234
SizeTotalassets	5.477E-12	6.312E-13	8.678	<,001	4.237E-12	6.717E-12
Paygap	.001	.001	2.301	.022	.000	.002
[Year=2011]	.191	.127	1.508	.132	-.058	.440
[Year=2012]	.157	.125	1.259	.209	-.088	.403
[Year=2013]	.226	.123	1.834	.067	-.016	.468
[Year=2014]	.187	.127	1.476	.141	-.062	.435
[Year=2015]	.213	.124	1.719	.086	-.030	.457
[Year=2016]	.147	.125	1.178	.239	-.098	.392
[Year=2017]	.182	.126	1.447	.149	-.065	.429
[Year=2018]	.134	.125	1.066	.287	-.113	.380
[Year=2019]	.066	.133	.498	.619	-.195	.328
[Year=2020]	0[b]	.	.	.	.	.
a. HC3 method						
b. This parameter is set to zero because it is redundant.						

Source: Author's conceptualisation (2022)

ANNEXURE 5.4: REGRESSION WITH INTERACTIONS-OBJECTIVES 4 & 5

Univariate Analysis of Variance

OBJECTIVE 4.1: FIRM PERFORMANCE VS FIXED PAY_LOG10

Tests of Between-Subjects Effects					
Dependent Variable: Fixedpay_Log10					
Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	17.607[a]	19	.927	20.827	<,001
Intercept	109.902	1	109.902	2470.024	<,001
SH	.950	1	.950	21.346	<,001
ROA	.003	1	.003	.074	.786
IND	.019	1	.019	.423	.516
TobinsQ	.111	1	.111	2.501	.114
SizeTotalassets	2.364	1	2.364	53.130	<,001
RGCIJSE	.555	1	.555	12.466	<,001
HEPS_Log10	.135	1	.135	3.042	.082
SP_Log10	.408	1	.408	9.179	.003
HEPSLog10_RGCIJSE	.146	1	.146	3.273	.071
SPLog10_RGCIJSE	.135	1	.135	3.024	.083

Year	2.338	9	.260	5.839	<,001
Error	21.713	488	.044		
Total	25331.879	508			
Corrected Total	39.320	507			
a. R Squared = .448 (Adjusted R Squared = .426)					

Source: Author's conceptualisation (2022)

Parameter Estimates						
Dependent Variable: Fixedpay_Log10						
					95% Confidence Interval	
Parameter	B	Std. Error	t	Sig.	Lower Bound	Upper Bound
Intercept	6.520	.131	49.648	<,001	6.262	6.778
SH	.006	.001	4.620	<,001	.003	.008
ROA	.000	.001	-.271	.786	-.003	.002
IND	.000	.001	-.650	.516	-.002	.001
TobinsQ	-.018	.011	-1.582	.114	-.040	.004
SizeTotalassets	1.579E-12	2.166E-13	7.289	<,001	1.153E-12	2.005E-12
RGCIJSE	.008	.002	3.531	<,001	.003	.012
HEPS_Log10	-.183	.105	-1.744	.082	-.389	.023
SP_Log10	.329	.109	3.030	.003	.116	.543
HEPSLog10_RGCIJSE	.003	.002	1.809	.071	.000	.007
SPLog10_RGCIJSE	-.003	.002	-1.739	.083	-.007	.000
[Year=2011]	-.189	.045	-4.153	<,001	-.278	-.099
[Year=2012]	-.170	.045	-3.811	<,001	-.258	-.082
[Year=2013]	-.175	.044	-3.961	<,001	-.262	-.088
[Year=2014]	-.175	.045	-3.914	<,001	-.263	-.087
[Year=2015]	-.167	.045	-3.702	<,001	-.255	-.078
[Year=2016]	-.135	.046	-2.945	.003	-.224	-.045
[Year=2017]	-.020	.046	-.434	.664	-.110	.070
[Year=2018]	-.012	.045	-.257	.797	-.100	.077
[Year=2019]	-.003	.045	-.074	.941	-.092	.085
[Year=2020]	0[a]	.	.	.	.	.
a. This parameter is set to zero because it is redundant.						

Source: Author's conceptualisation (2022)

Parameter Estimates with Robust Standard Errors						
Dependent Variable: Fixedpay_Log10						
					95% Confidence Interval	
Parameter	B	Robust Std. Error[a]	t	Sig.	Lower Bound	Upper Bound
Intercept	6.520	.114	57.398	<,001	6.297	6.743
SH	.006	.001	6.458	<,001	.004	.008
ROA	.000	.001	-.286	.775	-.003	.002
IND	.000	.001	-.649	.517	-.002	.001
TobinsQ	-.018	.011	-1.547	.122	-.040	.005
SizeTotalassets	1.579E-12	1.966E-13	8.032	<,001	1.193E-12	1.965E-12
RGCIJSE	.008	.002	4.290	<,001	.004	.011
HEPS_Log10	-.183	.088	-2.070	.039	-.356	-.009
SP_Log10	.329	.096	3.417	<,001	.140	.519
HEPSLog10_RGCIJSE	.003	.001	2.356	.019	.001	.006
SPLog10_RGCIJSE	-.003	.001	-2.124	.034	-.006	.000
[Year=2011]	-.189	.043	-4.371	<,001	-.273	-.104
[Year=2012]	-.170	.045	-3.809	<,001	-.258	-.082

[Year=2013]	-.175	.042	-4.140	<,001	-.258	-.092
[Year=2014]	-.175	.043	-4.092	<,001	-.259	-.091
[Year=2015]	-.167	.046	-3.641	<,001	-.257	-.077
[Year=2016]	-.135	.043	-3.123	.002	-.219	-.050
[Year=2017]	-.020	.043	-.462	.645	-.104	.065
[Year=2018]	-.012	.040	-.288	.773	-.090	.067
[Year=2019]	-.003	.040	-.084	.933	-.082	.075
[Year=2020]	0[b]	.	.	.	.	.
a. HC3 method						
b. This parameter is set to zero because it is redundant.						

Source: Author's conceptualisation (2022)

OBJECTIVE 4.2: FIRM PERFORMANCE VS STI_LOG10

Tests of Between-Subjects Effects					
Dependent Variable: STI_Log10					
Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	26.633[a]	19	1.402	6.870	<,001
Intercept	83.229	1	83.229	407.894	<,001
SH	.005	1	.005	.024	.878
ROA	.123	1	.123	.605	.437
IND	.435	1	.435	2.133	.145
TobinsQ	1.302	1	1.302	6.383	.012
SizeTotalassets	.991	1	.991	4.856	.028
RGCIJSE	.007	1	.007	.036	.849
HEPS_Log10	.085	1	.085	.419	.518
SP_Log10	.058	1	.058	.283	.595
HEPSLog10_RGCIJSE	.043	1	.043	.209	.648
SPLog10_RGCIJSE	.042	1	.042	.205	.651
Year	.581	9	.065	.316	.969
Error	81.414	399	.204		
Total	18953.626	419			
Corrected Total	108.047	418			
a. R Squared = .246 (Adjusted R Squared = .211)					

Source: Author's conceptualisation (2022)

Parameter Estimates						
Dependent Variable: STI_Log10						
					95% Confidence Interval	
Parameter	B	Std. Error	t	Sig.	Lower Bound	Upper Bound
Intercept	6.443	.327	19.685	<,001	5.799	7.086
SH	.000	.003	.154	.878	-.005	.006
ROA	.002	.003	.778	.437	-.004	.008
IND	-.002	.002	-1.460	.145	-.006	.001
TobinsQ	-.065	.026	-2.526	.012	-.116	-.014
SizeTotalassets	1.136E-12	5.157E-13	2.204	.028	1.226E-13	2.150E-12
RGCIJSE	.001	.005	.191	.849	-.009	.011
HEPS_Log10	.160	.248	.647	.518	-.327	.647
SP_Log10	.139	.261	.532	.595	-.374	.651
HEPSLog10_RGCIJSE	-.002	.004	-.457	.648	-.010	.006

SPLog10_RGCIJSE	.002	.004	.453	.651	-.006	.010
[Year=2011]	-.040	.109	-.367	.713	-.254	.174
[Year=2012]	-.025	.109	-.231	.818	-.239	.189
[Year=2013]	-.041	.107	-.381	.704	-.251	.169
[Year=2014]	.014	.107	.133	.894	-.196	.225
[Year=2015]	.021	.110	.193	.847	-.195	.237
[Year=2016]	.036	.111	.324	.746	-.182	.254
[Year=2017]	-.038	.111	-.340	.734	-.256	.180
[Year=2018]	.062	.108	.571	.568	-.150	.273
[Year=2019]	-.060	.109	-.548	.584	-.275	.155
[Year=2020]	0[a]	.	.	.	.	.
a. This parameter is set to zero because it is redundant.						

Source: Author's conceptualisation (2022)

Parameter Estimates with Robust Standard Errors						
Dependent Variable: STI_Log10						
		Robust Std.			95% Confidence Interval	
Parameter	B	Error[a]	t	Sig.	Lower Bound	Upper Bound
Intercept	6.443	.419	15.393	<,001	5.620	7.266
SH	.000	.004	.116	.908	-.007	.008
ROA	.002	.003	.777	.438	-.004	.008
IND	-.002	.002	-1.554	.121	-.006	.001
TobinsQ	-.065	.025	-2.555	.011	-.115	-.015
SizeTotalassets	1.136E-12	9.520E-13	1.194	.233	-7.351E-13	3.008E-12
RGCIJSE	.001	.006	.154	.878	-.012	.014
HEPS_Log10	.160	.261	.614	.540	-.354	.674
SP_Log10	.139	.313	.443	.658	-.477	.754
HEPSLog10_RGCIJSE	-.002	.004	-.429	.668	-.010	.006
SPLog10_RGCIJSE	.002	.005	.375	.708	-.008	.012
[Year=2011]	-.040	.099	-.406	.685	-.234	.154
[Year=2012]	-.025	.111	-.226	.821	-.244	.193
[Year=2013]	-.041	.103	-.395	.693	-.243	.161
[Year=2014]	.014	.105	.135	.892	-.192	.221
[Year=2015]	.021	.098	.216	.829	-.172	.215
[Year=2016]	.036	.112	.320	.749	-.185	.257
[Year=2017]	-.038	.130	-.291	.771	-.292	.217
[Year=2018]	.062	.115	.537	.592	-.164	.287
[Year=2019]	-.060	.139	-.432	.666	-.333	.213
[Year=2020]	0[b]	.	.	.	.	.
a. HC3 method						
b. This parameter is set to zero because it is redundant.						

Source: Author's conceptualisation (2022)

OBJECTIVE 5.1: PAY-GAP VS HEPS_LOG10

Tests of Between-Subjects Effects					
Dependent Variable: HEPS_Log10					
Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	87.614[a]	17	5.154	14.076	<,001
Intercept	11.779	1	11.779	32.171	<,001

SH	2.920	1	2.920	7.974	.005
ROA	3.058	1	3.058	8.352	.004
IND	3.608	1	3.608	9.854	.002
TobinsQ	2.995	1	2.995	8.179	.004
SizeTotalassets	27.589	1	27.589	75.351	<,001
RGCIJSE	7.218	1	7.218	19.715	<,001
Paygap	.705	1	.705	1.925	.166
Gap_RGCIJSE	.410	1	.410	1.120	.291
Year	3.279	9	.364	.995	.443
Error	164.029	448	.366		
Total	303.184	466			
Corrected Total	251.642	465			
a. R Squared = .348 (Adjusted R Squared = .323)					

Source: Author's conceptualisation (2022)

Parameter Estimates						
Dependent Variable: HEPS_Log10						
					95% Confidence Interval	
Parameter	B	Std. Error	t	Sig.	Lower Bound	Upper Bound
Intercept	-1.003	.198	-5.079	<,001	-1.392	-.615
SH	-.011	.004	-2.824	.005	-.018	-.003
ROA	.011	.004	2.890	.004	.004	.019
IND	.007	.002	3.139	.002	.002	.011
TobinsQ	.089	.031	2.860	.004	.028	.149
SizeTotalassets	4.985E-12	5.743E-13	8.680	<,001	3.856E-12	6.113E-12
RGCIJSE	.010	.002	4.440	<,001	.006	.015
Paygap	.003	.002	1.387	.166	-.001	.007
Gap_RGCIJSE	-3.519E-5	3.325E-5	-1.058	.291	.000	3.016E-5
[Year=2011]	-.008	.134	-.061	.951	-.272	.255
[Year=2012]	-.012	.132	-.091	.928	-.271	.247
[Year=2013]	.001	.130	.008	.994	-.254	.256
[Year=2014]	-.179	.132	-1.358	.175	-.438	.080
[Year=2015]	-.066	.135	-.490	.624	-.331	.199
[Year=2016]	-.171	.135	-1.264	.207	-.437	.095
[Year=2017]	.124	.137	.905	.366	-.145	.392
[Year=2018]	.076	.133	.574	.566	-.185	.337
[Year=2019]	.052	.132	.390	.697	-.209	.312
[Year=2020]	0[a]	.	.	.	.	.
a. This parameter is set to zero because it is redundant.						

