GLOBAL BUSINESS & FINANCE REVIEW, Volume. 28 Issue. 5 (OCTOBER 2023), 31-50
pISSN 1088-6931 / eISSN 2384-1648 | Https://doi.org/10.17549/gbfr.2023.28.5.31

GLOBAL BUSINESS & FINANCE REVIEW

www.gbfrjournal.org

The Nexus between Executive Compensation and Firm Performance: Does Governance and Inequality Matter?

Tapiwa Muzata[a†], Godfrey Marozva[b]

[a]Doctor, Department of Finance and Risk Management and Banking, School of Economics and Financial Science, University of South Africa, College of Economic and Management Sciences, Pretoria, South Africa
[b]Professor, Department of Finance and Risk Management and Banking, School of Economics and Financial Science, University of South Africa, College of Economic and Management Sciences, Pretoria, South Africa

A B S T R A C T

Purpose: The main aim of this study is to empirically investigate the relationship between executive compensation, inequality, and corporate governance, thus filling a gap in extant literature.
Design/methodology/approach: The methodology used calculated the salary Gini (s-Gini) and governance indices (G-index) for companies in the sample and these were used as proxies for inequality and corporate governance respectively. The dataset is panel in nature. It comprises 46 conveniently selected largest JSE listed companies (by market capitalisation). A 2-step system GMM was used to determine if s-Gini and G-index were channels through which executive compensation could influence company performance. While considering a dynamic specification, the GMM estimator addressed possible endogeneity bias. GMM estimation method addressed potential over or underestimation of the relationship between company performance and executive compensation because it was considered more efficient on shorter panels. GMM analysis on companies listed on the JSE Top40 index was from 2008 to 2020. Overall, the methodology and analysis employed provide valuable insights into the complexities between executive compensation, inequality, corporate governance, and company performance, shedding light on important factors that can influence company's performance.
Findings: Results indicated that as executive compensation improved, company performance deteriorated. Furthermore, varied impact of inequality on performance measures were recorded. The observation was that inequality influenced performance in diverse ways. This accentuated the convoluted nature of this relationship. The study also established that both inequality and corporate governance are channels through which executive remuneration affects performance. Additionally, a positive nexus between governance and net profit margin was discovered.
Research limitations/implications: The results imply that: higher executive pay does not always yield better company performance; the effects of executive pay on performance are mediated by the level of inequality within the company and the quality of corporate governance practices; good corporate governance practices can enhance financial performance. It is recommended that companies should prioritise espousal of sound corporate governance practices because they have positive influence on performance. Moreover, diligent attention must be given to how executive compensation is configured. Poorly designed compensation packages erode company value. Conversely, properly structured ones may enhance performance and successively improve company value. This study is focused solely on the Top40 largest listed companies in South Africa. The findings may not be generalisable to all listed entities, as there could be variations in the relationship between executive compensation, inequality, and corporate governance across companies of different sizes. By concentrating on the largest entities, the study may gloss over nuances that exist in smaller companies. However, it is important to state that the insights gained from this research are still valuable and can provide useful guidance to policymakers, shareholders, and other stakeholders in understanding the interaction of the variables examined within the context of larger firms. Future research should consider

Received: May. 30, 2023; Revised: Jun. 29, 2023; Accepted: Jul. 14, 2023

† Corresponding author: Tapiwa Muzata
E-mail: tmuzatt@unisa.ac.za

expanding the sample to include a broader range of listed entities to obtain a more comprehensive understanding of these relationships across the entire corporate landscape.

Originality/value: This study contributes to research gap highlighted by Core et al. (1999), Morais et al. (2013) and Enderle (2018) regarding the limited literature on income inequality within companies and strategies to mitigate such disparities. By incorporating income inequality as a key factor rarely explored in dialogues on executive compensation and performance, we contribute to knowledge in this field. Furthermore, the study sheds light on the interplay between executive compensation, corporate governance, and inequality as catalysts that influence company performance. To progress the discourse, future studies should investigate this phenomenon within the context of a pandemic, providing valuable insights to enhance the resilience of companies.

Keywords: Executive compensation, Company performance, Inequality, Governance, JSE

I. Introduction

The nexus between executive compensation, performance of companies, corporate governance (CG), and inequality are a major area of interest within the field of business management. Among these fields of study, the relationship between executive compensation and performance of companies have been well researched, yet findings are mixed (Brunello et al., 2001; Chen & Jermias, 2014; Raithatha & Komera, 2016; Rasoava, 2019). These mixed research findings leave research-space for this study that seeks to explore the cointegrating relationship between executive compensation and performance as well as causality between compensation and performance.

Heightened reporting on CG scandals in the media and increased inequality have led to a sharp focus on executive compensation (Brunello et al., 2001; El-Sayed and Elbardan, 2016; Raithatha and Komera, 2016; Mishel and Wolfe, 2019) and its role in governance and inequality challenges. In the concerns and focus on executive compensation, there are implied relationships between executive compensation, performance of companies, CG, and inequality. Executive compensation structures that are well designed ameliorate main CG mechanisms (Faulkender et al., 2010). Moreover, weak CG systems provide opportunities for executives to influence compensation processes to extract maximum benefits even when the company poorly performs (Basu et al., 2007; El-Sayed & Elbardan, 2016; Faulkender et al., 2010). Companies with weak CG mechanisms experience greater agency problems and costs which result in sub-optimal performance (Core et al., 1999). Weak governance systems result in higher executive compensation and agency costs (Core et al., 1999; Parthasarathy, Menon and Bhattacherjee, 2006; Basu et al., 2007) while robust CG systems result in decreased executive compensation (Basu et al., 2007). It can be averred that robust governance has moderating effects on performance and could act as a channel which executive compensation affects performance. A priori expectation suggest that the higher the executive compensation, the higher the motivation which leads to higher performance. Therefore, there is expectation of a positive relationship between executive compensation and performance. These assertions provide clues on extant links between executive compensation and CG.

Governance influences executive compensation and company performance, especially in emerging markets (Raithatha & Komera, 2016). This adds to justify why we included the three variables. Moreover, executive pay may exacerbate or mitigate within-company income inequality. Since entities are responsible for income generated by households, within-company income inequality overflow into societies (Enderle, 2018). The overflow of income inequality has widely increased in contemporary business world due to dominant share and performance-based pay offered to executives (Morais et al., 2013; Willman & Pepper, 2019). There is strong evidence exhibiting the correlation

between the Gini coefficient of income inequality in 23 OECD countries and the ratio of executives' compensation to average income in the same countries (Enderle, 2018; Mishel & Wolfe, 2019). Share-based executive compensation and shareholder value approach have exacerbated rapid growth in inequality (Morais et al., 2013; Willman & Pepper, 2019). The design of executive compensation is heterogeneous across entities and industries, with each component having implications for investor pricing and the cost of funds, which in turn impact performance outcomes (Sanoran, 2022). While executives compensation is largely share-based, has cash and bonus components, most other employees are compensated based on government and industry determined minimum wages and related increments (Willman & Pepper, 2019). This establishes a landscape where all other employees are reliant on the success of executives who hold positions of power within entities (Nurlina et al., 2019). However, these employees lack opportunities to possess and exercise ownership and control over productive assets such as land and capital. This dependency structure reinforces the hierarchical dynamics within entities, where executives retain significant influence and control over the allocation and use of resources, while other employees are limited in their ability to participate in decision initiation and making processes and benefit from the ownership of productive assets. The absence of ownership and control opportunities for employees accentuates the disparity in wealth and power distribution within the context of the entity. This highlights the need for further examination of the implications of such dynamics on governance and equity within entities.

An additional practice that affects other employees (under the guise of cost cutting to improve profit margins) is outsourcing of labour to labour-brokers (Willman & Pepper, 2019). This practice conceals intra-company income inequality while improved profit margins benefit executives in the form of performance pay. Resultant inequality and its social ills accentuate why it should be studied. Where largest companies (e.g., FTSE/JSE Top40) employ significant proportions of the country's labour-force, academics owe society answers to why inequality keeps increasing amidst reported CG failures. This, in the context of high unemployment rate and limited to no growth in business activities by companies. Lack of answers to income inequality challenges bring mistrust towards those who are seen to have. Most studies focus on executive compensation, company performance and governance. Our study contributes to extant literature because it includes income inequality, making it one of the few to provide explanations to the income inequality challenge. Inequality was vital to include in this study because the social ills arising from it, which if not addressed, have dire consequences for society.

To sum up the nexuses between the variables chosen for this study, we argue that Remuneration Committees determine executive compensation. Remuneration Committees are part of governance structures of companies and are supposed to be largely independent. That establishes the first nexus between governance and executive compensation. Core et al. (1999) identify a similar connection. The second connection arises from failure by the Remuneration Committee to fairly determine executive compensation which exacerbates inequality between executives and other employees. This connection is rooted in inequality stemming from excessive compensation awarded by boards to executives while compensations to other employees is a cost control matter handled to improve performance (Mishel & Wolfe, 2019). The third one emanates from the rewarding of performance or lack thereof by Remuneration Committees in ways that may weaken governance systems or permit executives' influence to weaken CG (Morais et al., 2013).

Ensuing from established linkages above, this study sought to ascertain the relationship between compensation and performance. The relationship should be in the long run as properly structured executive compensation should be aligned with long run objectives of companies. That is, shareholder value enhancement (justifying the use of net profit as a shareholder value driver). All within the context of CG and inequality. While we are interested in examining the nexus in

the context of income inequality, income inequality is an unintended consequence of the agency theory and tournament theory propositions. These may affect performance itself through employee disgruntlements and socio-economic disturbances (labour union advocated industrial actions). The objectives of this study are thus,

- to examine the relationship between executive compensation and performance.
- to investigate if CG is the channel through which executive compensation affects performance.
- to test if income inequality is the channel through which executive compensation affects performance.

By attaining these objectives, we contribute to the challenge posed by (Enderle, 2018) who stated that there is less literature addressing income inequality within companies and recommending ways to reduce those inequalities in companies. Research into income inequality and performance was recommended by Morais et al. (2013). Core et al. (1999) suggests inclusion of other characteristics not normally found in governance literature. Income inequality was incorporated as a characteristic that is seldom included in literature discussing executive compensation and performance. Likewise, CG was tested as a moderating factor for which executive compensation affects performance. Results revealed that performance improved with executive compensation and inequality gap. Moreover, CG was found to be positively related to performance. Both inequality and CG were found to be channels through which executive compensation influence performance. Nevertheless, the nexus was significantly dependent on the performance measure used. This article contributes to knowledge by examining the nexus between executive compensation and performance under different contexts. CG and inequality were put into perspective as catalysts through which executive compensation affects performance. This nexus has not been empirically tested before.

From the above introductory section, subsequent sections are structured as section 2 provides overview of governance and inequality is South Africa. Section 3 outlines theoretical and empirical literature while the subsequent section details the data and methodology used. Section 5 presents the results and discussion. Finally, the study's conclusions and recommendations are expounded in section 6.

II. Overview of the Governance and Inequality Issues in South Africa

This section outlines governance issues in listed companies and inequality landscape in South Africa.

A. Overview of Governance Issues in listed Companies in South Africa

The CG framework used by listed companies in South Africa comprises the Companies Act 71 of 2008, other relevant laws and specific industry acts of laws, JSE Limited Listing Requirements, and King Code on Corporate Governance for South Africa (King Code hereafter). The JSE Limited Listing Requirements incorporate King Code making its implementation by listed companies mandatory even though the Code is a voluntary one (JSE Limited, nd). King IV, the current instalment of King Code, requires adopters to apply principles and explain practices in corporate disclosure. This, in accordance with its "apply and explain" approach. Listing requirements align with King Code by outlining governance aspects pertaining to balance of power and authority, appointment of officers in entities, appointment of board committees and their responsibilities as CG structures, compliance with Companies Act and other relevant laws and regulations, and external reporting requirements. Among the board committees that need to be in place is the Remuneration Committees which determine executive compensation which contributes to income inequality. Paragraphs 3.84, 8.63(a) and 21.5 of JSE Listing Requirements detail CG practices and disclosure compliances.

Despite the robustness of South African CG frameworks for FTSE/JSE listed companies, there

has been heightened reporting on CG scandals in the media. The CG failures among some of the listed companies seem perverse given recent examples of Steinhoff International, Tongaat Hulett, British American Tobacco, MTN Group, Aspen Pharmacare Holdings - to name a few. The landscape of these CG failures is surprising as a priori expectations are that these large companies have robust governance systems built on the compliance-foundations of listing requirements. This intrigued us to investigate the nexuses between performance of companies, and CG, as proxied by governance indices of companies, executive compensation, and inequality. The perceived nexuses are already highlighted in the previous section.

B. Overview of Income Inequality Issues in South Africa

South Africa has the greatest inequality in the world, based on the Gini coefficients (Francis & Webster, 2019; Sulla et al., 2022). Of interest to this study, one of the key drivers of the inequality is wage distribution (Hundenborn et al., 2018; Sulla et al., 2022). Inequality emanating from wage distribution (as a primary source of inequality) is exacerbated by how earnings among the employed are distributed by companies. Deficiencies in levels of education, past injustices (that are perpetuated in most instances), shortage of skilled labour, increases in wages for skilled workforce and highly remunerated executives while that of unskilled workforce is stagnated are at the core of inequality (Sulla et al., 2022).

For purposes of this study, the focus is on inequality arising from employment income. There is income inequality emanating from increases in highly remunerated executives while wages of employed workforce are stagnated. Use of wages as a mechanism to mitigate income inequality has had limited to no effect (Hundenborn et al., 2018). The study focuses on income inequality because the gap widened between 1995 and 2015 with a Gini coefficient from 58 to 69 (Sulla et al., 2022). Also, income inequality from wages accounts for 91% of overall inequality in South Africa (Francis & Webster, 2019). This suggests that income inequality is the main driver of inequality in South Africa and has increased since 2008 (Hundenborn et al., 2018). Income inequality is envisaged to have widened given the impact of Covid-19 and increased unemployment rate since 2015 (Francis & Webster, 2019). The study focusses on income inequality because income or lack thereof impacts daily living of societies, intricately links to poverty, diminishes society's perception of fairness and trust and destabilises society (Francis and Webster, 2019;). In this study, the source of inequality is included as a variable to examine its nexuses to performance, governance, and executive compensation. A salary Gini (s-Gini) was calculated for each company and was used as a proxy for inequality.

III. Literature Review

This literature review section provides a theoretical background and an empirical review. These follow in sequence.

A. Theoretical Background

One significant way to link CG and executive compensation is through agency theory. The theory advances that executives are appointed agents by shareholders through boards and compensation structures are designed to achieve goal congruency in maximising shareholder value (Jensen & Meckling, 1976). The agency theory is the dominant approach to executive compensation (Bebchuk & Fried, 2003; Chen & Jermias, 2014). A corpus of literature use it as a research framework (Brunello et al., 2001; Chen and Jermias, 2014). The theory aligns with optimal contracting approach which is mainly applied by financial economists (Bebchuk & Fried, 2003). Here, boards are assumed to design executive compensation schemes to ensure that shareholder value is maximised

net of contracting and transaction costs (Enderle, 2018; Rasoava, 2019). Executive compensation is viewed as a solution to agency problems when this approach is adopted. The approach implies that executives acquire higher compensation when set targets are attained (Brunello et al., 2001; El-Sayed and Elbardan, 2016; Rasoava, 2019). Another cogitated approach to executive compensation is the managerial power approach. In this approach, executive compensation is considered as a solution that addresses agency problems but also constitutes agency problem because of rent-seeking behaviour exemplified by executives. As such, executive compensation schemes are designed to achieve goal congruence with shareholders (principals) while decision-control remains with boards. However, the approach posits that executives may have significant influence on boards and in designing their compensation (Bebchuk & Fried, 2003; Enderle, 2018; Rasoava, 2019; Willman & Pepper, 2019). Per se, executives will acquire higher rewards irrespective of the performance of the entity (El-Sayed & Elbardan, 2016; Rasoava, 2019). The two approaches recognise that executive compensation is influenced by value maximisation for shareholders and investors, and executives maximising opportunities that enrich them.