Source: Author's conceptualisation (2022)

Parameter Estimates with Robust Standard Errors						
Dependent Variable: HEPS_Log10						
					95% Confidence Interval	
Parameter	B	Robust Std. Error[a]	t	Sig.	Lower Bound	Upper Bound
Intercept	-1.003	.217	-4.630	<,001	-1.429	-.578
SH	-.011	.003	-4.050	<,001	-.016	-.005
ROA	.011	.004	2.483	.013	.002	.020
IND	.007	.002	3.306	.001	.003	.011
TobinsQ	.089	.027	3.226	.001	.035	.142
SizeTotalassets	4.985E-12	5.654E-13	8.816	<,001	3.874E-12	6.096E-12
RGCIJSE	.010	.003	4.037	<,001	.005	.016

Paygap	.003	.003	1.072	.284	-.002	.008
Gap_RGCIJSE	-3.519E-5	4.213E-5	-.835	.404	.000	4.760E-5
[Year=2011]	-.008	.145	-.056	.955	-.294	.278
[Year=2012]	-.012	.137	-.087	.930	-.281	.257
[Year=2013]	.001	.138	.008	.994	-.270	.272
[Year=2014]	-.179	.151	-1.187	.236	-.475	.117
[Year=2015]	-.066	.139	-.476	.634	-.339	.207
[Year=2016]	-.171	.149	-1.148	.251	-.464	.122
[Year=2017]	.124	.146	.849	.396	-.162	.410
[Year=2018]	.076	.142	.538	.591	-.202	.355
[Year=2019]	.052	.150	.345	.730	-.243	.346
[Year=2020]	0[b]	.	.	.	.	.
a. HC3 method						
b. This parameter is set to zero because it is redundant.						

Source: Author's conceptualisation (2022)

OBJECTIVE 5.2: PAY-GAP VS SP_LOG10

Tests of Between-Subjects Effects					
Dependent Variable: SP_Log10					
Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	141.717[a]	17	8.336	24.992	<,001
Intercept	.155	1	.155	.466	.495
SH	5.792	1	5.792	17.365	<,001
ROA	4.612	1	4.612	13.826	<,001
IND	6.939	1	6.939	20.802	<,001
TobinsQ	11.748	1	11.748	35.220	<,001
SizeTotalassets	30.497	1	30.497	91.427	<,001
RGCIJSE	6.892	1	6.892	20.663	<,001
Paygap	.591	1	.591	1.772	.184
Gap_RGCIJSE	.223	1	.223	.669	.414
Year	1.934	9	.215	.644	.759
Error	162.445	487	.334		
Total	1304.332	505			
Corrected Total	304.161	504			
a. R Squared = .466 (Adjusted R Squared = .447)					

Source: Author's conceptualisation (2022)

Parameter Estimates						
Dependent Variable: SP_Log10						
					95% Confidence Interval	
Parameter	B	Std. Error	t	Sig.	Lower Bound	Upper Bound
Intercept	-.203	.175	-1.162	.246	-.547	.141
SH	-.014	.003	-4.167	<,001	-.021	-.007
ROA	.011	.003	3.718	<,001	.005	.016
IND	.009	.002	4.561	<,001	.005	.013
TobinsQ	.165	.028	5.935	<,001	.110	.220
SizeTotalassets	5.187E-12	5.425E-13	9.562	<,001	4.121E-12	6.253E-12
RGCIJSE	.010	.002	4.546	<,001	.005	.014
Paygap	.003	.002	1.331	.184	-.001	.006
Gap_RGCIJSE	-2.570E-5	3.142E-5	-.818	.414	-8.743E-5	3.602E-5

[Year=2011]	.113	.121	.931	.352	-.125	.351
[Year=2012]	.063	.118	.529	.597	-.170	.295
[Year=2013]	.125	.117	1.068	.286	-.105	.354
[Year=2014]	.049	.119	.411	.681	-.185	.283
[Year=2015]	.089	.119	.744	.457	-.146	.323
[Year=2016]	.021	.121	.171	.864	-.217	.259
[Year=2017]	.240	.120	2.003	.046	.005	.476
[Year=2018]	.149	.118	1.269	.205	-.082	.380
[Year=2019]	.071	.116	.615	.539	-.156	.298
[Year=2020]	0[a]	.	.	.	.	.
a. This parameter is set to zero because it is redundant.						

Source: Author's conceptualisation (2022)

Parameter Estimates with Robust Standard Errors						
Dependent Variable: SP_Log10						
					95% Confidence Interval	
Parameter	B	Robust Std. Error[a]	t	Sig.	Lower Bound	Upper Bound
Intercept	-.203	.179	-1.133	.258	-.556	.149
SH	-.014	.003	-5.128	<,001	-.020	-.009
ROA	.011	.003	3.316	<,001	.004	.017
IND	.009	.002	4.619	<,001	.005	.013
TobinsQ	.165	.024	6.781	<,001	.117	.213
SizeTotalassets	5.187E-12	6.129E-13	8.462	<,001	3.983E-12	6.391E-12
RGCIJSE	.010	.002	4.435	<,001	.005	.014
Paygap	.003	.003	.934	.351	-.003	.008
Gap_RGCIJSE	-2.570E-5	4.139E-5	-.621	.535	.000	5.562E-5
[Year=2011]	.113	.128	.883	.378	-.138	.364
[Year=2012]	.063	.124	.503	.615	-.182	.307
[Year=2013]	.125	.123	1.012	.312	-.117	.367
[Year=2014]	.049	.128	.381	.703	-.203	.301
[Year=2015]	.089	.125	.709	.479	-.157	.335
[Year=2016]	.021	.126	.165	.869	-.226	.267
[Year=2017]	.240	.127	1.891	.059	-.009	.490
[Year=2018]	.149	.125	1.193	.233	-.096	.395
[Year=2019]	.071	.133	.534	.594	-.190	.332
[Year=2020]	0[b]	.	.	.	.	.
a. HC3 method						
b. This parameter is set to zero because it is redundant.						

Source: Author's conceptualisation (2022)

ANNEXURE 5.5: KPI'S OF THE SELECTED JSE FIRMS

	Executive KPIs from 2011 to 2020												
	Firm name	**Year**	**KPI1**	**KPI2**	**KPI3**	**KPI4**	**KPI5**	**KPI6**	**KPI7**	**KPI8**	**KPI9**	**KPI10**	**KPI11**
1	Adcock Ingram Holdings	2020	Trading profit	HEPS	new business development	Return on funds employed							
2	Adcock Ingram Holdings	2019	Trading profit	HEPS	new business development	Return on funds employed		market share	BBBEE	factory performance			

3	Adcock Ingram Holdings	2018	factory effecien cies and perform ance	new busines s develop ment		Return on funds employ ed	critical control environ ment	mark et share					
4	Adcock Ingram Holdings	2017	Trading profit			Return on funds employ ed							
5	Adcock Ingram Holdings	2016	Trading profit	Expens e manag ement	Service level agreem ents	Return on funds employ ed	Order infill rate						
6	Adcock Ingram Holdings	2015	Trading profit	Expens e manag ement	Service level agreem ents	Return on funds employ ed	Order infill rate						
7	Adcock Ingram Holdings	2014											
8	Adcock Ingram Holdings	2013											
9	Adcock Ingram Holdings	2012											
10	Adcock Ingram Holdings	2011											
11	Advtech	2020	Minimis e student losses	Revenu e	Preserv e cash	Return on funds employ ed	Improv e net borrowi ng	Impr ove staff welln ess	Reduce staff turnove r	Boost staff morale & boost Increas e product ivity			
12	Advtech	2019	EBIT	CPI	Non-financia l KPIs	Return on funds employ ed							
13	Advtech	2018	EBIT	CPI	Non-financia l KPIs	Return on funds employ ed							
14	Advtech	2017		CPI		Return on funds employ ed	Revenu e						
15	Advtech	2016	Operati ng profit	NEPS	Revenu e	full time enrolm ents	person al kpi						
16	Advtech	2015	HEPS										
17	Advtech	2014	HEPS	Revenu e	EBIT	Person al							
18	Advtech	2013											
19	Advtech	2012											
20	Advtech	2011											
21	AECI	2020	Total shareh older returns	HEPS	Return on net assets	Improv ement in cash from operati ng activitie s	Manag ement of debt and loans	Reduc tion in Total Reco rdabl e Incid ent Rate (TRI R) and no fatal accid ents	B-BBEE rating improv ement	Improv ement in achievi ng Employ ment Equity goals	Deliver y of investm ent case of AECI Much Asphalt and AECI Schirm	Deliver y of busines s optimis ation projects	Shared service s centres implem entatio n

22	AECI	2019	Total shareholder returns	HEPS	Return on net assets	Governance & integrity of financial reporting		Health & safety	B-BBEE rating improvement	implementation of strategic projects	Trading profit	cash flow management	
23	AECI	2018	Total shareholder returns	HEPS	Return on net assets								
24	AECI	2017	Total shareholder returns	HEPS	Return on net assets	Implementation of strategic projects	cash flow management	Health & safety	B-BBEE rating improvement				
25	AECI	2016	Total shareholder returns	HEPS	Acquisitions and disposals	Implementation of strategic projects	Cash flow management	Health & safety	B-BBEE rating improvement				
26	AECI	2015	Total shareholder returns	HEPS		Implementation of strategic projects	Cash optimisation	Health & safety	Trading profit	Employment equity	Acquisitions and disposals	Trading profit	
27	AECI	2014	Total shareholder returns	HEPS		Implementation of strategic projects	Cash flow management	Health & safety	B-BBEE rating improvement	Acquisitions and disposals		Trading profit	
28	AECI	2013	Total shareholder returns	HEPS		Implementation of strategic projects	Cash flow management	Safety performance	Implementation of strategic projects	Acquisitions and disposals			
29	AECI	2012											
30	AECI	2011											
31	African Rainbow Minerals	2020	PBIT	Cost target	Safety								
32	African Rainbow Minerals	2019	PBIT	Cost target	Safety								
33	African Rainbow Minerals	2018	PBIT	Cost target	Safety								
34	African Rainbow Minerals	2017		Cost target	Safety								
35	African Rainbow Minerals	2016	TSR	Cost target	Profit from operations								
36	African Rainbow Minerals	2015	TSR										
37	African Rainbow Minerals	2014											
38	African Rainbow Minerals	2013	HEPS	TSR	ROCE								
39	African Rainbow Minerals	2012	HEPS	TSR	ROCE								
40	African Rainbow Minerals	2011	HEPS	TSR	ROCE								
41	Aspen Pharmacare Holdings	2020	Strategy	Succession	Ethics/culture	Environmental	Leadership	ROIC	EBITDA	NHEPS	Free cash flow		
42	Aspen Pharmacare Holdings	2019	Development of a sustainable growth	Supply chain enhancements	good reputational and ethical positioning	Maintain safety, health and environmental	Implement succession planning measures	Ensure appropriate funding	Deliver appropriate IT strategy	ROIC	Free cash flow	NHEPS	