Another prominent theory is the tournament theory (Willman & Pepper, 2019). Tournament theory posits executive compensation schemes across hierarchical structures and governance mechanisms within the entity are designed to attract or ignite competition with the top executive getting higher pay (Willman & Pepper, 2019). Ignited competition would boost company performance as executives compete (Morais et al., 2013; Willman & Pepper, 2019). Lack of competition that boost performance and or poorly designed executive compensation schemes are typical of CG failures (Rasoava, 2019).

Whichever lens is used in formulating a company's compensation structure, it operates within the realms of governance mechanisms (board nominating, audit, remuneration committees) as stated by listing requirements. From an agency theory perspective, the governance mechanisms are necessitated by separation of ownership and control. From a tournament theory perspective, governance mechanisms arise from the need to enable, monitor, and evaluate performance used to reward executives. Other things like board independence, ethics (see King IV's articulation on board leadership) come into play and relate to the study.

Gao (2019) provides link between executive compensation and performance. Gao (2019) also discusses nexuses between executive compensation gap and performance. Empirical evidence from state owned entities reveals that executive compensation gap between executives and other employees is significantly positively correlated to performance, albeit creating inequality within the company. This relationship accedes to tournament theory's propositions. However, the finding contradicts propositions of behavioural theory which opposes executive compensation gap because it results in inequality. Inequality impacts company's performance (Morais et al., 2013). Employees at the lower end are likely to feel exploited, unjustly treated, reduced motivation or morality, and unsatisfied by their jobs - all impact company's performance (Gao, 2019). Thus, inequality acts as a drag on executive compensation and ultimately firm performance.

Compensation gap among Fortune 500 executives exhibited weak correlation with entity's performance (Gao, 2019 citing O'Reilly III, Main and Crystal (1988)). This suggests that the company's performance is impacted more by the compensation gap (inequality) between executives and employees than inequality among executives. Gao's (2019) further citation of Zhang (2007) and Lu (2007) highlight that compensation gap among executives in listed entities exhibited negative correlation to performance of those entities. There are times where executive compensation is benchmarked to industry or another external matrix. In such instances, the compensation gap may be increased with no relation to company's performance. This results in both internal and external income inequality.

Willman and Pepper (2019) assert that income inequalities reveal trends of increasing in the long term. Coupled with economic and ethical arguments, this has triggered public and government attention (Enderle, 2018; Willman & Pepper, 2019) as well

as our own interest as academics.

B. Empirical Review

As alluded in the introduction section of this research paper, many investigations into the relationship between executive compensation and performance of companies has yielded mixed findings. For brevity, not all but some of the empirical evidence is discussed below.

Parthasarathy, et al. (2006) studied determinants of executive compensation using company performance and CG in a sample of Indian companies. Parthasarathy, et al. (2006) used return on assets (ROA) and net profit margin (NPM) as profitability measures of company performance while Core et al. (1999), Raithatha and Komera (2016), and Rasoava (2019) used ROA and return on equity (ROE). Parthasarathy, et al.'s (2006) findings suggest that none of the profitability measures significantly explain variation in executive compensation. Rasoava (2019) concluded that there are no long run responses of executive compensation to company's performance existed. The finding contradicts other studies that revealed that performance is a significant determinant of executive pay. For example, in a study of the FTSE 350 companies, there was a positive relationship between executive compensation and company performance (El-Sayed & Elbardan, 2016). Similar findings are from Raithatha and Komera (2016) with Brunello et al. (2001) determining that executive compensation should have a higher sensitivity to performance when an entity is listed. The tournament approach to set up executive compensation was found to yield positive performance (El-Sayed & Elbardan, 2016). On the other hand, investigations into the relationship between CG and executive compensation and performance found weak connections (El-Sayed & Elbardan, 2016). Rasoava's study in 2019 concluded that ROA is strongly associated to executive compensation while the link with ROE is weak or non-existent. On the contrary, Basu et al.'s 2007 study settled that ROA and ROE were not significant. As such, they have limited explanatory power of why executive pay levels are at the levels they are. Core et al. (1999) stated that ROA coefficients in their study were not significant while that of ROE exemplified positive and significant relation to executive compensation.

Considering inequality empirical evidence, in 2008, a top executive in the USA earned approximately 320 times more than an average employee (Faulkender et al., 2010). Tyco executive was awarded US$81 million worth of share options at a time he was charged for looting the company (Faulkender et al., 2010). This phenomenon also links to the illogical awarding of compensation increases to executives when performance of companies was on the decline. This is documented during the period between 1980 and 2010 (Enderle, 2018) and 1990 and 2005 (Morais et al., 2013). These two aspects suggest that governance structures are not effective in prohibiting rent extraction behaviour by executives.

Reverting to inequality, Willman and Pepper (2019) highlight that WPP Plc had an executive compensation to average employee salary ratio of 1 408:1 with FTSE 100 executives receiving an average pay increase of 300% between 2000 and 2015. In the USA, Walgreen's executive earned 582 times more than a median employee in 2014 while Discovery Comm's had a ratio of 1 951 (Enderle, 2018). In South Africa, between 2008 and 2016, an executive earned 6 490 times more than an average worker in the industry (Muzata, 2018). These multiples assert that income inequality significantly contribute to national and societal inequality (Enderle, 2018). McGuire et al. (2003), as cited by Morais et al. (2013), documented a negative correlation between executive compensation and social performance. Inequality is a social issue, its worsening position has health and social consequences (Morais et al., 2013). Morais et al. (2013) use an adaptation of the standard Gini as a measure of inequality in addition to executive compensation and governance as variables.

From a CG front, Parthasarathy, et al. (2006) found that the presence and proportion of non-executive directors (NEDs) (a governance aspect captured in the governance proxy, G-index, used) significantly

determine levels of executive compensation. The presence of NEDs is linked to lower executive compensation (Basu et al., 2007) while the proportion of NEDs was reported to have no relationship with performance (Core et al., 1999). However, El-Sayed and Elbardan (2016) found no significant relationships between presence of NEDs and executive compensation and company performance. In addition, El-Sayed and Elbardan (2016) discovered that the presence of a Remuneration Committee was insignificantly and negatively associated with executive compensation. Also, Core et al. (1999) concluded that there was an adverse association between executive compensation projected by CG mechanism and succeeding performance. A weak empirical relationship between measures of internal governance and levels of executive compensation existed (Core et al., 1999). Core et al. (1999) aver that this weak relationship is evidence that CG structures have limitations in encouraging executives to improve performance. This also points to the limitations of CG mechanisms in establishing appropriate executive compensation because of the executives' influence over structures like board committees.

The empirical discussions above exemplify how research on the nexuses between executive compensation, CG, company performance, and inequality (albeit with variations in the mix of these variables) has yielded mixed results. In the next section, the study's methodology is discussed.

IV. Data and Methodology

This section discusses the sample, data and variables used in this study. Furthermore, the models used in the analysis are put into perspective.

A. Salary Gini (s-Gini) Calculation

The salary Gini (s-Gini) was calculated using an adaptation from Muzata (2018). Another study that modified the traditional Gini equation is that of Morais et al. (2013). The traditional direct method of calculating the Gini coefficient was modified in a similar way done by Thomas, Wang and Fan (2001) in determining educational inequality. Thomas, Wang and Fan's final equation was given by Equation 1:

$$E_L = \left(\frac{1}{\mu}\right)\sum_{i=2}^{n}\sum_{j=1}^{i-1} p_i \ |y_i - y_j| p_j$$

Equation 1: Thomas et al.'s final equation.

Where:

E_L = the education Gini based on educational attainment distribution, large population.

μ = are the average years of schooling for the concerned population.

p_i and p_j = the proportions of population with certain levels of schooling.

y_i and y_j = the years of schooling at different educational attainment levels.

n = the number of levels/categories in attainment data, and n = 7

Following similar adaptation by Muzata (2018), the final equation used to calculate the s-Gini is:

$$Gini = \frac{1}{2}(Relative\ mean\ difference)^{\dagger}$$

†The difference is relative to the mean

Equation 2: Formulation to measure s-Gini adopted from Muzata (2018).

Where:

$s-Gini$ = *the salary Gini to measure salary inequality between a company's executive* and *the lowest paid employees in an industry*,

Y_i = *the highest salary, i.e. company's executive salary per year*,

$Y_j = the\ lowest\ average\ salary\ per\ year\ in\ an\ industry$ and

$\mu = the\ mean\ salary\ per\ year$

The s-Gini coefficient, as with the standard Gini coefficient, reveals a measure of 0 for perfect equality and 1 for perfect inequality.

Datasets on total number of employees and annual lowest salaries per industry was obtained from Statistics South Africa (StatsSA). Executive compensation data per company in the sample was obtained from Annual Financial Statements (AFS) that disclose these figures as mandated by the Companies Act 78 of 2008. The two datasets meant two population groups, that is, executives and the least paid in each industry. The modifications to Equation 1 needed the salary differential ($Y_i - Y_j$) and determination of the mean (μ) to provide comparable results with salary multiples considered (Muzata, 2018).

B. Governance Indices (G-index) Calculation

Governance indices (G-index) for companies in the sample were used as proxies for CG. Using entities that were listed on the FTSE/JSE Top40 from 2008 to 2016, we aligned with the instalments of King III and King IV Codes as CG codes that listed entities need to comply with as per JSE Listing Requirements. The authors adopt the Codes as the principal references for CG practices, like Tulcanaza-Prieto's et al. (2020) use of the Korean Commercial Code as the primary legal source pertaining to CG. By employing these Codes as their primary sources, the authors establish a foundation for examining and evaluating the prevailing CG practices within the context of their study. CG data as per required disclosures by the two South African Codes was obtained from Integrated Reports and or AFS, wherever the required disclosures were made. The study included a sample of 46 FTSE/JSE Top40 listed companies. The FTSE/JSE Top40 index lists the largest listed companies based on their market capitalisation. Some companies were continuously part of the FTSE/JSE Top40 index throughout the period, while others were added or excluded due to changes in their market capitalisation and or missing data.

In calculating the G-index, we aligned our index construction with Muzata (2018) who had 20 equally weighted CG provisions drawn from King III and King IV Codes. The CG provisions were converted to an index by assigning a value of 1 where an entity complied with King III and King IV provisions. A 0 was assigned for non-compliance. The assigned values are added to determine the G-index in each of the years in the study. This meant that a company that fully complied with provisions in any given year within the period would have a maximum G-index of 20. A fully non-compliant company in any given year during the considered period would have a G-index of 0. This index construction is like the ones used by Gompers, Ishii and Metrick (2003) and Shaukat and Trojanowski (2018).

C. Data, Sample Selection and Variables

As aforementioned, the study utilised secondary data for FTSE/JSE Top40 listed companies. Therefore, the data is panel in nature comprising 46 companies over the study's period. The sample was conveniently selected and excluded companies that did not have data over the period of analysis. Moreover, the sample selected constitutes 80% of the trade which makes it more appropriate for this study. The company specific data focuses on executive compensation; company performance as measured by ROA and net profit margin; governance index; compensation inequality as measured by the s-Gini coefficient. StatsSA and SARB databases were used to extract data on the entire set of data of macroeconomic variables which included the Gross Domestic Product Growth (GDPG), Covid-19 dummy, and inflation. Table 1 provides a descriptive summary of the variables used for the analyses.

Out of the several financial performance measures available, ROA, ROE, and net profit margin were used in this study to measure firm performance. These

profitability measures were derived from the accounting information that companies disclose periodically. Being ratios, these measures are already normalised for any size effects among different companies.

Executive compensation includes the incentive (exercised share options) or performance-linked pay, as a tool to motivate managers and induce risk taking. This has been widely recognised in the economic literature. It is the aim of this article to investigate if indeed there is a linkage between company performance and executive compensation. Ideally, if executives are well remunerated, they are presumed to be well incentivised and higher levels of profitability are expected. Therefore, executive compensation in the current period can also be seen as a tool for motivating executives to achieve superior performance in subsequent periods. This expectation gives rise to the following null hypothesis:

Null hypotheses 1: there is no relationship between ROA and executive compensation.

Null hypotheses 2: there is no relationship between ROE and executive compensation.

Null hypotheses 3: there is no relationship between NPM and executive compensation.

D. Model Specifications

The Arellano and Bond (1991) generalised method of moments (GMM) for dynamic panels was utilised to examine the relationship between company performance and executive compensation. GMM was also used to determine if s-Gini and G-index were channels through which executive compensation could influence company performance or not. While considering a dynamic specification, the GMM estimator aims to address possible endogeneity bias.

Table 1. Description of variables

Variable	Definition	Source	Expected Sign
Dependent variables			
Return on Assets (ROA)	ROA is the return on assets. This is computed as the net income divided by total assets	IRESS database	
Return on Equity (ROE)	ROE is the return on equity. This is computed as the net income divided by total equity	IRESS database	
Net profit margin (NPM)	NPM is the net profit margin. This is calculated as net profit divided by sales.	IRESS database	
Independent variables			
Governance Index (G-index)	The governance index was constructed using the provisions extracted from King III and King IV recommendations following Gompers et al. (2003) and Shaukat and Trojanowski's (2017) index construction methodologies.	Integrated Reports and or AFS	Positive (+)
Executive compensation (EC)	Executive compensation is the total remuneration earned by the executive director which are officially disclosed by companies, as required by the South African Companies Act 71 of 2008.	Integrated Reports and or AFS	Positive/Negative
COVID-19_Dummy	COVID-19_Dummy is the dummy variable which in 1 during COVID-19 or 0 pre COVID-19 period	Worldometer database	Positive/Negative
Inequality (s-Gini)	The Gini coefficient is a measure of inequality withing a company. Where a coefficient of 0 represent perfect equality and 1 perfect inequality.	StatsSA, Integrated Reports and or AFS	Positive (+)
Gross Domestic Product Growth (GDPG)	Gross Domestic Product Growth (GDPG). This is a measure of economic activity each year.	SARB	Negative (-)
Inflation (CPI)	Annual general changes in prices of a basket of goods and services	SARB	Negative (-)

Depending on the source of bias, this can lead to over or underestimation of the relationship between company performance and executive compensation. The system GMM estimation method addresses these problems, and it is argued to be more efficient on short panels (see Arellano and Bond, 1991), hence it was a preferred technique to determine the relationship.

Moreover, there is bias due to the introduction of the lagged dependent variables among the regressors, reverse causality, and measurement errors that can be other sources of endogeneity (Arellano & Bond, 1991). There is a possibility of interdependencies among the companies and dependences emanating from the same macroeconomic shocks hence the need to test for the cross-sectional dependence (CD) (see De Hoyos and Sarafidis, 2006; Pesaran, 2006, 2021). The system GMM technique yields an asymptotically unbiased estimation of the t-statistics without requiring the heteroscedastic structure of the regression equation (Hansen, 1982; Blundell and Bond, 1998).

Also, 2-step system GMM technique assumes that the error term is not serially correlated. Thus, disturbances and instrumental variables are uncorrelated in the equations, that are the lagged levels of the series after the equation has been first-differenced to eliminate company-specific effects. The instruments used in the study were differenced lag variables. The exogenous instruments were validated using the Hansen test and Sargan test. The Arellano-Bond AR(1) and AR(2) were used to test for autocorrelation. The tests statistics were not significant meaning that the models did not have a problem of serial correlation, they were robust and not weakened by many instruments because instruments were less than the number of groups in model estimation output. Equations 3 through 8 were estimated after the validation of the instruments.