						standards		structure				
43	Aspen Pharmacare Holdings	2018	implementing working capital improvement strategies	maintaining an appropriate funding structure in line with the Group's growth objectives	ensuring that SHE standards are maintained across the Group	ensuring Group infrastructure is appropriate	developing and implementing synergy realisation and growth plans	develop a sustainable growth strategy and implementing an effective organisational structure	Leverage	NHEPS	meeting certain talent development objectives determined by the S&E Co	ensuring that an effective risk management and reporting process is maintained across the Group	implementing and maintaining appropriate business and reporting systems
44	Aspen Pharmacare Holdings	2017	Maintaining productive stakeholder relations		ensuring that SHE standards are maintained across the Group	ensuring our infrastructure is appropriate	developing and implementing synergy realisation and growth plans	continuing to develop and implement a sustainable growth strategy	EBIT	HEPS	developing and implementing strategies to achieve a better than budgeted earnings outcome	setting an exemplary ethics tone for the Group	
45	Aspen Pharmacare Holdings	2016	Maintaining productive stakeholder relations	establish a talent development programme	ensuring that SHE standards are maintained across the Group	ensuring our infrastructure is appropriate	maintaining an appropriate funding structure	continuing to develop and implement a sustainable growth strategy	EBIT	HEPS	ensuring that SHE standards are maintained across the Group	ensuring that an effective risk management and reporting process is maintained across the Group	
46	Aspen Pharmacare Holdings	2015	Maintaining productive stakeholder relations	developing and implementing synergy realisation and growth plans	ensuring that SHE standards are maintained across the Group	ensuring our infrastructure is appropriate	maintaining an appropriate funding structure	continuing to develop and implement a sustainable growth strategy	EBIT	HEPS		ensuring that an effective risk management and reporting process is maintained across the Group	
47	Aspen Pharmacare Holdings	2014			EBIT	HEPS	development and implementation of Group strategy						
48	Aspen Pharmacare Holdings	2013			gross revenue	Number of product recalls	IMS value of product pipeline for the next		EBITA	HEPS			

							five years						
49	Aspen Pharmacare Holdings	2012											
50	Aspen Pharmacare Holdings	2011											
51	AVI	2020	Profit	Capital employed	Attraction and retention of key talent	Effective brand development activity	Successful execution of key projects	Achievement of transformation objectives and targets	Progress made on medium-term programmes				
52	AVI	2019			Profit and capital employed	Effective management and delivery of core responsibilities	Attraction and retention of key talent	Effective brand development activity	Successful execution of key projects	Achievement of transformation objectives and targets	Progress made on medium-term programmes		
53	AVI	2018			Profit and capital employed	Effective management and delivery of core responsibilities	Attraction and retention of key talent	Effective brand development activity	Successful execution of key projects	Achievement of transformation objectives and targets	Progress made on medium-term programmes		
54	AVI	2017			Profit and capital employed	Effective management and delivery of core responsibilities	Attraction and retention of key talent	Effective brand development activity	Successful execution of key projects	Achievement of transformation objectives and targets	Progress made on medium-term programmes		
55	AVI	2016			Profit and capital employed	Effective management and delivery of core responsibilities	Attraction and retention of key talent	Effective brand development activity	Successful execution of key projects	Achievement of transformation objectives and targets	Progress made on medium-term programmes		
56	AVI	2015			Profit and capital employed	Effective management and delivery of core responsibilities	Attraction and retention of key talent	Effective brand development activity	Successful execution of key projects	Achievement of transformation objectives and targets	Progress made on medium-term programmes		
57	AVI	2014			Profit and capital employed	Effective management and delivery of core responsibilities	Attraction and retention of key talent	Effective brand development activity	Successful execution of key projects	Achievement of transformation objectives and targets	Progress made on medium-term programmes		
58	AVI	2013											
59	AVI	2012											
60	AVI	2011											
61	Barloworld	2020			HEPS	Free cash flow	ROIC						
62	Barloworld	2019	Economic profit	ROE	HEPS	Free cash flow	ROIC	Internal audit and compliance	Workforce diversity and inclusion				

63	Barloworld	2018	Economic profit	ROE	HEPS	Free cash flow	ROIC		Workforce diversity and inclusion				
64	Barloworld	2017	Operating profit	ROE	HEPS	Cash flow	Customer loyalty and satisfaction + Relationships with principals	Aftermarket growth rates	Workforce diversity and inclusion	Market share + safety	Sustainable development	Special projects	Acquisitions and disposals
65	Barloworld	2016	Operating profit	ROE	HEPS	Cash flow	Customer loyalty and satisfaction + Relationships with principals	Aftermarket growth rates	Workforce diversity and inclusion	Market share + safety	Fuel, electricity + water usage	Special projects	Greenhouse gas emission
66	Barloworld	2015	Operating profit	ROE	HEPS	Cash flow	Customer loyalty and satisfaction + Relationships with principals	Aftermarket growth rates	Workforce diversity and inclusion	Market share + safety	BBBEE	Special projects	
67	Barloworld	2014	Operating profit	ROE	HEPS	Cash flow	Customer loyalty and satisfaction + Relationships with principals	Aftermarket growth rates		Market share + safety	Relationships with principals	Special projects	
68	Barloworld	2013	Operating profit	ROE	HEPS	Cash flow	Customer loyalty and satisfaction + Relationships with principals	Aftermarket growth rates + Sustainable development	Empowerment and transformation	Market share + safety	People development and training	Special projects	Acquisitions and disposals
69	Barloworld	2012	Operating profit	Total return on net operating profit	HEPS	Cash flow	TSR	return on net operating assets					
70	Barloworld	2011	Operating profit	ROE	HEPS	Cash flow							
71	Bell Equipment	2020	HEPS	ROIC									
72	Bell Equipment	2019											
73	Bell Equipment	2018											
74	Bell Equipment	2017											
75	Bell Equipment	2016											
76	Bell Equipment	2015											
77	Bell Equipment	2014											

78	Bell Equipment	2013											
79	Bell Equipment	2012											
80	Bell Equipment	2011											
81	Blue Label Telecoms	2020	EBITDA	HEPS	NPAT	total shareholder return	return on capital employed						
82	Blue Label Telecoms	2019	EBITDA	HEPS	NPAT	total shareholder return	return on capital employed						
83	Blue Label Telecoms	2018											
84	Blue Label Telecoms	2017											
85	Blue Label Telecoms	2016											
86	Blue Label Telecoms	2015											
87	Blue Label Telecoms	2014											
88	Blue Label Telecoms	2013											
89	Blue Label Telecoms	2012											
90	Blue Label Telecoms	2011											
91	Cashbuild	2020	Revenue	Gross profit	Profit before tax	Project based objectives	Personal goals	EPS	TSR	ROCE			
92	Cashbuild	2019	Revenue	Gross profit	Profit before tax	Project based objectives	Personal goals	EPS	TSR	ROCE			
93	Cashbuild	2018	Revenue	Gross margin	Profit before tax	Project based objectives	Personal goals	EPS	TSR	ROCE			
94	Cashbuild	2017	Revenue	Gross profit	Profit before tax	Project based objectives	Personal goals						
95	Cashbuild	2016											
96	Cashbuild	2015											
97	Cashbuild	2014											
98	Cashbuild	2013			reduce paper consumption	Reduce electricity costs							
99	Cashbuild	2012											
100	Cashbuild	2011											
101	Clicks Group	2020	RONA	Operating profit	HEPS	Total shareholder return growth							
102	Clicks Group	2019	RONA	Operating profit	HEPS	Total shareholder return growth							
103	Clicks Group	2018	RONA	Operating profit	HEPS	Total shareholder return growth							
104	Clicks Group	2017	RONA	Operating profit	HEPS	Total shareholder return growth							
105	Clicks Group	2016	RONA	Operating profit	HEPS								

106	Clicks Group	2015	RONA	Operating profit	HEPS								
107	Clicks Group	2014	RONA	Operating profit	HEPS								
108	Clicks Group	2013	RONA	Operating profit	HEPS								
109	Clicks Group	2012	RONA	Operating profit	HEPS								
110	Clicks Group	2011	RONA	Operating profit	HEPS								
111	Crookes Brothers	2020	Expand community JVs	Make further Renishaw land sales	Expand Macadamia orchards by 70 ha	Harvest first 80 ha of bananas	Renew long-term wage agreements	Driving sales and marketing to achieve sales targets					
112	Crookes Brothers	2019	Headline earnings	Profit growth	Production								
113	Crookes Brothers	2018	Headline earnings	Profit growth	Production								
114	Crookes Brothers	2017	Headline earnings										
115	Crookes Brothers	2016											
116	Crookes Brothers	2015											
117	Crookes Brothers	2014											
118	Crookes Brothers	2013											
119	Crookes Brothers	2012											
120	Crookes Brothers	2011											
121	Distell Group	2020	Net Revenue growth as per the approved budget	Headline Earnings	Cash invested	Return on invested capital	Strategic initiatives	EBITDA	B-BBEE				
122	Distell Group	2019	Net Revenue growth as per the approved budget	Headline Earnings	Cash invested	Return on invested capital		EBITDA	B-BBEE				
123	Distell Group	2018	Net Revenue growth as per the approved budget		Cash invested	Return on invested capital		EBITDA	B-BBEE				
124	Distell Group	2017	Revenue		Cash invested	Return on funds employed		EBITDA	B-BBEE				
125	Distell Group	2016	Revenue		Cash invested		Effecies	EBITDA					

126	Distell Group	2015	Revenue			Investment	Effecincies	EBITDA					
127	Distell Group	2014											
128	Distell Group	2013											
129	Distell Group	2012											
130	Distell Group	2011											
131	DRDGOLD	2020	Free Cash Flow	Safety	Social development	Labour development	Transformation	Production	Social value	environmental practice			
132	DRDGOLD	2019	Free Cash Flow	Safety	Costs	Share price	Internal controls over financial reporting	Production	Sustainability	Resource optimisation			
133	DRDGOLD	2018	Free Cash Flow		Costs	Share price	Internal controls over financial reporting	Production	Sustainability	Resource optimisation			
134	DRDGOLD	2017	Return on equity	HEPS	Share price	Free cash flow margin							
135	DRDGOLD	2016											
136	DRDGOLD	2015											
137	DRDGOLD	2014											
138	DRDGOLD	2013											
139	DRDGOLD	2012											
140	DRDGOLD	2011											
141	Efora Energy	2020	Production	Operating costs	Attract JV partner	Gross margin	Safety	Environmental matters	EBITDA	Raise new funds	Employee satisfaction index		
142	Efora Energy	2019	Production	Operating costs	Attract JV partner	Gross margin	Safety	Environmental matters	EBITDA	Raise new funds	Employee satisfaction index	BBBEE	Procurement spending allocated to BBBEE
143	Efora Energy	2018	Staff turnover	Improve BBBE status		Reduction in costs	Safety	Production	ROIC	EBITDA			
144	Efora Energy	2017	Staff turnover	Improve BBBE status	Spend within budget and complete projects on time	Non-upstream revenue stream	Safety	Compliance with in-country laws and regulations	ROIC	Raise 5% funds	AIM and JSE compliance	BBBEE	Improve investor relationships
145	Efora Energy	2016	Staff turnover	Improve BBBE status	Spend within budget and complete projects on time	No non-compliance matters raised	Safety	50% of training and development plans completed	ROIC	No funds raised	Complete programs on time	Production growth for the year	ESIA completed
146	Efora Energy	2015											
147	Efora Energy	2014											