The relationship between firm performance and executive compensation was empirically tested using the system-GMM as presented in equations 3 to 5.

$$\begin{aligned}\Delta ROA_{it} &= (\alpha-1)\Delta ROA_{it-1} + \beta_1 \Delta EC_{it} \\ &+ \beta_2 \Delta COV\text{-}19\_Dummy_{it} \\ &+ \beta_j \sum_{j=1}^{N} \Delta X_{j,it} + \Delta \mu_{it} + \Delta \epsilon_{it} \end{aligned} \quad (3)$$

$$\begin{aligned}\Delta ROE_{it} &= (\alpha-1)\Delta ROE_{it-1} + \beta_1 \Delta EC_{it} \\ &+ \beta_2 \Delta COV\text{-}19\_Dummy_{it} \\ &+ \beta_j \sum_{j=1}^{N} \Delta X_{j,it} + \Delta \mu_{it} + \Delta \epsilon_{it} \end{aligned} \quad (4)$$

$$\begin{aligned}\Delta NPM_{it} &= (\alpha-1)\Delta NPM_{it-1} + \beta_1 \Delta EC_{it} \\ &+ \beta_2 \Delta COV\text{-}19\_Dummy_{it} \\ &+ \beta_j \sum_{j=1}^{N} \Delta X_{j,it} + \Delta \mu_{it} + \Delta \epsilon_{it} \end{aligned} \quad (5)$$

Equations 3 to 5: Relationship between firm performance and executive compensation.

Since CG has been found to significantly affect the levels of executive compensation (Parthasarathy et al., 2006; Basu et al., 2007). CG can act as a channel through which executive compensation can influence firm performance. This is because higher compensation in a well governed firm acts as a motivator which encourages behaviour, hence greater economic efficiency. Robust governance mechanisms have moderating effects on performance and could act as a channel which executive compensation affects performance (Raithatha & Komera, 2016). The linkage was tested empirically through Equations 6 to 8:

$$\begin{aligned}\Delta ROA_{it} &= (\alpha-1)\Delta ROA_{it-1} + \beta_1 \Delta EC \\ &+ \beta_2 \Delta EC^{*} G\text{-}index_{it} \\ &+ \beta_3 \Delta COV\text{-}19\_Dummy_{it} \\ &+ \beta_j \sum_{j=1}^{N} \Delta X_{j,it} + \Delta \mu_{it} + \Delta \epsilon_{it} \end{aligned} \quad (6)$$

$$\begin{aligned}\Delta ROE_{it} &= (\alpha-1)\Delta ROE_{it-1} + \beta_1 \Delta EC \\ &+ \beta_2 \Delta EC^{*} G\text{-}index_{it} \\ &+ \beta_3 \Delta COV\text{-}19\_Dummy_{it} \\ &+ \beta_j \sum_{j=1}^{N} \Delta X_{j,it} + \Delta \mu_{it} + \Delta \epsilon_{it} \end{aligned} \quad (7)$$

$$\begin{aligned}\Delta NPM_{it} &= (\alpha-1)\Delta NPM_{it-1} + \beta_1 \Delta EC \\ &+ \beta_2 \Delta EC^{*} G\text{-}index_{it} \\ &+ \beta_3 \Delta COV\text{-}19\_Dummy_{it} \\ &+ \beta_j \sum_{j=1}^{N} \Delta X_{j,it} + \Delta \mu_{it} + \Delta \epsilon_{it} \end{aligned} \quad (8)$$

Equations 6 to 8: Relationship between performance, CG, and executive compensation.

On the other hand, compensation in equality is presumed to equally play a moderating role like governance. Salary Gini coefficient is used to measure the compensation inequality within the entity. Since, performance of the entity is the sum of individual effort, it is important to determine if compensation distribution has effect on firm performance. Therefore, the s-Gini is tested if it is a channel through which executive compensation influences entity performance. It is expected that the higher the distribution as measured by s-Gini, the lower the motivation and therefore this might drag down the effect of higher compensation. This linkage was tested empirically using Equations 9 to 11:

$$\begin{aligned}\Delta ROA_{it} &= (\alpha-1)\Delta ROA_{it-1} + \beta_1 \Delta EC \\ &+ \beta_2 \Delta s-Gini_{it} \\ &+ \beta_3 \Delta COV-19\_Dummy_{it} \\ &+ \beta_j \sum_{j=1}^{N} \Delta X_{j,it} + \Delta \mu_{it} + \Delta \epsilon_{it} \end{aligned} \quad (9)$$

$$\begin{aligned}\Delta ROE_{it} &= (\alpha-1)\Delta ROE_{it-1} + \beta_1 \Delta EC \\ &+ \beta_2 \Delta s-Gini_{it} \\ &+ \beta_3 \Delta COV-19\_Dummy_{it} \\ &+ \beta_j \sum_{j=1}^{N} \Delta X_{j,it} + \Delta \mu_{it} + \Delta \epsilon_{it} \end{aligned} \quad (10)$$

$$\begin{aligned}\Delta NPM_{it} &= (\alpha-1)\Delta NPM_{it-1} + \beta_1 \Delta EC \\ &+ \beta_2 \Delta s-Gini_{it} \\ &+ \beta_3 \Delta COV-19\_Dummy_{it} \\ &+ \beta_j \sum_{j=1}^{N} \Delta X_{j,it} + \Delta \mu_{it} + \Delta \epsilon_{it} \end{aligned} \quad (11)$$

Equations 9 to 11: Relationship between performance, s-Gini and executive compensation.

The following equations test if s-Gini is the channel through which executive compensation affects entity performance:

$$\begin{aligned}\Delta ROA_{it} &= (\alpha-1)\Delta ROA_{it-1} + \beta_1 \Delta EC \\ &+ \beta_2 \Delta EC^{*} s-Gini_{it} \\ &+ \beta_3 \Delta COV-19\_Dummy_{it} \\ &+ \beta_j \sum_{j=1}^{N} \Delta X_{j,it} + \Delta \mu_{it} + \Delta \epsilon_{it} \end{aligned} \quad (12)$$

$$\begin{aligned}\Delta ROE_{it} &= (\alpha-1)\Delta ROE_{it-1} + \beta_1 \Delta EC \\ &+ \beta_2 \Delta EC^{*} s-Gini_{it} \\ &+ \beta_3 \Delta COV-19\_Dummy_{it} \\ &+ \beta_j \sum_{j=1}^{N} \Delta X_{j,it} + \Delta \mu_{it} + \Delta \epsilon_{it} \end{aligned} \quad (13)$$

$$\begin{aligned}\Delta NPM_{it} &= (\alpha-1)\Delta NPM_{it-1} + \beta_1 \Delta EC \\ &+ \beta_2 \Delta EC^{*} s-Gini_{it} \\ &+ \beta_3 \Delta COV-19\_Dummy_{it} \\ &+ \beta_j \sum_{j=1}^{N} \Delta X_{j,it} + \Delta \mu_{it} + \Delta \epsilon_{it} \end{aligned} \quad (14)$$

Equations 12 to 14: Testing if s-Gini is the channel which executive compensation impacts entity performance.

Different econometric approaches were estimated to gather diagnostic statistics and were reported for robustness. Firstly, a model was run for the whole period under study and a dummy variable was used: 0 for no COVID-19 and 1 during the period of COVID-19 (Equation 3). Where: X is a vector of control variables where j is the number of the macro-economic control variables. The vector of the control variables includes GDPG, Covid-19 dummy, and inflation; $\mu_{it}$is the time invariant firm specific effect, $\epsilon_{it}$is a random error term for firm i for time t. The following section presents and discusses the results of the study.

V. Results and Discussion

A preliminary analysis was performed, and the results of the descriptive statistics and correlation analysis of the study are presented in Table 2 and Table 3 respectively. For brevity the descriptive statistics and correlation analysis are not discussed.

The results of the 2-step system GMM panel regression are presented in Tables 4 through Table 7. To ensure the robustness of results and conduct diagnostic assessments, additional estimation techniques were employed, including Pooled Effects, Random Effects, and Feasible Generalized Least Squares models. Although the detailed outcomes of these

models were not presented, they were used to evaluate the validity and reliability of the findings. Pre-test diagnostics were conducted to examine potential issues related to cross-sectional dependence and heteroscedasticity, which are crucial assumptions in panel data analysis. When these assumptions are violated, the standard errors become biased, rendering statistical inference based on such standard errors unreliable. By addressing these diagnostic concerns, the study aimed to enhance the credibility and validity of the results, ensuring that any potential biases or violations of assumptions were properly accounted for in the analysis. The study employed the Driscoll and Kraay's (1998) standard errors as a remedy. The Driscoll and Kraay's (1998) method produce non-parametric covariance matrix estimator that produces heteroskedasticity - and autocorrelation-consistent standard errors that are robust to general forms of spatial and temporal dependence (Hoechle, 2007).

The findings from Table 4 demonstrated a significant negative association between remuneration and both return on assets (ROA) and return on equity (ROE). This outcome aligns with the intuitive expectation that executive compensation, when not appropriately tied to company performance, can undermine value creation. These results highlight the need for careful consideration of how returns are measured in the analysis, as a substantial portion of executive remuneration is typically fully vested after a three-year period. Therefore, adopting a return matrix that aligns with the vesting period may confirm the a priori expectation that executive compensation motivates managers to align their goals with those of the shareholders (Enderle, 2018; Jensen & Meckling, 1976; Rasoava, 2019). Contrary to preliminary expectations, the study showed that companies with higher levels of inequality performed better than those with lower levels of inequality. One possible explanation for this finding

Table 2. Descriptive Statistics

Variables	Mean	Median	Maximum	Minimum	Std, Dev,	Skewness	Kurtosis	Jarque-Bera	Observation
EC	37 387 634,00	26 899 385,00	659 000 000,00	765 109,00	44 963 802,00	6,58	81,38	123166,2***	468
s-Gini	0,98	0,98	1,00	0,91	0,02	-1,02	4,24	110,74***	468
G-Index	15,80	16,00	20,00	8,00	2,13	-0,29	3,25	7,88***	468
GDPG	0,97	1,40	3,20	-6,40	2,49	-1,90	6,17	476,47***	468
ROE	16,93	16,47	441,52	-483,65	42,54	-3,69	87,47	40195,60***	468
ROA	12,78	10,10	92,89	-25,76	14,61	1,33	7,81	588,11***	468
NPM	28,10	7,65	637,78	-950,88	108,38	1,97	33,69	18672,96***	468
CPI	5,23	4,70	10,04	3,30	1,73	1,56	5,01	269,25***	468

Table 3. Cross correlations

Variables	EC	GINI	GOV-INDEX	GDPG	ROE	ROA	NPM	CPI
EC	1,0000							
s-Gini	0,3035***	1,0000						
G-Index	-0,2147***	-0,0309	1,0000					
GDPG	-0,0060	-0,0195	-0,1270***	1,0000				
ROE	0,0448	0,0821*	0,0390	0,0554	1,0000			
ROA	-0,0316	0,0253	-0,0104	0,1378***	0,446302***	1,0000		
REVG	0,0235	-0,0559	-0,0530	0,0606	0,0086	0,0039		
NPM	-0,0711	0,0280	0,0283	0,0697	0,126130***	-0,0653	1,0000	
CPI	-0,1141	-0,0817	0,3031***	0,2324***	0,0853*	0,0895*	0,0246	1,0000

Where: ROA is Return on Assets, ROE is Return on Equity, NPM is Net profit margin, G-index is Governance Index, EC is Executive compensation, COV-19_Dummy is COVID-19 as a Dummy variable, s-Gini measures Inequality, GDPG is Gross Domestic Product Growth, CPI measures Inflation, REVG is Revenue growth

is that the promotion structure within these companies is based on individual performance. Consequently, lower-level employees may exert exceptional effort to ascend to top-level management positions and secure a larger portion of the company's returns. Similarly, managers may also work harder to maintain their compensation packages. This observation aligns with the propositions of the tournament theory, which suggests that competitive dynamics within companies can incentivise individuals to strive for higher performance (Morais et al., 2013; Willman & Pepper, 2019). Interestingly, when performance was measured relative to sales, that is net profit margin (NPM) in this study, the relationship between inequality and performance turned negative. This suggests that the association between inequality and performance is contingent upon the specific profitability measure used, or there may be other unanticipated underlying factors at play. One such underlying factor could be the presence of aggressive earnings management by executives who manipulate profit measures to enhance their performance especially when the entity is experiencing financial constraints as observed by Lee and Chun (2023). This accentuates the importance of considering different performance matrices and exploring additional variables to acquire comprehensive insights into the complex relationship that exist between inequality and performance of companies.

In line with other prior studies (see Marozva, 2021), company performance was found to be persistent as the lagged ROA, lagged ROE and lagged NPM were highly significant. Performance is usually benchmarked to previous year results meaning that the aim in the subsequent period is to outperform the previous period results. The dummy variable, GDPG and CPI were found to be insignificant.

In line with the research objectives, the study examined the possibility that inequality serves as

Table 4. Summary results for the effects of Executive Compensation and Inequality on firm performance

Variables	Equation 7 ROA	Equation 8 ROE	Equation 9 NPM
L.ROA	0.615***	0.117***	1.206***
	(0.0309)	(0.00923)	(0.188)
LEC	-13.05***	-19.16*	13.04
	(2.187)	(8.237)	(107.8)
s-Gini	136.6***	609.6***	-4969.6***
	(36.39)	(133.2)	(1018.5)
COV19_DUMMY	-1.124	-10.75	64.45
	(1.608)	(5.366)	(39.64)
GDPG	0.338	0.170	7.454
	(0.183)	(0.750)	(4.057)
CPI	-0.117	0.617	4.477
	(0.186)	(0.935)	(9.317)
_cons		-442.6**	
		(138.7)	
N	396	432	396
Instruments	24	26	12
Arellano-Bond AR(1)	-2.32**	-1.77	-2.61***
Arellano-Bond AR(2)	-0.11	0.89	-0.33
Sargan Test	19.16	14.92	5.27
Hansen Test	0.97	16.18	6.35

Coefficients reported. Standard errors in parentheses * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$
Source: Authors' own compilation using Stata 10

the channel through which executive compensation affects firm performance. The results presented in Table 5 confirmed this hypothesis, demonstrating that inequality indeed acts as the intermediary through which executive compensation impacts performance. Specifically, the findings indicated that firms with higher levels of both inequality and executive compensation experienced improved performance. This outcome can be attributed to the motivating environment created by higher income inequality, which encourages employees to strive for promotion and higher salaries. Similarly, executives are incentivised to maintain their positions and perform well to attain desired bonuses.

This explanation aligns with the tournament theory, as proposed by (Gao, 2019), and contradicts the expectation that inequality negatively affects performance, as suggested by (Morais et al., 2013). Notably, executive compensation alone was found to be negatively related to performance, which may seem surprising at first. However, this result can be attributed to situations where executives receive bonuses and share options even when company performance is poor or when the company incurs losses, as discussed in studies by Muzata (2018), Enderle (2018), and Morais et al. (2013).

To address this issue, it is crucial to align the returns acquired by the company with the vesting period and the timing of executives' option exercises or receipt of performance-related bonuses. By incorporating a more accurate measurement framework, the relationship between executive compensation and performance can be better understood and interpreted.

The findings reaffirm the concept of performance persistence, as lagged returns were found to have a significant impact on current period returns. Profitable companies tend to maintain their profitability over time, as prior-period profits provide the necessary resources to remain competitive. Conversely, companies

Table 5. Summary results for the effects of Executive Compensation and s-Gini*LEC on firm performance

Variables	Equation 10 ROA	Equation 11 ROE	Equation 12 NPM
L.ROA	0.619***	0.119***	1.234***
	(0.0267)	(0.00953)	(0.195)
LEC	-47.87***	-115.1***	-716.7***
	(9.697)	(22.64)	(199.0)
s-Gini*LEC	35.69***	96.04***	718.4***
	(8.113)	(20.34)	(144.2)
COV19_DUMMY	-1.299	-11.41	66.52
	(1.775)	(5.669)	(40.63)
GDPG	0.405*	0.0942	7.807
	(0.192)	(0.797)	(4.163)
CPI	-0.0170	0.450	4.190
	(0.209)	(0.999)	(9.518)
_cons		169.5*	
		(67.06)	
N	396	432	396
Instruments	24	26	12
Arellano-Bond AR(1)	-2.35	-1.78	-2.57***
Arellano-Bond AR(2)	-0.17	0.91	-0.34
Sargan Test	15.51	14.82	5.39
Hansen Test	0.00	16.19	1.18

Coefficients reported. Standard errors in parentheses * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$
Source: Authors' own calculation using Stata 10

experiencing losses tend to continue in that trajectory, as losses are often preceded by further losses.