148	Efora Energy	2013											
149	Efora Energy	2012											
150	Efora Energy	2011											
151	enX Group	2020	EBIT	free cash flow	Governance, transformation and risk	Return on invested capital	Strategic targets	Operational volumes	Discretionary measures				
152	enX Group	2019	ROE	Headline Earnings	free cash flow	Capital management	Transformation	Strategic targets	Governance/discretionary				
153	enX Group	2018	ROE	Adjusted HEPS		Capital management	Transformation	Strategic targets	Governance/discretionary				
154	enX Group	2017	ROE	Adjusted HEPS		Capital management	Transformation	Strategic targets	Governance/discretionary				
155	enX Group	2016	The achievement of liquidity strengthening indicators		return on invested capital		Certain governance initiatives	Increase in revenue generated ex-South Africa	BBBEE				
156	enX Group	2015	The achievement of liquidity strengthening indicators	Earnings growth through acquisitions	return on invested capital		Certain governance initiatives	Increase in revenue generated ex-South Africa	BBBEE				
157	enX Group	2014	Liquidity strengthning initiatives	Earnings growth through acquisitions		Discreionary component			BBBEE				
158	enX Group	2013											
159	enX Group	2012											
160	enX Group	2011											
161	Exxaro Resources	2020											
162	Exxaro Resources	2019											
163	Exxaro Resources	2018											
164	Exxaro Resources	2017	Stretch in targets	R/tonne/product group measured versus stretch budget	Cash flow against budget	Safety	JSE SRI rating	HEPS	Value and fit of growth portfolio	King IV (ethics and activities)	Perception of the Exxaro brand among stakeholders	Development and implement a long-term strategy that will support the Exxaro vision	Progress against EE plan

165	Exxaro Resources	2016	Stretch in targets	R/tonne/product group measured versus stretch budget	Cash flow against budget	Safety		HEPS			Perception of the Exxaro brand among stakeholders		
166	Exxaro Resources	2015	Stretch in targets	R/tonne/product group measured versus stretch budget	Cash flow against budget	Safety	SRI and risk management	HEPS	Alignment with strategy	Compliance with all regulations	Perception of the Exxaro brand among stakeholders	Comply with all targets in mining charter and employment equity plans	People strategy developed and targets set for implementation
167	Exxaro Resources	2014											
168	Exxaro Resources	2013											
169	Exxaro Resources	2012	ROE	ROCE	EBITDA	Operating margin	Safety	Employment equity	Functional literacy	HIV counselling	Human resources development	Learnership	Procument from hdsa firms
170	Exxaro Resources	2011	ROE	ROCE	EBITDA	Net margin	Safety	Employment equity	Functional literacy	HIV counselling	Human resources development	Learnership	Procurement from HDSA firms
171	Fortress REIT-A	2020	Total shareholder return	Absolute shareholder return	Transformation	Sustainability							
172	Fortress REIT-A	2019	FFB share dividend growth	Increasing NAV (combined for FFA and FFB)	Hedge ratio (interest rates)	Average interest rate hedge term	LTV ratio	Limiting vacancies	Increasing retail trading densities in excess of inflation	Development profit on new developments (value at year-end following completion less total cost)	Maintaining tenant arrears written off as a percentage of revenue	Maintaining net property expenses to revenue ratio	Individual performance (0 to 10)
173	Fortress REIT-A	2018	Grow b share dividends	Increase NAV	Increase retail trading densities	Limiting vacancies	Write-offs below 1% of revenue	Property expenses	Improve hedging of interest rate				
174	Fortress REIT-A	2017	Grow b share dividends	Increase NAV	Increase retail trading densities	Limiting vacancies	Write-offs below 1% of revenue	Property expenses	Improve hedging of interest rate				
175	Fortress REIT-A	2016			Ensuring the publication of financial results within seven weeks of the end of a financial period	Ensuring the publication of financial results within seven weeks of the end of a financial period	Ensuring the publication of financial results within seven weeks of the end of a financial period	Ensuring the publication of financial results within seven weeks of the end of a financial	Ensuring the publication of financial results within seven weeks of the end of a financial period	Ensuring the publication of financial results within seven weeks of the end of a financial period	Ensuring the publication of financial results within seven weeks of the end of a financial period	Ensuring the publication of financial results within seven weeks of the end of a financial period	Ensuring the publication of financial results within seven weeks of the end of a financial period

								period					
176	Fortress REIT-A	2015			Growing distributions in excess of 10% per annum	Increasing net asset value per share in excess of 10% per annum	Increasing retail trading densities by more than 1% over CPI	Limiting vacancies to less than 4,0% of total GLA	Maintaining tenant arrears written off below 1% of revenue	Maintaining staff turnover below 5% per annum	Maintaining the net property expenses to revenue ratio below 18%	Ensuring that at least 80% of the group's exposure to interest rate movement is hedged	Ensuring an average interest rate hedge term exceeding four years
177	Fortress REIT-A	2014											
178	Fortress REIT-A	2013											
179	Fortress REIT-A	2012											
180	Fortress REIT-A	2011											
181	Harmony Gold Mining Company	2020	Total shareholder return	Free cash flow	Production	Total production cost	All-in sustaining cost per kg	Safety performance	Additions to mineral reserves		Development	Environment, social and governance	
182	Harmony Gold Mining Company	2019	Total shareholder return	Free cash flow	Production	Total production cost	All-in sustaining cost per kg	Safety performance				Environment, social and governance	
183	Harmony Gold Mining Company	2018	Total shareholder return	Free cash flow	Gold produced	Total production cost	All-in sustaining cost per kg	Safety performance	Additions to mineral reserves	Underground grade	Development	Environment, social and governance	Project execution
184	Harmony Gold Mining Company	2017	Total shareholder return		Gold produced			Safety performance		Underground grade			
185	Harmony Gold Mining Company	2016			Gold produced					Underground grade			
186	Harmony Gold Mining Company	2015											
187	Harmony Gold Mining Company	2014			Gold produced			Safety performance		Underground grade			
188	Harmony Gold Mining Company	2013		HEPS	Gold produced	Cost and capital expenditure		Safety performance					
189	Harmony Gold Mining Company	2012		HEPS				Safety performance					

190	Harmony Gold Mining Company	2011		HEPS				Safety performance					
191	Homechoice International Plc	2020	PBT	Cash yield	Individual performance								
192	Homechoice International Plc	2019			EBITDA	Profit before tax	Operating profit	Cash					
193	Homechoice International Plc	2018	PAT	Innovative product and credit offers	Insight-led customer growth	Mobi-first engagement and sales	Diversify into new markets and services	Enhance the customer experience	Support services				
194	Homechoice International Plc	2017	EBITDA		EBITDA								
195	Homechoice International Plc	2016											
196	Homechoice International Plc	2015											
197	Homechoice International Plc	2014											
198	Homechoice International Plc	2013											
199	Homechoice International Plc	2012											
200	Homechoice International Plc	2011											
201	Hudaco Industries	2020	ROE										
202	Hudaco Industries	2019	ROE	Increase in HEPS									
203	Hudaco Industries	2018	ROE	Increase in HEPS									
204	Hudaco Industries	2017	ROE	Increase in HEPS									
205	Hudaco Industries	2016	ROE	Increase in HEPS									
206	Hudaco Industries	2015	ROE	Increase in HEPS									
207	Hudaco Industries	2014	ROE	Increase in HEPS									
208	Hudaco Industries	2013	ROE	Increase in HEPS									
209	Hudaco Industries	2012	ROE	Increase in HEPS									
210	Hudaco Industries	2011	ROE	Increase in HEPS									
211	Hulamin	2020	EBIT	TSR	ROCE	Sales volumes	Working capital	Safety	Budgetary/cost control	Transformation	Overall recoveries	Manufacturing and employee costs	Rolling margins
212	Hulamin	2019	EBIT	TSR	ROCE	Sales volumes		Safety			Overall recoveries	Manufacturing and employee costs	Rolling margins

213	Hulamin	2018	EBIT	TSR	ROCE	Sales volumes		Safety			Overall recoveries	Manufacturing and employee costs	Rolling margins
214	Hulamin	2017	EBIT	HEPS	ROCE	Sales volumes	On time deliveries	Safety	Individual performance		Overall recoveries	Manufacturing and employee costs	Rolling margins
215	Hulamin	2016	EBIT	HEPS	ROCE								
216	Hulamin	2015	EBIT	HEPS	ROCE								
217	Hulamin	2014	EBIT	HEPS	ROCE								
218	Hulamin	2013	EBIT	HEPS	ROCE								
219	Hulamin	2012	EBIT	HEPS	ROCE								
220	Hulamin	2011											
221	Impala Platinum Holdings	2020	Deliver the Impala Rustenburg restructuring objectives for 2020	Free cash flow	Implement decision on Waterberg post DFS and develop a suitable funding strategy	Identify and develop value accretive business development	Strengthen stakeholder engagement						
222	Impala Platinum Holdings	2019	Platinum ounces	Free cash flow	Cost per platinum ounce			Safety					
223	Impala Platinum Holdings	2018	Develop a quality and clearly defined end product and ngage government on policies affecting the sustainability of the Zimbabwean operations and influence policy change	Develop a tracking mechanism that tracks effective implementation of the strategy and report progress. Concert special mining lease to mining lease, defer Mimosa export levy	Present outcomes of the strategic review that restores Impala to profitability by 2021	Deliver cash positive FY2018 business plan and receive favourable rating from top 5 sell-side analysts and top 10 institutional investors	Develop, in collaboration with Exco, key priorities and performance metrics for FY2018	align Exco KPIs to key priorities and review remuneration structure to support the delivery of key priorities	Review organisational structure and identify feeder positions for Exco succession	Assess potential successors in feeder positions, identify gaps and develop succession management roadmap	Develop and implement the Group safety strategy and engage organised labour, DMR and community leaders	Develop and implement the Group performance management framework	Conduct Company culture survey and develop a baseline and targets for FY2019
224	Impala Platinum Holdings	2017			Cash flow	Capital	volume, value, quality, cost	Health & safety					
225	Impala Platinum Holdings	2016											
226	Impala Platinum Holdings	2015	Total shareholder return	Individual project	Operational excellence	Vision and strategy sustainability		EBITDA	Safety, health, environmental and community				

227	Impala Platinum Holdings	2014	Total shareholder return	Operational services	Group support	Direct production		EBITDA	Safety				
228	Impala Platinum Holdings	2013	Total shareholder return	Key business drivers	Individual performance		cost and volume of production targets	EBITDA	Safety				
229	Impala Platinum Holdings	2012	Total shareholder return	Business drivers			cost and volume of production targets	EBITDA	Safety				
230	Impala Platinum Holdings	2011		Key business drivers			cost and volume of production targets		Safety				
231	Imperial Holdings	2020	Operating performance	HEPS	ROIC	Free cash conversion	Revenue	EBIT	Cost savings				
232	Imperial Holdings	2019	Operating performance	HEPS	ROIC			EBIT					
233	Imperial Holdings	2018		HEPS	ROIC			EBIT					
234	Imperial Holdings	2017		HEPS	ROIC								
235	Imperial Holdings	2016		HEPS	ROIC								
236	Imperial Holdings	2015		HEPS	ROIC								
237	Imperial Holdings	2014		HEPS	ROIC								
238	Imperial Holdings	2013		HEPS	ROIC								
239	Imperial Holdings	2012		HEPS	ROIC								
240	Imperial Holdings	2011		HEPS	ROIC								
241	KAP Industrial Holdings	2020	HEPS	BBBEE score against budget	Internal audit and compliance		EBITDA	0,8 Fin					
242	KAP Industrial Holdings	2019	HEPS	BBBEE score against budget	Internal audit and compliance	Cash execution	ESG	Strategy execution	ROE	0,75 Fin			
243	KAP Industrial Holdings	2018	HEPS			Cash execution			ROE				
244	KAP Industrial Holdings	2017	HEPS				EBIT		ROE				
245	KAP Industrial Holdings	2016	HEPS				EBIT		ROE				
246	KAP Industrial Holdings	2015											
247	KAP Industrial Holdings	2014											
248	KAP Industrial Holdings	2013											
249	KAP Industrial Holdings	2012											
250	KAP Industrial Holdings	2011											
251	Luxe Holdings	2020	HEPS	EBITDA	Operating profit								