Moreover, the study showed that there exists a positive and significant relationship between economic performance, as measured by GDP growth, and company performance. This aligns with theoretical expectations and is consistent with previous empirical studies that have also found a positive association between macroeconomic indicators and firm performance (see Morais et al., 2013 citing Khurana (2002)).

In summary, the results emphasize the presence of performance persistence within companies and highlight the positive influence of economic growth on company performance, supporting existing theories and empirical research in this area.

The analysis went further to look at the linkage between remuneration and performance while accounting for governance within the company. The results are presented in Table 6 and discussed thereafter.

The study consistently found a negative relationship between executive compensation and company performance. The results indicated that companies with robust governance practices demonstrated better performance, as evidenced by a positive and significant association with net profit margin. This finding aligns with the expectation that firms with effective corporate governance tend to outperform those with weaker governance structures. Nevertheless, the empirical evidence does not provide conclusive support for an optimal corporate governance system that universally enhances performance (Core et al., 1999).

Additionally, the study observed that performance improved in the presence of increased economic growth. However, the analysis also recorded that the COVID-19 pandemic had implications for company performance, as indicated by a significant relationship between the dummy variable representing the

Table 6. Summary results for the effects of executive compensation and governance on firm performance

	Equation 3 ROA	Equation 4 ROE	Equation 5 NPM
L.ROA	0.612***	0.125***	1.021***
	(0.0308)	(0.0211)	(0.266)
LEC	-7.776***	-48.57	-163.4
	(2.050)	(28.82)	(115.2)
G-index	-0.337	6.032	39.15**
	(0.303)	(3.461)	(11.26)
COV19_DUMMY	-0.368	5.221	104.1*
	(0.993)	(5.554)	(38.33)
GDPG	0.339*	2.655**	17.31**
	(0.138)	(0.747)	(5.051)
CPI	0.0453	-1.512	-16.50
	(0.312)	(2.656)	(13.96)
_cons		286.6	
		(188.1)	
N	396	432	396
Instruments	24	26	12
Arellano-Bond AR(1)	-2.29	-1.79	-2.63***
Arellano-Bond AR(2)	-0.09	0.30	-1.30
Sargan Test	19.55	10.96	9.72
Hansen Test	0.58	19.28	0.22

Coefficients reported. Standard errors in parentheses * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$
Source: Authors own calculation using Stata 10

pandemic and net profit margin.

These findings contribute to the scholarly understanding of the interplay between executive compensation, corporate governance, economic growth, and firm performance. The results highlight the importance of effective governance practices and the impact of external factors, such as the COVID-19 pandemic, on company performance. Further research is needed to explore and identify optimal corporate governance systems that consistently enhance performance in various contexts.

The study examined whether CG served as the transmission through which executive compensation influenced company performance. The findings provide confirmation, showing a positive and significant relationship between the interaction of governance and executive compensation, and net profit margin. These results indicate that CG acts as the mechanism by which executive compensation impacts the financial performance of companies. Moreover, financial performance is affected by executive incentives and investor pricing through cost of equity capital as recorded by Sanoran (2022). The relationship becomes intricate and convoluted because executive compensation, which is an outcome of CG decision-control processes, becomes the transmission mechanism upon which cost of equity is impacted (Sanoran, 2022). Furthermore, the noted relationships between executive compensation, lagged performance, the COVID-19 pandemic, and economic growth were consistent with the overall findings presented in this writeup.

This analysis contributes to extant academic literature by highlighting the specific role of CG in mediating the relationship between executive compensation and company performance. The results emphasise the importance of effective governance practices in optimising the impact of executive

Table 7. Summary results for the effects of executive compensation and G-index*LEC on firm performance

	Equation 6 ROA	Equation 7 ROE	Equation 8 NPM
L.ROA	0.614***	0.125***	1.002**
	(0.0238)	(0.0215)	(0.285)
LEC	-10.46*	-64.63	-259.8*
	(3.852)	(34.93)	(113.0)
G-index*LEC	-0.0146	0.817	5.622**
	(0.0584)	(0.467)	(1.651)
COV19_DUMMY	0.824	4.659	106.3*
	(1.108)	(5.605)	(40.34)
GDPG	0.503***	2.588**	17.86**
	(0.131)	(0.737)	(5.375)
CPI	0.0282	-1.606	-17.66
	(0.450)	(2.715)	(14.64)
_cons		405.5	
		(228.9)	
N	396	432	396
Instruments	24	26	12
Arellano-Bond AR(1)	-2.32	-1.79	-2.58***
Arellano-Bond AR(2)	-0.02	0.24	-1.31
Sargan Test	17.80	10.83	17.36
Hansen Test	0.58	19.15	9.95

Coefficients reported. Standard errors in parentheses * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$
Source: Authors own calculation using Stata 10.

compensation on financial outcomes. In addition, the study underscores the relevance of considering lagged performance, external disruptions like the COVID-19 pandemic, and broader economic conditions when examining the dynamics between executive compensation, firm performance, and other contextual factors.

More scholarly evaluations are needed to provide in-depth insights into the intricate nexuses between executive compensation, CG, performance, and external influences. The acquired insights will inform development of comprehensive frameworks that promote sustainable company resilience.

VI. Conclusion

This study examined the nexuses between performance, executive compensation, inequality, and CG. Through the application of the 2-step system GMM on secondary datasets from 2008 to 2020 for forty-six FTSE/JSE Top40 listed companies, the impact of executive compensation and inequality on company performance was investigated. The findings showed a deterioration in performance as executive compensation improved. This accentuates the importance of properly aligning executive remuneration with company performance. Unexpectedly, the relationship between inequality and performance was contingent on specific profitability measures used, intimating the need for further academic examination.

Observably, the study discovered a stimulating result: inequality serves as the channel through which executive remuneration influences performance. This infers that higher levels of executive compensation coupled with higher inequality levels are associated with better company performance. Moreover, the analysis underscored the significance of CG, exhibiting a positive relationship between CG and net profit margin. Also, CG was recognised as the contrivance through which executive compensation affects net profit margin.

Grounded on these findings, it is recommended that companies prioritise good CG practices as they contribute to enhanced performance. Further, diligent attention should be given to executive compensation structure, as poorly designed remuneration packages erode company value and or value creation, while well-structured compensation schemes can enhance performance and overall company value. Moreover, the discovery that inequality can lead to better performance implies the need for egalitarian executive compensation structures that have very minimum adverse impact on company performance.

Future research interests should consider examining the same phenomenon within the context of a pandemic, enabling empirical examination of the effects of such crises on executive compensation and performance. Also, the alignment of performance measurement periods, vesting periods, and exercise periods should be thoroughly explored to improve the understanding of the linkage between executive compensation and performance.

Overall, this study adds to extant literature by providing insights into the complex relationships among performance, executive compensation, inequality, and corporate governance. The findings offer valuable implications for companies aiming to enhance their performance and optimising their executive compensation practices.

Acknowledgments

The authors are grateful to the opportunities provided by the University of South Africa.

References

Arellano, M., & Bond, S. (1991). Some Tests of Specification for Panel Data: Monte Carlo Evidence and an Application

to Employment Equations. *The Review of Economic Studies, 58*(2), 277-297. doi:10.2307/2297968

Basu, S., Hwang, L.-S., Mitsudome, T., & Weintrop, J. (2007). Corporate governance, top executive compensation and firm performance in Japan. *Pacific-Basin Finance Journal, 15*(1), 56-79. doi:10.1016/j.pacfin.2006.05.002

Bebchuk, L. A., & Fried, J. M. (2003). Executive Compensation as an Agency Problem. *Journal of Economic Perspectives, 17*(3), 71-92.