252	Luxe Holdings	2019	HEPS	EBITDA	Operating profit								
253	Luxe Holdings	2018	HEPS	EBITDA	Operating profit								
254	Luxe Holdings	2017	HEPS	EBITDA	Operating profit								
255	Luxe Holdings	2016	HEPS	EBITDA	Operating profit								
256	Luxe Holdings	2015	HEPS	EBITDA	Operating profit								
257	Luxe Holdings	2014											
258	Luxe Holdings	2013											
259	Luxe Holdings	2012											
260	Luxe Holdings	2011											
261	Merafe Resources	2020	NAT	TSR	HEPS	EBITDA	Revenue	Cost savings	BBBEE	environmental incidents	Safety	Stakeholder engagement	Talent management
262	Merafe Resources	2019		TSR	HEPS	EBITDA	Revenue	Cost savings	BBBEE		Safety	Stakeholder engagement	Talent management
263	Merafe Resources	2018		TSR	HEPS	EBITDA	Revenue	Cost savings	BBBEE		Safety	Stakeholder engagement	Talent management
264	Merafe Resources	2017	Meeting debt covenants			EBITDA	Grow assets and revenue	Cost savings	BBBEE		Safety	Stakeholder engagement	Talent management
265	Merafe Resources	2016				EBITDA							
266	Merafe Resources	2015	achievement of additional ferrochrome			EBITDA							
267	Merafe Resources	2014	achievement of additional ferrochrome			EBITDA							
268	Merafe Resources	2013	achievement of additional ferrochrome			EBITDA							
269	Merafe Resources	2012	achievement of additional ferrochrome			EBITDA							
270	Merafe Resources	2011											
271	Metair Investments	2020	HEPS	ROIC									
272	Metair Investments	2019	HEPS	ROIC									
273	Metair Investments	2018	HEPS	ROIC									
274	Metair Investments	2017	HEPS	ROIC	TSR								
275	Metair Investments	2016	HEPS	ROIC									
276	Metair Investments	2015	HEPS	PBIT	BBBEE	ROA	ROE						

277	Metair Investments	2014	ROE	PAT	BBBEE	ROA	PBIT						
278	Metair Investments	2013	ROE	PAT	BBBEE								
279	Metair Investments	2012	ROE	PAT	BBBEE								
280	Metair Investments	2011	ROE										
281	Metrofile Holdings	2020	HEPS	EBITDA	Cash conversion ratio	Transfo rmation	ROCE						
282	Metrofile Holdings	2019	Revenue	PBIT	BBBEE	Transfo rmation							
283	Metrofile Holdings	2018	Revenue	PBIT	Gross margin	Transfo rmation	Accounts receivable management						
284	Metrofile Holdings	2017	Revenue	PBIT	Gross margin	Transfo rmation	Accounts receivable management						
285	Metrofile Holdings	2016	Revenue	PBIT	Gross margin	Transfo rmation	Accounts receivable management						
286	Metrofile Holdings	2015	Revenue	PBIT	Gross margin	Transfo rmation	Accounts receivable management						
287	Metrofile Holdings	2014	Revenue	PBIT	Gross margin	Transfo rmation	Accounts receivable management						
288	Metrofile Holdings	2013	Revenue	PBIT	Gross margin	Transfo rmation	Accounts receivable management						
289	Metrofile Holdings	2012	Revenue	PBIT	Gross margin	Transfo rmation	Accounts receivable management						
290	Metrofile Holdings	2011	Revenue	EBIT	Gross margin	Transfo rmation	Accounts receivable management						
291	Mr Price Group	2020	ROE	HEPS	Personal performance	Extend earnings through local growth	Build high performing brands	Continually strive for the world class methods and systems	high ethical standards and sustainable business practices	Maintain an energised environment with empowered and motivated people			
292	Mr Price Group	2019	ROE	HEPS				Leadership	Innovation	Effort	Operating profit	Teamwork	
293	Mr Price Group	2018	ROE	HEPS	Key imperatives linked to the business								

					strategy								
294	Mr Price Group	2017	ROE	HEPS	Key imperatives linked to the business strategy								
295	Mr Price Group	2016	Profit before tax	HEPS	Return on capital employed			Leadership	Innovation			Effort and teamwork	
296	Mr Price Group	2015	Profit before tax	HEPS									
297	Mr Price Group	2014	ROE	HEPS	Strategic KPIs								
298	Mr Price Group	2013		HEPS									
299	Mr Price Group	2012	ROE	HEPS	Return on operating assets				BBBEE				
300	Mr Price Group	2011	ROE	HEPS	Return on operating assets			Leadership	BBBEE	Innovation		Effort and teamwork	
301	MTN Group	2020	Revenue	EBITDA	Operating free cash flow	Group attributable earnings	Competitive performance	Market share	Customer churn	Relative customer NPS	ROE	TSR	ROCE
302	MTN Group	2019	Revenue	EBITDA	Operating free cash flow		Competitive performance	Market share	Customer churn	Relative customer NPS			
303	MTN Group	2018	Revenue	EBITDA	Operating free cash flow	Group attributable earnings	Competitive performance	Market share	Customer churn	Relative customer NPS			
304	MTN Group	2017	Revenue	EBITDA	Operating free cash flow	Group attributable earnings	Competitive performance	Market share					
305	MTN Group	2016	Revenue	EBITDA	Operating free cash flow			Market share					
306	MTN Group	2015	Revenue	EBITDA	Operating free cash flow			Market share					
307	MTN Group	2014	Revenue	EBITDA	Operating free cash flow			Market share					
308	MTN Group	2013	Revenue	EBITDA	Operating free cash flow			Market share					
309	MTN Group	2012	Revenue	EBITDA	Operating free cash flow	Group equity transactions	Business risk and operational compliance	Market share	Customer satisfaction and retention index	Customer centricity management	Brand health and equity index	Mobile Money strategy management	Global service delivery platforms
310	MTN Group	2011						Market share					

311	Murray & Roberts Holdings	2020		EBIT	diluted HEPS	Net cash	Free cash flow	ROIC E	Transformation & diversity	Strategy implementation	Operational Risk	HEPS	Returns
312	Murray & Roberts Holdings	2019		EBIT	diluted HEPS	Net cash	Free cash flow	ROIC E	Transformation & diversity	Strategy implementation	Operational Risk	HEPS	
313	Murray & Roberts Holdings	2018		EBIT	diluted HEPS	Net cash	Free cash flow	ROIC E	Transformation & diversity	Strategy implementation	Operational Risk		
314	Murray & Roberts Holdings	2017		EBIT	diluted HEPS	Net cash	Free cash flow	ROIC E	Transformation & diversity	Strategy implementation	Operational Risk		
315	Murray & Roberts Holdings	2016		EBIT	diluted HEPS	Net cash	Free cash flow	ROIC E					
316	Murray & Roberts Holdings	2015			diluted HEPS	Net cash	Free cash flow	ROIC E					
317	Murray & Roberts Holdings	2014				TSR	Free cash flow	ROIC E					
318	Murray & Roberts Holdings	2013				TSR	Free cash flow	ROIC E					
319	Murray & Roberts Holdings	2012				TSR	Free cash flow	ROIC E					
320	Murray & Roberts Holdings	2011											
321	Nampak	2020	EBITDA	Restructure and simplify cost base	Reduce cost of employment	Develop new business	Improve operational efficiency and reduce spoilage	Safety					
322	Nampak	2019	HEPS	EBIT	Working capital	TSR	RONA						
323	Nampak	2018	HEPS	EBITDA		TSR	RONA						
324	Nampak	2017	HEPS	EBITDA		TSR	RONA						
325	Nampak	2016	HEPS	EBITDA	Reduce inventory	Trading income	RONA	Safety	Reduction in cost of overtime				
326	Nampak	2015	HEPS		ROE	Trading income	RONA						
327	Nampak	2014	HEPS		ROE	Trading income	RONA						
328	Nampak	2013	HEPS			Trading income	RONA				Employment equity		
329	Nampak	2012	HEPS	outsourcing of the information technology function	Improvement in the B-BBEE rating	conclusion of supply and customer contracts in key areas of the business	RONA	employee productivity improvements	conversion plan from steel to aluminium beverage cans	growth in profits and product range in the rest of Africa	BBBEE		

330	Nampak	2011	HEPS	disposal of European cartons businesses		successfully commissioned beverage can line in Angola	RONA	restructured Containers and Tubs business after the sale of the Tubs portion		identification of investment opportunities in the rest of Africa	BBBEE		
331	Netcare	2020	ROIC	EBITDA									
332	Netcare	2019	ROIC	EBITDA	Disruptive innovation	Transformation of society	Consistency of care	Organic growth	Integration of services				
333	Netcare	2018	HEPS	EBITDA	ROCE	Asset management	Growth initiatives	Transformation	Consistency of care				
334	Netcare	2017	HEPS	EBITDA	ROCE								
335	Netcare	2016	HEPS	EBITDA	ROCE	Net assets	Working capital	Enhancement of the internal control framework compliance	Strategic and sustainability achievements				Patient satisfaction
336	Netcare	2015	HEPS	EBITDA	ROCE	Net assets	Staff engagement	Transformation	Strategic and sustainability achievements	Internal control			Patient satisfaction
337	Netcare	2014		EBITDA	ROCE	Net assets		Transformation	Strategic and sustainability achievements				Patient satisfaction
338	Netcare	2013		EBITDA	ROCE	Net assets	Working capital	Transformation	Strategic and sustainability achievements	Quality metrics and outcomes	Control environment and governance	Patient care feedback	Patient satisfaction
339	Netcare	2012		EBITDA	Cash		Revenue						Patient satisfaction
340	Netcare	2011		EBITDA	Cash		Revenue						
341	Northam Platinum	2020	Safety	chrome recovery	PGM recovery	barrel development)	Manage absolute cash costs	Personal performance					
342	Northam Platinum	2019	Safety		PGM recovery		Manage absolute cash costs						
343	Northam Platinum	2018	Safety	TSR	PGM recovery	Absolute & relative return	Manage absolute cash costs						
344	Northam Platinum	2017	Safety										

345	Northam Platinum	2016	Safety			Recoverable metals	cash costs						
346	Northam Platinum	2015	Safety			Recoverable metals	cash costs						
347	Northam Platinum	2014	Safety			Recoverable metals	cash costs						
348	Northam Platinum	2013	Safety			Recoverable metals	cash costs						
349	Northam Platinum	2012	Safety			Recoverable metals	cash costs						
350	Northam Platinum	2011											
351	Oceana Group	2020	HEPS	RONA	Working capital	Operating profit							
352	Oceana Group	2019	HEPS	RONA	Working capital	Operating profit							
353	Oceana Group	2018	HEPS	RONA		Operating profit							
354	Oceana Group	2017	HEPS	RONA		Operating profit							
355	Oceana Group	2016	HEPS	TSR									
356	Oceana Group	2015	HEPS										
357	Oceana Group	2014	HEPS										
358	Oceana Group	2013	HEPS										
359	Oceana Group	2012	HEPS										
360	Oceana Group	2011	HEPS										
361	Omnia Holdings	2020	HEPS	Cash flow	Diversity & inclusion	Strategic initiatives	EBITDA	ROC	Free cash flow				
362	Omnia Holdings	2019		Cash flow	Diversity & inclusion	Strategic initiatives	EBITDA						
363	Omnia Holdings	2018											
364	Omnia Holdings	2017	EPS	ROE									
365	Omnia Holdings	2016	Growth and profitability	ROE	Working capital management	BBBEE	Safety and health issues	Quality of products and services	Management of the environment and environmental issues	Business development			
366	Omnia Holdings	2015											
367	Omnia Holdings	2014											
368	Omnia Holdings	2013											
369	Omnia Holdings	2012											
370	Omnia Holdings	2011											
371	Pick N Pay Stores	2020	PBTAE	HEPS	ROCE	Share price							
372	Pick N Pay Stores	2019	PBTAE	HEPS	ROCE	Share price							
373	Pick N Pay Stores	2018	PBTAE	HEPS	Working capital	Profiit margins	Turnover						
374	Pick N Pay Stores	2017	PBTAE	HEPS	ROCE								

375	Pick N Pay Stores	2016	PBTAE	HEPS	ROCE								
376	Pick N Pay Stores	2015	PBTAE	HEPS									
377	Pick N Pay Stores	2014	PBTAE	HEPS									
378	Pick N Pay Stores	2013											
379	Pick N Pay Stores	2012											
380	Pick N Pay Stores	2011											
381	PPC	2020	EBITDA	Free cash flow (operating)	TSR	Economic value creation							
382	PPC	2019	EBITDA	HEPS	TSR	Emissions	Safety	BEE					
383	PPC	2018	EBITDA	HEPS		Sustainability	Safety	BEE					
384	PPC	2017	EBITDA	HEPS	Cash conversion ratio	Emissions	Safety	BEE					
385	PPC	2016	EBITDA	HEPS	Cash conversion ratio	Execute SA business plan	Execute international business plan		ROIC				
386	PPC	2015	EBITDA	HEPS	Cash conversion ratio	Transformation	Sustainability	Safety					
387	PPC	2014	EBITDA	Delivery of projects									
388	PPC	2013	EBITDA	Delivery of projects	Individual performance								
389	PPC	2012	EBITDA										
390	PPC	2011											
391	Primeserv Group	2020	Cost reduction										
392	Primeserv Group	2019											
393	Primeserv Group	2018											
394	Primeserv Group	2017											
395	Primeserv Group	2016											
396	Primeserv Group	2015											
397	Primeserv Group	2014											
398	Primeserv Group	2013											
399	Primeserv Group	2012											
400	Primeserv Group	2011											
401	Raubex Group	2020	Profit before tax	HEPS	free cash flow	Strategy execution	Stakeholder management	Risk identification & mitigation	Manage non compliane issues	Safety	BBBEE	ROIC	TSR
402	Raubex Group	2019	Profit before tax	HEPS	free cash flow	Strategy execution	Stakeholder management	Risk identification & mitigation		Safety	BBBEE	ROIC	TSR

403	Raubex Group	2018					Stakeholder management						
404	Raubex Group	2017					Stakeholder management						
405	Raubex Group	2016	EPS	ROCE	Cash management	Strategic targets	Stakeholder management	Compliance and risk					
406	Raubex Group	2015	EPS	ROCE									
407	Raubex Group	2014	EPS	ROCE									
408	Raubex Group	2013	EPS	ROCE									
409	Raubex Group	2012											
410	Raubex Group	2011											
411	Reunert	2020	NHEPS	TSR	ROCE								
412	Reunert	2019	NHEPS	TSR									
413	Reunert	2018	NHEPS	TSR									
414	Reunert	2017	NHEPS	TSR									
415	Reunert	2016	NHEPS	TSR									
416	Reunert	2015	NHEPS	TSR									
417	Reunert	2014	NHEPS	TSR									
418	Reunert	2013	NHEPS	TSR	EBIT								
419	Reunert	2012			EBIT								
420	Reunert	2011											
421	Royal Bafokeng Platinum	2020	Labour productivity	HEPS	Capital projects	Return on capital employed	Maseve MF2 upgrade	Safety	EBITDA	RBPlat net debt	Fixed cost component of total cash costs	Production	Operating costs
422	Royal Bafokeng Platinum	2019	Labour productivity, leadership management and team orientation	HEPS	Capex CIB & replacement	Technical direction, innovation & technology	Total operating labour	Safety and ethics	EBITDA	Net debt and capital expenditure	Fixed cost component of total cash costs	Production and 4 ounces in concrete	Operating costs
423	Royal Bafokeng Platinum	2018	Labour productivity, leadership management and team orientation	HEPS	Governance & sustainability	management, Risk & assurance	Total operating labour	Safety and SLP delivery	EBITDA	Net debt	Fixed cost component of total cash costs	Production	project performance and governance
424	Royal Bafokeng Platinum	2017	Labour productivity	HEPS		Debt facilities and Capital expenditure	Total operating labour	Safety	EBITDA	Net debt	Cash reserves	Production, Risk & sustainability maturity	Operating costs
425	Royal Bafokeng Platinum	2016	Labour productivity	HEPS	Capital projects	Debt facilities and Capital expenditure	Trackless workshops	Safety	EBITDA	Risk & sustainability maturity	Cash reserves	Production	Operating costs

426	Royal Bafokeng Platinum	2015	Labour productivity	HEPS	Capital projects	Debt facilities and Capital expenditure		Safety	EBITDA	Risk & assurance maturity	Cash reserves	Production and SLP delivery	Operating costs
427	Royal Bafokeng Platinum	2014	Labour productivity, leadership management and team orientation	HEPS	Capital projects	Raise equity capital	Progress	Safety	EBITDA	Critical path	Cash reserves	Production and SLP delivery	Operating costs
428	Royal Bafokeng Platinum	2013		HEPS	Working capital	Net profit before tax			EBITDA				
429	Royal Bafokeng Platinum	2012											
430	Royal Bafokeng Platinum	2011											
431	Santova	2020	HEPS	Return on average shareholders funds	Operating margins	PAT	Cuture & values of the group	Duties & responsibilities					
432	Santova	2019	HEPS	Return on average shareholders funds	Operating margins	PAT	Cuture & values of the group	Duties & responsibilities					
433	Santova	2018											
434	Santova	2017											
435	Santova	2016											
436	Santova	2015											
437	Santova	2014											
438	Santova	2013											
439	Santova	2012											
440	Santova	2011											
441	Sasol	2020	Dividend returns	HEPS	Culture	Return on investment capital	Production	Safety	EBIT growth	Control of fixed costs	LCCP delivery within schedule and budget	achieve 23,63 out of 27 on the preferential procurement scoreca rd	Appointment of African and coloured employees in senior positions
442	Sasol	2019	Dividend returns	HEPS	Culture	Return on investment capital	Production	Safety	Cost effecien cy	achieve 17,38 out of 25 on the preferential procurement scoreca rd	Appointment of African and coloured employees in senior positions, terget 70%	17 fires, explosions and releases	energy effecien cy and improvement

443	Sasol	2018	Total shareholder return	HEPS		Return on invested capital	Production	Safety and sustainability targets	BBBEE	Efficiencies measuring increase in tons	Project delivery	Cash fixed costs	Improvement in working capital and gross margin
444	Sasol	2017	Total shareholder return	HEPS		Return on invested capital	Production	Safety and sustainability targets	BBBEE	Efficiencies measuring increase in tons		Cash fixed costs	Improvement in working capital and gross margin
445	Sasol	2016	Working capital & gross margin	HEPS	MSCI World Chemicals Index	TSR – MSCI World Energy Index	Volume growth	Safety FERs and RCR	Employment equity	Preferential procurement	Compound growth in attributable earnings	Cash fixed costs	Increase in tons produced per head
446	Sasol	2015	Key milestones in Business Performance enhancement program	HEPS	MSCI World Chemicals Index	TSR – MSCI World Energy Index	Volume growth	Safety FERs and RCR			Compound growth in attributable earnings	Cash fixed costs	Increase in tons produced per head
447	Sasol	2014	Total shareholder return	Growth in attributable earnings			Growth in fuel volume measured in tones	Safety	EBITDA	Employment equity		Growth in cash fixed costs versus PPI	Increase in tons produced per head
448	Sasol	2013		Growth in attributable earnings			Volume growth	Safety	EBITDA	Employment equity		Cash fixed costs	
449	Sasol	2012		Growth in attributable earnings				Safety		Employment equity			
450	Sasol	2011	Growth in production volumes	Growth in attributable earnings		Compliance	Volume growth	Safety	BBBEE				
451	Sephaku Holdings	2020	HEPS	Free cash flow	Debt covenants	Gearing	Safety	Improve compliance to King Code & JSE	BBBEE	TSR			
452	Sephaku Holdings	2019	HEPS	Free cash flow		Gearing	Safety	Improve compliance to King Code & JSE	BBBEE	TSR			
453	Sephaku Holdings	2018	HEPS	EBITDA		Gearing	Safety	Improve compliance to King Code & JSE	BBBEE	TSR			

454	Sephaku Holdings	2017	HEPS	EBITDA			Safety	Improve compliance to King Code & JSE	BBBEE	TSR			
455	Sephaku Holdings	2016											
456	Sephaku Holdings	2015											
457	Sephaku Holdings	2014											
458	Sephaku Holdings	2013											
459	Sephaku Holdings	2012											
460	Sephaku Holdings	2011											
461	Shoprite Holdings	2020	Revenue	EBITDA	Trading profit	Trading margin	Food stock turn	Non-food stock turn					
462	Shoprite Holdings	2019	Revenue	ROIC	Diluted HEPS								
463	Shoprite Holdings	2018	Revenue	market share growth	shrinkage	BBBEE	cost savings	stock days	controllable expenses	debtors' management			
464	Shoprite Holdings	2017	Revenue	market share growth	shrinkage	BBBEE	cost savings	stock days	controllable expenses	debtors' management			
465	Shoprite Holdings	2016	Revenue	market share growth	shrinkage	BBBEE	cost savings	stock days	controllable expenses	debtors' management			
466	Shoprite Holdings	2015	Revenue	market share growth	shrinkage	BBBEE	cost savings	stock days	controllable expenses	debtors' management			
467	Shoprite Holdings	2014	Revenue	market share growth	shrinkage	BBBEE	cost savings	stock days					
468	Shoprite Holdings	2013	Revenue	market share growth	shrinkage	BBBEE	cost savings	stock days					
469	Shoprite Holdings	2012	Revenue	market share growth	shrinkage	BBBEE	cost savings	stock days					
470	Shoprite Holdings	2011											
471	Spur Corporation	2020	ROE	Adjusted HEPS		Personal performance							
472	Spur Corporation	2019	ROE	Adjusted HEPS	ROE								
473	Spur Corporation	2018	ROE	HEPS									
474	Spur Corporation	2017		HEPS									
475	Spur Corporation	2016		HEPS									
476	Spur Corporation	2015											
477	Spur Corporation	2014											
478	Spur Corporation	2013											
479	Spur Corporation	2012											
480	Spur Corporation	2011											
481	Stefanutti Stocks Holdings	2020	HEPS	TSR	free cash flow	ROIC							

482	Stefanutti Stocks Holdings	2019	HEPS	TSR	free cash flow	ROIC							
483	Stefanutti Stocks Holdings	2018	HEPS	TSR	free cash flow	ROIC							
484	Stefanutti Stocks Holdings	2017	HEPS	TSR	free cash flow	ROIC							
485	Stefanutti Stocks Holdings	2016											
486	Stefanutti Stocks Holdings	2015											
487	Stefanutti Stocks Holdings	2014											
488	Stefanutti Stocks Holdings	2013											
489	Stefanutti Stocks Holdings	2012											
490	Stefanutti Stocks Holdings	2011											
491	Sun International	2020											
492	Sun International	2019											
493	Sun International	2018											
494	Sun International	2017											
495	Sun International	2016											
496	Sun International	2015											
497	Sun International	2014											
498	Sun International	2013							EBITDA				
499	Sun International	2012						EVA	EBITDA				
500	Sun International	2011	HEPS	TSR	BBBEE	continued employment		EVA	EBITDA				
501	The Foschini Group	2020	HEPS	Operating profit	EBIT	ROCE	Customer voice	Basket size	Employee engagement	Quick response	Net promoter score	Cash customer base	
502	The Foschini Group	2019	HEPS			ROCE	Customer voice	Basket size	Employee engagement	Quick response	Net promoter score	Cash customer base	
503	The Foschini Group	2018	HEPS	Free cash flow		ROCE	Customer voice	Basket size	Employee engagement	Quick response	Net promoter score	Cash customer base	
504	The Foschini Group	2017	HEPS		African expansion	ROCE	Customer voice	Basket size	Employee engagement	Quick response	Net promoter score	Cash customer base	
505	The Foschini Group	2016	HEPS		EBIT	ROCE							
506	The Foschini Group	2015	HEPS										
507	The Foschini Group	2014	HEPS										
508	The Foschini Group	2013	HEPS	Stock turn									
509	The Foschini Group	2012	ROE										
510	The Foschini Group	2011											