Blundell, R., & Bond, S. (1998). Initial conditions and moment restrictions in dynamic panel data models. *Journal of Econometrics, 87*(1998), 115-143. doi:10.1016/S0304-4076(98)00009-8

Brunello, G., Graziano, C., & Parigi, B. (2001). Executive compensation and firm performance in Italy. *International Journal of Industrial Organization, 19*(1), 133-161. doi:10.1016/S0167-7187(99)00026-0

Chen, Y., & Jermias, J. (2014). Business strategy, executive compensation and firm performance. *Accounting & Finance, 54*(1), 113-134. doi:10.1111/j.1467-629X.2012.00498.x

Core, J. E., Holthausen, R. W., & Larcker, D. F. (1999). Corporate governance, chief executive officer compensation, and firm performance1The financial support of Nomura Securities and Ernst & Young LLP is gratefully acknowledged. We appreciate the able research assistance of Dan Nunn. We acknowledge the helpful comments of Abbie Smith (the referee), Kevin Murphy, and workshop participants at Columbia University, the University of California - Los Angeles, the University of Colorado - Boulder, Harvard University, George Washington University, Massachusetts Institute of Technology, New York University, Stanford University, and Tempe University.1. *Journal of Financial Economics, 51*(3), 371-406. doi:10.1016/S0304-405X(98)00058-0

De Hoyos, R. E., & Sarafidis, V. (2006). Testing for Cross-Sectional Dependence in Panel-Data Models. *The Stata Journal, 6*(4), 482-496. doi:10.1177/1536867X0600600403

Driscoll, J. C., & Kraay, A. C. (1998). Consistent Covariance Matrix Estimation with Spatially Dependent Panel Data. *Review of Economics and Statistics, 80*(4), 549-560. doi:10.1162/003465398557825

El-Sayed, N., & Elbardan, H. (2016). Executive compensation, corporate governance and corporate performance: evidence from the UK. *Journal of Organisational Studies and Innovation, 3*(2), 31-49.

Enderle, G. (2018). Corporate responsibility for less income inequality. *Review of Social Economy, 76*(4), 399-421. doi:10.1080/00346764.2018.1525761

Faulkender, M., Kadyrzhanova, D., Prabhala, N., & Senbet, L. (2010). Executive Compensation: An Overview of Research on Corporate Practices and Proposed Reforms. *Journal of Applied Corporate Finance, 22*(1), 107-118. https://doi.org/10.1111/j.1745-6622.2010.00266.x

Francis, D., & Webster, E. (2019). Poverty and inequality in South Africa: Critical reflections. *Development Southern Africa, 36*(6), 788-802. doi:10.1080/0376835X.2019.1666703

Gao, J. (2019). Literature Review of Executive Compensation Gap and Company Performance. *American Journal of Industrial and Business Management, 9*(1), Article 1. doi:10.4236/ajibm.2019.91009

Gompers, P., Ishii, J., & Metrick, A. (2003). Corporate Governance and Equity Prices*. *The Quarterly Journal of Economics, 118*(1), 107-156. doi:10.1162/00335530360535162

Hansen, L. P. (1982). Large Sample Properties of Generalized Method of Moments Estimators. *Econometrica, 50*(4), 1029-1054. doi:10.2307/1912775

Hoechle, D. (2007). Robust Standard Errors for Panel Regressions with Cross-Sectional Dependence. *The Stata Journal, 7*(3), 281-312. doi:10.1177/1536867X0700700301

Hundenborn, J., Leibbrandt, M., Woolard, I., & UNU-WIDER. (2018). *Drivers of inequality in South Africa* (162nd ed., Vol. 2018). UNU-WIDER. doi:10.35188/UNU-WIDER/2018/604-3

Jensen, M. C., & Meckling, W. H. (1976). Theory of the firm: Managerial behavior, agency costs and ownership structure. *Journal of Financial Economics, 3*(4), 305-360. doi:/10.1016/0304-405X(76)90026-X

Lee, H.-A., & Chun, S. (2023). Earnings Management Behavior of Firms with Financial Constraints: Focusing on Firms that Issue Redeemable Convertible Preferred Stocks. *Global Business Finance Review, 28*(1), 58-71. doi:10.17549/gbfr.2023.28.1.58

Marozva, G. (2022). *Liquidity Mismatch Index and Bank Performance* (SSRN Scholarly Paper No. 4028311). Social Science Research Network. https://papers.ssrn.com/abstract=4028311

Mishel, L., & Wolfe, J. (2019). CEO compensation has grown 940% since 1978: Typical worker compensation has risen only 12% during that time (p. 27). Economic Policy Institute. https://www.epi.org/publication/ceo-compensation-2018/

Morais, F., Kakabadse, A., Kakabadse, N. K., & Pryce, A. (2013). Corporate Income Inequality and Corporate Performance: Any Correlations? In A. Kakabadse & L. Van den Berghe (Eds.), *How to Make Boards Work* (pp. 44-74). Palgrave Macmillan UK. doi:10.1057/9781137275707_3

Muzata, T. (2018). *Examining Consequences of Principal-agent and Corporate Governance Interactions in South Africa. A study of FTSE/JSE Top40 Companies* (Ph.D. Thesis), University of South Africa. https://uir.unisa.ac.za/bitstream/handle/10500/25016/thesis_muzata_t.pdf?sequence=1&isAllowed=y

Nurlina, N., Hanum, N., Safuridar, S., & Muda, I. (2019). Analysis of Structural Poverty Trend Among Rice Farmers in East Aceh Regency, Indonesia. *Global Business Finance Review, 24*(1), 71-79. doi:10.17549/gbfr.2019.24.1.71

Parthasarathy, A., Menon, K., & Bhattacherjee, D. (2006). Executive Compensation, Firm Performance and Governance: An Empirical Analysis. *Economic and Political Weekly, 41*(39), 4139-4147.

Pesaran, M. H. (2006). Estimation and Inference in Large

Heterogeneous Panels with a Multifactor Error Structure. *Econometrica, 74*(4), 967-1012. doi:10.1111/j.1468-0262.2006.00692.x

Pesaran, M. H. (2021). General diagnostic tests for cross-sectional dependence in panels. *Empirical Economics, 60*, 13-50. doi:10.1007/s00181-020-01875-7

Raithatha, M., & Komera, S. (2016). Executive compensation and firm performance: Evidence from Indian firms. *IIMB Management Review, 28*(3), 160-169. doi:10.1016/j.iimb.2016.07.002

Rasoava, R. (2019). Executive compensation and firm performance: A non-linear relationship. *Problems and Perspectives in Management, 17*(2), 1-17. doi:10.21511/ppm.17(2).2019.01

Sanoran, K. (Lek). (2022). Transmission Mechanisms of Executive Compensation to Cost of Equity Capital. *Global Business Finance Review, 27*(4), 111-120. doi:10.17549/gbfr.2022.27.4.108

Shaukat, A., & Trojanowski, G. (2018). Board governance and corporate performance. *Journal of Business Finance & Accounting, 45*(1-2), 184-208. doi:/10.1111/jbfa.12271

Sulla, V., Zikhali, P., & Cuevas, P. F. (2022). Inequality in Southern Africa: An Assessment of the Southern African Customs Union (p. 144) [Text/HTML]. The World Bank. https://documents.worldbank.org/en/publication/documents-reports/documentdetail/099125303072236903/P1649270c02a1f06b0a3ae02e57eadd7a82

Tulcanaza-Prieto, A. B., Lee, Y., & Koo, J.-H. (2020). Leverage, Corporate Governance and Real Earnings Managem ent: Evidence from Korean Market. *Global Business Finance Review, 25*(4), 515-572. doi:10.17549/gbfr.2020.25.4.51

Willman, P., & Pepper, A. (2019). *Do Firms Manage Pay Inequality?* Working Paper 31. London School of Economics and Political Science: International Inequality Institute, 1-26.