511	The SPAR Group	2020	HEPS	RONA	TSR								
512	The SPAR Group	2019	HEPS	RONA	TSR								
513	The SPAR Group	2018	HEPS	RONA	TSR								
514	The SPAR Group	2017	HEPS	RONA	TSR								
515	The SPAR Group	2016	HEPS	RONA	TSR								
516	The SPAR Group	2015	HEPS	RONA	TSR								
517	The SPAR Group	2014	HEPS	RONA	TSR								
518	The SPAR Group	2013	HEPS	RONA	TSR								
519	The SPAR Group	2012											
520	The SPAR Group	2011											
521	Tiger Brands	2020	Sales volumes	Brand health	Absolute gross margins	EBIT	Cost savings	Networking capital	Quality	Safety	ACI opportunity utilisation		HEPS
522	Tiger Brands	2019	Sales volumes	BBBEE	Absolute gross margins	EBIT	Cost savings	Networking capital	Quality	Safety			HEPS
523	Tiger Brands	2018	Sales volumes	BBBEE		EBIT		working capital					HEPS
524	Tiger Brands	2017	Sales volumes	BBBEE		EBIT		working capital					HEPS
525	Tiger Brands	2016	TSR	BBBEE			Drive the talent management process	Improve net savings	Maintain operational margin and market value	Improve innovation	Drive excellence	Turnaround Africa business	HEPS
526	Tiger Brands	2015		BBBEE									HEPS
527	Tiger Brands	2014		BBBEE									HEPS
528	Tiger Brands	2013		BBBEE									HEPS
529	Tiger Brands	2012		BBBEE									HEPS
530	Tiger Brands	2011	Profits	BBBEE	RONA		Organisation and culture development	Improve growth strategy	Environmental policy	Share price			
531	Tongaat Hulett	2020		EBITDA	free cash flow	Production	Ethanol volume	debtors collection	new sales agreements	infrastructure guarantee	infrastructure savings	employment equity	internal control
532	Tongaat Hulett	2019	debt refinancing	EBITDA	free cash flow	Safety	Share price						debt reduction
533	Tongaat Hulett	2018											
534	Tongaat Hulett	2017	HEPS	ROCE	Cash flow	Operating profit	TSR	Production					
535	Tongaat Hulett	2016	HEPS	ROCE	Cash flow	Operating profit	TSR	Production					
536	Tongaat Hulett	2015	HEPS	ROCE			TSR						
537	Tongaat Hulett	2014	HEPS	ROCE			TSR						
538	Tongaat Hulett	2013	HEPS	ROCE			TSR						
539	Tongaat Hulett	2012	HEPS	ROCE			TSR						

540	Tongaat Hulett	2011	HEPS	ROCE	Share price		TSR						
541	Truworths International	2020	HEPS	ROA	EBIT	Strategic targets	Gross profit margin	Inventory turn					
542	Truworths International	2019	HEPS	ROA	EBIT	Strategic targets	Gross profit margin	Inventory turn					
543	Truworths International	2018	Operating profit	ROA	EBIT	Strategic targets	Gross profit margin						
544	Truworths International	2017		ROA	EBIT	Strategic targets							
545	Truworths International	2016		ROA	EBIT								
546	Truworths International	2015	HEPS		EBIT								
547	Truworths International	2014	HEPS		EBIT								
548	Truworths International	2013	HEPS		EBIT								
549	Truworths International	2012	HEPS		EBIT								
550	Truworths International	2011	HEPS	ROE	EBIT	ROIC							
551	Tsogo Sun	2020	Adjusted earnings	EBITDAR	Revenue	Personal performance							
552	Tsogo Sun	2019				Personal performance							
553	Tsogo Sun	2018				Personal performance							
554	Tsogo Sun	2017				Personal performance							
555	Tsogo Sun	2016				Personal performance							
556	Tsogo Sun	2015				Personal performance							
557	Tsogo Sun	2014				Personal performance							
558	Tsogo Sun	2013				Personal performance							
559	Tsogo Sun	2012	HEPS			Personal performance							
560	Tsogo Sun	2011	HEPS			Personal performance							
561	Vodacom Group	2020	Revenue	EBIT	Operating free cash flow	Customer appreciation	TSR						
562	Vodacom Group	2019	Revenue	EBIT	Operating free cash flow	Customer appreciation	TSR						
563	Vodacom Group	2018	Revenue		Operating free cash flow		TSR						
564	Vodacom Group	2017	Revenue		Operating free cash flow		TSR						

565	Vodacom Group	2016	Revenue		Operating free cash flow		TSR						
566	Vodacom Group	2015	Revenue		Operating free cash flow								
567	Vodacom Group	2014	Revenue		Operating free cash flow								
568	Vodacom Group	2013	Revenue		Operating free cash flow								
569	Vodacom Group	2012	Revenue		Operating free cash flow								
570	Vodacom Group	2011	Revenue	EBITDA	Operating free cash flow	Competitive performance							
571	Wescoal Holdings	2020	NPAT	EBITDA	Cost savings	Divisional measures	Compliance and audit	Human capital	Health and safety	Leadership and culture			
572	Wescoal Holdings	2019	NPAT	EBITDA	Financial and shareholder value sustainability	Operational and customer sustainability	Safety	Transformation					
573	Wescoal Holdings	2018	NPAT	EBITDA	Stakeholder engagement	BBBEE	Operational efficiency	Governance risk, and compliance	Business reporting	Business development	Human resources development		
574	Wescoal Holdings	2017	NPAT	EBITDA									
575	Wescoal Holdings	2016	NPAT	EBITDA	Transformation and business development								
576	Wescoal Holdings	2015											
577	Wescoal Holdings	2014											
578	Wescoal Holdings	2013											
579	Wescoal Holdings	2012											
580	Wescoal Holdings	2011											
581	Woolworths Holdings	2020	HEPS	ROCE	TSR	Revenue	EBIT	Operating profit margin		EBITDA	Net debt		
582	Woolworths Holdings	2019	HEPS	ROCE	TSR	Revenue	EBIT	Operating profit margin		EBITDA	Net debt		
583	Woolworths Holdings	2018	HEPS	ROCE	TSR	Online sales	Market growth	Net promoter score	Retail space growth	Water reduction	Employment equity	Transformation of DJ	
584	Woolworths Holdings	2017	HEPS	ROCE	TSR	Online sales	Market growth	Net promoter score	Retail space growth	Water reduction	Employment equity	Transformation of DJ	

585	Woolworths Holdings	2016	HEPS	ROCE	TSR		PBTAE						
586	Woolworths Holdings	2015	HEPS		TSR								
587	Woolworths Holdings	2014	HEPS		TSR								
588	Woolworths Holdings	2013	HEPS		TSR								
589	Woolworths Holdings	2012	HEPS		TSR								
590	Woolworths Holdings	2011	HEPS		TSR								

Source: Author's conceptualisation (2022)

ANNEXURE 5.6: FPMs OF THE 80 SELECTED ARTICLES

	Firm performance measures (FPM)										
	Article title	**Author/s**	**Year**	**FPM1**	**FPM2**	**FPM3**	**FPM4**	**FPM5**	**FPM6**	**FPM7**	**FPM8**
1	Corporate governance and performance of UK listed small and medium enterprises	Afrifa, GA & Tauringana, V	2015	Board size	CEO age	CEO tenure	Ratio of NEDs				
2	Director's remuneration and correlation on firm's performance: A study from the Indian corporate	Aggarwal, R & Ghosh, A	2015	PAT	Return on stock price	EPS	Tobin's Q				
3	More on the relationship between corporate governance and firm performance in the UK: Evidence from the application of generalized method of moments estimation	Akbar, S, Poletti-Hughes, J, El-Faitouri, R & Shah, SZA	2016	ROA	Tobin's Q						
4	Board diversity, corporate governance, corporate performance, and executive pay	Sarhan, AA, Ntim, CG & Al-Najjar B	2018	Tobin's Q	ROA						
5	Assessing the effect of managerial power on firm performance through the perceptual lens of executive remuneration	Akram, F, Muhammad, AUH, Umrani, WA	2019	ROA	ROE	Total assets					
6	Interactive effects of executive compensation, firm performance and corporate governance: Evidence from an Asian market	Al Farooque, O, Buachoom, W & Hoang, N	2019	ROA	ROE	RO stock	Board size	Managerial ownership	Ownership concentration	Tobin's Q	Board independence
7	Executive pay and performance in Portuguese listed companies	Alves, P, Couto, EB & Francisco, PM	2016	TSR							
8	Corporate governance and firm performance in developing countries: evidence from India	Arora, A & Sharma, C	2016	ROA	ROE	Tobin's Q	Net profit margin	Stock returns			
9	The relationship between corporate governance and	Ashwin, VA	2015	ROA	Tobin's Q						

	financial performance of companies listed on the JSE Ltd										
10	firm performance: An empirical analysis of executive director remuneration in Pakistan	Aslam, E, Haron, R & Tahir, MN	2019	ROA	Tobin's Q	EPS					
11	Performance sensitivity of executive pay: the role of ownership structure, board leadership structure and board characteristics	Ataay, A	2018	ROE	Ownership concentration	Duality	Board size	Board indp			
12	Pay Gap and Performance in China	Banker, RD, Bu, D & Mehta, MN	2016	ROA	Margin						
13	Corporate governance and firm performance in Malaysia	Bhatt, PR & Bhatt, RR	2017	ROA	ROE	ROIC					
14	Corporate governance and firm performance: The sequel	Bhagat, S & Bolton, B	2019	ROA	Annual stock return	Annual Tobin's Q					
15	Revisiting executive pay, firm performance, and corporate governance in China	Bin, L, Chen, J & Ngo, XA	2020	ROA	Stock price return						
16	Compliance and multidimensional firm performance: Evaluating the ef fi cacy of rule-based code of corporate governance	Bin, Y & Abbas, Z	2013	ROA	ROE	ROCE	EPS				
17	The relationship between CEO compensation and company performance in a South African context	Bradley, S	2013	ROA	ROE	EPS					
18	Corporate governance and firm performance: evidence from Saudi Arabia	Buallay, A, Hamdan, A & Zureigat, Q	2017	ROA	ROE	Tobin's Q					
19	Financial indicators of company performance in different industries that affect CEOremuneration in South Africa	Bussin, M & Blair, C	2015	PAIT	Change in capital employed	Change in fixed assets	Change in turnover	DPS	EBITDA	TSR	HEPS
20	The relationship between Chief Executive Officer remuneration and financial performance in South Africa between 2006 and 2012	Bussin, M & Modau, M	2015	MC	EPS	ROE	EVA	MVA			
21	Shareholders' say on pay: Does it create value?	Cai, J & Walkling, RA	2011	MC	The size factor SMB	Book to market factor	The momentum factor	Event window			
22	Excess pay and deficient performance	Carter, ME, Li, L, Marcus, AJ & Tehranian, H	2016	ROA	EBIT	ROE					
23	Agency conflicts, executive compensation regulations and CEO pay-	Cieślak	2018	ROA	Dual class	Stock return	Market book value	%SH	Ownership concentration		

	performance sensitivity: evidence from Sweden										
24	Do high CEO pay ratios destroy firm value?	Cheng, Q, Ranasinghe, T & Zhao, S.	2017	Tobin's Q	ROA						
25	Disclosure, shareholder oversight and the pay-performance link	Clarkson, PM, Walker, J & Nicholls, S.	2011	MC	ROE						
26	Chief Executive Officer remuneration and financial performance of Australian and South African publicly listed companies	Desfontaines	2018	ROA	ROE	EPS	MC	MVA	EVA		
27	CEO Compensation of listed companies in Switzerland: Empirical studies on firm financial performances, risk, and peer group comparisons	Eklund, MMA.	2015	ROA	EPS	TSR	Tobin's Q				
28	Investigating the associations between executive compensation and firm performance: Agency theory or tournament theory	Elsayed, N & Elbardan, H	2018	ROA	ROE	HEPS				TSR	MC
29	The Effect of Corporate Governance on Firm Performance, Evidence from Egypt	Emile, R	2015	ROA	ROE						
30	The impact of corporate governance on firm performance: Evidence from Bahrain Bourse	Esra, A & Hamdan, A	2016	ROA	ROE	EPS					
31	Corporate governance and firm performance and value in Saudi Arabia	Fallatah, Y	2012	ROA	Tobin's Q	MVE					
32	Does Corporate Governance Disclosure Practice Impact Firm Performance in India?	Assankutty, A, Fatima, F & Kuntluru, S	2019	ROA	ROE	Tobin's Q					
33	Empirical study on the relationship between executive compensation dispersion and firm performance: The moderating role of technology intensity	Gao, Z & Zhang, C	2015	EPS							
34	Corporate governance, economic turbulence and financial performance of UAE listed firms	Hassan, MK & Halbouni, SS	2013	ROA	ROE	Tobin's Q					
35	Does one size fit all? Investigating pay–future performance	Hou, W, Priem, RL & Goranova, M.	2015	TSR							

	relationships over the “Seasons” of CEO tenure										
36	Compensation committees, CEO pay and firm performance	Kanapathippillai, S, Gul, F, Mihret, D & Muttakin, MB	2019	ROA							
37	The impact of CEO compensation on firm performance in Scandinavia	Kazan, E.	2016	ROA	ROE						
38	The relationship between remuneration and financial performance for companies listed on the Johannesburg stock exchange	Kirsten, E & Du Toit, E.	2018	ROE							
39	An empirical study on the relationship between executive compensation and corporate performance of listed energy companies	Li, L	2017	ROE	EPS	Net profit growth	Growth rate of net assets				
40	When Are Pay Gaps Good or Bad for Firm Performance? Evidence from China	Luo, J, Xiang, Y & Zhu, R.	2020	ROA	Tobin's Q						
41	Does corporate governance beget firm performance in Fortune Global 500 companies?	Malik, MS & Makhdoom, DD.	2016	ROA	Tobin's Q	Stock return					
42	Does investing in sound corporate governance pay? A South African study	Mans-Kemp, N, Erasmus, PD & Viviers, S.	2017	ROA	ROE	EPS	TSR				
43	Corporate governance and firm performance: an empirical evidence from Syria	Mardnly, Z, Mouselli, S & Abdulraouf, R	2018	ROA	EPS						
44	The relationship between Chief Executive Officer (CEO) remuneration and financial performance of an organisation	Modau, M	2014	ROE	EPS	MC	EVA	MVA			
45	CEO performance based remuneration and the agency problem in JSE listed mining companies	Mnyaka, N	2019	ROE	HEPS	MC	SP	No. of employees	Board indp	%SH	
46	Corporate governance and company performance across Sub-Saharan African countries	Munisi, G & Randøy, T	2013	ROA	Tobin's Q						
47	Executive director remuneration, company performance and executive director profiles for South African companies listed on the Johannesburg	Naik, M	2015	ROA	Tobin's Q	Revenue	Total assets				

	Stock Exchange (JSE)										
48	The role of corporate governance in firm performance	Naimah, Z & Hamidah	2017	ROA							
49	Does managerial behavior of managing earnings mitigate the relationship between corporate governance and firm value? Evidence from an emerging market	Nazir, MS & Afza, T.	2018	ROA	Tobin's Q	EVA					
50	The relationship between CEO compensation and various performance indicators in South Africa	Ndofirepi, TP	2015	ROA	ROE	International interest	Firm size	Stock returns			
51	CEO compensation, corporate governance, and performance of listed platinum mines in South Africa	Ngwenya, S	2016	ROA	ROE						
52	Executive pay and performance: the moderating effect of CEO power and governance structure	Ntim, CG, Lindop, S, Thomas, DA, Abdou, H & Opong KK	2019	ROA	Tobin's Q	TSR					
53	Let's talk about money! Assessing the link between firm performance and voluntary Say-on-Pay votes	Obermann, J	2020	Tobin's Q	Free cash flow		Social, environmental and governance performance				
54	CEO Cash Compensation and Firm Performance: An Empirical Study from Emerging Markets	Osei-Bonsu, N & Lutta, JGM	2016	ROA	ROE						
55	Corporate governance guidelines compliance and firm financial performance Kenya listed companies	Outa, ER & Waweru, NM.	2016	ROA	Tobin's Q						
56	Executive director remuneration and company performance: panel evidence from South Africa for the years following King III	Padia, N & Callaghan, CW	2020	ROA	Tobin's Q						
57	Corporate governance and financial performance: The role of ownership and board structure	Paniagua, J, Rivelles, R & Sapena, J.	2018	ROE							
58	Linking pay to performance: A closer look at performance-based compensation and shareholder voting rights	Pecher, C	2012	ROA	ROE	Net income					

59	Executive compensation and firm performance: Evidence from Indian firms	Raithatha, M & Komera, S	2016	ROA	ROE	Tobin's Q	Stock return				
60	Relevance of Executive Compensation and Corporate Performance: Indian Automobile Industry	Ramachandran, N	2018	PAT	Total income	Total assets	Networth	Market price return			
61	The relationship between corporate governance and company performance	Rambajan, A	2011	ROA	ROE	Net margin	SP	Dividend payout			
62	CEO and executive director remuneration practice and corporate financial performance: a comparison of practices in the USA, UK and Australia	Rampling, PN	2015	EBIT	NPAT	MC					
63	Firm performance and comply or explain disclosure in corporate governance	Rose, C	2016	ROA	ROE						
64	TMT pay dispersion and firm performance: The moderating role of organizational governance effectiveness	Sanchez-Marin, G & Baixauli-Soler, S.	2015	ROA	EPS	Tobin's Q					
65	Compensation of top brass, corporate governance and performance of the Indian family firms – an empirical study	Saravanan, P, Srikanth, M & Avabruth, SM.	2017	ROE	Tobin's Q						
66	Corporate Governance and Firm Performance: An Empirical Analysis of Manufacturing Listed Firms in Ghana	Sarpong-Danquah et al	2018	ROA	ROE						
67	The Influence Of Board Diversity On Company Performance Of South African Companies	Scholtz, H & Kieviet	2018	ROA	Tobin's Q						
68	Pay dispersion, sorting and organisational performance	Shaw, J	2015	Total sales/ square meters of the floor							
69	Corporate fraud culture: Re-examining the corporate governance and performance relation	Tan, DT, Chapple, L & Walsh, KD.	2017	ROA	Tobin's Q	Total returns	Accounting profit				
70	Corporate governance, antecedents and performance implications in the Ethiopian non-financial share	Tizazu, AE	2017	ROA	ROE						

	companies-A contingency perspective										
71	The south African code of corporate governance. The relationship between compliance and financial performance: Evidence from south African publicly listed firms	Tshipa, J & Mokoaleli-Mokoteli, T.	2015	ROA	Tobin's Q						
72	CEO Pay Ratios and Company Performance: a Study of JSElisted Consumer Goods	Urson, M.	2016	ROA	TSR						
73	Does Corporate Governance Enhance Firm Performance and Reduce Firm Risk ? Evidence from Taiwanese Listed Companies	Wang, J & Wang J	2019	ROE	Tobin's Q	EPS					
74	What is the effect of corporate governance on the pay-performance relationship in the Netherlands?	Weenders, V	2019	ROA	Annual stock return						
75	The Impact of Firm Performance on Executive Compensation in France	Yamina, A & Mohamed, B	2017	ROA	Tobin's Q						
76	The impact of corporate governance practices on firm's performance: An empirical evidence from Indian tourism sector	Yameen, M, Farhan, NH & Tabash, MI	2019	ROA	Tobin's Q	ROCE					
77	The moderating role of country-specific characteristics on pay-performance relationship in Asian markets: A meta-analysis approach	Yahya, F & Ghazali, Z.	2018	ROA	Operating profits/ assets						
78	Executive compensation, financial performance and say on pay votes	Yuan, X, Lin, W & Oriaku, EA. 2017	2017	Net income							
79	CEO Compensation and Performance	Zandi, G, Mohamad, S, Keong, OC & Ehsanullah S	2019	ROA	ROE	Profit Margin					
80	How the executive compensation effects the performance of listed companies	Zhang, Z & Cui, Y	2018	ROE	EPS						

ANNEXURE 4.14: ETHICAL CLEARANCE-SECONDARY DATA

UNISA COLLEGE OF ACCOUNTING SCIENCES RESEARCH ETHICS REVIEW COMMITTEE

Date: 8 February 2022

ERC Reference # :
2022_CAS_001

Name : N P Mnyaka

Dear Ms NP Mnyaka,

Decision: Ethics Approval from8 February 2022 to 7 February 2025

Researcher: Ms Nomanyano Primrose Mnyaka (48871990@mylife.unisa.ac.za)
Supervisor: Prof Cosmas M Ambe (cosmasmpohambe@gmail.com)

Working title of research:

Conceptual model linking compliance with remuneration governance, executivepay, pay-gap and performance of JSE listed companies

Qualification: PhD and non-degree

Thank you for the application for research ethics clearance by the Unisa College of Accounting Sciences Research Ethics Review Committee for the abovementioned research. **Ethics approval is granted for collection of secondary data.** The certificate is valid for the period **8 February 2022 to 7 February 2025.**

*The **negligible risk application** was **approved** by the CAS RERC on **8 February 2022** incompliance with the Unisa Policy on Research Ethics and the Standard Operating Procedureon Research Ethics Risk Assessment.*

The proposed research may now commence 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 isrelevant to the ethicality of the study should be communicated in writing to the CASRERC.
3. The researcher(s) will conduct the study according to the methods and

4. Any changes that can affect the study-related risks for the research participants, particularly in terms of assurances made with regards to the protection of participants' privacy and the confidentiality of the data, should be reported to the Committee in writing, accompanied by a progress report.
5. The researcher will ensure that the research project adheres to any applicable national legislation, professional codes of conduct, institutional guidelines andscientific standards relevant to the specific field of study. Adherence to the followingSouth African legislation is important, if applicable: Protection of Personal Information Act, no 4 of 2013; Children's act no 38 of 2005 and the National HealthAct, no 61 of 2003.
6. Only de-identified research data may be used for secondary research purposes in future on condition that the research objectives are similar to those of the original research. Secondary use of identifiable human research data requires additional ethics clearance.
7. No fieldwork activities may continue after the expiry date **(7 February 2025)**. Submission of a completed research ethics progress report will constitute an application for renewal of Ethics Research Committee approval.

Note:
*The reference number **2022_CAS_001** should be clearly indicated on all forms of communication with the intended research participants, as well as with the Committee.*

Yours sincerely,

Signature: **Prof Lourens Erasmus**

Chair of CAS RERC

E-mail: erasmlj1@unisa.ac.za
Tel: (012) 429-8844

Signature : **Dr Chisinga Chikutuma**

Head : Office for Graduate Studies andResearch
By delegation from the Executive Dean:College of Accounting Sciences

E-mail: chikucn@unisa.ac.za
Tel: (012) 429-3401

Ethics approval 2020_CAS_043_MNYAI

ANNEXURE 4.15: ETHICAL CLEARANCE-CONCEPTUAL RESEARCH

ANNEXURE 4.17: TURNITIN REPORT

Conceptual model linking compliance with remuneration governance, executive pay, pay-gap, and performance of JSElisted firms

ORIGINALITY REPORT

20%	18%	7%	11%
SIMILARITY INDEX	INTERNET SOURCES	PUBLICATIONS	STUDENT PAPERS

PRIMARY SOURCES

1	link.springer.com Internet Source	8
2	repository.up.ac.za Internet Source	2
3	uir.unisa.ac.za Internet Source	3
4	Submitted to University of South Africa Student Paper	4
5	scholar.sun.ac.za Internet Source	1
6	ujcontent.uj.ac.za Internet Source	1
7	eprints.nottingham.ac.uk Internet Source	1

Submitted to Coventry University Student Paper

ww.researchgate.net	1%
	1%
	<1%
	<1%
	<1%
	<1%
	<1%
	<1%